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SEPTEMBER, 1875.

[THIRD SERIES.

THE  
**FARMER'S MAGAZINE,**

AND

MONTHLY JOURNAL

OF

THE AGRICULTURAL INTEREST.

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Dedicated

TO THE

FARMERS OF THE UNITED KINGDOM.

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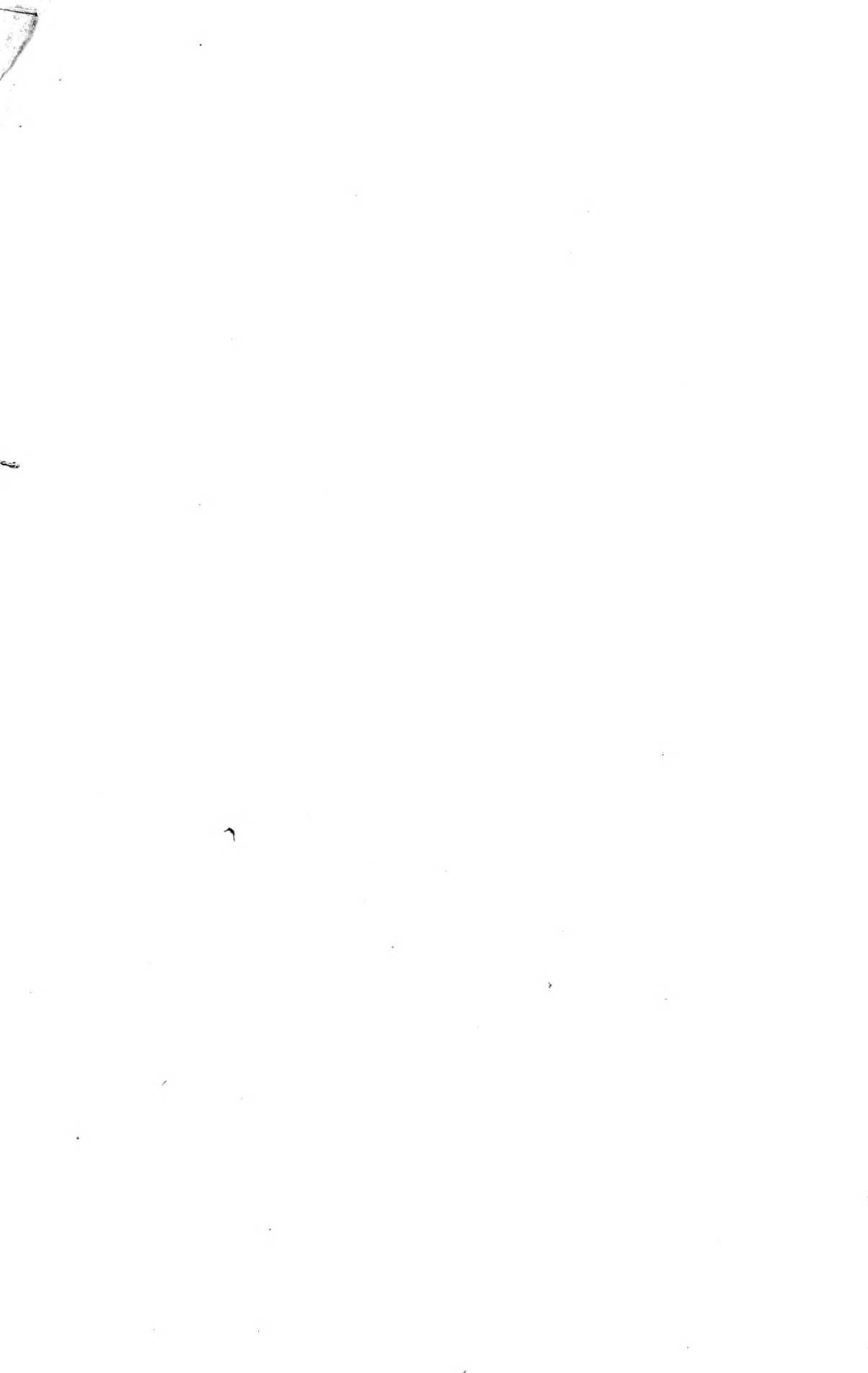
# THE FARMER'S MAGAZINE.

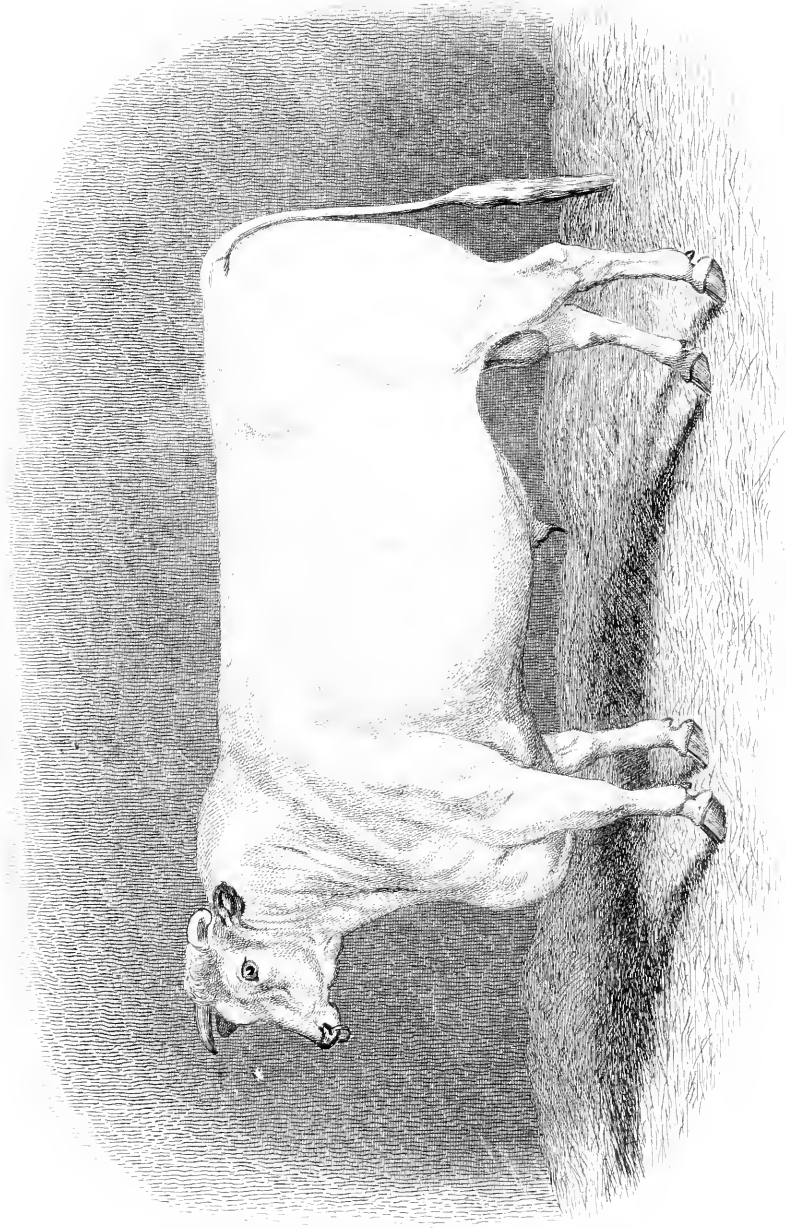
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SEPTEMBER, 1875.

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*Grand Duke of Kent's cow*

# THE FARMER'S MAGAZINE.

SEPTEMBER, 1875.

## PLATE.

GRAND DUKE OF KENT 2ND: A SHORTHORN BULL.

THE PROPERTY OF MR. DENIS DE VITRE.

Grand Duke of Kent 2nd is a white bull, with roan ears, bred by Messrs. F. Lency and Son, and calved May 12th, 1870, is by Lord Oxford 2nd (20215), bred by Mr. Thorne, out of Grand Duchess 9th by 3rd Grand Duke (16182), her dam Grand Duchess 4th by Cherry Duke (12589)—Grand Duchess by Grand Duke (10284)—Duchess 51st by Cleveland Lad (3107)—Duchess 41st by Belvedere (1706)—Duchess 32nd by Second Hubbaek (1423)—

Duchess 19th by Second Hubbaek (1423)—Duchess 12th by The Earl (646)—Duchess 4th by Ketton 2nd (710)—Duchess 1st by Comet (155)—by Favourite (252)—by Daisy Bull (186)—by Favourite (252)—by Hubbaek (319)—by J. Brown's Red Bull (97).

Grand Duke of Kent 2nd was purchased by Mr. de Vitre at Lord Bective's last sale, for 750 gs. He is now on service at 50 gs. a cow.

## THE AGRICULTURAL HOLDINGS BILL READ A THIRD TIME AND PASSED.

*The Agricultural Holdings Bill (England) was read a third time and passed.*—So runs the parliamentary report of the proceedings in the House of Commons on Friday.

A new era in the history of Agriculture is thought to have commenced with the establishment of the Royal Agricultural Society; and another epoch may date from the recognition of the Tenant-Right principle by the Legislature. So far the relations between landlord and tenant have been regarded as private property. It might amuse the Farmers' Club, as it has done for the last five and twenty years, to talk about something more, which was required before the cultivation of the country could develop as it should do; but after the death of Mr. Pusey, little heed was taken of this in other places. Indeed, it appeared for some time as if the cause and its champion had died out together. Mainly, however, through the Farmers' Club and the material at its command, the cry grew again stronger than ever, until, at length, something has come of it. No one, moreover, would appear to think more of the question which he has taken up than the Premier himself. At the Lord Mayor's dinner table the other evening, Mr. Disraeli said, "There is a measure which I believe to be one of the most important that ever was passed in our time, and that is the bill with the modest title of regulating agricultural holdings. There are some, indeed, who say that bill is of no importance, that it is worth nothing, that it deals with an insignificant subject, and deals with that subject ineffectually. My opinion is, that it is many a long year since a bill was introduced which will have a

greater and happier effect than that bill in the life of a very considerable portion of her Majesty's subjects. I believe that the indirect influence of that measure will be greater even than its direct influence, and that the time will come when it will be referred to as an era in our legislation upon the most difficult and not the least important of subjects—that it will open a happier era to those who are connected with the cultivation of the soil, and not less for those who are the possessors of the soil. I believe that it will elevate and strengthen in all its classes that landed interest which is not the least but, perhaps, the most important in this country, upon whose welfare that of the people greatly depends and on whose existence also depend in a great measure the liberties of England." With very much of this we altogether agree, as we sympathise with Mr. Disraeli over the difficulties which he has had to encounter. The bill was beset with opposition from all sides. First, there was the good old-fashioned county member, of whom Mr. Henley is the model, who would not have such a thing on any terms, for he and his people had always managed to get on together without it, and would do so still. Then there was the more modern and insidious Farmers' Friend, hinting his doubts while the measure was yet out of the House, and going more directly against it when once within its walls. This honourable gentleman did his worst, no question; while a representative of the third class of those in opposition, was the Radical member, quite willing to make capital out of the question, had he known anything whatever about it. Of this school Sir William Harcourt is the type, ever ready to interfere, to amend and enlarge,

without giving much weight or authority to the proposals he broached or the alterations he suggested.

Under such circumstances it is said the measure does not go far enough; but in almost any other hands it would not have gone at all. Exercising something of an iron rule, the more particularly with his own party, Mr. Disraeli has persevered, and already is his work bearing fruit. Even in Mr. Pusey's time, although he had the pages of the *Journal* under his control, the question of Tenant-Right never found much favour in Hanover Square, where the Council table has been pretty generally surrounded by landlords and landlords' men, by no means inclined to identify themselves with their editor's new allies at The Farmers' Club. In fact, the golden rule at the Royal Agricultural Society long was, if it be not so still, that nothing about farming should get into Parliament. But even the direct influence of the Agricultural Holdings Act has come already to be acknowledged by this national body. On Friday evening a system of compensation for unexhausted material became the law of the land; and on the Wednesday previous, at the Council meeting in Hanover Square, Mr. Randell gave notice that he would move in November, "That while under any circumstances it would be of the greatest importance to the members of the Society to prove by a series of experiments made under every variety of soil and climate how far the accuracy of 'the estimated value of manure obtained by the consumption of different articles of food,' as given by Mr. Lawes in his valuable contribution to the last number of the *Journal* of the Society, is confirmed by practical results,

it becomes more especially important now that compensation to out-going tenants for the unexhausted value of purchased food will become universal. That it be referred to the Chemical Committee to consider in what way experiments may be conducted by practical farmers in different districts to demonstrate by this union of Practice with Science the actual manure-value of the kinds of food most extensively purchased—say the first four articles in Mr. Lawes' table, with any others the Committee may select. The feeding value of each being also recorded."

That compensation for unexhausted value will become universal is speaking out, but at the same time is speaking the truth. The Agricultural Holdings Act is not compulsory in law, although, with Mr. Randell, we shall assume that it will be very much so in actual effect. And further, we have this terrible Tenant-Right, coupled with the precepts and practice of Mr. Lawes, a gentleman who habitually defies the four-course system, and grows his wheats and barleys for twenty or thirty years together. As we said in the outset, the legal recognition of Tenant-Right opens up a new era in the history of Agriculture, as we have already one of the slowest bodies so far to move in this direction now the first to take action. The Farmers' Friends and the extreme Radicals, alike ignorant of the object to be attained, have been willing to allow the Premier little credit for his measure; but we believe there is much good in it, and that it will effect far more good than just at this present moment is anticipated.

### THE SHOW WEEK OF THE ROYAL AGRICULTURAL SOCIETY.

There is a threat of the Royal Agricultural Society's meeting in Birmingham next year being made the subject of a dangerous experiment; as all radical changes in the conduct of established institutions must be more or less hazardous. So far, up to this present time, the Royal show is no question a thorough success, as not only the largest but in every sense the best of its kind, commendable alike for its management and its quality. Of late, however, there has been a disposition on the part of the Council not so much to meet the necessary reforms urged by the outside members as to volunteer changes from within, proposed, as it would seem, simply for the sake of change. Thus, early in the year, came the recommendation of a Committee to run counter to Mr. Fawcett, and to put the catalogue complete into the hands of the judges—a measure especially advocated by Mr. Milward and Mr. Thomas Booth, although luckily, as it subsequently happened for one of these, the idea was acouted by the country, and by none more than by men who are in the habit of acting judges. Still, the thing has been tried on again in the North, probably at the instance of some of those who were defeated in Hanover-square, with the very practical commentary of a judge at the show declining to be hampered in this way, but at once putting the catalogue aside, and taking the numbers of the animals once more as his only mark and guide. The country, it is clear, will not submit to be primed after this fashion, a means to an end which had better still be left to the horse-show or sale at Islington.

However, Mr. Milward, for one, cannot stop here, and accordingly at the Council meeting in November he will move, "That in future the country meeting shall commence on Wednesday instead of Monday, for this reason, amongst others, that Saturday and Monday, which are generally holidays in large towns, would be shilling days."

In the face of this, it may be well to go back to the shilling days in some of the large towns which the Society has already visited, such as Leeds and Manchester; at Leeds the crush on the shilling days was so great that Mr. Brandreth Gibbs and the stewards were in some alarm as to whether their arrangements would equal the demand, and there was another bumper take at Manchester. On the other hand, a week's holiday would have failed to disturb the serenity of Bedford, and the rain had much to answer for at Taunton; although here possibly centres the head and front of Mr. Milward's movement. Had the show in the West commenced in the middle of the week previous to that in which it was held, taking the four days of one week and the Monday in the other, the Council would have very cleverly avoided the downfall which wept over the shilling days. But, unfortunately, in so capricious a climate as ours we cannot, as a rule, reckon even in July on the Saturdays and Mondays being invariably fine, and the bad weather falling to those who pay the higher fees. Moreover, we are inclined to think that all the large towns, as they certainly will in Birmingham, would make special holiday for the occasion; nor do we see that the change would be of any proportionate advantage to the exhibitors, a class whose interests should be carefully considered. The stock would still have to submit to a Sunday out, at the wrong end of the week, as they would have less time to travel on to the next show due, and people would not easily fall in with an alteration, which, as we have said, would be an experiment, the advantage of which has yet to be proved. If it be adopted the Smithfield Club must of course fall in, say by opening on Tuesday and closing rather earlier on the Saturday, when the people would have the opportunity of devoting at least one of their holidays to the stalls and galleries.

THE DIVIDED "UNION."

For some time there has been strife in the camp of the National Agricultural Labourers' Union, until these dissensions have culminated in a split into two distinct and hostile parties, the members of which abuse each other as they once abused the "brutal farmers" and the "landlord robbers." A new Union, which "knows not Joseph," has been started, having for its president a venerable gentleman, whose age has not diminished his enthusiasm or increased his discretion. This new body is represented by the old organ, the *Labourers' Union Chronicle*; whilst a fresh advocate, called the *English Labourer*, has been started to uphold the claims of the old Union. These papers are nearly filled, week after week, with columns of mutual abuse. One side says to the labourer, "Codling's your friend, not Short," and the other, "Short's your friend, not Codling;" so that between the two he is fairly puzzled. Messrs. Arch, Henry Taylor, and Howard Evans say to him, "Those who are endeavouring to divide the Union are your foes;" whilst, on the other hand, Messrs. Vincent, Lake, and Ward assure him that he has been shamefully robbed and bamboozled by the officials of the old Union, and that the new institution is much safer, more economical, and offers far more advantages. One side accuses the other of wholesale jobbery and misappropriation of funds, and the other replies by denial and recrimination.

The programme of the new Union is ambitious, and its objects are extensive. Its title is "The National Farm Labourers' Union," and its headquarters are at Leamington. Its chief object is to provide land for the labourers, either as owners or tenants; but the more common objects of trade unions also form part of the programme. The weekly subscription of members is to be twopenny, of which one penny is to go to the Land Fund, one halfpenny to the Lock-out Fund, and the remaining halfpenny for management. But the promoters hope that neither the lock-out or administrative funds will absorb the penny devoted to these purposes, and they anticipate there will generally be a surplus in each case, which will be added to the Land Fund. For every twopenny paid the labourer will receive a penny land-ticket, but his investments are not limited to this minimum sum. He may purchase land-tickets to the value of twopenny, fourpenny, or sixpenny. These tickets will be transferable, like postage stamps, and will represent to the holder so much value in land purchased. As soon as a member has accumulated tickets to the value of one pound, he will receive a share to that amount bearing interest at five per cent., if profits will allow. He will also be entitled to ballot for the occupation of land purchased by the Committee in his county or district. The Committee will purchase land in different counties, as their means allow, and as opportunities of purchasing to advantage occur. They will also hire land to re-let in small portions to labourers, at a profit rental. The rents of land purchased, and the profits of land hired by the Union will constitute the fund from which interest is to be paid to shareholders. The promoters expect, as promoters are wont to do, there will be "large surplus profits;" in which case the Committee will have power to increase the rate of interest up to ten per cent., thus doubling the value of the shares! They trust that in five years "at least one-third of the agricultural labourers of England will, through the aid of this Union, be occupiers of an acre of land." This, they think, will raise the condition of the class, and give assurance of generally good wages. Strikes as well as lock-outs are deprecated, and

will be avoided as far as possible. When a dispute between masters and men arises in any district, and the Committee think that the men are in the right, they will "at once put the labourers, as labourers, on Union land, at good wages, and so terminate the dispute." But the object of the Union will be "to cherish and maintain good feeling and fair dealing between employer and employed."

The promoters of this scheme estimate that, if they get 100,000 members, they will in three years have at their disposal 8,510 acres of land, and the way in which so satisfactory a result is arrived at is thus put. It is assumed that the 100,000 members will pay, on the average, threepence per week, which, it is stated, will give for Management Fund, £10,800; for Lock-out Fund, £10,800; for Land Fund, £12,300. The Land Fund, at the very liberally computed average of £65 per acre, will purchase 650 acres of land, which, let at an average rental of £4 per acre, would bring in a yearly sum of £2,600. This would pay the dividend of five per cent. on the Land Fund, and leave a balance. But it is estimated that at least one half of the Lock-out and Management Funds will be available for adding to the Land Fund, thus making in round numbers an addition of £10,000 to it, from which it is expected the returns would be another £500 a year. It is further taken as probable that 2,000 acres of land might be hired and relet at a profit of fifteen shillings per acre, or £1,500, which, by adding to the £500 just referred to, appears by some new process of arithmetic to amount to £2,500, or "enough to pay an additional five per cent. on all land shares, making ten per cent. in all, and so to double (*sic*) the value of all land subscriptions, and to leave in hand a property of £10,000 over and above the £2,000 for which land tickets were held." On the above assumption it is estimated that in three years the following results would be attained:

	£	Aeres.
The Land Fund would amount to.....	126,000	or 1,950
Half the Lock-out Fund to .....	16,200	or 280
Half the Management Fund to.....	16,200	or 280
Land hired, 2,000 acres yearly.....		6,000
 Total land in occupation of farm labourers...		8,510

"Thus," to quote the summing-up of this tremendous scheme, "three years of the New Land Union would find every member holding in his own possession twice the value of his subscriptions, by receiving 10 per cent. on his land shares, while the Union would possess over and above the 1,950 acres which these shares purchased, an estate of 560 acres, and it would be placing 8,510 acres in the occupation of agricultural labourers!!!" Well may the writer of this address fire off his notes of admiration at the wonderful results—on paper—of his brilliant financing. And all for threepence—weekly! Can the labourers hesitate to take advantage of so splendid an opening?

Ten per cent interest on money invested in landed security is an unheard-of rate in this country; but it is just possible that it may occur to them that, after all, these immense profits are all in some way to come out of the labourers. The landowners are to be paid with lavish liberality for their land, and there must of course be some expense for management, however economical the leaders may be. The figures scarcely merit serious criticism; but, letting that pass, it is obvious that it is out

of the exertions of those who are to hold the land that these large sums of money are to be obtained. In short, those who take the land will have to pay 10 per cent. on the investments of all who hold land-tickets, beyond an exorbitant rent. It would, of course, be useless to suggest difficulties to people of such extremely sanguine temperament as the promoters of the new union. Least of all will it avail to question whether, when peasant occupiers or owners came to be so numerous as to include a third of the present labourers, they would find land pay at a rental of £1, with tithes, rates, and taxes to be added. The

friends of peasant proprietorship never will see that where the few can live, and even do well, the many would starve. Peasant-farmers in this country, as a rule, only do well when they go out of the ordinary course of farming—as, for instance, to market-gardening or poultry-keeping. But the demand for vegetables, poultry, and eggs at remunerative prices is limited, and a third of the labourers competing with each other in these and other ways would soon overstock the markets, and then it is not unlikely that they would do what to members of a union so readily suggests itself—strike for lower rents.

### INOCULATION FOR PLEURO-PNEUMONIA.

At a meeting of the Agricultural Society of New South Wales the following paper was read by Mr. Donald Campbell:

When I first began to inoculate on this river (the Richmond) we obtained the virus from the lungs, and although we were very careful in trying to get virus in the best stage we possibly could, we suffered many great losses on account of, the animals suffering from the swelling of tails and body. After continuing inoculating for two years some of my neighbours, as well as myself, began to imagine that the cure was as fatal as the disease; but after I began to inoculate with virus from the chest I found little or no losses. I should say 1 per cent. would cover all. Still, I did not feel satisfied in my own mind that the chest virus was as effectual as that taken from the lungs, until I saw our neighbours' cattle on every side, which had not been inoculated, dying in numbers, while our cattle, which had been inoculated, were in good health and doing well. There should be great care to get what we call "chest virus," as the beast should be taken in the proper stage, and taken as quietly as possible, and not allowed to run or knock itself about before being killed. The best plan is to shoot the beast through the forehead and bleed well from the neck, when it should be placed on its back, and all the offal carefully removed. There is a thin skin dividing the paunch from the lungs and the heart, which, when opened, in many instances discloses a great quantity of fluid substances, which some people might be apt to take for chest virus, but which is of no use for inoculating purposes, being too fluid and too weak. But if the beast has been fat, the lungs will have something covering them in the form of a honeycomb, which contains very good virus. There is also a skin covering the heart in the shape of a pocket which often contains the very best of virus, and from which frequently one or two bottles of virus can be obtained. Virus should be the colour of sherry, or rather, an amber colour. I would never use virus squeezed from the lungs if I could obtain chest virus. I have kept a small phial of chest virus for six weeks preserved in glycerine, and inoculated over half the milkers' calves with this preserved virus, and the other half with fresh virus. I watched them carefully, and I found the preserved virus had equally the same effect as the fresh virus, only that with the former I used the needle and worsted, as I thought it might not be so strong in its effects as the fresh virus. I never used anything but the lance, or the knife, as it is more commonly called, when I am inoculating with fresh chest virus, though if the weather were cold it would be desirable to use the needle and worsted. I would always prefer fresh to preserved virus when obtainable, but I should always keep some preserved in glycerine, for fear of not having any when required. When obtainable, it can generally be got in larger quantities than can be used while it keeps good, so that a store can be provided for future use. Before I proved the goodness of the preserved virus, I often had to throw away considerable quantities. Usually virus will not keep good for more than three days; but putting as much in a small bottle as would be used in a day, corking the bottles air-tight, and placing them in a bucket of cold water under a shady tree, or lowering the bucket into a well, is the best method of keeping the virus good in hot weather. I never knew a beast affected with pleuro in the proper stage for giving good virus that could be driven for half a mile, though it might straggle a short distance in its own direction. A beast that would give the proper virus is easily detected without driving it about; and the quicker an animal is taken the better will be the virus. In conclusion, I thoroughly believe in inoculation, and I think it is a great pity that all stock-owners are not induced or compelled to inoculate,

for I am sure that the country will never get rid of pleuro-pneumonia until inoculation is made compulsory.

The Chairman and several other members of the Council expressed themselves favourable to inoculation as a remedy for pleuro-pneumonia.

Mr. Graham Mitchell, M.R.C.V.S., of Victoria, writes to the Chief Inspector of Stock thus: I have the honour to acknowledge receipt of your letter of the 27th inst., requesting me to furnish you with such complete information as may be necessary for persons who are desirous of inoculating their cattle for pleuro-pneumonia, and have much pleasure in complying with your request. Contagious pleuro-pneumonia of cattle may be popularly defined a blood disease of fever peculiar to horned cattle, communicated by contagion, does not develop spontaneously, and was introduced into Victoria by imported stock from England; terminates by exudation and deposit of the fibrino-albuminous portions of the blood into the interlobular lung and surrounding tissues, proving fatal by destroying more or less the structure and functions of these vital organs. Medical treatment is useless, and the disease can only be successfully eradicated by the adoption of stringent preventive measures—early isolation of suspected animals, destroying and burning the carcasses of diseased ones, and inoculating all animals expose, to contagion. Animals once attacked are liable to relapse acting as centres of contagion, and perpetuating the disease.

*General Symptoms.*—Infected animals separate from the herd, feed sparingly, ruminant irregularly, with the heads held low, necks stretched out, backs arched, breathing short and quick, show a disinclination to move, cough and grunt on being driven, flunks tucked up, haggard appearance, &c.

*How to Obtain Inoculating Lymph.*—Having selected an animal suffering from pleuro, slaughter in the usual way; the carcass being properly bled, open the chest, and if the disease has reached the proper stage (second stage), the lymph will be found round the consolidated lung, frequently inclosed in cells, like a honey-comb of coagulated fibrine. Lymph may also occasionally be obtained from the substance of the lung, in that portion only of a salmon colour. The proper inoculating lymph is recognised by being of a sherry-wine-colour; it coagulates on cooling into a transparent jelly, has no offensive smell, and has a sticky feel when rubbed between the finger and thumb. Mistakes are frequently made by using the watery effusion or serum found in the chest and substance of the lung, and the efficacy of inoculation is frequently condemned in consequence. Such mistakes must therefore be carefully avoided, as the success of the operation depends upon using the proper lymph, which should be strained before being used, and a supply for future use placed in small phials, and preserved by adding an eighth part of pure glycerine, and kept in a cool place or underground.

*How to Inoculate.*—A number of small spicing needles, with white worsted thread, and a wide-mouthed phial containing the lymph, into which the thread is dipped as required, should be held in readiness by an assistant. The animals having been secured in bails or crush, the end of the tail should be turned up and held slack, so that when the animal moves it will not be jerked out of the operator's hand. The hair of the brush or bulb (on the inside portion, where the skin is thin) should be laid on each side so as to expose the skin. Holding the tail in the left hand, between the finger and thumb, a needle and saturated thread should be passed along the skin to about one inch in extent downwards towards the end of the tail. (The right hand should be protected by a sail-maker's palm.) A portion of the thread may be left in the wound, to ensure retention of the lymph. The needle should not penetrate deeper than the skin. If any of the tails subsequently swell, the parts should be freely slit open.



THE BIDEFORD FARMERS' CLUB.

THE INCOMING TENANT.

The following paper was read by Mr. J. Fletcher, agent to the Hon. Mark Rolle, at a recent meeting of the club.

Great agitation has prevailed in this country for some years in favour of the interests of the out-going tenant. It has not alone been confined to agriculturists, but statesmen, economists, and philosophers have joined in the cry, until Parliament can no longer resist the demand for legislation in this direction. There is every prospect of the Agricultural Holdings Bill becoming law in a very short period, and we have yet to learn that the measure will confer the benefits, and be productive of the results, which its framers design. The creation of Tenant-Right marks an important era in agriculture, and it seems impossible at this moment to foresee the consequences that will follow its adoption. There are statesmen and agriculturists who view the measure as a direct interference with private interests, and there are others who hold that it is the duty of the Legislature to define the terms upon which land shall from henceforth be let. No doubt the whole thing is an experiment, and it must affect the relations that have hitherto existed between landlord and tenant. Up to this time the arguments have been directed chiefly to the outgoing tenant, whilst some voices have been raised in support of the landlord's interests. Nothing appears to have been said on behalf of the incoming tenant. One cannot but be struck with the indifference (amounting almost to ignorance) with which his interests have been treated, not only by Parliament, but also by Chambers of Agriculture. Surely there are representatives of both places who are well aware of the doubtful value which at present attaches to many matters for which an incoming tenant will from henceforth become responsible. The only member who touched upon the question in the first discussion on the Government measure was Sir W. Barttelot, who is reported to have said that, "the incoming tenant had hardly been mentioned during the debate, and that he of all others was the person who ought to have the most serious consideration of the House." This is a weighty charge to bring against Parliament, and one we should have thought sufficiently urgent to lead to immediate inquiry. No one rose to refute it, nor was any explanation asked for, and I verily believe the thing is not more understood in the House of Commons than it is by the public at large. The tenant-farmer is the only man who does or should know what will result from legislating upon unexhausted improvements, and he of all others is most interested in securing an equitable arrangement at the termination of a tenancy, and should watch with jealousy the wording of every clause in a Bill for this object. It is my firm belief some of the provisions in the Act now before the House are in advance of the knowledge we possess of many of the subjects it deals with, and that dissatisfaction and litigation must spring from its enactments. Holding these views, I embrace the opportunity afforded me by your association to invite discussion upon the incoming tenant's liabilities. In recognising the claims of a farmer at the termination of his tenancy, you must ensure their being substantial and honest ere deciding who is to discharge them. It is all very well to say the landlord shall do so, and he may do so; but that the incoming tenant will eventually have to pay the bill, no one acquainted with the letting of land will deny. A very great authority, in addressing the Lavenham Farmers' Club, is reported to have said that, "mistakenly associating great wealth with landlordism, opinions are pretty strongly expressed that the landlord ought to pay for this or that, forgetting that practically it is a matter which more concerns the incoming tenant, for all land-agents of average sagacity first protect their employers by informing the would-be hirer of a farm that he must pay by valuation for all the claims the outgoing tenant is entitled to make." Assuming that the Act now before Parliament be passed, we may take it for granted that its provisions will become the basis of all future arrangements in letting land, notwithstanding the outcry against the 4th clause. These provisions we find described in three classes. Passing over the first class, which treats of improvements needing the landlord's sanction before they can be executed, we come to those in the second class, which a tenant can per-

form upon giving his landlord seven days' notice. They comprise boning of pasture land with undissolved bones, chalking of land, clay burning, claying, liming, and marling of land. These improvements are to extend over seven years. Finally, in class 3 we find a tenant is to be entitled to compensation up to the end of two years for application to land of purchased, artificial, or other manure; consumption on the holding by cattle, sheep, and pigs, of cake or other feeding stuff not produced on the holding. With some few restrictions, these are the matters the outgoing tenant will be entitled to be paid for, and the man who has to pay the bill will find it his interest to discover the money value of them. The liability we have, I think, traced to the incoming tenant: let us see how it would affect him in the event of his entering upon a farm in this county, subject to the provisions I have just now read to you.

Assumed Valuation upon a Farm of 200 Acres, let subject to the Provisions of the Agricultural Holdings Bill, at Lady Day, 1875, cultivated in the following Proportions:

40 acres wheat.	40 acres seeds.			
40 " Leat corn, part with seeds.	40 " roots.			
10 acres hmed, 4 tons per acre, at 15s. per ton in 1873, allowing improvement seven years		£	s.	d.
6 acres of mangels:		22	17	0
3 cwt. guano at 12s. per cwt. whole cost		10	16	0
4 cwt. superphosphate, at 6s. per cwt. whole cost		7	4	0
6 acres of mangels in previous year, $\frac{2}{3}$ cost		6	0	0
14 acres of swedes:				
6 cwt. dissolved bones, at 10s. whole cost		27	6	0
14 acres of swedes in previous year, $\frac{1}{2}$ cost		9	2	0
20 acres of common turnips:				
4 cwt. superphosphate at 6s. whole cost		24	0	0
20 acres of common turnips in previous years, $\frac{1}{2}$ cost		8	0	0
25 acres of seeds at 15s. (seed bill)		18	15	0
Cake to 20 fat oxen, 5 tons at £11 per ton ( $\frac{1}{2}$ cake bill)		27	10	0
Cake to 20 fat oxen, 5 tons at £11 per ton, previous year ( $\frac{1}{2}$ bill)		13	15	0
Cake to 80 fat sheep, at 8s. per head ( $\frac{1}{2}$ cake bill)		16	0	0
Cake to 80 fat sheep, at 8s. per head, previous year ( $\frac{1}{2}$ bill)		8	0	0
Meal to 10 pigs, $\frac{7}{8}$ cwt., at 12s. per cwt ( $\frac{1}{2}$ meal bill)		11	5	0
Meal to 10 pigs previous year ( $\frac{1}{2}$ bill)		5	12	6
10 tons of hay, $\frac{3}{4}$ market price		50	0	0
15 tons of straw, $\frac{2}{3}$ market price		30	0	0
Taking down hedges, &c.		7	10	0
		228	13	0

Disregarding the items in this account of hay and straw, it will be seen that the sum of £228 13s., or more than five-sevenths of the whole amount, is charged for matters which have not hitherto been generally included in a valuation. This increase is not, in my opinion, the most important feature in the account—22s. per acre is by no means a heavy valuation. It is the calculation for manures and feeding-stuffs I think unsatisfactory; also there is a looseness in the classification of the improvements in the third class which opens the door to deception, and must cause infinite trouble hereafter. As the words now stand, an outgoing tenant might claim to be paid for the veriest rubbish in the shape of purchased manures and feeding-stuffs. My valuation I am aware differs in many respects from the practice of some of your local valuers, but my desire has been to make the calculations in strict conformity with the Act before Parliament. The matter we are now upon may appear small in itself, but with the farming interest of this kingdom it is of vital consequence, and who dare say that claims for compensation may not grow up under the Act we are discussing, precisely as they have done under the Landlord and Tenant (Ireland) Act, 1870?

According to the agricultural returns for the year 1874, the total number of acres under mangels, swedes, and turnips in Great Britain was 2,455,950. Now, supposing an average of 2 cwt. of artificial manure per acre was applied upon that area, and that we compute its value at 8s. per cwt., we get £1,964,760. Going back another year, we find the figures much the same, and we should, under the allowances in the Act, be entitled to one-third of this sum for that year, or £2,619,680 for the whole period, being the value of this article now in the soil. If, from the same report, we take one-third the number of cattle, sheep, and pigs in England, Wales, and Scotland, in the same year, it would give us 2,041,830 cattle, 10,104,647 sheep, and 807,611 pigs, and consider them as the proportion of cattle, sheep, and pigs which have received purchased artificial food at the rate of 30s. a head for each ox, 2s. a head for each sheep, and 5s. a head for each pig, it gives us the enormous total of £4,275,112 paid for these commodities by the British farmer in the last year. Now taking the unexhausted value of these artificial manures and purchased feeding-stuffs according to the rules laid down by Parliament, the whole of the £2,619,680 charged against the manures, and two-thirds the cost of artificial food used in the last two years, making together the sum of £5,469,755, would literally be the amount of the present occupier's unexhausted interests in these things, and, therefore, the sum of the incoming tenant's liabilities for them. These calculations must be accepted for what they are worth. I do not claim accuracy or the figures of the Statistical Department of the Board of Trade, from which they are made; even if they be larger than is really the fact, the subject will appear of sufficient magnitude to demand not only the earnest consideration of Parliament, but also strict inquiry from yourselves. I have as yet spoken of but two subjects which must be treated on the exchange of tenancies. They are perhaps the most important because they will be the more general—viz., the employment of purchased manures and foods. There are other matters to be dealt with which may be considered as shrouded in uncertainty. I mean the application of bones, lime, chalk, clay, marl, and sand. Much diversity of opinion, as I shall be able to show, prevails in regard to the value of applying these commodities to land; any good effect which they may have is ruled by climate, season, soil, and mechanical treatment. Where the rainfall is excessive, or the atmosphere humid, the process of decay and consequent dissolution of the parts would be more rapid than in drier situations, hence causing earlier exhaustion of the substance employed. The adoption of them out of season may be an error, and render their effect nugatory. Their contact with soils, and the result which follows, become obvious in proportion to the existence of certain properties in the soils, in some cases producing good, in others no benefit is discernible, and the previous cultivation of the land and process of applying these articles has much to do with after-results. What says Mr. Lawes, of Rothamsted, the greatest authority we have upon the manurial results of every kind of substance? In his pamphlet on "Unexhausted Manures," speaking of compensation for them, he says, "Much must depend on the description of the manure employed, the character of the soil to which it has been applied, the characters of the climate or of particular seasons, and the kinds of crop which have been grown since the application." Further on he dwells on the importance of carefully considering the peculiar properties and probable duration of effect of different manures, if we could hope to arrive at anything like a fair estimate of the money value of the unexhausted residue they leave in the soil under various circumstances, and in referring to estimates by him of the value of the unexhausted residue of various manures Mr. Lawes cautiously adds: "The amounts might be materially affected, according to the cleanliness or foulness of the land, the lightness or heaviness of the soil, the dryness and wetness of the locality or of particular seasons, and the difference between the purchasing price of the food or manure and its actual relative value." Take another authority on these matters, Professor Wrightson, of the Royal Agricultural College, in Gloucestershire, who has conducted a series of experiments, not only on the College Farm, but also, through the co-operation of gentlemen and farmers, upon some eight other farms in the district around Cirencester. In his paper, which appears in the *Journal of the Society of Arts* for April last, he asserts, after quoting several cases in point, that not only manure, but the land and climate, must be taken into account, and that his experiments

have shown that in the Cirencester district the character of the land, and its agricultural condition, exert a very positive effect upon the increase, from the use of any manure whatever. Feeling that this meeting might like to know the actual results of some of the Professor's labours, I have extracted from his Table of Experiments upon Swedes, in the year 1874, the following examples:

Dressings per Acre.	Rev. T. Maurice, Hares Hall.		Mr. Arkell, Dean Farm.		Mr. Stevens, Ranbury.		Mr. Hawkins, Oaksey.	
	T. cwt. lb.	T. cwt. lb.	T. cwt. lb.	T. cwt. lb.	T. cwt. lb.	T. cwt. lb.		
Mineralsuperphosphate, 3 cwt.....	9	11 7s 12	18	16 4s	9	15 6s	12	7 9s
Mineralsuperphosphate, 3 cwt., and nitrate of soda, 1 cwt.....	7	14 10s 13	2	8 6s	5	14 6s	10	15 7s
Mineralsuperphosphate, 3 cwt.; dissolved guano, 2 cwt., drilled together.....	11	3 2s 15	8	3 4s 10	13	9 4s 10	14	17 7s
Mineralsuperphosphate, 3 cwt.; dissolved guano, 2 cwt., sown broadcast separately.....	9	13 5s 14	17	9 6s 10	4	8 12s	17	16 1s
Mineralsuperphosphate, 3 cwt.; nitrate of soda, 1 cwt.; organic matter, ½ cwt.; potash salts, ¼ cwt.....	8	17 6s 14	16	3 8s 6	6	6 9s 7	6	4 8s 4s
Patent bone superphosphate, 3 cwt.....	9	11 3s 9	1	3 7s 5	6	10 12s 18	24	

I happen to know the locality intimately from which these particulars are derived, and am not aware of any perceptible variety of soil that has been experimentalised upon, although some of the farms are from 15 to 20 miles apart, and I am, therefore, at a loss to account for the great difference in the yield in the cases given in the table. I should weary you were I to quote the diversity of results that follow the use and application of purchased artificial foods and manures. As far as I am able to trace, the whole thing is wrapped in mystery. The mysterious part of the business commences directly an artificial manure is buried in the soil and the last atom of artificial food disappears down the gullet of an animal. What follows, a higher Power than man alone can say with certainty. In most cases, undoubtedly, manurial benefit is to be traced to the use of these things; but have we sufficient evidence so show the money value of it? I think not, and that is why I am anxious to invite discussion upon the matter amongst those who are certain to be affected by coming legislation. In doing so, I do not wish to be understood as opposed to a measure for securing Tenant-Right—far from it. So far back as the year 1870 I took up the question of compensating tenant-farmers for unexhausted improvements; and in a paper I read to the Monmouthshire Chamber of Agriculture I defined these things as "investments which took various forms, their effects being unequal in duration, and the cost of employing them as differing more or less according to circumstances." If this description is marked by caution, it is because I knew of no authority to sanction my saying the results were positive, nor am I aware of any facts since to define or prove the precise value to be assigned to unexhausted improvements. From information I now propose to lay before you, I think you will see that my doubts are shared by others. It is a summary of the replies I have received from some of the first agricultural authorities in the kingdom to six questions which I addressed to every county. You will be struck with the diverse notions which prevail relative to the several subjects.

QUESTION No. 1.—Is lime or chalk applied to land in your county? If it is, what proportion is used to the acre, and do you consider its good effect (in all cases) lasts for any number of years?

REPLIES.—Cheshire.—Yes, 40 to 70 cwt. per acre. Considered to have a beneficial effect for three years.  
Devonshire (South).—Yes; from 4 to 7 tons, on grass chiefly. It lasts at least 7 years.

Devonshire (East).—Yes. Four to five hogsheads on grass land have effect for ten years; on a bare wet fallow it has no effect.  
 Glamorganshire.—Yes; three tons. Never seen any effect.  
 Kent.—Yes. On the Weald clay 80 to 100 bush. Its effect lasts 6 or 7 years.  
 Norfolk.—Chalk and marl are used. Their effect lasts from 8 to 12 years.  
 Pembrokeshire.—Yes; from 5 to 10 tons. Its effect is always good, and lasts 7 years.  
 Staffordshire.—Yes; 4 to 8 tons on pasture. Effects are visible 5 to 20 years.  
 Suffolk.—Yes; 40 bush. to the acre. Effects last for two or three crops.  
 Warwick.—Yes; from 2 to 3 tons. Beneficial if applied at intervals of 12 or 14 years.  
 Seven Counties.—Yes.  
 Five counties.—No.

QUESTION No. 2.—Are you of opinion that artificial manures in all cases confer benefit to soils; and does the consumption of corn and cake do so likewise?

REPLIES.—Bedfordshire.—Certainly, when of good quality and suitable to the soil.  
 Cheshire.—Yes, if varied and applied of description to suit the nature of the land.  
 Devonshire (East).—Certainly not: nitrate grows too much straw, which incoheres has to take to.  
 Essex.—Certainly if the proper kind of artificial manure is used, suitable to the nature of the soil.  
 Kent.—Not in all cases, as applied by men ignorant of the chemical constituents and requirements of soils.  
 Lancashire.—Certainly not; I have seen repeated dressings of guano injure land. On some lands bones have no good effect.  
 Norfolk.—Generally genuine manure applied to root and corn crops answers. To grass the result is uncertain. Artificial food also, unless the expenditure is excessive in a wet season.  
 Ditto.—I believe superphosphate is an exhauster of the soils, and have doubts as to the lasting effects of guano. Consumption of corn and cake does good to soils, but I question the propriety of incoming tenants paying for their use.  
 Shropshire.—To a very limited extent.  
 Eight Counties.—Yes.  
 One County.—No.  
 One County.—Doubtful.

QUESTION No. 3.—Are you aware that the operations of (1) subsoiling, (2) applying ½-inch bones, (3) dressing with clay or sand, increases the fertility of land for any number of years?

REPLIES.—Denbighshire.—Applying ½-inch bones has a very permanent effect. Ought to be spread over from 7 to 10 years.  
 Devon (South).—Yes; 5 to 10 years.  
 Kent.—Subsoiling on the green and in the Weald improves the land for four or five years.  
 Lancashire.—Subsoiling on strong land is beneficial, if judiciously done in dry weather. Half-inch bones applied to pasture lands 20 years ago; the effect is still good.  
 Norfolk.—Deep cultivation answers admirably on heavy soils. Bones are of little use on pasture, but excellent on arable.  
 Warwickshire.—Land is permanently benefited by bones—say from 8 to 10 cwt. per acre.  
 Four Counties.—Yes.  
 Two Counties.—No.

QUESTION No. 4.—Do you consider the value of the several matters before mentioned sufficiently established to make it compulsory upon an incoming tenant to pay for them.

REPLIES.—Thirteen Counties.—Yes.  
 Five Counties.—No.  
 Four Counties.—Doubtful.

QUESTION No. 5.—In your opinion are public valuers qualified and armed with enough fact to entitle them to our entire confidence in assessing the sums to be paid for unexhausted improvements?

REPLIES.—Norfolk.—I should have perfect confidence in Norfolk valuers where, under agreements, payments are made.  
 Staffordshire.—Where well acquainted with the particulars of the district and armed with information.  
 Four Counties.—Yes.  
 Nine Counties.—No.  
 Nine Counties.—Doubtful.

QUESTION No. 6.—Is there not cause to fear that in the event of Tenant-Right becoming compulsory demands will be made upon the incoming tenant for matters of a doubtful and hitherto unascertained value?

REPLIES.—Bedfordshire.—At first they will, until valuers become trusted.  
 Devon (East).—If the Agricultural Holdings Bill passes, there is too much left to opinion on the one hand.  
 Essex.—I do not agree with the proposed finality in the Agricultural Holdings Bill. Doubtful claims will, no doubt, be made, which valuers must disallow.  
 Herefordshire.—A good system of arbitration will correct this.  
 Kent.—The demands should be defined in the bill making Tenant-Right compulsory.  
 Lancashire.—All claims should be made each year.  
 Norfolk.—No, taking into consideration the experience of Lincolnshire.  
 Shropshire.—Certainly, unless properly guaranteed.  
 Staffordshire.—Possibly, but competent valuers will be called in on such points.  
 Thirteen Counties.—Yes.  
 One County.—No.  
 Seven Counties.—Doubtful.

If any of the inquiries I have asked should appear to reflect upon our public valuers, I trust that no gentleman in this room will consider it as personal to himself. I desire to fix no responsibility upon them, but am inclined to say that the ignorance which prevails with regard to the manurial value, both of artificial food and manure, arises from the very small knowledge the world possesses about these matters; and until absolute experiment, aided by science, affords proof and furnishes a basis upon which calculations can be made, that it is unrighteous to frame laws making payment for them compulsory. The absence of this proof never appears to have entered the minds of statesmen or agriculturists; but one idea seems to have pervaded their councils—viz., compensate the outgoing tenant. For what? I ask. For the several matters under classes 2 and 3 in the bill referred to? Why, you have only the shallowest evidence of their value, as the reports I have just read go far to prove. The article lime, it is shown, is applied regardless of quantity (I might add, and consequences), from 3 to 10 ton per acre being used, its effect lasting from three to twenty years; in one instance no result is observed from the use of it. Artificial manures and feeding stuffs not more satisfactorily spoken of; great stress is laid on their quality and suitability to soils, and doubt is expressed as to their enduring effects. Subsoiling, half-inch boning, and claying do not appear to be much practised, and but little information is obtainable about them. In the face of all this, many of my correspondents are satisfied that the value of these articles is sufficiently established for them to be assessed to an incoming tenant; but the majority of them declare they do not consider public valuers are competent, or armed with sufficient fact, to deal with them. A general feeling would seem to prevail that advantage will be taken of a Tenant-Right scheme to obtain payment from the incomer for things of a doubtful value, and that our valuers need to be educated up to the Lincolnshire standard to resist them. There remains yet to be noticed the outward and visible improvements to land, the fruit of toil, industry, and patience of the occupier, producing more permanent results than artificials in any form, but in no respect encouraged by Tenant-Right. The security offered by well-tilled land free from weeds is to be preferred to a foul surface dosed with nitrates or dissolved bones, and if this fact was more generally recognised I have no hesitation in saying that Lord Derby's prophecy that the produce of the kingdom might be doubled, would approach realisation. Make a tour of a few miles around this town, take notes of the number of half-cultivated acres, and of those covered with rushes and gorse; if it is not nearly 50 per cent. of the whole I shall be surprised. Does anyone

mean to tell me that Tenant-Right alone is going to regenerate these profitless acres. Has not the want of capital much to do with it, and are you not making the redemption of these lands more distant by imposing a heavy tax upon an incoming tenant for matters of a doubtful value. It is not clear to me that many good men will not be kept out of the field by a too stringent Tenant-Right. The small capitalist who hopes to arrive at the top of the ladder by the sweat of his brow will be defeated, and he of all others is the man to take hold of these neglected lands, and put a new face upon them. Be cautious in imposing liabilities on an incoming tenant, let the value of a claim be clearly established before demanding payment, mete out compensation with justice, let the man who brings his holding to a high state of fertility by sheer labour feel that his exertions shall be rewarded. An old adage says, "An ill husbandman is he who is forced to buy that which his farm might produce;" and, no doubt, the better your tillage, the clearer your surface, the greater will be your crop. By way of illustration, I will relate the case of a Roman citizen, who, upon the complaint of his neighbours, was indicted and brought before one of the rulers for having used sorceries, charms, and witchcraft, whereby he had gathered from a little piece of ground a far larger bulk than they had from much greater possessions. When called upon for his defence, "My masters," quoth the citizen of Rome, "behold, these are the sorceries, charms, and all the enchantments that I use," pointing to his daughter, a lass lusty and strong and big of bone, yea, and well fed and as well clad, his draught oxen full and fair, and with his tools, plough-irons, coulter, strong and tough spades. "I might besides," quoth he, "allege my own travel and toil, the early rising and late sitting up, the careful watching and the painful sweats which I daily endure; but I am not able to represent these to your views, nor to bring them hither with me into this assembly." This Roman was acquitted, and we have a lesson from which we may learn that success in agriculture proceeds as much or more from the labour and skill of the husbandman as it does from the artificial applications brought to the soil by him. It has been my endeavour to impress you with the consequences which will follow the establishment of Tenant-Right, I have taken for my basis, as you are aware, the Agricultural Holdings Bill now under discussion in the House, because I do not apprehend the carving and gilding that may be practised upon it there will greatly alter

the spirit of the measure. The country seems bent upon passing a Tenant-Right Bill without much stimulating from the tenant-farmer, and there is a recklessness about the whole proceeding which betokens a want of knowledge with those who originated the question. I shall be much disappointed if I have not induced the majority of my hearers to feel and acknowledge that there is a very great deal to be learnt on the subject of unexhausted improvements. Before justice can be done to the incoming tenant, a severe task must be mastered by both farmers and valuers. The actual benefit which soils derive from artificials, whether applied directly in the shape of chemical substances, or indirectly through the carcass of an animal, has to be ascertained. The duration of these things in the respective localities in which they are employed must be discovered, and last, but not least, the money value of the unexhausted residue they leave in the soil under various circumstances required to be ascertained. Now, how is this to be achieved? I would submit, by practice and observation. You have heard how various are the results which follow the use of artificial manures and food in different localities, and must perceive how it influences their value. From this time it seems to me every neighbourhood must provide for a series of experiments in its centre with all sorts of manures and foods; the information which must naturally follow such a step will be of infinite value to agriculturists, and the foundation on which valuers will make their calculation in the several counties. Unless some scheme of this kind be introduced, I do not see how you will overcome the mystery which now shrouds the whole matter. I would not confine these experiments to the tests I have mentioned, but would have all artificial manures and feeding stuffs analysed and certified before exhibiting them for sale. With the risk of bringing upon myself the indignation of the vendors of these things, I have no hesitation in declaring that a large amount of spurious material is annually sold to the farmers. You cannot wonder at it. The manufacturer is perfectly conscious of the consumer's ignorance of the commodity he is preparing for the market, and mixes his article accordingly. I have touched briefly upon this business, because it is in such close relation to the "liabilities of the incoming tenant," and, in the words of Mr. Lawes, I "leave the farther discussion of this complicated and difficult subject to those whom it may most concern."

## THE AGRICULTURAL STATISTICS OF INDIA.

[A Paper read at the Society of Arts by Mr. CLEMENTS R. MARKAM, C.B.]

Agriculture is the main resource on which India relies for the supply of her wants, and the branch of administration dealing with it is the most important that can occupy official attention. Through it statesmen may be furnished with knowledge which will enable them to improve the condition of the people, to increase their means of subsistence, to avert famines, to add to the wealth of the country, and to adjust taxation. And it is because this knowledge is not marshalled and classified with sufficient accuracy, and brought to bear upon current questions, that disasters and mistakes have occurred, and that the progress of the country in moral and material prosperity is checked and retarded. It is the want of accurate knowledge of facts, and most assuredly not the want of capacity to deal with them when known, that is the evil to be grappled with. Expenditures of millions to avert famines, barrenness from *reli* efflorescence, water-logged villages, and all other evils connected with the British administration of India, are due to want of knowledge; and the consideration of the ways and means through which accurate knowledge may be brought to bear on the consideration of administrative questions is the first step to the adoption of a sounder system of record, and to the eventual introduction of efficient measures for securing the desired results. It is, however, essential to a right understanding of the matter, that we should bear in mind the habits and policy of the agricultural communities in India, and consider, as the basis of all future measures, the machinery for the collection of agricultural statistics which has existed among them from time immemorial, in a more or less efficient form. Systems which may be adapted for one country and one state of society are

often not suited for others. Information that is needed by one Government may be useless to another; and any *doctrinaire* attempts at uniformity are strongly to be deprecated. The first and leading rule should be to use the machinery which is adapted to the habits of the people, and to improve existing methods, rather than to attempt the enforcement of uniformity or the introduction of theoretical improvements. The record of agricultural statistics is coeval with civilised government, and assuredly such excellence as has ever been attained in administration for the good of a people has been due to the action of rulers, founded on more or less accurate knowledge. In Peru, under the Incas, the happiness and material comfort of the people were more completely secured than in any other country the history of which is recorded; and in Peru agricultural statistics formed the basis of all the measures of the Government. So exactly were the resources of every district known, and so complete were the arrangements for supplying one district with the superfluities of others, that not only were famines rendered impossible, but the regular system of exchanges secured a degree of comfort for the people throughout the empire such as is unknown in these days. A knowledge of the crops, and of all other products, was obtained by means of a village system entailing exact measurement. It was almost effaced in later times, but the attention of Peruvian statesmen is now aroused to the perfection of the Incarial system, and to the necessity for exact statistical records as a means of good government. The statistical volumes that are in preparation in Peru, one of which is actually published, are based on correct principles of record and classification, and are very far superior to anything of the kind that has yet

appeared in India. I have alluded to the facts relating to a country almost at the antipodes of India, because it seems desirable to point out that the importance of agricultural statistics is not confined to any region, and that results have been secured by them in former days such as are certainly not equalled in our time. Yet the machinery was analogous, and we may, therefore, conclude that like results must be sought through that machinery, and not by substituting any other. In the East, although the demand for agricultural knowledge has been more entirely due to fiscal considerations than in Peru, the necessity for it has from time immemorial been as strongly felt, and its acquisition has been sought by similar means. Unhappily, the records of the past are lost or incomplete; still, in disadvantages, we can discern the fact that agricultural statistics were the basis of good government. When they were neglected, mistakes, arbitrary exactions, and consequent poverty and misery, were the consequences. Attention to them was synonymous with an age of prosperity and happiness. In Persia, the king whose memory is most revered, and whose reign is ever referred to as the happiest and best, was Nourshewan; and it was Nourshewan who, carrying out the intention of his predecessor Kohad, first established a revenue survey, and a system of measuring and classing the lands. In India all prosperity and happiness is ascribed to the reign of Akbar; and the work of the great king's favourite minister proves that a very elaborate system of recording statistics were in force. The "Ayén Akbori" explains the rules for measuring the fields, for classing the soils, and for ascertaining the weight and value of the crops. The institutions in India, such as the village communities, which grew out of the necessities of the people, and have existed from time immemorial, and others involving special tenures of land, which have now been introduced by former governments, are now an integral part of British rule; and it is through the machinery supplied by native institutions that our knowledge of the condition and wants of the cultivators must be obtained. The welfare, and even the existence, of the people depend on the correctness of this knowledge, and on the way it is used; so that the importance of agricultural statistics cannot be over-estimated. When we find the cultivators well off in one district, depressed by poverty and want in another, or on the verge of starvation in a third, we may feel sure that these differences are, to a great extent, due to want of exact knowledge on the part of the rulers. The inequalities are roughly shown by comparing the average amount of land revenue per head of the population, which varies in different parts of India. In Bombay it is 3s. 4d.; in the North-West Provinces, 2s. 5d.; in the Punjab, 2s.; in Madras, 2s. 6d.; and in Bengal and Assam, 1s. 1½d. If we select a village in any part of India, and examine carefully into its interior economy, the wants of its inhabitants, its immemorial institutions, the system of agriculture that prevails, and the machinery for collecting information relating to it for fiscal and other purposes, we shall have a rough, but a sufficiently good notion of the material from which the items of information must be brought together and compared, so as to form a serviceable body of sound knowledge. For such a village is one unit in our calculations, and its combination with other units enables us to supply the facts which administrators need. In the Bombay Presidency, the means exist for such an examination in perhaps a more complete, and certainly in a more accessible form than in other parts of India. For in the Mahratta country the village system, which during centuries of misrule was the only centre of stability and the only repository of civil rights, is still maintained, and each village has more than once been the object of minute statistical inquiry. Fifty years ago a typical village in the Deccan was selected by Mr. Coats for examination, and the particulars relating to it are applicable to other Mahratta villages. Twenty years afterwards the settlement necessitated a similar investigation of every village, when Mr. Gooddive reported upon the village communities; and there has been a third such investigation, connected with the new settlement, quite recently. Here, then, we have the bases for statistical inquiries, in a knowledge of the condition of agriculture and of the agricultural population, at three distinct periods. It is, unhappily, very necessary to insist that the object of statistics is not to fill ruled table with figures, but to secure the well-being of an aggregate of units, by obtaining an accurate and scientific knowledge of the wants of each, and of this means for supplying such wants. The unit is the village cultivator;

and if we would really understand the use of Indian agricultural statistics, we must begin with some acquaintance with the agriculturist. In the Bombay Presidency we recognise him as a lean man, with prominent muscles, and small hands and feet, with eyes full and black, cheek-bones high, and teeth stained with betel, clothed in a *longoti*, or rag between his legs, and another round his head, with a black woollen cloth, or *emali*, in cold weather. He is frugal, and not improvident; better informed than most European labourers, and devoted to his children, but cunning and false. He forms one in a population of about 600 to 1,000, which cultivates some 4,000 acres, and lives in a village surrounded by a mud wall, with two gates. The 150 to 200 houses are of sun-dried bricks, with terraced roofs, and there are open porticoes along their fronts, but the few small dark interior rooms have no windows. The two or three temples will be of hewn stone. The furniture of a cultivator's house consists of a copper boiler and a few other copper vessels, about twenty earthen pots, to hold stores of grain and other food, a large wooden dish for kneading dough, a flat stone and rolling-pin for powdering spices, two iron lamps, and two beds laced with rope. The whole will not cost much more than forty shillings. But his agricultural implements and bullocks are his most valuable possessions. The plough, consisting of beam-head, and handle, but having no share, and leaving a mere scratch, is made of babool wood (*Acacia Arabica*), and only cost a few rупes. The cart is a rude frame on two solid wooden wheels, and there are also a harrow with wooden teeth, and a drill plough. A pair of good oxen is indispensable, and the well-to-do have two pairs. All these matters are of moment in calculating the cost of cultivation. The arable land consists of *jiugal*, the crops from which depend on rains, irrigated land, and *bagayat* or garden lands, where fruit trees and vegetables are carefully cultivated, and often surrounded by a hedge of the blistering milk bush (*Euphorbia Toxicaria*). The *kumbi*, or cultivator, has two crops to attend to during the year; the *khariif*, which he sows in June and July, and reaps in October and November; and the *rabi*, which he sows in the latter months, and reaps in January or February. For the *khariif* he sows *bjuri*, or spiked millet, the chief food of the people, in rows, with a drill-plough, mixed with *toor* and *muthic*, two pulses. *Jawari*, or great millet, *rabi*, and some other smaller millet, are also *khariif* crops. The *rabi* crops are wheat and grain; and a variety of seeds are often mixed in the same field, which is one obstacle to correct statistics. The land is only ploughed once in two years, and the depth of a span is considered sufficient, the cultivator working from six in the morning until eleven, and again from three until sunset. All land, whether ploughed or not, is subjected to the drag hoe, first lengthways and then across, which loosens the surface and destroys weeds. This operation is repeated three or four times at intervals of eight days. When harvest begins, a level spot is chosen for a thrashing-floor, and made dry and hard. A pole five feet high is stuck in the middle, the grains are stacked round the floor, and the women break off the ears and throw them in. Six or eight bullocks are then tied to each other, and to the post, and driven round to tread out the grain; and the winnowing is done by a man standing on a high stool, and submitting the grain and chaff to the wind from a basket. The cultivator requires but little food. It consists of cakes made of millet flour, with water and salt, baked on a plate of iron; greens, pods, or fruits cut in pieces, boiled and mixed with salt, pepper, or turmeric, and then fried in oil; and porridge of coarsely-ground *jawari* and salt. His wife brings him his dinner at noon, and the two other meals are taken on setting out and returning to and from the fields. The working-day toils are interspersed with pilgrimages to temples, and holidays, such as the *Holi*, or full moon in April, which lasts five days, when many games are played; the *Dushera* in October, the *Devuli* twenty days afterwards, and the feast in honour of the bullocks in October, when the poor beasts are painted, dressed up, and fed with sugar, and their masters prostrate and worship them. The office bearers of the village, including all the artificers, form an institution which has undergone no alteration from time immemorial, and they also enter into calculations connected with the statistics of an agricultural village. The *patel*, or head of the village, has freehold land or special rights, and the *kulkarni*, or accountant, also receives remuneration in various ways. These two officers supply the machinery in every village for collecting statistical details. The *Barra Ballwoti* consists of twelve

hereditary office-bearers, including the *patel* and *kulkarni*, who receive certain fees or remuneration from the village in exchange for professional services. Thus the *sutar*, or carpenter, the *lohar*, or smith, the *chamkar*, or shoemaker, are paid by each villager, and they mend all implements for agricultural purposes, the owners finding the materials. Some of the office-bearers have a right to a certain number of rows in the crops, and all the fees form items in the statistical calculations. Such are the circumstances which surround our cultivator in the Deccan, and for the most part throughout India—he who forms a unit in the vast aggregate of similar units which are the source of the wealth and the revenue of British India, and whose welfare is the ultimate object of agricultural statistics. The proper statistical unit is, therefore, the extent of land which one of these living units can plough with two bullocks; and this area, in the Bombay Presidency, is called a "number." It is the smallest extent of land that can be ploughed and tilled by the cultivator or bread-winner, so as to serve for the support of his family. If an accurate record can be kept of each of these "numbers," as regards the nature of the soil and other circumstances, the crop and its yield, and the items which compose the cost of cultivation, the aggregate of these particulars for all the "numbers" forming a village, and all the villages forming a district, will furnish the materials required by the statistician. The three essential bases of statistics are—space, which is the abstract of all relations of co-existence; number, which is the abstract of all relations of comparison; and time, which is the abstract of all relations of sequence. Now, the first basis, namely, area or space, is supplied by the survey for fiscal purposes. Number is derived from the periodical census, and is the relation between the bread-winner and his crop, or between the aggregate of bread-winners and the aggregate of crops. Time, the third basis, is obtained through the periodical surveys; and the comparison between prices of all articles and services which form the items of the cost of cultivation supply, and the means of examining the relations of sequence. In the Bombay survey, the "numbers," or fields of a village, varying in size from what a pair of bullocks can plough to double that quantity, are carefully measured, with the necessary checks to insure accuracy, lands held on different tenures being measured separately, and different kinds of culture, such as wet, dry, and garden, being treated as separate "numbers." The checks are taken by a European assistant, and the errors of native measures are not allowed to exceed 2 per cent. All the original records are kept in the vernacular language. After the "numbers" or fields composing a village are measured, there is a process of classification for purposes of assessment, which also supplies essential information in the preparation of agricultural statistics. The fields are classified, according to the productive capability of the soil, in three distinct orders, black, brown or yellow, and gravelly. These are again gauged according to their depth, on which depends their ability to imbibe and retain moisture. Then the presence of deteriorating ingredients, technically called "faults"—*choonkud*, a mixture of nodules of limestone; *walsa*, a mixture of sand; *potawal*, sloping surface; *keswal*, want of cohesion among particles of soil; *kanul*, a mixture more or less impervious to water; *doopun*, liability to be swept over by running water; *populwal*, excess of moisture from surface springs; *gochur*, mixture of large nodules of limestone—is taken into consideration, as well as the means of irrigation and distance from markets. Thus the statistical limits are measured and classified, and a return for them is made for each village, with the population, number of live stock, carts, ploughs, wells, and other agricultural details. These returns are only prepared at intervals of some years. But every year statements are sent in of the number of acres in each village under 25 of the principal crops, with the number left fallow and temporarily out of cultivation, the prices and the rate of wages, and village population. The village accounts are combined, so as to give the results for each *taluk*; the *taluk* accounts are united into accounts for collectorates and divisions, and these again furnish agricultural statistics for the whole Presidency. I have selected the system prevailing in the Bombay Presidency for more detailed description, because, to the best of my judgment, it appears to be best adapted for the record of statistics making some approach to accuracy. The same system has been introduced into Mysore, and eventually, not at present, statistics will be available from that State in the same form as those which can now be supplied from

Bombay. But there is analogous machinery, differing in details in several other parts of India. In the Madras Presidency the statistical records collected between 1810 and 1825 are most full and complete in every respect, more especially those for Tinnevely. At present the measuring portion of the survey is effected with greater scientific accuracy than in Bombay, and the classing of soils is done on similar principles. Annual returns are furnished of the acreage of cultivable and cultivated land in each village, and of irrigated and dry crops, as well as of three principal crops, sugar, cotton and indigo, and of prices and rates of wages. But the acreage under various millets and pulses, and other dry crops, is not given separately, as in Bombay, the Punjab, Oudh, &c. There is also, in Madras, a quinquennial agricultural census, containing those details of population, live stock, implements, &c., which are furnished in Bombay at each settlement. In Malabar, however, which is one of the most interesting districts in the Madras Presidency, owing to the prevalence of peculiar private rights, it is more difficult to obtain statistics. In Madras, as in Bombay, the village returns are combined into those of *taluks*, and are only published showing the general results of each collectorate. In the north-west provinces the different settlements, and especially the most recent one, have furnished a series of records and maps which are useful with reference to the time they were made. But hitherto these records have not been kept up to date. There is, in this part of India, only one section of the agricultural statistics which are recorded in Bombay and Madras, namely, those given in the periodical settlements. Details can only be supplied referring to certain periods, and not annually. The extent of the information that has been periodically recorded can be judged from the report recently made by Mr. Halsey on the district of Cawnpore. He was enabled to show the estimated cost of cultivation of the six principal crops, as deduced from statistics collected at three different periods by Sir Robert Montgomery, Mr. Hume, and himself. The details include the quantity of seed required to sow an acre, the cost of ploughing, sowing, manure, weeding, watering, bird-scaring, reaping, thrashing, the total expenses, rent, prices, and quantity and value of each crop per acre; the prices of grain and pulses each year for fifty years; and a comparative statement of produce when unirrigated, and when under irrigation by wells or canals. But annual returns were also needed in the north-west provinces, and the suggestion of Mr. Buck, the secretary to the Board of Revenue, that a special officer should be employed for the supervision of the records, has recently been adopted by Sir John Strachey, the present Lieutenant-Governor. This officer will supervise the collecting agency, see to its efficient instruction, and provide an annual series of agricultural statistics. His subordinate staff will test the accuracy of the maps and records, and he will himself concentrate and arrange the materials on a uniform plan. In the Punjab, where the village system prevails, the measurements were executed by the *Patwars*, or accountants, who were specially trained, and who prepared the field maps and registers, under a careful series of checks. The Punjab settlement reports are perfect mines of statistical information. Among others, that of Mr. Barnes on the Kangra district may be mentioned as most interesting; while that by Mr. E. A. Prinsep, on the Sealkot district, is remarkable for the amount of valuable suggestive matter it contains, and for its admirable series of maps, which show the immense importance of that method of statistical illustration. The acreage, first of culturable and unculturable land, and then of irrigated, moist, and dry cultivation, are given, the classification of soils and the distribution according to products as well as the systems of rotation of crops, also the number of ploughs, carts, cattle, population, prices, and rate of wages. This information, with many other interesting details, is contained in all settlement reports, and the adoption of a measure similar to that approved by Sir John Strachey in the north-west provinces will place the Punjab on the same footing. In the Lower Provinces of Bengal, the permanent settlement has caused the effacement of that machinery for the record of agricultural statistics which is supplied in other parts of India by village and district officials. They cannot be collected without a separate staff, which would entail great expense, but Sir George Campbell has introduced a plan of selecting certain districts for statistical treatment, which will at least be useful so far as those special districts are concerned. But it will be long before satisfactory results will be received from this rich and important province. There are monu-

gradus on some of the special products of India, such as tea, silk, cotton, tobacco, fibres, and especially jute; and others are needed on opium, indigo, coffee, and sugar. These form admirable bases, and should be given for each year in the annual returns. Closely allied to agriculture, and forming inalienable portions of the subject, the statistics of irrigation should be collected and displayed side by side with the facts referring to the area and yield of crops and the cost of cultivation. The present returns give the area of land under irrigation, and the classification of soils, as well as the rainfall. To these details should be added the sources of water-supply, and the depth of water in wells. The disturbing influence which irrigation, when supplied to a region hitherto mainly under dry cultivation, has upon agriculture is very striking. In a district of Rohilkund the area under well-irrigation increased from 4,991 acres at the period of the settlement of 1835 to 202,505 acres at the last settlement. But Mr. Buck points out that, at present, our ideas on the results of irrigation (he is speaking especially of canal irrigation) are founded on mere conjecture which a series of reliable statistics would enable us to replace by knowledge based on certain and accurate facts. It is by no means certain that the introduction of canals would be beneficial to a district—frequently the reverse would be the case—and accurate knowledge may as often avert administrative errors as promote the construction of useful public works. In some parts of India the whole history of agriculture and population depends upon irrigation. In the open country of Mysore, for instance, population has little or no existence except in connection with works of irrigation, and nearly 60 per cent. of the whole area of that State has, by the patient industry of its inhabitants, been brought under the influence of tanks. The total number as given by Major Sankey, is 26,450, or one per square mile. It is sufficiently clear, from such facts as these, that details of irrigation must form an integral part of efficient agricultural statistics. The question of timber and fuel supply is also most important in connection with the operations of agriculture, yet until the last thirty years it was wholly neglected. Forest conservancy was commenced in India not a single day too soon, and not before agriculture had begun to suffer very severely from its neglect in many parts of the country. In the Ceded District timber is so scarce that the very cart-wheels are made of stone, and in other districts all timber is so difficult to get that the operations of the farmer are sensibly crippled. The destruction of forests, and consequently absence of trees, has also so curtailed the means of manuring the land, in many parts of India that it is permanently in a poor and exhausted condition. Leaf manure cannot be procured, the area for feeding cattle is reduced, and yet the people are obliged to use such small supplies of manure as they still have for fuel. Thus, from an agricultural point of view, the measures for forest conservancy have become most important; and the amount of forest, with its comparative value, and the extent to which its produce is available for agricultural purposes in the different districts, is another integral part of agricultural statistics. But it is a part which is not yet attainable. Its first basis, a survey of reserved and communal forests has only just been sanctioned in the North of India, and has not yet been permitted in Madras. Knowledge respecting this branch of the subject can only at present be had in a very general and mutilated shape. A third, and not the least important collateral consideration, is that of communications, proximity to markets, and facilities for transporting produce. It is certain that every year, including famine years, the crops raised throughout India are sufficient to feed the whole population of India. The question of food supply, the most momentous that can come under the consideration of the Government, consequently resolves itself into one of distribution. It is not enough to know the quantity of grain in each district; the means of transport, and the distances from good roads and railroads must also be considered, and these particulars ought to be included in the commentary on agricultural tabular statements, with market prices. In Northern India we are assured by Mr. Halsey that the average prices of grain and other staples are such as to preclude their paying even the cheapest forms of transit for long distances. But the traffic in grain is a proof that this is not generally the case, and a correct view of the facts bearing on cost and means of transfer in the different districts of India, is one of the most essential items in the preparation of really useful agricultural statistics. I have now given a general view of the character and extent of the information which is collected. In all parts of India

where there has been a revenue settlement we have one or more reports on the agricultural condition of each district, containing many details which are needful in calculating the cost of cultivation. In Bombay there are annual returns of cultivable and cultivated land (distinguishing wet, dry, and garden), with the acreage under 28 principal crops, prices, rate of wages, and population. They are based on village accounts, which are in the vernacular. These are condensed into tabular returns, whence the published returns for each collectorate are compiled. In Madras (exclusive of Malabar) the same information is available, except that instead of the 28 principal crops, only the wet and dry cultivation is given, and three other special crops, sugar, cotton, and indigo. But in Madras much additional information is furnished in the quinquennial returns, which in other parts is only found in the settlement reports. In Mysore, information of the same character as is supplied to the Bombay Government, will be eventually attainable as soon as the survey is completed, and also in the central Provinces. In the North-West Provinces statistical information has hitherto been mainly derivable from settlement reports, but a system of annual returns has now been inaugurated; and in the Punjab a similar system can be introduced. But in Bengal there will long be difficulties in obtaining any but very general views respecting the state of agriculture, owing to the effacement of native institutions through the permanent settlement. There is, however, over the greater part of British India, exclusive of the native states, machinery for collecting agricultural statistics, which is based on ancient local institutions, and best suited to the customs of the people, and the returns that are made serve many of the purposes for which they are required. It is to their improvement with the use of the same agency, not to the enforcement of uniformity, and the demand for figures to fill up, cut-and-dried tabular statements, that we must look in our effort to make more perfect the method of collecting and recording statistical facts. Although the machinery is there and at work, yet there is undoubtedly a great want of accuracy and reliableness in the returns. The facts are not brought together so as to furnish the knowledge which is so much needed. The most efficacious remedy for this state of things lies in the step taken by Sir John Strachey, and this ought to be imitated in all parts of India. For securing accuracy, which is, after all, the main point, the standard of intelligence among the actual measurers and collectors of statistics for the village records must be raised, and the checks on their work must be rendered more effective. This can only be done by a special officer, with a small staff, whose duties would be to supervise the efficient instruction of the subordinates, to apply checks for securing accuracy, and to prepare the statistical returns and memoirs. The small cost entailed by such an appointment would be amply repaid by the value of the work. In preparing the returns, a commentary should accompany the tabular statements; and statistics of irrigation, forests, and communications should form an integral part of the agricultural reports. Another indispensable change is the supply of more detailed information. At present all the returns are lumped into statements for whole collectorates. But these divisions are much too large for any useful purpose. They often include every kind of soil and climate, mountain and valley, plateau and swampy plain, and, of course, every description of product. When information which only concerns a portion of a collectorate is given as if it vaguely affected the whole, it is not possible to make any graphic and effective use of it. It is, therefore, essential that the returns for each *taluk*, or division of a collectorate should be available; because the *taluks*, as a rule, include one class of cultivation, and will, therefore serve as units for purposes of illustration. Why not take the village at once? It is the actual unit. The *taluk* returns are only the totals of the villages contained in the *taluk*. The local government could not operate on a *taluk* return. Upon any question arising the Government would have to recur to the village returns. The adoption of the village would place the registration on the same footing as the English and other European systems. The *taluk* returns are made up in the vernacular, but abstracts of them would not involve much additional labour, while the advantage of obtaining them would be very great. I now come to the second part of my subject, in which I propose to submit the uses to which agricultural statistics should be put, and to a certain extent are now put, in India for administrative purposes, and next in this country for the supply of informa-



tion. Statistical inquiries are primarily instituted for the purpose of ascertaining the gross receipts from agricultural operations, in order that a portion of the profits may be deducted as the land tax. An important object of agricultural statistics must be to ensure the provision of accurate and complete knowledge in fixing the assessments. Too often there has been action without complete knowledge. The assessment has occasionally been too light, but more often it has been so heavy as to absorb all the profits, and in some cases even to encroach upon the sum which should be set apart for expenses of cultivation. The consequences of such mistakes are very serious. One out of many instances may be selected from the reports in the district of Cawnpore, by Mr. Rose, in 1871, and Mr. Halsey, in 1872. Mr. Rose tells us that no district has ever suffered so much from bad administration as Cawnpore, owing to excessive revenue rates; and Mr. Halsey draws a still further picture in 1872. The abject poverty of the average cultivator is beyond the belief of anyone who has not seen it. The demand actually encroaches upon the sum that should cover the cost of cultivation, and the land could not be cultivated with hired labour, so as to leave a margin of profit. The cultivators are slaves to the usurers and to Government, and live just on the very verge of starvation. This state of things, wherever it exists, and it exists in many parts of India, is due to a want of accurate knowledge on the part of revenue officers, so that the importance of agricultural statistics, and of a thoroughly efficient system of recording them, can scarcely be over-stated, for to ruin and starve the cultivators is to destroy the wealth of the country. A second use to which agricultural statistics should be put is to secure the selections of judicious lines for irrigation canals. In choosing a country through which such a canal should pass, there are other considerations beside the head of water, the rainfall, and the levels, of equal importance, which are all connected with agricultural statistics. One is the nature of the soil. In some soils, unless there is good and expensive drainage, as well as irrigation, there will be a salt efflorescence, which will convert fertile land into a barren waste. In others, although the rainfall may be deficient, irrigation is unnecessary, because the richness of the soil renders dry cultivation profitable. Mr. Minchin has well pointed out that, under such circumstances, it is idle to expect a complete revolution in the agriculture of the country because it has pleased the Government to construct a huge work of irrigation. Another serious mistake has sometimes been made by taking a canal through a region already irrigated by wells. It is a well-known fact that well water is more productive than canal water, and canal-irrigated land is apt to become water-logged for want of concurrent drainage. The real use of canals is to bring fresh and poor lands under the plough, not to bring out salt efflorescence, and to create water-logged villages; and a close attention to the lessons taught by accurately recorded agricultural statistics would prevent future mistakes in the preparation of large irrigation schemes. Another subject of inquiry, especially in the densely-peopled Lower Provinces of Bengal, relates to the preservation of the land from periodical inundations, whereby it is probable that large tracts of fertile land could be rendered available for food crops and human occupation. The improvement of agriculture is in reality, as will eventually be recognised and acknowledged, the most pressing of all Indian questions; and reliable statistics are the chief instruments for its solution, for it is not by introducing European appliances and ideas that Indian agriculture can be advanced. The first step must be an exact knowledge of Indian facts, and the second a careful study of Indian methods. Although agriculture is sadly behindhand, this does not wholly or even mainly arise from ignorance, but from want of means. For instance, manure is not sufficiently used, yet this is not owing to want of appreciation of its value, but to the absence of available means for obtaining it. The yield per acre of nearly every description of staple is less than in other countries, although the population is over vast tracts more densely packed. Yet the soil and climate of India will yield cereals as heavy and as good as the English climate, if manure and liberal improved agriculture could be applied. The condition of the people depends upon the state of agriculture, and questions of social science are ruled by facts recorded in agricultural statistics. It is well known to readers of police reports that increase of crime coincides with increase of the market price of food grains. Such principles as that industrious and hard-working classes should pay more rent than

those which are idle and improvident would scarcely be allowed to prevail if the facts were understood and appreciated, and more attention would be given to agriculture if its close connection with all social and sanitary questions were better understood. The prevalence alike of crime and disease is partly due to the fact that the people are insufficiently fed; and their misery is mainly the consequence of ignorance of facts, which should be collected and classified before action is taken which ought to be influenced by them. Thus in India agricultural statistics are required to decide questions relating to the assessment of taxes, the averting of famines, the construction of public works, the improvement of agriculture and the condition of the people, and as the connection of India with this country is one which makes it a necessity that all the details of administration should be thoroughly understood, and that all information that is recorded should be available here as well as there, it is evident that the details needed in India are also needed in England. The only difference should be that while in India these details are primarily wanted to decide upon direct administrative action, and for guidance in settling pressing questions, in this country they should be marshalled and classified for the illustration and clear setting forth of the information they convey, so as to furnish effective assistance in the consideration of lines of policy, and reliable guidance in the information of sound opinions. There can be no reason why Indian agricultural statistics should not be as well and as completely displayed and illustrated as those of any other country. To no other country is agriculture more important, and in none does the existence of the people so absolutely depend upon its well-being. In the information of an efficient scheme we may obtain ideas from the reports that are prepared in other countries. For this object the returns published for Great Britain and Ireland are of no use. They consist of three tabular statements without commentaries, the first giving the number of occupiers of land, and owners of live stock, with the average size of each holding; the second having columns for population, area, area under corn and green crops, grass, fallow, permanent pasture, orchards, woods, and number of live stock; and the third, showing acreage under ten different crops, and per-centage of corn crops, and live stock to total acreage. There is no other illustration, although rough attempts have occasionally been made to produce agricultural maps, showing the areas of prevailing crops. In the United States there is a nearer approach to what the Indian returns ought to be. There are reports for each State, including the details for every county, divisions which correspond with the *taluks* in India, and these are combined in the annual report of the Commissioner of Agriculture at Washington. The tables for each State show the amount of the different crops, the average yield per acre, the number of acres under each crop, the price, and the total value; the number, average price, and value of live stock, and the acreage of forests and woods. The reports are illustrated in various ways. One very suggestive diagram shows the proportion of forest area of farm lands in the several States, with reference to timber and fuel supply. The diagram consists of square blocks, divided into white and shaded portions, showing the farm area in acres, and the proportion of that area under forest. The report is not a mere series of repulsive tabular statements, but consists of interesting chapters, illustrated by tables and diagrams. In France the agricultural returns are most voluminous, and they furnish complete materials for their illustration by means of maps and diagrams. The agricultural map, recently prepared from these returns, by M. Delessé, is very suggestive. It comprises the whole of France on a scale of 500,000, yet it shows the division of cantons (equivalent to Indian *taluks*), the arable land, pastures, woods, and vineyards, and the courses of equal revenue indicated by graduated shades. The whole forms a most suggestive and graphic illustration of one aspect of French agriculture. In Holland, especially with reference to the development of the resources of Java, much attention has been bestowed upon the illustration of agricultural statistics, and monographs have been prepared on special products. In one of these works there is a series of maps and diagrams, showing the results of rice cultivation in Java. It strikingly illustrates the use that may be made of those items of information which show the cost of production, including the quantity of seed required to sow an acre. By this method the facts are presented with far more clearness and precision than if they were huddled into tabular statements. The map and diagram for each year, occupying a page, show at a glance the profit



or loss on rice cultivation in every district of Java. The maps and diagrams which have occasionally been prepared in India itself are also suggestive, and some of them should certainly be adopted for continuation in a series. The maps of the earlier surveys in the Nizam's territory are very beautiful specimens of cartographic illustration, and show, besides physical features, the irrigation system, and the fields under wet and dry cultivation, as well as waste land. The series of maps prepared by Mr. E. A. Prinsep are also full of useful suggestions. One of these shows the productive power of a district as influenced by rain or aided by irrigation, with lines of rainfall, lines showing depth of water in wells, and other particulars. Others give areas under different kinds of produce, prices quoted in different markets, with a diagram, areas of various classes of soils, and physical features, with zones of fertility. Diagrams are also most useful aids to the comprehension of statistics, and often show at one glance what it would take some time to gather from columns filled with figures. In Bombay the extent of Government land annually in cultivation in each *taluk*, with the assessment on it during a series of years, is always shown by a diagram, and this is also the best method of showing the fluctuations of market prices. One large map of a collectorate, that of Sholapore, has recently been completed under the orders of the Bombay Government, which shows the division into *taluks* and villages, the river system, and the various tenures. Even on a smaller scale many other particulars could be shown, which are best exhibited by cartographic illustration, such as the distribution of soils, the wet and dry cultivation, the area of special crops, and the lines of rainfall. Both from other countries and from India many valuable

suggestions are available for the illustration of statistics, so that in the commencement of a series of annual returns in this country, with the agricultural memoirs as a basis, there is excellent guidance. I should propose, in the first instance, to select one special agricultural region for illustration, as a type or pattern upon which other maps should be prepared on smaller scales and covering a larger area. This plan, which is suggested by the excellent tentative measures of Sir George Campbell, is, as it seems to me, almost a necessary preliminary to useful work. I have selected for typical illustration the most southerly district of British India, that of Tinnevely, for several reasons, the chief of which is that the necessary details are likely to be accessible at present, and experienced advice is at hand. Tinnevely also presents a great variety of features. It has an interesting system of irrigation, various soils, wet and dry cultivation, districts covered with Palmyra palms, special crops, such as cotton and senna, forests and coffee plantations; and it also includes, within its limits, the two products which form the subjects of papers I have previously read before the Society of Arts—namely, chinchona cultivation and the pearl fishery. Maps, with the same elaboration, could not be prepared on the same scale for all the districts of India. But the Tinnevely map, besides its intrinsic value, will be very useful in showing the materials out of which smaller scale maps covering large areas are produced. Eventually, agricultural maps might be prepared for the Madras and the Bombay Presidency, for Mysore and the Central Provinces, and for other divisions of the Bengal Presidency, forming a series of most valuable cartographic illustrations of Indian agricultural statistics.

## DAIRY FARMING ON LIGHT LAND.

No. I.

BY THE NORTHERN FARMER.

To keep a heavy stock of milch cows on a farm which is worked to the last acre on an intelligent and regular system of convertible husbandry, if not in itself the embodiment of commercial success, is at least one of the surest methods of farming, available to the ordinary working tenant, by which this important element may be attained. Dairy produce, being in continual demand for daily consumption, is subject to comparatively little fluctuation; and, under whatever form it may be offered for sale, if of first rate quality, commands a high market value all the year round, is at all times saleable, either in large or small quantity, requiring no pushing or business-like energy to get rid of it, but invariably placing itself, and thus in another way commends itself to the man of moderate means, by bringing in a continuous stream of money to meet current expenses. When a dairy has become thoroughly organised, the stalls full of the right kind of stock, and the cropping so arranged as to provide an abundant supply of food at all seasons, the people charged with its management intimately conversant with its details, taking an absorbing interest in their duties, and a laudable pride in turning out produce of the very best quality, difficulties vanish, and the entire business goes on with surprising smoothness and accuracy.

Highly important as it undoubtedly is to have a rich piece of old meadow or permanent pasture on which the cows may be put to graze, if only for a few hours each day, dairying can yet be carried on successfully without it, and excellent results can be obtained, even although they have no better run than what is afforded by the young grasses and clovers of the rotation. To those who dispose of the milk as drawn from the cow this system especially commends itself, the succulent food, given regularly, forcing the animals to give all the milk which their system is capable of yielding, the quantity given for the season rising above the average more in consequence

of the flow being steady, and continuing as long as it is safe or advisable to milk them, rather than by a perceptible increase in each day's produce. As a rule, a noticeably heavy milker does not continue so for a very lengthened period after calving, but after a couple of months begins to lessen, and will probably be completely dry five months before she is again due. A moderate milker that goes on steadily, and gives milk until within as many weeks of her time, will thus completely distance the cow of much greater promise, and although at her best time giving but four and a half gallons a day, will often give a great many more gallons throughout the season than her comrade that made a wonderfully greater show, by beginning at seven gallons. Further, a particularly good cow, that milks close to the period of parturition, is not to be judged by her performance immediately after calving, as, if fed regularly in and out, as here recommended, her system will be strengthening for a good many weeks, and her energies fully renewed: it will frequently be found that she is milking better three months after calving than she did at only three weeks. The arable farmer who sells his milk direct from the cow has, unless in some exceptional cases, the best opportunity of any for extracting the largest possible profit from his dairy stock; as, first of all, having nothing to do but get the milk drawn from the cows, and send on to a contractor or factory, as is the case in districts where the process of preserving milk is carried on, or to a public institution, his expenses are reduced to the lowest limit. Again, he is not subjected to annoyance on account of quality at any season, as, if he feeds with nutritious food in proper quantity, the milk will have body, and no objection will be taken to its flavour, whatever the quantity or kind of roots used in feeding. Those who have had opportunities of trying the different modes of disposing of dairy produce invariably

give their testimony in favour of getting rid of it at once as it comes from the cow, the receipts being not only larger, but the working expenses and anxieties in connection with its manufacture vastly lessened. As it is evident, however, that only a very small proportion of those who keep cows can avail themselves of this way of turning their product into money, it is well that other modes of doing so are open to them, by which, if they cannot be quite so successful, they may yet, by careful management, clear all expenses, and still have a fair margin left for profit. In the absence of a market for the sale of large quantities of new milk, the farmer who keeps a full stock of milch cows must turn his attention to butter-making, which is the next best thing he can do, when he has no permanent pasture or rich old meadows on which to graze his cattle. On an arable farm, with 100 available run for the cows but two, or at most three, years' old seeds, butter-making would be anything but profitable but for the abundant house-feeding, which it is here assumed is grown and given to the cows every day throughout the year. Although the pasture may do but little more than afford space for air, water, and exercise, yet the cattle may be kept in full milk for a lengthened season, and give it of a quality but little inferior to that yielded by cows fed on the finest old pasture. By making a comparison during the first four months of the milking season between a dairy of cows whose produce is sold direct off the farm, and another where it is retained and manufactured into butter, the difference in favour of the former would appear so great as to make it appear to the uninitiated or inexperienced a wilful throwing away of money to dispose of the produce in any other way than pure from the cow. To find out the actual truth, however, the comparison must be continued to the end of the season, when it will be found that, after the first flush of milk begins to wane—probably about four months after calving—the butter dairy picks up wonderfully, and recoups itself so largely during the later months, as to come much closer in the monetary receipts to the amount realised by the sale of new milk than could, judging by first appearances, have possibly been expected. This is easily explained in practice by the fact of the milk of continually well-fed cows, although inevitably falling off in quantity as the season advances, being richer in quality, and, in consequence, turning out a larger weight of butter to the measurement of milk than was done during the warm months. And, again, the quality and texture of the butter being at its best in August, September, and October, and the quantities sent to market getting gradually less, this article of farm produce attains its highest value during these months. Of course this comparison refers only to country districts, where the facilities presented for the sale of new milk are not of the highest class, as, in the neighbourhood of cities or large manufacturing towns, no form of dairy produce can compete with the unmanufactured article in the amount of money it can make, however excellent may be the quality. On a farm cultivated on a regular system of husbandry, and green crops necessarily entering largely into the course, and occupying each year a considerable breadth of surface, rearing live stock becomes a matter of vital importance to the farmer; and the mode of dairy management which enables him to keep his farm continually stocked at least expense, and with the least possible trouble, must be especially favoured, even although in some ways it might appear scarcely so money-making. In such a case the butter dairy especially recommends itself, as not only will each cow make a considerable sum *per annum* by the produce sold, but also make a large additional sum by rearing her calf, when the breed is of the right sort, a little linseed put through the milk strengthening it, and compensating so well for the

removal of the cream, as to build up strong, healthy, young cattle, suited for any purpose for which they may afterwards be required. This part of the subject naturally leads to the best breeds, for the double purpose here indicated, the dairy and cattle-breeding. For merely dairy purposes, it matters little what breed, or mixture of breeds, is patronised, providing the animals, under the influence of liberal treatment, can be forced to milk largely; but as in the system now advocated a much more important question is involved, the milking property can scarcely be allowed to take other than a secondary position. Most practical men who understand this subject, and who have for a series of years tested it by actual experiment, are agreed that a cross-bred cow combines the two much-desired and valuable qualities in a greater degree than can possibly be attained by any pure animal of the standard breeds. As an example of the deep milker, the Dutch cow takes a leading, if not first, position, giving milk, under the influence of good feeding, in extraordinary quantity, and continuing it far into the season. Her milking capacity is so enormous, that she recommends herself in an especial manner to those who supply milk in large quantity to public institutions; but with this single feature her usefulness begins and ends, as she is a hard feeder, consuming food in excessive quantity, and scarcely at any age compensating her owner for his trouble and outlay in feeding her. The exactly opposite quality is found in the Shorthorn, the tendency to lay on flesh being in the superlative degree; while the milking property, unless in some exceptional strains of blood, is not to be depended on, the cow of this breed, however freely she may milk for a short time after calving, being extremely apt to run dry long before the expiration of the season. Whatever the alloy, the Shorthorn must now be taken as the standard breed of the kingdom, its blood being largely infused into every herd from which a profit is expected. Where dairy business and the breeding as well as the feeding of stock are all carried on together, a three-quarter bred Shorthorn fulfils as nearly as possible the whole of the conditions necessary to success in each department, as any slight deficiency in one qualification is more than counterbalanced by the extraordinary aptitude to reach early maturity, which is evinced by her offspring. The breed used to somewhat check the running to flesh, to assist the milking capacity, and retain it farther into the season, may be found nearly in every district, often under no distinctive name but that of the common cattle of the country, and although somewhat coarse and strong of bone, will not, on that account, prove the less valuable, as their descendants will retain a portion of the hardness of constitution and free milking quality, for which features they were originally selected, long after the unmistakable impress of the Shorthorn sire has been indelibly stamped on their outline and general character.

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**TRIAL OF MOWERS AND REAPERS AT THE ATHY FARMERS' CLUB.**—Self-delivery reaper: The Telford Challenge Cup, Samuelson and Co.; second, W. A. Wood. Combined reaper and mower: First prize, Samuelson and Co.; second, W. A. Wood. Reapers, manual delivery: First prize, Samuelson and Co.; second, W. A. Wood.

**ASHBOURN AUGUST FAIR.**—The show of stock on Monday was very poor indeed. A small quantity of fat and store stock was offered for sale, and the show of bulls was not nearly so large as in former years. There were several good pens of sheep and lambs, which were speedily brought up at advanced prices. The horse fair was large, and good animals realised high prices, a large amount of business being transacted. The attendance of farmers and dealers was far above the average.

## THE ROMFORD SEWAGE FARM.

Mr. HOPE AND ROMFORD BOARD OF HEALTH.

Mr. Hope, on Thursday week, filed a petition in Chancery, praying for an injunction to restrain the board, their agents and workmen from removing or selling, or allowing to be removed or sold, any of the sewage sediment at a place called Oldchurch, in the parish of Romford, and from damming up, or allowing to remain dammed up, the flow of sewage through the sewer in a meadow belonging to the board and on some lands the property of a Mr. Vince, and from allowing the sewer at the two last mentioned places to remain disconnected. The bill also prayed for the specific performance of an indenture of May 16th, 1870, made between the plaintiff and the board, and for an inquiry as to the sums of money realised by the sale of the sewage and as to the damage sustained by the plaintiff. The moving of the motion for the injunction was fixed for Saturday last, before Vice-Chancellor Malins.

On Tuesday, when the motion came on for argument before Vice-Chancellor Malins, Mr. Locoock Webb, Q.C., with Mr. Roxburgh represented plaintiff, while Mr. Glasse, Q.C., with Mr. W. W. Cooper appeared for defendants.

Mr. Locoock Webb, in opening the case, reviewed the circumstances under which the Board of Health purchased Breton's Farm for the reception of the sewage, and the correspondence and interviews which led to plaintiff taking a seven years' lease of the farm in May, 1870, by which he was to have the whole of the sewage, or "such part as shall flow by gravitation," these words being inserted with the sanction of the plaintiff to relieve the board from the great expense of lifting the sewage from such houses as might be built at too low a level to allow of the sewage flowing by gravitation, and the words were intended to refer to such cases only. Though the board would not guarantee the sewage of 6,000 inhabitants, they promised that the plaintiff should have the whole of the sewage of the district, and plaintiff (who had given great time and attention to the utilization of sewage) calculated the amount payable for rent at 2s. per head of a population 6,000, and thus gave the large sum of £600 per annum for the sewage, well knowing that the sewage of a less number would not give him a reasonable profit.

His Honour: Then he pays £5 per acre?

Mr. Webb: Oh, he pays more than that. The rent of the land is £313 more. Mr. Hope was not wrong in his calculations, and if he could get the whole sewage he would make it a most valuable farm, for when he had sufficient sewage he cultivated forty acres with the greatest success, but he suffered a loss on the other part of the farm through the default of the board. Mr. Webb then said that the petition set forth that at the end of 1872 plaintiff found that of the 1,290 houses in the district, containing a population of 6,338, 225 were not connected, and 550 only partially, and a correspondence ensued, the board promising to have all the connections made but refusing any compensation, and declining to submit the matter to arbitration; and at the end of 1873 the board entered an action against plaintiff for rent, and in January, 1874, plaintiff commenced an action against the board. The two actions came on for trial at the Spring Assize at Chelmsford, in 1874, and verdicts were entered for the plaintiffs in both actions for the full amounts, the verdicts to be subject to the judgment of the Court of Exchequer upon a case to be stated by Mr. F. M. White. The case was stated before the Court of Exchequer in November last, the 14th paragraph stating that at various times in August, September, October, and November, 1873, the sewage flowing by gravitation had been allowed to pass into the river, and a verdict was entered for plaintiff in reference to matters mentioned in that paragraph, and judgment was signed in May, 1875, subject to a reference as to damages, which had not yet been assessed. Plaintiff, added the learned counsel, alleges that there are now a number of houses unconnected which would flow by gravitation, and since the commencement of the action plaintiff has discovered several important branches which took place prior to the commencement of the action and since that date. They had dammed up the sewage at Old Church for the purpose of irrigating their own field, and had turned it, in violation of the lease, bodily into the river Rom.

His Honour: If they did not give you the whole of it they seem to be guilty of a breach of contract, but I had better appoint some competent person to examine and report on the case; I shall not be able to settle it without.

Mr. Webb said he had evidence to bear out the statements of the petition. The tankhouse at Old Church was kept locked, so that plaintiff could not go to see what they were doing. From this tankhouse, if they would not intercept it, sewage would flow into the outfall sewer and so on to the farm, but here sewage sediment was intercepted and means existed for turning the whole into the river, and the outfall sewer was so disconnected that it was only when the sewage was high it would flow on to the farm.

His Honour: Could not Mr. Hope and Mr. Hunt agree about this?

Mr. Glasse said there was a strainer at the tankhouse to keep out roots of trees, which, if allowed to get into the sewer further down, would stop it up, and they cleared out the accumulation from time to time, and asked Mr. Hope to take it away.

His Honour said he hoped Mr. Hope had been successful in his farming.

Mr. Webb said it was just the contrary. With regard to the acreage for which he had had sufficient sewage he had done well, but on the whole farm he had sustained a great loss. In the tankhouse was a trough by which they threw out what was to plaintiff most valuable, the sewage sediment, and sewage their own meadow with plaintiff's stuff.

His Honour: You say they rob you, in fact.

Mr. Webb: Just so. We have evidence that the board had been in the habit of selling this sediment.

Mr. Glasse: It is placed there for you to take away.

Mr. Webb: That is not the contract. The contract is that it is to flow through the sewer, and you have no right to throw out this sediment and deprive us of our property. We only discovered this last month, and a minute of the board accepting a tender from a Mr. Linnett of £6 for a heap of the sewage sediment in 1870 and a receipt for the money is set out in the petition, and the plaintiff further charges that certain flat stones near the tankhouse "are wilfully and unlawfully used by the board, or by their direction, for the purpose of damming up the sewer at this point, so that these wages may flow on to the land belonging to the board for the purpose of irrigation, and that large quantities are used for such purpose." Plaintiff further alleges that at Vince's Farm there is a breakage or disconnection in the sewer, whence the sewage escapes into a small dam, which is filled with sediment, and from which sewage constantly overflows into the river and on the ground round and about, which was completely saturated.

Mr. Glasse said it was all imagination, and urged the appointment of some competent person to examine and report on the matters; and his Honour advised the same course.

Mr. Webb said Mr. Hope was a civil engineer, and was there to answer any question upon the affidavit which he put in, and which bore out the statements in the petition.

Mr. Glasse said in March, 1874, they wrote Mr. Hope, explaining why the strainer was placed there, and informing him that the refuse was placed in a heap at his disposal, but no answer was received to his letter.

His Honour still thought the proper plan would be to send some person down to examine and say what was required to be done to give Mr. Hope the benefit of his contract.

Mr. Cooper: He owes now £1,370 for rent.

His Honour: Are you willing to cancel your contract?

Mr. Webb: Yes, if they will only pay us damages. Mr. Webb continued that when plaintiff brought this action only a part of the things complained of had been discovered; but notwithstanding the finding in plaintiff's favour in that action defendants still continued the matters they complained of. Since the commencement of the action they had repeatedly turned the sewage into the river, and had violated their contract day by day, and what he wanted was to have the thing stopped.

Mr. Glasse: It is our desire that he should have the full benefit of his contract.

In the course of further argument Mr. Webb said there was now a heap of twenty tons of sewage sediment lying outside the tankhouse. His friend stated they did not want to do anything contrary to plaintiff's rights. Then why not let them have an injunction. It was a case that required the interference of the Court. It was not until June plaintiff knew that they diverted the sewage, and not until July that he knew they were returning to the sale of the sewage again.

His Honour: They sell the sewage they sold to you?

Mr. Webb: Yes, sir.

His Honour: They are robbers, then.

Mr. Webb: No doubt they are, sir. I am afraid that is not too strong a term for them.

Mr. Glasse: I say none of it has been sold.

His Honour: I cannot go on with it, Mr. Webb. The other side are willing to refer it, and if you are right they will have to pay, and if they are right you will have to pay.

Ultimately the proposition of his Honour was agreed to—namely, that some competent person should inspect the works, and report to the Court whether the works as they now exist give plaintiff the full benefit of his contract, and if not whether anything and what should be done, or whether anything and what should be left undone to give him that full benefit, and the question of the costs will be reserved. His Honour named Sir Joseph Bazalgette, C.E., to report on the works.

FLAX GROWN IN IRELAND.

	Acre.		Acre.
1851	140,536	1864	301,693
1852	137,008	1865	251,433
1853	174,579	1866	263,507
1854	151,403	1867	253,257
1855	97,075	1868	206,483
1856	106,311	1869	229,252
1857	97,721	1870	194,910
1858	91,646	1871	156,670
1859	136,282	1872	121,992
1860	128,595	1873	129,297
1861	147,957	1874	106,907
1862	150,070	1875	101,205
1863	214,099		

The foregoing returns—which exhibits a decrease of 5,702 acres in the total area under flax in Ireland in 1875, compared with 1874—is published, as in previous years, in anticipation of the general abstracts of tillage and live stock. In the province of Ulster alone the decrease is 4,319 acres (of the entire number (1,330) of scutching mills in 1874, 1,295 were in Ulster, 25 in Leinster, 31 in Munster, and 29 Connaught.—WILLIAM DONNELLY, Registrar-General.

General Register Office, 30th July.

THE PLUM AND APPLE CROPS OF 1875.—Of plums there is an enormous crop. This is in an especial manner a plum year and an apple year. The plum-trees are breaking down with their burdens, but the fruit does not ripen satisfactorily on any of the heavy soils that suit the plum, for the tree loves moisture quite as much as the fruit loves sunshine; and the latter being deficient, the finest dessert plums are, in very many cases, wanting in the rich, visous, saccharine glutinous flesh by which, above all other fruits, they are distinguished, being watery and pumpkin-like in flavour. Fine samples are to be found in plenty, as there are fine breadths of wheat and happy crops of hay, and perfectly clean acres of potatoes; but the prevailing case is a great weight of fruit of low specific gravity, owing to a superabundance of moisture and insufficiency of sunshine. Apples and pears are abundant, and many sorts that are usually shy of bearing now show heavy crops. But apples take the lead in respect of relative

production, and this will be a great cider year should the great crop ripen fairly. We have seen some fine crops of the Cornish Gilliflower and other capricious kinds that are valued for their fine quality, but are rarely produced in plenty even in the districts that suit them best. As regards bulk of fruit, the orchards of the extreme east are for the most part as heavily laden as those of the extreme west, but we know where the quality will be: it will be in the districts that have had the least rainfall, and there already the fine colour of the fruit foretells that it will abundantly pay for gathering. From this time forth every ray of sunshine will bring money out of the ground, but every drop of rain for at least six weeks will do mischief; and our hope is that we may have none of it until the proper rainy season recurs in the mellow month of October.—*The Gardener's Magazine.*

SALE OF SHORTHORNS FROM LORD FEVERSHAM'S HERD,

IN DUNCOMBE PARK, HELMSLEY.

BY MR. STRAFFORD.

- Hospitality 2nd, roan, calved Jan. 19th, 1872, by Hospitality.—Mr. J. Greaves, 35 guineas.
- Sockburn Duke, roan, calved Sept. 18th, 1873, by 5th Duke of Wetherby.—Mr. E. C. Tisdil, 48 gs.
- Ryedale Duke, red, calved June 16th, 1874, by 2nd Duke of Tregunter.—Mr. W. P. Horne, 50 gs.
- Coxcomb, roan, calved May 28th, 1874, by 20th Duke of Oxford.—Mr. Greaves, 25 gs.
- Sam Wiley, roan, calved Aug. 2nd, 1874, by 20th Duke of Oxford.—Mr. W. Wilson, 32 gs.
- Lord Oxford Bright Eyes, roan, calved July 16th, 1874, by 20th Duke of Oxford.—Lord Stourton, 50 gs.
- Cleveland 3rd, red and white, calved Oct. 5th, 1874, by 2nd Duke of Ryedale.—Mr. Greaves, 18 gs.
- Colonist 5th, roan, calved Nov. 13th, 1874, by 20th Duke of Oxford.—Mr. J. Boston, 34 gs.
- Abbot of Rievaulx, roan, calved Nov. 17th, 1874, by 20th Duke of Oxford.—Mr. W. Coverdale, 31 gs.
- Lion of Oxford, roan, calved Jan. 16th, 1875, by 20th Duke of Oxford.—Mr. Richardson, 25 gs.
- Oxford Ryedale 2nd, roan, calved Dec. 27th, 1874, by 20th Duke of Oxford.—Mr. Snary, 50 gs.
- Cleveland 3rd, roan, calved Feb. 7th, 1875, by 20th Duke of Oxford.—Mr. Lesley, 21 gs.
- Grand Master roan, calved April 24th, 1875, by 21st Grand Duke.—Mr. S. Kirby, 28 gs.
- Lord Oxford Bright Eyes 2nd, red, calved May 23rd, 1875, by 20th Duke of Oxford.—Mr. Isherwood Fryton, 30 gs.
- Ryedale Grand Duke, roan, calved June 4th, 1875, by 21st Grand Duke.—Hon. E. Lascelles, 36 gs.

HUNGERFORD SHEEP FAIR (Tuesday).—The number of sheep penned was about 5,000, or something like a thousand less than last year, the cause of this falling off being attributed, not to the want of satisfactory management, or from lack of interest, but from the fact that many flockowners were prevented sending their sheep on account of the existence of foot-and-mouth disease on their own and other farms in the surrounding country. The animals penned were of very good quality, especially the lambs. The business done in the early part of the fair was comparatively triling, owing to the high figures asked by owners, but as the close drew near more activity was noticeable, and things passed off quickly at good prices. Best ewes realised from 50s. to 53s., and 5-ks. per head, while inferior made 40s. to 50s. Lambs fetched 26s. to 40s. per head, and upwards, according to quality. One prime lot of lambs, belonging to Mr. Palmer, East Garston, numbering thirty, fetched 3 guineas per head. Wether sheep were somewhat scarce and dear. One superior lot of ewes made 63s.

## HIGHLAND AND AGRICULTURAL SOCIETY.

## MEETING IN GLASGOW.

In the opening class of Shorthorns, Mr. Bruce shows Lord Irwin for the gold medal, which he receives in virtue of his success at Inverness last year. Seven aged bulls appeared before the judges, and the success of Mr. Brown's Duke of Aosta was a foregone conclusion. He was second to Lord Irwin at Inverness last year, was first in his class at the Royal English Show at Taunton the other day, and since then has stood first, and won the cup as best bull at Durham, over his two sons, also in possession of Mr. Brown. Jeweller, a light roan of five years old, shown by Mr. Scott, Glendronach, Aberdeenshire, and bred by Mr. Cruickshank, Sittytou, was a good second. He was fourth at Inverness and second at Aberdeen last year, and came next to Lord Irwin at the Aberdeen show last week. The two-year-old bull class was here again headed by Mr. Brown with Rosario, first at Inverness last year in the yearling bull class, and first at Taunton in the two-year-old class. Mr. Walton's second prize bull was Squire Marshall, bred by Mr. Henderson, East Ellington, Haydon Bridge. In the yearling bull class another victory awaited Mr. Brown with Pioneer, which was first at Taunton; and thus Mr. Brown repeated the success which he there achieved. Fair Tyne, belonging to Mr. Bruce, and bred by Mr. Harris, Faruhill, which was first at Inverness last year, appeared here for the gold medal, and, of course, obtained it. The cow class is a large one, but two or three of the animals might well have been kept at home. As was early anticipated, Mr. Hutchinson's Lady Playful, the winner at Taunton, secured the first place, and Sir William Stirling Maxwell was second with Princess Henrietta. The two-year-old heifers were as good a class as that of cows, and the yearling heifer class was perhaps the finest in the Shorthorn department. Mr. Bruce showed his Sunflower, the nine months' calf that carried the cup at Aberdeen, and was first in her class at Elgin, but as merely a calf she competed at a great disadvantage. A creditable first was Mr. Lawrence's Ira, who was second at Aberdeen to Sunflower. Thus, so far as was possible, all the Royal English awards at Taunton were confirmed at Glasgow.

The polled cattle classes were well filled, and the general character of the animals superior; while the Duke of Buccleuch had everything his own way in the Galloway section. His Grace had close on thirty entries, and in almost every class he took the lion's share of the prizes. The number of entries in this section is much larger than was seen at the Highland capital, and in point of merit the display is equally ahead of what it was last year. At no show of the Highland Society is the Ayrshire breed so extensively exhibited as at Glasgow, and this year the collection is superior to any seen in point of quality since the Dumfries show of 1870. The number of specimens is also large, and though all the stalls were not filled, especially those in the milk classes, the competition was keen, and the work of judging was prolonged in an unusual degree. Of the Highlanders there is a very creditable muster, both in point of numbers and merit, but the entry of fat stock is by no means large, though a few very good animals are to be found in the section. Without in any way detracting from the importance of other sections, horses were a special attraction. Good as was the display at Stirling the year before last, the present collection of Clydesdales excels that as much as the turnout of 1873 surpassed any previous exhibition, and even those who have witnessed the

greatest shows of the Royal Agricultural Society declare that they never saw such a collection of agricultural horses. Special mention should be made of the stallions; and, with such an array of sires in the country, no fear need be entertained of the decay of the Clydesdale breed, which is becoming recognised not only in Great Britain, but on the Continent of Europe. It was calculated that the entire horses placed before the judges were worth in the market over £30,000. In the midst of a hunting country one might have expected a larger show of hunters and roadsters than actually turned out, but no fault could be found with the quality. That the entries in the sheep classes should be more numerous at a south country show than when, as last year, the exhibition takes place in the north, was only to have been looked for; but at the same time, from the general progress made by the Society of late years, it was also to be expected that improvement should be found on a comparison of the sheep-pens on Tuesday with those of 1867. The total number of animals entered in all the classes is accordingly found this year to be 296, as against 192 last year, and 257 in 1867. The breeds which most materially swell the catalogue are the Cheviots and the black-faced, there being thirty more specimens of the former penned than there were eight years ago; while the black-faced, curiously enough, show a falling off of four. Another lot strongly represented is that of Border Leicesters—a breed which did not make an appearance at all in 1867. The place of honour in the catalogue is given to the Cheviots, and deservedly so, as they are more numerous than any of their neighbours, while their average quality is at least equal to that of the others. One of the few sales made in the course of the day was that of Mr. Welsh's second prize Cheviot ram, which was bought by a neighbouring farmer for 100 guineas. Of the black-faced there is also a meritorious display. The Border Leicesters were all on the improvement; but in the proper Leicester classes there was a poor show, only seven lots being entered; and of Cotswolds there was but one exhibitor. The Lincolns also made but a meagre appearance, but of Shropshires there were several of the best known breeders represented, the average merit of the section being decidedly above anything that has been seen in former years; and there was a good show of pigs.

## PRIZE LIST.

JUDGES.—CATTLE.—Shorthorns: G. Drewry, Holker House, Carlisle; Cartmel, Lancashire; R. Johnson, Preston House, Whitehaven; J. Cochrane, Little Haddo, Newburgh, Aberdeen. Polled Angus or Aberdeen: A. Bowie, Maids of Kelly, Arbroath; T. Ferguson, Kinnochtry, Couper-Angus; J. Mackessack, Earnside, Forres. Galloway: D. Hardie, Priesthaugh, Hawick; J. Thomson, Blakiet, Crockettford, Dumfries. Ayrshire: A. Allan, Carbarns, Wishaw; J. Howie, Burnhouse, Galston, Kilmarnock; A. Murdoch, Garteraig, Shettleston, Glasgow. Highland: J. Macfarlan, Eastlawn, Garelochhead; D. McIntyre, Tighnamuir, Currie. Fat Stock: A. Young, Keir Maids, Dalbribe; J. Bell, Argyle-street, Glasgow. HORSES.—Clydesdale Stallions and Colts: O. Brown, Shield, New Galloway; W. Findlay, Brackenbrae, Bishopbriggs; J. Park, Gushlumoch, Eskine, Glasgow. Clydesdale Mares and Fillies, Milk-cart Horses and Geldings: R. Findlay, of Springhill, Ballieston, Glasgow; M. Lange, Lochmill, Milton of Campsie; J. Macadam, Blairrie, Drymen. Hunters, Roadsters, Ponies, and Extra Horses: J. A. Thomas, of Charlton, Colinsburgh; Colonel J. G. Hay Boyd, of Fawcett, Symington, Kilmarnock; J. W. Paterson, Fernona, Loughlin. SHEEP.—Cheviot: W. Griess, SLBhill, Hawick; W.

Mitchell, Palrossie, Dornoch; H. Scott, Gilmanseuch, Selkirk. Black-faced: J. Johnstone, Kingledores, Biggar; J. Craig, Polquhays, New Cumnock; J. Blake, Wester Noy, Beauly. Forder Leicester: J. Usher, Stodrig, Kelso; J. Wilson, Woodhorn Manor, Morpeth; J. Dickenson, Bemersyde Cottage, St. Boswells. Leicester, Cotswold, Lincoln, Southdown, and Shropshire: C. Randell, Chadbury, Evesham; T. Horley, jun., The Fosse, Leamington; W. Ford, Hard-green, Dalkeith. PRIZES.—P. D. Findlay, of Easterhill, Telferross, Glasgow; J. Fisher, Carhead, Cross Hills, Yorkshire. POULTRY.—R. Teebay, Fulwood, Preston; J. Jardine, Mill Lane Forge, Kilmarnock. DAIRY PRODUCE.—T. Bailie, 15, Victoria-street, Edinburgh; B. Osborne, Glasgow; G. T. Samson, Old Cumnock. IMPLEMENTS.—Society's Inspecting Committee: J. W. Hunter, of Thurston, Dunbar, Chairman of the Society's Machinery Committee; D. Stevenson, C.E., Edinburgh, Consulting Engineer to the Society; Professor Wilson, Edinburgh; J. Munro, Fairington, Kelso; P. B. Swinton, Holywell Bank, Gifford; J. D. Park, Edinburgh, Practical Engineer to the Society.

#### CATTLE.

##### SHORTHORNS.

First prize bulls at former shows, exhibited for medium gold medal.—R. Bruce, Newton of Struthers, Forres (Lord Irwin).

Bulls calved before 1st January, 1873.—First prize, £25, and silver medal for breeder of best bull, A. H. Browne, Doxford, Chathill, Northumberland (Duke of Aosta); second, £15, W. Scott, Glendronach, Huntly (Jeweller); third, £10, A. Buchanan, Whitehouse, Stirling (Heather-bred Lad).

Bulls calved after 1st January, 1873.—First prize, £25, A. H. Browne (Rosario); second, £15, W. and H. Walton, Appletree Shield, West Aboyne, Langley Mills (Squire Marshall); third, £10, W. S. Marr, Upper Mill, Tarves (Royal Prince).

Bulls calved after 1st January, 1874.—First prize, £15, A. H. Browne (Pioneer); second, £10, J. Bruce, Burnside, Fochabers (Laird of March); third, £5, G. Shiels, Horsup-clench, Dunse (Scottish Erant).

Cows of any age.—First prize, £20, T. H. Hutchinson, Manor House, Catterick (Lady Playful); second, £10, Sir W. Stirling Maxwell of Keir, Bart., M.P., Duublane (Princess Henrietta).

Heifers calved after 1st January, 1873.—First prize, £15, T. H. Hutchinson (Lady Alicia); second, £10, J. Tweedie, Deuchrie, Prestonkirk (Red Tulin); third, £5, W. S. Marr, Upper Mill, Tarves. (Moy, Age 10th).

Heifers calved after 1st January, 1874.—First prize, £10, J. Lawrence, Thornhill, Forres (Ida); second, £5, W. S. Marr (Emma 3rd); third, £4, W. A. Mitchell, Auchnagathie, Whitehouse, Aberdeen (Young Hawthorn).

##### POLLED ANGUS OR ABERDEEN.

First prize bulls at former shows, exhibited for medium gold medal.—The Earl of Fife, K.T., Duff House, Banff (Gainsborough) (Inverness, 1874, when the property of A. Bowie, Mains of Kelly).

Bulls calved before 1st January, 1873.—First prize, £20 and silver medal to breeder of best bull, the Marquis of Huntly, Aboyne Castle, Aberdeen (Duke of Perth); second, £10, Sir G. Macpherson Grant, Bart., Bollandaloch Castle, Bollandaloch (Scotsman).

Bulls calved after 1st January, 1873.—First prize, £20, the Earl of Fife, K.T. (Young Viscount); second, £10, Sir T. Gladstone of Fasque, Bart., Laurencekirk (Adrian 2nd); third, £5, W. McCombie, of Easter Skene, Skene, Aberdeenshire (Bachelor).

Bulls calved after 1st January, 1874.—First prize, £10, Earl of Fife, K.T., Duff House, Banff (St. Clair); second, £5, W. J. Taylor, Rothiemay House, Huntly (Sir Roger); third, £3, J. Law, East Mains, Broxburn (Robin Hood).

Cows of any age.—First prize, £20, Marquis of Huntly, Aboyne Castle, Aberdeen (Dora); second, £10, Earl of Fife, K.T. (Corrientalzie); third, £5, Earl of Fife (Lunes).

Heifers calved after 1st January, 1873.—First prize, £10, W. McCombie, Easter Skene, Skene, Aberdeenshire (Blackberry); second, £6, Sir G. Macpherson Grant, Bart. (Ethel); third, £4, Earl of Fife, K. T. (Fluscarden).

Heifers calved after 1st January, 1874.—First prize, £8, Sir T. Gladstone, Fasque, Bart., Laurencekirk (Emilie); second, £5, W. McCombie (Lady Anne); third, £3, J. Law, East Mains, Broxburn (Nancy of East Mains).

##### GALLOWAYS.

First prize bulls at former shows, exhibited for medium gold medal.—Stirling, 1873, when the property of the present exhibitor—J. Cunningham, Tarbrooch, Dalbeattie (Pretender). Inverness, 1874, when the property of the present exhibitor, Duke of Buccleuch and Queensberry, K.C., Drumlanrig, Thornhill (Black Prince of Drumlanrig).

Bulls calved before 1st January, 1873.—First prize, £20, and silver medal, J. Cunningham (Cunningham); second, £10, G. Graham, Oakbank, Longtown (Forest King).

Bulls calved after 1st January, 1873.—First prize, £20, R. Rae, Meikle Cocklecks, Dalbeattie (Oliver); second, £10, J. Graham, Parcelstown, Longtown (Sim of Whitram); third, £5, T. Bigar, Chapeltown, Dalbeattie (Dandie Diamond).

Bulls calved after 1st January, 1874.—First prize, £10, J. Jardine Paterson, Balgray, Lockerbie (Bob); second, £5, R. Jardine, Castlemilk, Lockerbie (Burnswark); third, £3, A. Jardine, Lanrick Castle, Stirling.

First prize cows shown at former shows, exhibited for medium gold medal.—Inverness, 1874, when the property of the present exhibitor—Duke of Buccleuch and Queensberry, K.G., Drumlanrig and Thornhill (Juno of Drumlanrig).

Cows of any age.—First prize, £20, J. Cunningham (Maid Marion 4th); second, £10, Duke of Buccleuch and Queensberry, K.G. (Hylthia); third, £5, Duke of Buccleuch and Queensberry, K.G. (Louisa of Drumlanrig).

Heifers calved after 1st January, 1873.—First prize, £10, Duke of Buccleuch and Queensberry, K.G. (Aurora); second, £6, Duke of Buccleuch and Queensberry, K.G. (Antigone); third, £4, R. Jardine, Castlemilk (Lucy); fourth, Duke of Buccleuch and Queensberry, K.G. (Amy of Drumlanrig).

Heifers calved after 1st January, 1874.—First prize, £8, Duke of Buccleuch and Queensberry, K.G. (Beauty of Drumlanrig); second, £5, Duke of Buccleuch and Queensberry, K.G. (Bridesmaid); third, £3, J. Cunningham (Little Emily); fourth, Duke of Buccleuch and Queensberry, K.G. (Britomartis).

##### AYRSHIRES.

Bulls calved before 1st January, 1873.—First prize, £20, and silver medal as breeder, W. Smith, Chanlockfoot, Penton, Dumfriesshire (The Shah); second, £10, W. Weir, Inches, Larbert (Jamie).

Bulls calved after 1st January, 1873.—First prize, £20, R. Gillespie, Boyleston, Barrihead (Scottish Chief); second, £10, J. Fleming, Woodside, Rutherglen (Charlie); third, £5, W. Gilmour, Kells of Southwick, Dumfries (Prince Charlie); fourth, £3, Mrs. G. Douglas, Kilmacoolm (Kerr).

Bulls calved after 1st January, 1874.—Third prize, £3, T. Cochrane, Laigh Clenghearn, East Kilbride; fourth, £2, W. Hunter, Craighhead, Abington (Chieftain).

First prize cows at former shows (exhibited for medium gold medal)—Stirling, 1873, when in-milk and the property of the present exhibitor: R. Wilson, Forehouse, Kilbarchan (Hornie). Inverness, 1874, when in-milk and the property of the present exhibitor: Duke of Buccleuch and Queensberry, K.G. (Dewdrop).

Cows in-milk, calved before 1st January, 1872.—First prize, £20, Duke of Buccleuch and Queensberry, K.G. (Ruby).

##### HIGHLANDERS.

Bulls calved after 1st January, 1872.—First prize, £20, D. McLaren, Corrychrone, Callander; second, £10, J. Stewart, Duntulm, Portree (Rob Roy); third, £5, P. Sinclair, Largie, Kilmartin (Greagarach).

Bulls calved after 1st January, 1873.—First prize, £10, J. Stewart, Bochastle, Callander; second, £5, Trustees of the late R. Peter, Urral, Aberfeldy (Domhnall Buadh); third, £3, D. McLaren.

Cows of any age.—First prize, £15, J. Stewart, Bochastle, Callander; second, £8, J. Stewart, Duntulm, Portree (Guanel); third, £4, Earl of Seafield, Castle Grant, Grantown (Countess).

Heifers calved after 1st January, 1872.—First prize, £10, J. Stewart; second, £5, D. McLaren; third, £3, Earl of Seafield (Countess).

Heifers calved after 1st January, 1873.—First prize, £8, J. Stewart, Duntulm, Portree (Fargal Bhag); second, £4, J. Stewart, Bochastle, Callander.

##### FAT STOCK.

Shorthorn oxen calved after 1st January, 1872.—Prize, £6, C. Alexander, Easter Know, Stobo.

Highland oxen calved after 1st January, 1871.—First prize, £6, G. S. H. Drummond of Blairdrummond, Stirling; second, £3, C. D. Jones, Kilehannaig, Whitehouse, Kintyre.

Oxen of any other pure or cross breed, calved after 1st January, 1872.—First prize, £6, W. Scott, Glendonach, Huntly; second, £3, R. Husband, Gellat, Dunfermline.

Oxen of any other pure or cross breed, calved after 1st January, 1873.—Prize, £5, W. Scott.

## EXTRA CATTLE.

United States ox.—Highly commended: J. Bell and Sons, 170, Argyle-street, Glasgow.

Canadian ox.—Commended: J. Bell and Sons.

## HORSES.

## FOR AGRICULTURAL PURPOSES.

First-prize stallions at former shows, exhibited for Medium Gold Medal.—Prize, A. Galbraith, Croy Cunningham, Kilmear (Topsman).

Stallions, foaled before 1st January, 1872.—First prize, silver medal, D. Riddell, Kilbowie, Duntocher (Time of Day); second, S. Clark, Manswrae, Bridge of Weir; third, P. Ferguson, Renfrew; fourth, R. Brewster, Branchal, Kilmaccolm, Bridge of Weir; fifth, Sir W. Stirling-Maxwell of Keir, Burt.

Entire colts, foaled after 1st January, 1872.—First prize, A. Smith, Stevenson Mains, Haddington (The Warrior); second and fourth, D. Riddell; third, A. Gemmell, Caplaw, Neilston; fifth, W. Wyllie, Fenwick.

Entire colts, foaled after 1st January, 1873.—J. Hendrie, Maryville, S2, West Regent-street, Glasgow (Disraeli); second, J. Thomson, Blaiket, Crockettford, Dumfries; third, N. Riddell; fourth, P. Crawford, Drumgoyack, Strathblane; fifth, R. Brewster, Branchal.

Entire colts, foaled after 1st January, 1874.—First prize, L. Drew, Merryton, Hamilton; second, J. M. Martin, Auchendennan Farm, Balloch; third, W. M. Master, Challock, Glenluce; fourth, D. Riddell; fifth, J. Thomson, Crockettford.

Mares (with foal at foot), foaled before 1st January, 1872.—First prize, L. Drew (Mary); second, A. Buchanan, Garscadden Mains, New Kilpatrick; and R. Stark, Summerford, Camelon, Falkirk; third, J. N. Fleming, of Knockdon, Maybole; fourth, A. Smith, Stevenson Mains, Haddington.

Mares (in foal), foaled before 1st January, 1872.—First prize, J. Gardner, Boghead Farm Paisley (Jess); second, J. Sutor, Collie, Orton, Fochabers; third, J. Clarke, Spindlehowe, Uddingston; fourth, A. Lang, Garneyland, Paisley; fifth, J. Murdoch, Hilton, Bishopsbriggs.

Fillies foaled after 1st January, 1872.—First prize, L. Drew; second, W. H. Hardie, Borrowstoun Mains, Linlithgow; third, J. McNab, Glenochil, Menstrie; fourth, J. Watson, Earnock, Hamilton; fifth, W. J. Houldsworth, Coltness House, Wishaw.

Fillies foaled after 1st January, 1873.—First prize, R. Frederick, Drumflower, Glenluce (Young Mary); second, W. Pollock, Low Mains, East Kilbride; third, J. N. Fleming; fourth, D. Riddell; fifth, R. Murdoch, Hallside, Newton, Cambuslang.

Fillies foaled after 1st January, 1874.—First prize, R. Weir, Brownhill, Carnworth; second, J. Cunningham; third, A. Buchanan, Garscadden Mains, New Kilpatrick; fourth, W. B. Craig, Bishopbriggs; fifth, J. Anderson, Smithstown, Croy, Kilsyth.

Draught geldings, foaled before 1st January 1872.—First prize, R. Stark (Marquis); second, A. Aitkenhead, Shaw Moss, Pollockshaws; third, J. Walker, East Ann-street, Glasgow; fourth, R. Stark.

Draught geldings, foaled after 1st January, 1872.—First prize, W. Colquhoun, Kilmahew, Cardross (Smiler); second, J. Wilson, Old Mill, New Cumnock; third, J. Harvey, Toward Farm, Greenock.

Mares or geldings, not exceeding fifteen hands high, for milk carts of heavy draught.—First prize, A. Bulloch, Mullikin, East Kilpatrick (Tam); second, J. Hamilton, 69, Kirkstreet, Caltou, Glasgow; third, R. Cowan, Sauchenhall, Kirkintilloch.

Mares or geldings, not exceeding 14½ hands high, for milk carts of light draught.—J. Fleming, Woodside, Rutherglen (Dickie).

Hunters and roadsters (first prize mares at former shows, exhibited for Medium Gold Medal).—J. Stewart, Heathfield, Irvine (Miss Kelly).

Brood mares, with foal at foot, suitable for field, foaled before 1st January, 1871.—First prize, J. Moffatt, Kirkinton Park, Carlisle (Lady Lyne); second, J. Houldsworth, Coltness, Wishaw; third, J. C. Wakefield, Eastwood Park, Thornliebank; fourth, H. Taylor, Kainshill, Kilmarnock.

Yield mares or geldings, suitable for field, light weight, foaled before 1st Jan., 1871.—First prize, D. Kippen, Busby, Glasgow (Kilbride); second, G. Jardin, Hillside, H1, Douglas-street, Glasgow; third, Lieut. Colonel D. C. R. Carrieff Buchanan, Drumpellier; fourth, W. C. Brantford, Veterinary College, Clyde-street, Edinburgh.

Yield mares or geldings, suitable for field, heavy weight, foaled before 1st Jan., 1871.—First prize, J. Heubric, Maryville, S2, Regent-street, Glasgow (Bridegroom); second, G. Jardine; third, T. McDougal, Eskvale, Penicuik; fourth, A. F. Williamson, Standingstones, Dyce, Merdeen.

Fillies or geldings, suitable for field, foal at foot, 1st Jan., 1871.—First prize, W. Bartholomew, Auchincroft, Duffry; Kirkealdy (Rufus); second, Lieut.-Col. Buchanan; third, Capt. Lyon, R.N., Kirkcaldy, Dumfries; fourth, G. Williamson, Balcathley, St. Andrews.

Fillies or geldings suitable for field, foaled after 1st Jan., 1872.—First prize, J. Moffat, Kirkinton Park, Carlisle; second, A. Lang, Garneyland, Paisley; third, D. Davidson, Tulloch; fourth, J. S. Alston, Stockbriggs, Lessmaling.

Stallions, mares or geldings, for leaping.—First prize, G. W. Richardson, Junior Club, Glasgow; second, J. Fleming, Falkirk; third, D. Kippen.

Mares or geldings, suitable for carriage, foaled before 1st January, 1872.—First prize, A. J. H. Souererville, Greenbank, Bothwell (Prince); second, P. Jefferson Steel, Weary Hall, Southfield, Abbey Town, Carlisle; third, A. Arrol, 18, Blythwood-square, Glasgow; fourth, A. Duncan, Herbertshire Castle, Denny.

Mares or geldings, suitable as roadsters.—First prize, Lieut.-Col. Buchanan; second, L. Drew; third, D. Kippen; fourth, J. W. Morison, Falfield House, Cupar Fife.

Mares or geldings, suitable as hackneys or roadsters, between 14 and 15 hands high.—First prize, A. Duncan (Zepha); second, J. C. Wakefield, Eastwood Park; third, H. N. Fraser, Hay Close, Penrith; fourth, R. McIndoe, Merkins, Alexandria.

Extra horses.—Commended: J. Buntin, 19, St. Vincent-street, Glasgow; J. M. Marten, Auchendennan Farm, Balloch; A. B. Sandman, Huntingtowerfield, Perth.

Ponies, first-prize stallions at former shows, exhibited for Medium Gold Medal.—Miss A. Norton, Rannoch Lodge, Pitlochrie (Little Benjamin).

Highland stallions, 11½ hands high and under.—First prize, J. M. Martin, Auchendennan Farm (Joe); second and third, Hon. Lady Menzies.

Highland mares or geldings, between 12 and 14½ hands high.—First prize, D. A. Macrae, Fernaig, Stron Ferry, mare (Mhari Og).

Mares or geldings, between 13 and 14 hands high.—First prize, J. Bell, Cleddens House, Bishopbrigg (Daisy); second, J. Meikle, Nether Mains, Kilwinning; third, T. Wyse, Royal Hotel, Falkirk; fourth, J. Relf, Southerby, Hasket, Newmarket.

Mares and geldings, between 12 and 13 hands high.—First prize, J. M. Martin; second, J. Syme, Millbank, Edinburgh; third, Sir M. R. Shaw Stewart.

Mares or geldings, 12 hands and under.—First prize, J. McKnight, Plann, Kilmarnock (Billy); second, G. Eric, Wheatlands, Penny; third, J. M. Martin; fourth, D. McFarlane, Langloan, Coatbridge.

## SHEEP.

## CHEVIOTS.

Tups above one shear.—First prize, J. Bryden, Kinnelhead, Moffat; second, J. A. Johnson, Archbark, Moffat; third, T. Welsh, Eriestane, Moffat.

Dinnont or shearing tups.—First prize, J. A. Johnstone, second, T. Welsh; third, J. Archibald.

Pens of five ewes, above one shear.—Pens of lambs shown with ewes.—First prize, J. Brydon; second, J. Archibald.

Blackfaced tups, above one shear.—First prize, J. Archibald, Overshields, Stow; second, T. Aitken, Listonsields, Balmoro; third, J. Craig, South Halls, Strathaven.

Dinnont or shearing tups.—Prizes, first, second, and third, J. Greenshields, West Town, Lesmahagow.



Pens of five ewes, above one shear.—Pens of lambs shown with ewes.—First prize, J. Archibald; second, J. and J. Moffat, Gateside, Sanguilar; third, J. Hamilton, Lesmahagow.

Pens of five shearing ewes or gimmers.—First prize, J. Archibald; second, D. Foyer, Knowiehead, Campsie; third, J. Hamilton.

#### BORDER LEICESTERS.

Tups, above one shear.—First prize, T. Forster, jun., Ellingham; second, A. Smith, Castle mains, Gifford; third, R. Tweedie, The Forest, Catterick.

Dimont or shearing tups.—First prize, J. Clark, Oldhamstocks Mains; second, J. Melvin, Bonnington; third, Marquis of Tweedale.

Pens of five ewes, above one shear.—First prize, Rev. R. W. Bosanquet, Rock, Alwrick; second, H. N. Fraser, Hay Close, Penrith; third, J. Nisbet, Lambden, Greenlaw.

Pens of five shearing ewes or gimmers.—First prize, J. Clark; second, R. Tweedie; third, J. Hill, Carlowie.

#### LEICESTERS.

Tups of any age.—First prize, T. H. Hutchinson, Manor House, Catterick; second, third, and fourth, E. Sutherland, Tannachie House, Fochabers.

Five ewes of any age, or gimmers.—Prize, E. Sutherland.

#### COTSWOLDS.

Tups of any age.—First, second, and third prize, J. Gibson Woolnot.

Pens of five ewes of any age, or gimmers.—First and second, prizes, J. Gibson.

#### LINCOLNS.

Tups of any age.—First, second, and third prizes, J. B. Irving, White Hill, Lockerbie; fourth, T. Wilkin, Tinwald Downs, Dumfries.

Pens of five ewes, of any age, or gimmers.—First and third prizes, J. Bell; second and fourth T. Wilkin.

#### SHROPSHIRE.

Tups of any age.—First, second, and fourth prizes, Lord Chesham, Bucks; third, J. Gibson.

Pens of five ewes or gimmers, of any age.—First prize, Lord Chesham; second, J. Gibson; third, Earl of Strathmore; fourth, Lord Polwarth.

#### EXTRA SECTIONS.

Pens of five Cheviot widders, not above four shear.—Prize, C. Alexander, Easter Knowe, Stobo.

Pens of five blackfaced widders, not above four shear.—First prize, C. Macpherson Campbell, Ballimore, Tighnabraich; second, W. Todd, Glenrice, Lamash.

Pens of five half-bred hogs, not above one shear.—First prize, J. Cunningham, Tarbreoch, Dalbeattie; second and third, J. Kerr, Flatts of Cargen, Dumfries.

Pens of five wedder hogs, of any cross, not above one shear.—First prize, E. Sutherland; second, Lord Polwarth.

#### PIGS.

Boars, large breed.—First prize, Earl of Ellesmere, Worsley Hall, Manchester; second, J. Dove, Hambrook House, Hambrook, Bristol; third, R. E. Duckering, Northorpe, Kirton Lindsey.

Sows, large breed.—First prize, Earl of Ellesmere; second, J. Dove; third, R. E. Duckering.

Pens of three pigs, not above eight months old, large breed.—Prize, R. E. Duckering.

Boars, Berkshire breed.—First prize, J. Dove; second, W. Macdonald, Woodlands, Perth; third, J. Moir and Son, Garthder, Aberdeen.

Sows, Berkshire breed.—First prize, R. E. Duckering; second, J. Dove; third, W. Macdonald.

Pens of three pigs, not above eight months old, Berkshire breed.—Prize, J. Moir and Son.

Boars, small breed.—First prize, Earl of Ellesmere; second J. Dove; third, J. Moir and Son.

Sows, small breed.—First and third prizes, Earl of Ellesmere; second, J. Moir and Son.

Pen of three pigs, not above eight months old, small breed.—First prize, Earl of Ellesmere; second, J. Moir and Son.

#### DAIRY PRODUCE.

##### BUTTER.

Cured.—First prize, A. Gilmour, Crosshill, East Kilbride; second, A. Lithgow, Drumstall, East Kilbride; third, W. Reid, Catterick, Bantyre.

Powdered.—First prize, J. Hutcheson, Netherhouse, Old Monkland; second, D. M'Farlane Bullmuddy, Bishopbriggs; third, D. M'Laren, Middleton, Milngavie.

Fresh.—First prize, A. Gilmour; second, W. Pollock, Kajeton, Milngavie; third, D. M'Laren.

#### CHEESE.

Cheddar variety.—First prize, A. M'Master, Glenhead House, Stranraer; second, J. M'Master, Carrochurie, Kirkmaiden; third, W. M'Master, Challock, Glenluce.

Dunlop variety.—First prize, J. Shearer, Holm Farm, Stonehouse; second, A. Gemell, Caplaw, Neilson; third, J. White, Nether Craigauds, Linwood, Paisley.

Sweet milk cheese, any other variety.—First prize, A. Picken, Glassoch, Fenwick; second, Mrs. W. Dickie, Girthil, Dalry, Ayrshire; third, J. Spen, Low Ardwell, Stranraer.

#### IMPLEMENT AWARDS.

##### SILVER MEDALS.

Aveling and Porter, Rochester, Kent, for agricultural locomotive improvement.

Rollands and Co., London, E.C., for American horse hay-rake.

MacLellan, Trongate, Glasgow, for M'Kean's rock-drilling machines.

Robey and Co., Lincoln, for new patent horizontal engines. Marshall, Sons, and Co., Gainsborough, for self-feeding thrashing machines.

Scholefield, Leeds, for semi dry brick machines.

Richmond and Chandler, Salford, Manchester, for chaff cutter new gearing.

Benet and Co., Hope-street, Glasgow, for Brotherhood's three-cylinder engine.

Augus, Parkhead, Glasgow, for improved farm carts.

##### MEDIUM SILVER MEDALS.

Harrison, M'Gregor, and Co., Albion Foundry, Leigh, Manchester, for combined mower and reaper.

Head, Wrightson, and Co., Teesdale Iron Works, Stockton-on-Tees, for hand hoists, &c.

Lincoln and Co., John-street, Glasgow, for steam trap invented by Robinson.

Murray and Co., Banff Foundry, for adjustable turnip-sower for sloping ground.

Pickering, Stockton-on-Tees, for patent steam pump.

Barr, Anderston, Glasgow, for water-pressure engines for small power.

Northern Agricultural Implement and Foundry Company, Inverness, for zig-zag harrows.

Richardson, Carlisle, for combined corn and grass seed dressing machines.

##### MINOR SILVER MEDALS.

Morton and Co. (Limited), Naylor-street, Liverpool, for collection of fences, field gates, &c.

Douglas, Cowan, and Co., Glasgow, for general collection of agricultural implements.

Gibson and Son, Bainfield Iron Works, Fountainbridge, Edinburgh, for collection.

Picksley, Sims, and Co., Lee, Lancashire, for general collection of agricultural implements.

Pringle, Edinburgh and Kelso, for general collection.

Smith and Simons, Howard-street, Glasgow, for general collection.

Leadbetter, Gordon-street, Glasgow, for portable fire-engines and manual pumps.

Bickerton and Sons, Berwick-on-Tweed, for collection.

Brown and Son, Ferguslie Fire Clay Works, Paisley, for collection.

Brown and Sons, Dunse, for collection.

Cathcart, Ayr and Glasgow, for collection.

Cassells and Son, Newton Mearns, for thrashing machine.

Doe, Errol, for general collection.

Drummond, Cumnock, for thrashing machine.

Fleming and Co., Argyle-street, Glasgow, for general collection.

Gray and Co., Uddington, for collection.

Haughton and Thompson, Carlisle, for collection.

Howarth, Bolton, for collection.

Hume, Buchanan-street, Glasgow, for collection.

Hunter, Maybole, for collection.

Jack and Sons, Maybole, for collection.

Kemp, Murray, and Nicholson, Stirling, for collection.



McCartney and Co., Cumnock, for thrashing machines.  
Main and Co., Port-Dundas, Glasgow, for collection.  
Pirie and Co., Kilmundy, Aberdeenshire, for collection.  
Pollock, Machline, for barrow wheel of iron.  
Reid and Co., Aberdeen, for collection.  
Sellers and Son, Huntly, for collection.  
Sheriff and Co., of Dunbar, for collection.  
Wallace and Sons, Graham-square, Glasgow, for collection.

RECOMMENDED FOR TRIAL.  
Dewar, Dundee, potato planting machine.  
Parker, Stranraer, drill and manure distributor.

Ord and Maddison, Darlington, for Koldmo's patent weed eradicator.  
Wood, Worship-street, London, E.C., for self-delivery reapers.  
Wood, Upper Thames-street, London, for control'able self-riake reaper.  
The Local Committee on Implements have, in accordance with the regulations, selected the whole of the turnip machines for trial. The exhibitors are Bickerton and Sons, Berwick-on-Tweed; Diekie, Girvan; Due, Erol; Hunter, Maybole; and Pirie and Co., Kilmundy, Aberdeenshire.

## THE SHROPSHIRE AND WEST MIDLAND SOCIETY.

## MEETING AT SHREWSBURY.

This show, which opened on Thursday, was very successful, although the interest was chiefly local; still, in the Hereford cattle, Shropshire sheep, and pig classes, there were many animals which have made their mark elsewhere.

## PRIZE LIST.

JUDGES.—AGRICULTURAL HORSES: D. Ashcroft, Haighton, Preston; H. Lowe, Comberford, Tamworth. THOROUGHBRED HORSES: Col. Cholmondeley, Abbot's Moss, Northwich; J. E. Bennett, Bosworth Grange, Rugby. SHORTHORNS and DAIRY COWS: G. Garne, Churchill Heath, Clipping Norton; E. Little, Lanhill, Chippenham. HEREFORDS: Warren Evans, Llandowlais, Newport, Monmouthshire; H. Haywood, Blakemere, Hereford. SHEEP: J. Coxon, Freeford Farm, Lichfield; T. Horley, jun., Fusse, Leamington. PIGS: J. Meire, Abbot's Hall, Shrewsbury; T. Morris, Spring Bank, Welshpool. BUTTER and CHEESE: J. Valentine, Ludlow. WOOL: A. Butcher, Kidderminster; H. Dibb, Bradford. IMPLEMENTS: R. T. Smith, engineer, Whitechurch.

## HORSES.

Cart stallion of any age.—First prize, M. Williams, Dryton, Wroxeter; second, A. Price, Bagley Hall, Ellesmere.  
Cart stallion, not exceeding three years old.—First prize, J. Jones, Yockleton; second, S. Davis, Woolashill, Pershore.  
Cart mare and foal.—First prize, E. Bach, Longville, Craven Arms; second, A. Darby, Little Ness, Baschurch. Special prize: J. Leighton, Ironbridge. Commended: J. Downes, Llandysio, near Llanymynech.  
Cart gelding or mare, foaled in 1872.—First prize, E. Green, Bank Farm, Pool Quay; second, S. Davies, Wollashill, Pershore. Highly commended: S. Jones, Lea Cross. The class commended.  
Cart gelding or mare, foaled in 1873.—First prize, J. Whitaker, Hampton Hall, Worthen; second, J. Whitaker.  
Pair of waggon horses, the property of a tenant-farmer.—First prize, J. Green, Walcot, Baschurch; second, T. Huxley, Preston Brockhurst. Highly commended: C. Wingfield, Onslow, Salop. Commended: T. Green, Knoekin, Westfelton.  
Thoroughbred stallion.—First prize, E. Foulkes, Beatrice-street, Oswestry; second, M. Hulton-Harrop, Pulverbatch. Highly commended: A. P. Lloyd, Shawbury, Shrewsbury.  
Brood mare and foal, for hunting purposes.—First prize, J. Hill, Felhampton-court, Church Stretton; second, W. M. Severne, Thenford-house, Banbury. Highly commended: J. Pinkney, Dryton, Wroxeter; B. Bithell, Lees-farm, Westfelton. Commended: J. Franklin, High-street, Wem.  
Mare or gelding, for hunting purposes, foaled in 1871.—First prize, R. B. Oswald, Thelrocke, Ruyton-of-the-eleven-Towns; second, T. Jones, Red Lion, Shrewsbury. Highly commended: H. M. Hornby, Hanley-house, Shrewsbury. Commended: J. Jones, Robertsford, Salop.  
Mare or gelding, for hunting purposes, foaled in 1872.—First prize, W. Lawrence, Cantlop, Salop; second, J. Crane, Calcott, Salop. Highly commended: J. Bowen Jones, Eusdon House, Salop. Commended: R. B. Oswald.  
Mare or gelding, for hunting purposes, foaled in 1873.—First prize, H. Smith, Harnage, Salop; second, H. J. Bailey, Rosedale, Tenbury. Commended: A. P. Lloyd, Shawbury, Shrewsbury.

Cob, hack, or roadster, not exceeding 15 hands.—First prize, J. Hill, Felhampton Court, Church Stretton; second, Sir C. F. Smythe, Bart., Acton Barwell. Highly commended: J. H. Robinson, 59, Mardol-quay, Shrewsbury. Commended: F. Bach, Ombury, Craven Arms.

Pony, not exceeding 13 hands.—First prize, W. Adams, Radbrook, Shrewsbury; second, J. Loxdale, Kingsford, Shrewsbury. Commended: T. U. Lowe, Mardol-quay, Shrewsbury.

## CATTLE.

## SHORTHORNS.

Bull not under two years old on January 1st, 1875.—First prize, T. Morris, Spring-bank, Welshpool; second and cup, T. Williams, Albrightlee, Battlefield, Sdop.

Bull above one year and not exceeding two years on January 1st, 1875.—First prize, J. and R. Jones, Aberton and Hilley, Salop; second, A. Robotham, Oak-farm, Drayton Bassett, Tamworth.

Bull not exceeding twelve months old on January 1st, 1875.—First prize, E. Meredith, Rednall, West Felton; second, A. Robotham. Highly commended and reserved: W. Sherraton, Broom-house, Ellesmere. Commended: T. Huxley, Preston Brockhurst.

Cow, in milk or in calf, having produced a calf within twelve months.—First prize, A. Robotham; second and cup, W. Nevett, Yorton. Highly commended and reserved: A. Robotham.

Pair of heifers, in milk or in calf, not exceeding twelve months old on January 1st, 1875.—First prize, W. Yates, Grindle-house, Smifnal; second, W. Nevett.

Pair of heifers not exceeding two years old on January 1st, 1875.—First prize, S. J. Horton, Park-house, Smifnal; second, H. O. Wilson, Church Stretton.

Pair of heifers not exceeding twelve months old on January 1st, 1875.—First prize, A. Robotham; second, G. T. Phillips, Sheriff Hales Manor, Newport. Highly commended: G. Jukes, Beslow, Wroxeter.

## HEREFORDS.

Bull not under two years old on January 1st, 1875.—First prize, J. Richards, Green Hall, Llanfyllin; second, R. Dixon, Abbots Beton.

Bull not exceeding two years old on January 1st, 1875.—First and special prize for best bull, T. Madleton, Clun, Salop; second, P. Turner, The Leen, Pembridge. Commended: J. Lucas, Westbury, Salop.

Bull not exceeding twelve months old on January 1st, 1875.—First prize, P. Turner; second, E. Lindop, Wilstone, Church Stretton.

Cow, in milk or in calf, having produced a calf within twelve months.—First and three special prizes, T. Rogers, Coxall, Buckwell; second, R. Tanner, Frodesley, Dorrington. Highly commended: J. Hill, Felhampton court, Church Stretton. Commended: R. L. Barton, Louguer Hall, Shrewsbury.

Pair of heifers, in milk or in calf, not exceeding three year, old on January 1st, 1875.—First prize, P. Turner; second, J. Crane, Benthall, Salop.

Best pair of heifers, not exceeding two years old on January 1st, 1875.—First prize, P. Turner; second, John Harding, The Greenhouse, Bridgnorth.

Pair of heifers, not exceeding twelve months old on January 1st, 1875.—First prize, J. Hill, Felhampton-court, Church Stretton; second, P. Turner.

## DAIRY COWS.

Pair of dairy cows, in milk, of any breed.—First prize and cup, W. Nevett, Yorton; second, Rev. T. Bainbridge, Battlefield, Salop.

## SMOKY FACED MONTGOMERYSHIRE CATTLE.

Silver cup for the best cow and calf of the smoky-faced Montgomeryshire breed of cattle, calf to be under twelve months old.—Prize, R. Asterley, Adeney, Newport.

## SHORTHORN BULLDOGS.

Pair of bullocks, not exceeding two years old on January 1st, 1875.—First prize, A. Darby, Little Ness, Baschurch; second, Sir C. F. Smythe, Bart., Acton Burnell.

Shorthorn bullock, not exceeding one year old on January 1st, 1875.—First prize, T. Jones, Red Lion, Shrewsbury. Highly commended: A. Darb.

## HEREFORD BULLDOGS.

Pair of bullocks, not exceeding two years old on January 1st, 1875.—First prize, J. B. Jones, Eusdou House, Shrewsbury; second, W. Blakeway, Wooton House, Onibury.

Hereford bullock, not exceeding one year old on January 1st, 1875.—Prize, Heighway and Son, Leebotwood and Lea Cross.

## SHEEP.

## SHROPSHIRE.

Shearling ram.—First prize, T. J. Mansell, Adcott Hall, Shrewsbury; second, Sarah Beach, The Hattons, Brewood. Highly commended: T. L. Naper, Lougherin, Oldcastle, Ireland; and T. Mansell, Ercall-park, Wellington. Commended: T. Mansell and J. W. Minton, Forton, Shrewsbury.

Ram of any other age.—First prize, W. O. Foster, Apley-park Farm; second, T. Mansell, Ercall-park. Highly commended: J. W. Minton, Forton, Salop.

Pen of ten breeding ewes, having reared lambs this season. First prize, T. J. Mansell, Adcott Hall, Shrewsbury; second, M. Williams, Dryton. Highly commended: T. Mansell. Commended: H. Smith, Sutton Maddock, Shifnal.

Pen of ten shearing ewes.—First prize, T. J. Mansell. Highly commended: T. Mansell. Commended: W. Brouley, Lea Hall, Harmer-hill.

Pen of five shering ewes.—First prize, Mrs. H. Smith, Sutton Maddock; second, Mrs. S. Beach, Brewood, Stafford. Highly commended: W. O. Foster, Apley-park Farm. The class commended.

## LAMBS.

Pen of ten ewe lambs in the Shropshire class.—Silver cup, J. W. Minton, Forton, Shrewsbury. Highly commended and cup: W. Yates, Grindle House, Shifnal; J. Bowen Jones, Eusdou House, Salop. Commended: R. Thomas, Baschurch.

Pen of five rana lambs in the Shropshire class.—Silver cup, T. J. Mansell, Adcott Hall, Shropshire. Highly commended: J. Bowen Jones. Commended: J. W. Minton, Forton.

## CLUN, KERRY, AND LONGMYND SHEEP.

Ram of any age.—First prize, J. More, Glanmihilly, Kerry, Montgomery; second E. Bach, Longville, Craven Arms.

Pen of five breeding ewes, having reared lambs this season.—First prize, J. Moore, Glanmihilly, Kerry, Montgomery. No second awarded.

## PIGS.

## LARGE BREED.

Boar.—First prize, executors of J. Weeler and Sons, Long Compton; second, R. K. Mainwaring, the Hills, Market Drayton. Highly commended: C. Wingfield, Onslow, Salop.

Sow in pig, or with pigs.—First prize, J. Dove, Hambrook; second, executors of J. Weeler and Sons, Shipton-in-Stour. Highly commended: T. Jones, New Mill, Lea Cross. Commended: C. Wingfield, Onslow, Salop.

## SMALL BREEDS, INCLUDING DERKSHIRES.

Boar.—First prize, R. L. Burton, Longnor Hall, Salop; second and highly commended: Executors of J. Weeler and Sons.

Sow in pig, or with pigs.—First prize, Sir C. F. Smythe, Bart., Acton Burnell; executors of Weeler and Sons. Highly commended: J. Dove, Hambrook.

## LABOURERS' PIGS.

(Having been in possession of exhibitor not less than two months before date of show.)

Pig.—First prize: W. Pugh, Circus Brewery, Salop; second, W. Rawlings, Beckleton, Salop; third, E. Williams, Hardwick Grange. Highly commended: G. Adams, Ercall Park, Wellington. Commended: W. Jones, Belle Vue, Shrewsbury; and R. Seacock, School-lane, Coleham, Salop.

## CHEESE.

Sample of four cheeses, not less than 60lbs. each.—First prize, T. Inions, Wem Brockhurst, Wem; second, W. Duddleston, New Lodge, Dorrington. Highly commended: B. Bithell, Lec Farm, Westfelton. Commended: F. Tauna, Noneley Hall, Wem.

Samples of four cheeses, not less than 20lbs. each.—First prize, T. Huxley, Preston, Brockhurst, Salop; second, C. Mort, Burlton, Shrewsbury. Commended: J. Jackson, Ityton, Wellington; and G. Richards, Bank House Ash, Whitechurch.

## BUTTER.

Tub of butter, not less than 60lbs., best 6lbs. of fresh butter in single lbs.—Tub of butter.—First prize, J. R. Kenyon, Pradoc, West Felton, R.S.O.; second, J. Hudson, Sibberscot. Highly commended; J. Jacks, Brouley. Commended: Mrs. Gittins, Buildwas, Ironbridge.

6lbs. of fresh butter in single lbs.—First prize, W. Heath, Haston Grove, Shrewsbury; second, R. Evans, Longdon Hall, Shrewsbury. Highly commended: J. Hudson; and J. Jackson, Eytton, Wellington. Commended: J. Marson, Acton Trussell, Stafford; J. Jacks, Bromley; Sarah Hughes, Uckington, Wroxeter; and R. J. Kenyon.

## WOOL.

Five fleeces of Shropshire wool.—First prize and cup, S. Amies, Stoke Castle, Craven Arms; second, J. Hill, Felhampton Court, Church Stretton. Highly commended: W. Rider, Crudington, Wellington. Commended: R. T. E. L. Burton, Shrawardine Castle, Shropshire.

Five fleeces of Clun, Kerry, or Longmynd wool.—First prize, J. Moore, Glanmihilly Kerry, Montgomeryshire; second, J. Haynes, Upton Magna, Salop.

## IMPLEMENTS AND MACHINES.

(Open to the United Kingdom.)

Collection of the most modern agricultural implements and machines.—[No competition.]

Collection of the most improved agricultural implements and machines, manufactured by the exhibitors.—[No competition.]

THE ORMSKIRK AND SOUTHPORT AGRICULTURAL SOCIETY.—This show was held in Southport. The entries, 950 in number, were much more numerous than at any previous show. There were three entries of farms, 60 of crops, 17 of implement stands, 65 of cattle, 180 of horses, 16 of sheep, 25 of pigs, 200 of poultry, and 290 of pigeons. The horses were specially commendable, and included some of the competitors from the Royal show. In addition to the prizes offered by the society, 31 special prizes were given, chiefly by private persons, the total value being over £700. The judges of farms and crops were Mr. Jno. Hulme, Melling, and Mr. R. Webster, Litherlands. The judges of cattle were Mr. Thomas Bell, Stafford, and Mr. Thomas Dodds, Wakefield, with Mr. T. Tunstall as umpire. Judge of implements, Mr. R. Whalley, Bold. Judges of light horses, Mr. W. Challinor, Lancaster, and Mr. T. Dufty, Epperston, with Mr. T. Brumley as umpire. Judges of heavy horses, Mr. T. Scotson, Knotty Ash, and Mr. T. Brumley, Lancaster, and Mr. W. Challinor as umpire; judges of sheep and pigs, Mr. Frederick Byrd, Mr. W. Dodgson, and Mr. T. Tunstall; of butter, Mrs. S. Johnson, Southport, and Mrs. Alice Shockley, Downholland-of-All. The prize for the best cultivated farm of not less than 150 statute acres was won by Mr. Edward Musker, Aintree; that for the best cultivated farm of 100 and 150 statute acres by S. Cooke, Linacre; and that for the best cultivated farm of between 40 and 100 statute acres by Mr. James Pimbley, Meghall, who also obtained a silver cup in respect of his farm being the cleanest and best cultivated of all entered for competition. First prizes were won by R. Brade, Banks, and Edmund Berry, Shelmersdale, each for a field of wheat; B. Bathel, of Tarbock, and Richard Mawdsley, Orrell, each for a field of oats; T. Williamson, Linacre, and the Marquis of Castelnau, Scarisbrick Hall, each for a field of barley; and Peter Rymer, Hesketh Bank, Southport, for a field of beans. The principal prize winners for cattle were Edgar Musgrove, Aughton; Thos. Statter, Stand Hall, near Manchester; Thos. Atkinson, Dutton, Richester, who among them took the bulk of the

best prizes); John Harrison, Huck Hool; Ellen Birch, Aintree; Robert Whalley, Mill Green, Bold; Jane Walthew, Aughton; George Maples, jun., Wavertree; George Maples, Woolton; John Harrison, Much Hoole; and Robert Harrison, Tarleton. Among exhibitors of horses first prizes were distributed to the following: The Earl of Ellesmere; J. F. Crowther, Mirfield; Thos. Stutter, Stand Hall, near Manchester; James Birch, Sefton; Ellen Birch, Aintree; T. Taylor, Hesketh Bank, Southport; Benjamin Bee, Goosnargh;

Edgar Musgrove, Aughton; J. C. Rogerson, Manchester; Wm. A. Meadows, Rainhill, Liverpool. The most successful competitor with sheep was Edward Musgrove, Aughton, who took three first prizes and a cup offered for the best pen of any kind of sheep or lambs on the show ground. R. G. Welsby, Setton, won two first prizes, and Humphrey Fulm, Netherton, one first prize for sheep. Among competitors in the classes for pigs, Samuel Wilson, Ramsbottom; Samuel Wilson, jun.; and the Earl of Ellesmere were winners of first prizes.

## GLoucestershire Agricultural Society.

### MEETING AT CIRENCESTER.

Most of the Shorthorn winners were in somewhat similar positions at Taunton, with one grave exception in the all-aged bull class, where Protector was preferred to Royal Windsor and Sir Arthur Ingram. Queen Mary, however, still kept her place as Champion of the show. The show of Herefords was small, but included the best bull and the best cow of the Royal Show. Amongst the sheep the Cotswolds, considering the locality, offered no great front but some of the Shropshires were better; and there were some good Berkshire pigs.

#### PRIZE LIST.

**JUDGES.**—**SHORTHORNS:** M. Savidge, Sarsden, Chipping Norton; R. Doig, Lillingstone, Buckingham. **HEREFORDS AND CHANNEL ISLANDS:** J. Bennett, Ingstone, Ross; H. Middleton, St. Frideswide, Cutte-howe, Oxford. **SHEEP:** W. Slater, Stratton, Cirencester; W. Keeling, Yew Tree Farm, Penkridge; F. Burnett, Kingscote, Wotton-under-Edge. **PIGS:** J. Smith, Henley-in-Arden; J. Scott Hlayward, Frocester Court, Gloucester. **CART HORSES:** H. Bone, Stoke Orchard, Cheltenham; H. Bettridge, Hanney, Wantage. **HUNTERS AND ROADSTERS:** J. S. Walker, Knightwick, Worcester; J. B. Bennett, Bosworth Grange, Rugby; W. Stratton, Kingston Deverill, Warminster. **CHEESE:** B. Brunson, Ashfield, Ross; E. Bretherton, Gloucester.

#### CATTLE.

##### SHORTHORNS.

Bull above two years old.—First prize, R. Stratton, the Duffry, Newport (Protector); second, J. Outhwaite, Bainesse, Catterick (Royal Windsor). Highly commended: W. Linton, Sheriff Hutton, York (Sir Arthur Ingram).

Bull above one and under two years old.—First prize, Lieut.-Col. R. Loyd Lindsay, V.C., M.P., Lockinge Park, Wantage (Lord Rockville); second, J. Outhwaite (Duke of Chamburg). Highly commended and reserved: J. Stratton, Aiton Priors, Marlborough (Royal James).

Bull calf above six months and under one year old.—First prize, Lord Sadeley, Toddington, Winchcomb (Mondarin 11th); second, W. G. Garne, Broadmoor, Northleach (Milkman). Reserved: J. Stratton (Caracicus).

Breeding cows.—First prize, J. Outhwaite (Vivandiere); second, J. Stratton (Mabel). Highly commended and reserved: Marquis of Exeter, Burgliley Park, Stamford (Moll Gwynne).

Heifer under three years old.—First prize and champion cup, Rev. R. Bruce Kennard, Marnhill, Blandford (Queen Mary); second, Lord Sadeley (Seraphina Bella 2nd). Highly commended and reserved: J. Stratton (Miriam).

Heifer under two years old.—First prize, Rev. R. Bruce Kennard (Olga); second, Marquis of Exeter (Telemacina).

Heifer calf above six months and under one year old.—First prize, J. Outhwaite (Lady Danby); second, R. Stratton (Queen Bess). Highly commended and reserved: Lord Sadeley (Ceres 14th).

##### HEREFORDS.

Bull above one year old.—First prize, Mrs. S. Edwards, Wintercote, Leominster (Winter De Cote).

Cow or heifer above one year old.—First prize, T. Fenn, Stonebrook House, Ludlow (Lady Stanton); second, Mrs. S. Edwards (Myrtle 3rd).

Bull calf above six months and under one year old.—First prize, Mrs. S. Edwards (Sir Edward).

Heifer calf above six months and under one year old.—First prize, Mrs. S. Edwards (Mabel).

Three dairy cows.—First prize, J. Stratton (Cassandra, Bosette, and Miss Corfrule); Earl Beauchamp, Madresfield Court, Malvern. Highly commended and reserved: Earl Beauchamp.

##### CHANNEL ISLANDS.

Bull of any age.—First prize, J. R. Raymond-Barker, Fairford Park (Signalman). Reserved number: F. W. Coole, South Cerney (Crown Prince). Commended: H. Van Notten Pole, Watermoor House Cirencester (General).

Cow or heifer in calf or in milk.—First prize, J. R. Raymond-Barker Spotless; second, E. M. Williams, Bilbury Court (Rose). Reserved number: J. R. Raymond-Barker (Lemonade). Commended: C. Lawrence, the Querns, Cirencester (Mouse and Beauty).

##### BREEDING SHEEP.

###### LONGWOOLS.

Shearling ram.—Prize, D. C. Holbor w, Scrubbert's Farm, Cirencester. Highly commended: R. Swanwick, R.A., College Farm, Cirencester.

Ram of any age.—First prize, R. Swanwick; second, R. Swanwick. Highly commended: R. Swanwick.

Five yearling ewes.—First prize, R. Swanwick; second, H. E. Raynbird, Basingstoke.

###### SHORTWOOLS.

Shearling ram.—First prize, Sir W. Throckmorton, But., Faringdon; second, Sir W. Throckmorton. Highly commended: C. Chapman, Frocester Court.

Ram of any age.—First prize, Sir W. Throckmorton; second, H. S. Waller, Farmington.

Five yearling ewes.—First prize, Sir W. Throckmorton; second, H. S. Waller.

###### SHROPSHIRES.

Shearling ram.—First prize, J. Pulley, Lower Eaten, Hereford; second, J. Pulley. Highly commended: J. Pulley.

Ram of any age.—First prize, W. Baker, Moor Barns, Hatherstone; second, T. Fenn, Stonebrook House, Ludlow. Commended: J. Pulley.

Five yearling ewes.—First prize, J. Pulley; second, W. Baker. Commended: J. H. Elwes.

###### PIGS.

Berkshire boar under a year old.—First prize, H. Humphrey, Shrivensham; second, J. Dove, Hambrook. Commended and reserved number: W. Hewer, Sevenhampton. Commended: A. Stewart, Gloucester.

Boar of any breed under a year old.—Prize, J. Dove. Berkshire sow under a year old.—First prize, W. Hewer; second, W. Hewer. Highly commended and reserve number: R. Swanwick. Commended: A. Stewart.

Sow of any breed under a year old.—Prize, J. Dove. Berkshire boar over a year old.—First prize, W. Hewer; second, A. Stewart. Highly commended and reserved number: H. Humphrey.

Boar of any breed over a year old.—First prize, J. Dove; second, J. Dove.

Berkshire sow.—First prize, A. Stewart; second, H. Humphrey. Commended and reserve: H. Humphrey.

Sow of any breed.—First prize, J. Dove; second, J. Dove. Reserve: J. Raymond-Barker, Fairford Park.

Three sow pigs of the same litter under nine months old.—First prize, A. Stewart; second, H. Humphrey. Highly commended: J. Dove and W. Hewer.

Sow and pigs.—First prize, H. Humphrey; second, A. Stewart. Reserved: H. Humphrey.

## HORSES.

## CART HORSES.

Sallion.—First prize, Messrs. Yeomans, Wolverhampton; second, S. Davis, Woolashill. Reserved: W. Wynn, Stratford-on-Avon.

Mare and foal.—First prize, S. Davis; second, G. Nichols, Long Ashton, Bristol. Reserved: Lieut.-Col. Loyd Lindsay.

Gelding or filly under three years old.—First prize, S. Davis; second, J. Clarke, Cricklade. Reserve: E. Parsons, Coates, Cirencester.

## HUNTERS AND ROADSTERS.

Stallion for getting hunters or hacks.—First prize, W. West, Cirencester; second, H. Brown, Monkton, near Swindon. Reserved: Col. R. Richardson-Gardner, M.P., Cowley Manor, Cheltenham.

Hunter of any age.—First prize, E. St. Pierre Chaplin, Laborough Park, Wotton-under-Edge; second, E. Ernest Bowly, the Lodge, Siddington. Highly commended: C. Allen, Cirencester; C. Allen (2); T. H. Ashton, Temple Langherne, Worcester; T. H. Ashton (2). Reserved: W. R. Holman, Cheltenham.

Hunter under five years old.—Second prize, G. Edmonds, Eastleach. Reserved: J. Ratcliffe, Jackbarrow Farm, Cirencester.

Hack, equal to 15 stone, not exceeding 15 hands.—First prize, J. Barton, Kemble; second, W. Edmonds, Southrop. Reserved: Mr. Masters, the Abbey, Cirencester.

Hack, equal to 12 stone, not exceeding 15 hands.—First prize, Captain Waller, Preston; second, W. F. Croome, North Cerney House. Reserved: Nevil Cuss, Ampney Crucis.

Pony above 12 and not exceeding 14 hands.—First prize, Miss C. C. Ireland, Cheltenham; second, T. H. Ashton.

Pony not exceeding 12 hands.—First prize, F. J. Morse, Woodmancote, Cirencester; second, C. A. Jacobs, Clifton. Reserved: E. Ernest Bowly.

## CHEESE.

Thick cheese, 1 cwt.—First prize, S. M. Harding, Almondsbury, Bristol; second, S. M. Harding. Reserve: J. Smith, Nupdown Farm, Thornbury, Gloucestershire.

Double cheese, 1 cwt.—First prize, T. and H. Wilkins, Nethercote Farm, Bourton-on-the-Water; second, S. M. Harding. Reserve: G. Harris, Court House Farm, Lower Cam, Dursley.

Thin cheese, 1 cwt.—First prize, G. Harris; second, A. Neale, Peddington, Berkeley.

## CLECKHEATON AGRICULTURAL SOCIETY.

Horses generally form the chief feature, and this year there was an excellent entry, numbering 203 as against 201 last year.

## PRIZE LIST.

JUDGES.—CATTLE: J. Knowles, Wakefield; G. Robson, Easingwold. HORSES: W. H. Gaunt, Kirk Hammerton; T. Scott, Ripon; J. E. Scriven, Aberford; J. Kirkby, Stamford Bridge. PIGS: P. Eden, Salford; M. Walton, Halifax. BUTTER: Mrs. Gomersall, Ilansworth.

## CATTLE.

Shorthorn bull, over two years old.—First prize, C. W. Brierley, Middleton; second, J. H. Rockett, Snaith Hall.

Shorthorn bull, under two years.—First prize, A. and R. Mann, Thornhill; second, J. Saville, Birstal.

Full calf, under twelve months and over five months.—Prize, J. H. Rockett, Selby.

Shorthorn cow, in calf or milk.—First prize, H. Fawcett, Leeds; second, J. Rowley, Doncaster.

Cow for dairy purposes.—First and second prize, J. F. Crowther, Mirfield.

Two-year-old heifer.—First prize, J. H. Rockett; second, A. and R. Mann.

One-year-old heifer.—First prize, J. H. Rockett; second, H. Fawcett.

Heifer calf, under twelve months.—First prize, B. Fletcher, Yeaton; second, H. Fawcett.

Alderney or Guernsey cow in calf or milk.—First prize, J. White, Whitby; second, A. Hall, Cleckheaton.

Two cows for dairy purposes.—First prize, J. F. Crowther; second, J. Hindell, Leeds.

## PIGS.

Boar, middle breed, any age.—First prize, I. Graham, Leeds; second, T. Hannan, Leeds.

Boar, small breed, any age.—First prize, W. R. Bowditch, Wakefield; second, J. Hallas, Huddersfield.

Store pig, middle breed, any age.—First prize, J. Hallas, second, K. Platt, Brighouse.

Store pig, small breed, any age.—Prize, J. Hallas.

Store pig, for feeding, under twelve months old.—First prize, H. Muirkin, Bradford; second, J. Hallas.

Breeding sow, middle breed, any age.—First prize, T. Holmes, Keighley; second, W. Rushworth, Idle.

Sow and litter, under eight weeks old.—First prize, G. Armitage, Huddersfield; second, L. Thornton, Huddersfield.

Store pig, middle breed.—First prize, J. Copperthwaite, Cleckheaton; second, S. Drake, Scholes.

Store pig, any breed.—First prize, J. Copperthwaite; second, S. Drake.

## HORSES.

One-year-old draught colt or filly.—First and second prize, J. F. Crowther.

One-year-old draught colt or filly.—First prize, J. M. Stott, Brighouse; second, F. Fearnside, Netherton Hall.

Two-year-old roadster gelding or filly.—First prize, B. Robertshaw, Great Gomersal; second, S. F. Wrigglesworth, Gomersal.

Two-year-old draught gelding or filly.—First prize, E. Haley, Allerton; second, W. Charlesworth, Netherton.

Three-year-old draught gelding or filly.—First prize, T. W. Waterhouse, Apperley Bridge; second, Clayton and Speight, Gildersome.

Three-year-old roadster gelding or filly.—First prize, W. Sadler, Leeds; second, H. Fawcett.

Agricultural brood mare and foal.—First prize, G. Smith, Middleton; second, Heckmondwike Manufacturing Co.

Roadster mare and foal.—First prize, T. F. Firth, Heckmondwike; second, J. M. Stott.

Agricultural horse or mare, not to exceed 16 hands.—First prize, R. Crawshaw, Heckmondwike; second, J. P. Crowther, Mirfield.

Draught horse or mare.—First prize, R. Crawshaw; second, C. W. Brierley, Middleton.

Carriage horse or mare.—First prize, Mrs. J. Crossley, Halifax; second, T. E. Morrell, Rotherham.

Pair of draught horses.—First prize, R. Crawshaw, Heckmondwike; second, J. F. Crowther.

Pony under 13½ hands, mare or gelding.—First prize, S. Scarborough, Halifax; second, J. G. Hey, Cleckheaton.

Cob 14½ hands high or under.—First prize, T. Mitchell, Bowling Park; second, R. Y. Gledhill, Bradford.

Lady's pad.—First prize, J. Ackroyd, Harrogate; second, E. Charlesworth, Bradford.

Best groomed draught horse, and gears kept in the best condition.—First prize, W. Atkinson and Son, Cleckheaton; second, Heckmondwike Manufacturing Company.

Roadster 15½ hands or under.—First prize, A. Mitchell; second, E. Charlesworth.

Mare or gelding exceeding 14 hands, to be shown in harness and trap.—First prize, T. Statter, Manchester; second, Mrs. J. Crossley.

Mare or gelding not exceeding 14 hands, to be shown in harness and trap.—First prize, T. Mitchell, Bradford; second, R. Y. Gledhill.

Blood stallion.—First prize, J. H. Wright, North Rigton; second, W. Sugden, Brighouse.

Roadster stallion.—First prize, E. Clarkson, Salsden; second, E. Taylor, Bramham.

Draught stallion.—First and second prize, J. F. Crowther.

## CORK AGRICULTURAL SOCIETY.

The summer show was held on Wednesday in the Corn Market, and, taken as a whole, probably the most successful exhibition this Society has had since its formation. Having come to an arrangement with the Committee of the Cork and South of Ireland dog show, to hold both meetings at the same time and place, with an equal division of the receipts, the promoters of the Agricultural Society have not the slightest reason to suppose they made anything else but an excellent and highly profitable bargain. Favoured with a day of great brilliancy, one of the finest of the season, the County and City of Cork poured in to see an exhibition which, amongst its other attractions, numbered no less than 450 dogs of every size and breed, from the tiniest lady's pet to the formidable mastiff and Newfoundland. During the fashionable hours the crush at the gates was immense, and such was the anxiety of the fair visitors to get in to such a novel exhibition, that even with three entrances, it was impossible to take the money fast enough to clear the crowd. People from a distance who were unfortunate enough to have to leave early to catch a train, could only get out by special favour of a money taker, who might for a few moments stop his duty to favour their exit.

The exhibition of Shorthorns was decidedly the weak part of an otherwise good show, the entries in some of the sections consisting solely of the prize animals. In the aged class for bulls there were but two entries, the first place being taken by Mr. McDonnell, of Water-park, Cerrigaline, with his bull Prince of the Blood, bred by Mr. Downey, of Fermoy, an animal possessed of great substance, and, at the same time, rare quality. Although having served a dairy of over seventy cows, he was in very nice condition, and looked active and spirited enough to last for an indefinite number of years. By the bulk of the farmers present this animal was considered the finest Shorthorn in the yard. In the two-year-old section, which consisted of four entries, Mr. Marmaduke C. Cramer, Rathmore Kinsale, took the first prize with his well-known bull, Double Crown, bred by Wm. T. Crosbie, of Ardfort Abbey, Tralee, an animal with a grand middle and deep thighs, his only fault being a somewhat coarse shoulder. He was in superb condition, presenting not the slightest appearance of having been at all harassed with the duties devolving on him during the past summer. The second prize in this class went to Mr. Valentine Mairis Rosemount, Farran, for his bull May Boy, an animal of faultless quality, but singularly small and unshapely. Sir George C. Colthurst took first prize with the greatest ease in the yearling class, with Victor, a level, nice animal, beautifully brought out, and a credit to his breeder, Mr. H. L. Barton Straffan. This bull also took the Fifty-guinea Challenge Cup. The second prize in this class was taken by Mr. Wm. Good Farreu with a rather promising bull, bred by Mr. Crosbie, of Ardfort, taking also the Teuant-farmers' Challenge Cup. In section four, devoted to bull-calves, six animals were shown, all by famed breeders—Mr. Frank's, Westfield, Monutrath, and Mr. Massey, of Mount Massey, Macroom, dividing the honours. A few good animals in the class of Short-horned cows in milk were shown, most of them, however, being rather out of condition; Mr. Gumbleton, Glentore, Carryglass, taking first place with a useful cow, Lady of the Valley, and Mr. C. Cramer second with a rather sweet, though not large cow, Maid of Orwell. In the remaining sections there was nothing worthy of special remark, with the exception of that for yearling heifers; Captain Cosby, Stradbally Hall,

Queen's County, taking the first prize with a splendidly brought out animal of rare breeding and beauty. This animal was a great centre of attraction. There was no competition further than the two animals which gained first and second prizes, the latter being taken by Mr. Arthur J. Campbell, Fermoy, for a very nice heifer, but wonderfully plain in the vicinity of her magnificent rival. The Ayrshire sections call for no particular comment, and indeed were scarcely worthy of notice, as this breed was but indifferently represented, both as to numbers and quality. The Shorthorn being now the breed *par excellence* of the South of Ireland, it is quite time that the prizes for Ayrshire cattle were swept from the premium sheet. The dairy cows, shown in lots of three, of any breed or cross breed, made up a most inviting section, probably one of the most useful and interesting to practical men in the whole yard, as two tests were to be applied—viz., the milking quality by actual measurement in presence of the judges, and suitability for feeding purposes when done with the dairy. Those shown were mostly all half or three-quarter bred Shorthorns, and were with but few exceptions splendid specimens of the modern milk cow. The prizes went to Messrs. M'Donnell Carrigaline, Aheim Blarney, and Michael Forrest Blarney in the order here given. In the classes for the sheep the sections were but moderately filled, yet each was represented by first-class animals, some of the Downs being trimmed in a style not unworthy of the great master of the art—John Day. The entries for horses amounted for all classes to 108, and as regards live stock was far and away the strongest feature of the show. In stallions scarcely any new horse appeared, and the prizes were as nearly as possible awarded to the same who won at the spring show, Mr. Power Rosskeen, Mallow, leading with Beauvale in the thoroughbred section, and Mr. Walter Irvine taking both the first and second prizes, as well as the Meade Garde Challenge Cup, value fifty sovereigns, with his horses Billy's the Boy and Young Champion in the section for cart stallions. In no class for horses was there so much improvement discernible as in that for young draught horses, an improvement solely attributable to the Clydesdale blood so largely used in crossing during the past few years. In the brood mare class for producing weight-carrying hunters, some useful animals were shown, and some very clever animals in competition for Lord Doneraile's and the President's prizes. In implements and machinery every firm in the city exhibited, rendering this department a most interesting one alike to the farmer and those who visited the show as a mere sight. Although there was very little really new, yet the engines and other machinery in motion were so beautifully got up, the work on the thrashing machines so well finished, and the whole so well arranged for the safety and comfort of visitors that this part of the show almost rivalled the attractions of the adjacent dog show. The principal exhibitors were Messrs. Mackenzie and Sons Limited), Smith Brothers, Hartland, and O'Donnell.

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MR. CHARLES HOWARD'S OXFORD DOWN RAMS, AT BIDDENHAM, BEDFORD, ON FRIDAY, JULY 30. —This was a most satisfactory sale, the sixty sheep offered averaging £17 2s. 6d. The highest price, 56 gs., was given by Mr. K. Phipps, of Northampton, and other rams were purchased for Russia, Poland, Denmark, Germany, Holland, and Belgium.

## MALTON AND APPLETON AGRICULTURAL SOCIETY.

The third annual show of the amalgamated Malton and Appleton Agricultural Societies was held on Tuesday at Appleton-le-Street, near Malton. The show of the Society was last year at Malton; and independently of the fact that Malton seems to be the more popular, the approach of the Yorkshire show at Driffield would no doubt deter some of the exhibitors from appearing on Tuesday. The entries in the various classes were: Horses 289, sheep 32, cattle 32, pigs 32—total 385. The excellent turn-out of horses was without doubt the feature of the show. Horses for agricultural purposes were very largely represented. A number of fine animals were shown in the class "pair of agricultural horses." The first place was taken by two blacks, belonging to Mr. W. Smith, High Mowthorpe. The hunters were the finest show on the ground, and the class for four-year-olds especially good. Eventually the first prize of £15, given by the President, was awarded to First Commissioner, a bay, belonging to Mr. R. Metcalfe, Malton, with Mr. C. Rose, of Norton, second. The show of cattle was very limited, and little can be said for the quality of the stock. The class of heifers between one and two years old was the best. The show of sheep and pigs was good, and equal to any of the previous exhibition.

## PRIZE LIST.

JUDGES.—HUNTERS AND HACKS:—Forster, Burradon, Morpeth; J. Hall, Sedgfield, Durham;—Gaunt, Old Thorneville, Kirkhamerton. COACHING AND AGRICULTURAL: J. Crowther, Mirfield; E. Godfrey, Thealby, Brig;—Kirby, Burton Fields. CATTLE, SHEEP, AND PIGS: J. Kirby, Skirpenbeck; W. Brown, Holme-on Spalding-Moor; J. Outhwaite, Bainesse.

## HORSES.

Hunting colt foal.—First prize, G. Lovel, Norton; second, T. Cattle, South Holme.

Hunting filly foal.—First prize, R. Hicks, Cawton; second, D. W. Robertson, Pickering.

Coaching colt or filly foal.—First prize, G. Hopper, Yedmandale, Aytou; second, F. Coulson, Castle Howard.

Roadster colt or filly foal.—First prize, T. G. Mallory, Great Halton; second, S. Campion, Thorpebasset.

Agricultural colt or filly foal.—First prize, J. and C. Sollitt, Menuithorpe; second, J. Smith, Riseborough.

Yearling coaching gelding or filly.—First prize, J. Wood, Park House, Gilling; second, T. Stamper, Highfield.

Yearling roadster gelding or filly.—First prize, W. and C. Harrison, Bossall; second, J. Richardson, Pickering Marishes.

Yearling agricultural gelding or filly.—First and second prizes, F. C. Lett, Howsham.

Two-year-old hunting gelding.—First prize, W. Muzeen, South Holme; second, J. Welburn, Scackleton.

Two-year-old hunting filly.—First prize, J. Simpson, Winttingham; second, W. Muzeen.

Two-year-old coaching gelding or filly.—First prize, Hon. C. Duncombe, Newton; second, J. Wood.

Roadster gelding or filly.—First prize, J. E. Fearby, Lepington; second, W. and C. Harrison.

Two-year-old agricultural gelding or filly.—First and second prizes, W. Smith, High Mowthorpe.

Three-year-old hunting gelding.—Prize, J. Simpson, Winttingham.

Three-year-old hunting filly.—First prize, S. B. Robson, Ganton; second, W. Muzeen.

Three-year-old coaching gelding or filly.—First prize, R. Milner, Ryton; second, J. Miles, West Heslerton.

Three-year-old agricultural gelding or filly.—First prize, H. Lawson, Sutton-on-Forest; second, T. Stamper, Highfield.

Brood mare, with foal at foot, for hunting purposes.—First prize, H. Watson, Fley; second, D. W. Robertson, Pickering.

Brood mare, with foal at foot, for agricultural purposes.—First prize, J. Rooke, Farlington; second, W. S. Gotton, Wharrah Percy.

Brood mare, with foal at foot, for coaching purposes.—First prize, F. Coulson, Castle Howard; second, G. Hopper, Aytou.

Brood mare, with foal at foot, for roadster purposes.—First prize, T. G. Mallory, Great Halton; second, S. Campion, Thorpebasset.

Pony, not exceeding 14 hands.—First prize, E. Binington, North Dalton Wold; second, M. Welburn, Fylingdales.

Pony, not exceeding 12 hands.—First prize, F. Newton, Norton; second, Sir C. Strickland, Hildeuley.

Four-year-old hunting gelding or filly.—First prize, R. Metcalfe, Malton; second, C. Rose, Norton.

Five-year-old hunting gelding or filly, to jump hurdles to the satisfaction of the judges.—First prize, R. Barker, Malton; second, H. Jewison, Raisthorpe.

Yearling hunting gelding or filly.—First prize, J. P. Crompton, Barton Agnes; second, W. Muzeen, South Holme.

Lady's hack.—First prize (piece of plate), J. Welburn, Scackleton; second, R. Barker, Malton.

Gentleman's hack.—First prize (cup), Sir G. Wombwell, Newburgh Park; second, J. Snarry, Malton.

Pair of agricultural horses, mares or geldings, regularly worked by a tenant-farmer, having been used exclusively for farming purposes.—First prize, W. Smith, High Mowthorpe; second, A. Wilson, Swinton.

Foal, colt or filly, by Black Douglas.—First prize, J. Houlden, Langton; second, W. Weatherhill, North Grimston.

Foal, colt or filly, by Blooming Heather or Wellington.—First prize, T. Bradshaw, Amotherby; second, J. Shaw, Stockindale.

Foal, colt or filly, by George Oshaldston.—First prize, F. Coulson, Castle Howard; second, G. Lovel, Norton.

Foal, colt or filly, by Little John.—First prize, T. Robson, Marishes; second, A. Wilson, Swinton.

## CATTLE.

Bull, over one and under two years old.—First prize, W. and C. Harrison, Bossall; second, G. Oliver, Old Malton.

Bull, under twelve months old.—W. Smith, High Mowthorpe; second, T. Stamper, Highfield.

Cow, in calf or in milk.—First prize, T. Stamper; second, J. Key, Musley Bank.

Heifer, over two and under three years old.—W. Smith; second, W. Scoby, Barugh.

Heifer, over one and under two years old.—First prize, G. Scoby, Newton; second, T. Stamper.

Heifer, under twelve months old.—First prize, J. Snarry, Sledmere; second, R. Garbutt, Ampleforth.

Fat bullock, any age or breed, within a radius of ten miles of Appleton-le-Street.—First prize, J. Key; second, F. Coates, Little Halton.

Bull, of any age.—First prize, W. Smith; second, F. Coulson.

## SHEEP.

Aged ram.—First prize, T. Sadler; second, W. Coverdale, Newton.

Shearling ram.—First and second prizes, W. Coverdale.

Pen of five gimmer shearlings.—First prize, J. Key, Musley Bank; second, W. S. Lovel, Knapton.

Pen of five gimmer lambs.—First prize, Mrs. Webster, Allerston Marishes; second, R. Tarbotton, Cawton.

Pen of five wether lambs.—First prize, F. Coates, Little Halton; second, Mrs. Webster.

Extra stock.—First prize, W. Coulson, Gatherley; second, J. Key.

Pen of five ewes that have suckled lambs up to July 1st.—First prize, W. S. Lovel; second, R. Tarbotton.

## PIGS.

Sow, middle breed.—First prize, W. Boyes, Slingsby; second, J. Graham, Leeds.

Boar, middle breed.—First prize, J. Graham; second, G. Sedgwick, York.

Sow, small breed.—First prize, T. Nicholson, York; second, J. Graham.

Boar, small breed.—First prize, G. Sedgwick; second, T. Nesfield, Norton.

Three store pigs.—First and second prizes, T. Cattle, South Holve.

Cottage's pig, rent under £12 per annum.—First prize, J. Bradley, Swinton Gatehouse; second, W. Horner, Norton.

### SHEEP SALES AND LETTINGS.

**MR. NEWTON'S HAMPSHIRE RAMS AT DOGDEAN.**—The average of the 17 lambs let was £20 2s. 8d., the highest price was 74 gs., another 50 gs., and a third 45 gs. 83 ram-lambs were then sold, and produced an average of £12 19s. 10d., the average of the 40 being £15 18s. 8d. Ten lambs were bought by Mr. Tanner, Marlborough—viz., at 26 gs., 20 gs., 19½ gs., 19 gs., 17½ gs., 17 gs., 16½ gs., 14½ gs., and 14 gs. The average of the 100 ram-lambs let and sold was £14 3s. 9d. Eight two-tooth and four-tooth rams were then let and sold at lower prices.

**MR. BUSHBY'S SOUTH-DOWNS AT RUSTINGTON, BY MR. THORNTON.**—The first two lots were wether lambs, bought by Mr. Gates, Steyning, at 52s., and Mr. Hazeldine, of Godstone, at 48s. The other sheep sold as follows: Eve lambs 45s. to 47s., three pens of ten; breeding ewes 50s. to 63s., ten pens of five; ram lambs for letting, 8gs. and 10gs. (two). Rams for sale: Wanderer, 4 years old, 10½ gs., to Mr. Hampton of Applesham. Mr. Stapley, of Annington, bought a two-year old ram at 6gs. Of the shearlings offered (19), Mr. R. Hare (Steyning), bought one at 20gs. and another 12gs. The others realised from 8gs. to 13gs. The ram lambs (31) sold at from 8gs. to 17½ gs.

**MR. BUDD'S HAMPSHIRE, AT HATCHWARREN, BY MR. J. HARRIS.**—The six two-tooth sheep averaged £24 6s. 6d., the single four-tooth made £42; and the 154 lambs averaged £11 8s., the average of the whole being £12 1s. 6d.

**MR. AYLNER'S LONGWOOLS AT WEST DEREHAM.**—The lambs fetched £813 15s., or an average of £8 2s. 9d. Altogether, the shearlings realised £1,231, or an average of £15 17s. 7d. For two or three of the lots there was some brisk competition, the premier price being 40 guineas, given by Mr. Lyne, of New Zealand, who also purchased one at 23 guineas. Mr. Lane, of Gloucester, had one knocked down to him for 30 guineas, the like sum being paid for another by Mr. Pickeral of America, Lord Dudley becoming a hirer at 25½ guineas. The highest price obtained for a two shear was 14½ guineas, Mr. J. Aylmer being the hirer, and with an average of £10 1s. 6d. the sum realised for the ten offered was £100 15s. The total proceeds amounted to £2,145 10s.

**MR. GEORGE TURNER'S LEICESTER RAMS AT THORPELANDS, NORTHAMPTON, BY LYTHALL AND CLARKE.**—The highest price obtained was for a shearing which started at 15 guineas, was quickly run up at 5 guineas a bid, and finally knocked down to Mr. Wilkins, to be sent to New Zealand, for the large sum of 120 guineas. The lowest price was 8 guineas, given in several instances. The aggregate amount of the 34 lots was £616 6s. 6d., the average price being £18 2s. 6½d. Shearling rams to let: Lot 1, 15 guineas, Mr. Pulver, Broughton. Lot 2, 21 guineas, first prize at Croydon and third at R.A.S., Taunton, Mr. Potter, Yellowford, Thorneaton, Devonshire. Lot 3, not let. Lot 5, 21 guineas, Mr. T. Harris, Stony-lane, Bromsgrove. Lot 6, 8½ guineas, Mr. Pell, Billing. Lot 7, 11½ guineas, Mr. Pulver. Lot 8, 8 guineas, Mr. Stoue, Durston. Lot 9, 8½ guineas, Mr. Caupion. Lot 10, 8 guineas, Mr. Pell. Two-shear rams to be let: Lot 11, 34 guineas, Mr. Earl, Barton. Lot 12, 26 gs., first prize at R.A.S. at Bedford, first at Bristol, first and Challenge Cup at the Royal Irish in 1874, first and Champion Prize at Croydon in 1875, second at Grimsby, Mr. Painter, Burghley. Lot 13, 13 guineas, second prize as a shearing at R.A.S. at Bedford, and first at Grantham, Mr. Hopkins, Moulton. Lot 14, 20 guineas, first prize at Leicester, 1874, Mr. Walmsley, Yorkshire. Three-shear ram to be let: Lot 15, 20 guineas, second prize at R.A.S. at Bedford, first at Grantham, second at Shethfield in 1874, second at Croydon, and third at R.A.S. at Taunton, Mr. Earl. Shearling rams sold: Lot 4, 120 guineas, second prize at Taunton R.A.S., Mr. Wilkin, New Zealand. Lot 16, 22 guineas, second prize at Croydon, Mr. Bradshaw, Wakerley. Lot 17, 28 guineas, Mr. Brydon, Australia. Lot 18, 31 guineas, Mr.

Nelson, Cumberland. Lot 19, 9½ guineas, Mr. Mann, Seawby. Lot 20, 12 guineas, Mr. Potter. Lot 21, 11 guineas, Mr. Richings, Wolverton. Lot 22, 8 guineas, Mr. Shaw, Fradby. Lot 23, 27 guineas, Mr. Brydon. Lot 24, 9 guineas, Mr. Mann. Lot 25, 8 guineas, Mr. Lewin, Brington. Lot 26, 8 guineas, Mr. Sanders, Hedgford. Lot 27, 9 guineas, Mr. Nelson. Lot 28, 8½ guineas, Mr. Phipps, Towcester. Two-shear rams for sale: Lot 29, 9 guineas, Mr. Stone. Lot 30, 10 guineas, Mr. Hawkes, Ecton. Three-shear rams for sale: Lot 31, 8 guineas, Mr. Barton, Bargley. Lot 32, 10 guineas, Mr. Dexter, Seekington, Tamworth. Lot 33, 9½ guineas, third prize at R.A.S.E. at Hull, Mr. Lewis. Lot 34, 11 guineas, Mr. Berry, Stoke Golding. Lot 35, 10½ guineas, Mr. Walker, Moulton Lodge.

**OXFORD RAM FAIR.**—Thirteen Cotswold ram lambs, bred by and the property of Mr. W. H. Gillett, of Southleigh, averaged £6 8s., the highest price realised being 10 guineas, and the lowest 4 guineas. Eight Cotswold shearing rams, the property of Mr. S. Smith, of Somerton, sold at an average of £13 15s. 6d., the highest price obtained being 24½ guineas, and the lowest 8½ guineas. Six Cotswold ram lambs, the property of Mr. H. Akers, of Black Bourton, near Bampton, fetched an average of £4 14s. 6d. The best price realised was 5½ guineas, and the lowest 4 guineas. Messrs. T. and S. G. Gillett, of Kilkenny, Brize-Norton, had nine Cotswold shearing rams, which fetched from 11½ to 7½ guineas, averaging £9 6s. 6d. Five rams, belonging to Mr. E. Morley, of Brize-Norton, averaged £6 10s. The highest sum realised was 7½ guineas, and the lowest 5½ guineas.

**SALE OF MR. G. M. SEXTON'S PIGS, AT WHERSTEAD, IPSWICH, ON FRIDAY, JULY 30, BY MR. GRIMWADE.**—Black sows were first taken, and the first lot offered was Lady Love, in pig, the sow which took first honours at the Royal and Norfolk shows, and second at Stowmarket and Croydon; she quickly went up to 20 guineas, and at 21 guineas was sold to Mr. Lang, of Mancombe, Henbury, Bristol. The highest price for a black sow was, singularly enough, made by the sow placed second to Lady Love at Taunton and Fakenham, and first at the Essex show. She ran up to 25 guineas, the purchaser being Mr. Steward, of Rice Hall, Akenham. Mr. Steward bought another prize-winner, a young eight months sow, for 14 guineas, and Mr. H. Biddell secured one at 12 guineas. Other lots were knocked down to Mr. Keeble (Stutton), Mr. Codling (Lincolnshire), Mr. J. Smith (Liverpool), Mr. Westoby (Sudbury), Mr. Hicks (Felstead), Mr. H. Spurling, Mr. S. Wolton, Mr. D. Smith (for the Duke of Hamilton), Mr. Durham, Mr. Ruthven (Longfield, near Liverpool), Mr. F. H. Everett (Sudbourne), Mr. T. Pettitt (Eriston), Mr. H. Palmer (Bramford), Mr. Rising, Mr. J. A. Hempson, Mr. Clayden (Elough Hall, Beccles), Mr. F. Grimwad (Hadleigh). The black boars came next, commencing with a rather noted two-year-old boar, Holy Friar, the winner of several prizes, which went at 16 guineas to Mr. Lang. Galopin, a young boar, which was first both at Stowmarket and Taunton, also fell to Mr. Lang. Other boars were secured by Mr. H. Biddell, Mr. S. Wolton, the Earl of Portsmouth, the Duke of Hamilton, Mr. Codling, Messrs. W. Everett and Son (Mutford Bridge), Mr. Mutton (Brighton), the Countess of Aylesford, Capt. Hammond, Mr. W. Gurdon (Brantham Court), Mr. Steward. The whites followed, but the biddings were not nearly so brisk as for the blacks. Pure Small, a sow which was first in the Suffolk and Essex shows and second at the Royal, made 20½ guineas, and a Croydon prize-winner made 17 guineas. The others went at 5, 6, 7, 8, and 9 guineas. Kenealy, the son of Disturbance and grandson of Bombast, the auctioneer said was the best white boar in England, but the top bid was 25 guineas, the purchaser being Lord Morton. Other prices made were not large. Amongst the buyers of white pigs were, besides Lord Morton, Mr. J. Taylor (Parvell, Hithelin), Rev. H. L. Maud (Assington), Mr. J. Bryant, Lord Stafford, Mr. G. H. Spooner, Mr. Fisher (Market Harborough), Mr. B. Allen, Mr. G. Goldsmith (Sapiston), Mr. M. Biddell, Mr. Dodd (for Mr. J. Berners), Mr. R. Garrett. The pigs as a whole realised £1,070, the average working out a trifle over £9 apiece. Black sows sold best, averaging 10 guineas apiece. Black boars averaged 9½ guineas; white sows, 8 guineas; and white boars, 7 guineas each.

## THE EAST LOTHIAN AGRICULTURAL SOCIETY.

## STEAM CULTIVATION.

At the monthly meeting at Haddington, Mr. Wyllie Bolton in the chair,

Mr. STEIN (Broomhouse) said he did not expect to be called upon to open the discussion, for he took up this question of steam cultivation two or three years ago pretty much as a hobby, and naturally he had become interested as an owner of steam tackle. He left it to others to speak of its advantages, and said he would refer to some of the difficulties standing in his way as an owner of steam tackle. In many cases the gates of fields were too small to admit the engines and implements, much valuable time being wasted in consequence, and he suggested that this subject should be kept in view whenever opportunity occurred. Another serious obstacle was the smallness of some of the fields, and the crooked fences, which put off an enormous deal of time. Farmers were aware how much time was put off with common horse ploughs when they were in short cuts; but with steam the difficulty was still greater. Landfast stones also formed an obstacle, and he suggested that those who employed steam power should either remove the earthen stones when they were discovered, or mark the place, so that the boulders might be taken out before the steam plough went over the land again. There was no doubt that the question ultimately came to be at what cost land could be cultivated by steam; and, for his own part, he said that if they took away the risks of breaking 5s. or 10s. worth of shares, or £20 or £30 worth of machinery, and leaving a man idle for a week, they left a margin on the price of the work. It was no uncommon thing to get a rope of the value of £50 or £60 broken by a stone which might easily have been removed, and, for fear of such breakages, the tackle was often made to do far less work than it was capable of accomplishing.

Mr. ROBERTSON (New Mains) said: Is steam cultivation in its present advanced state to be brought to bear upon agriculture with advantage? Upon this I think there can be but one opinion. There will upon this as upon every new improvement introduced be diversities of opinion, all of which may in the estimation of one or other appear tenable and worthy of consideration. I will endeavour to draw your attention to some practical results that had come under my own observation. Expense of cultivating an imperial acre: Horse labour ploughing an acre, 15s.; hiring at present rates by the acre, 16s. 8d.; baby engines by the acre, 9s. 8d.; large engines by the acre, 9s. 3d. You will perceive the large engines do the work cheapest. You will naturally ask me to show you how I arrive at these figures. I will endeavour to show you. In horses an imperial acre per day on an average is a fair day's work; I therefore take a man and a pair of horses at 15s.; present rate of hiring by the acre, 12s.; to this add coals per acre, 3s. 7d.; water and attendance per acre, 1s. 1d.—16s. 8d. Two large engines and five ploughs will turn 5½ acres per day. Cost: Two tons of coals at 17s., £1 14s.; two enginemen, one steeringman, 4s. 6d., 13s. 6d.; one assistant, 4s.; horse and man in attendance with water, 7s. 6d.; tear-and-wear of machinery, &c., 2s. 6d. per acre, 21s. 10d.—total, £4 0s. 10d.; equal, per acre, to 9s. 3d. Baby engines, with four-furrow ploughs, will turn seven acres per day. Cost: One-and-half tons coals, 25s. 6d.; two enginemen, one steersman, at 4s. 6d. per day, 13s. 6d.; one assistant, 4s.; horse and man in attendance with water, 7s. 6d.; tear-and-wear of machinery, 2s. 6d. per acre; seven acres, 17s. 6d.—total, £3 8s.; equal, per acre, to 9s. 8d. You will perceive by these details how I have arrived at the cost per acre; how far I am correct, however, is for your consideration. Should your views, however, nearly agree with mine these statements will show the great advantage of steam in one's own possession as compared with hiring it. You will naturally enough, however, say in hiring by the day, I have no outlay for machinery; this I admit, but I meet that by allowing the tackle to go 200 days in a year, ploughing six acres per day, which, at 2s. 6d. an acre, will leave a balance for outlay and keeping machinery in order of £150 per annum, and even admitting you to put 2s. 6d. more on this head to each acre would double this amount to £300. Even with that balance, we should have land ploughed with large class for

11s. 9d., and with the small engines for 12s. 2d., while the hiring cost 16s. 8d., and horses 15s. I have no hesitation in saying, from what I have seen of the baby engines in operation, they are every way the most suitable for individual farmers. I may state, I along with others, this week, had an opportunity of seeing two of these engines at work in this county, and I am sure I speak the sentiments of Mr. Smith (Sevenson Mains), Mr. Skirving (Luffness) and Mr. Tweedie (Coates), when I say they did their work admirably, while in the cost price there is a saving like £500; the large class of engines costing £1,700, and the small £1,200. They have also this advantage, from their mode of construction they can be turned into traction engines very simply, and, being less in size, can be turned in less space, and are in every way capable of driving thrashing machinery, thus doing away with the expense of another engine for that purpose, which so far saves outlay. My impression is by having command of these engines on a farm of six pair of horses you could dispense with three pairs, which would be a saving of something like £300 a year. You will observe when I make this calculation I only do away with the horses, not the men—the men being required for carrying on the operations with the steam tackle. I may state that besides land being cultivated cheaper by steam than horse labour it is done more effectually. I by no means consider ploughing beyond 8 or 9 inches any benefit, but the reverse; beyond that depth I would recommend grubbing to the depth of 18 inches, if possible, as I consider that mode of cultivating more beneficial than too deep ploughing. By steam you can break the pan or crust to a depth which cannot practically be done by horse labour, thus allowing the water, when a heavy rainfall, to penetrate more easily into the soil, and allowing the plants in case of very dry weather to shoot down their roots for moisture, which cannot be done through this hard underlaid strata. I am of opinion the day is not far distant when steam cultivation will take the front rank in our agricultural progression; that the change we have near in prospect we cannot at present see with that expansion of view we ere long will be enabled to do. There is also another advantage in steam power, if idle it requires no feeding as is the case with horses; also, more work can be overtaken in a limited time. One objection to steam tackle is the pressure of the power-wheel consolidating the subsoil to some extent, which I consider injurious on tenacious subsoils. This I pointed out to Mr. Greig, the energetic representative of Fowler and Co., the other day. I also stated I thought by fixing a grubber tooth behind the wheel before the plough fills in the furrow, one on each side, with a lever to put out or in at pleasure, would relieve the pressed soil, in passing through it. Also another obstacle in steam ploughing for a time, before being taken out, is land boulders, which should, as far as possible, be taken out, as in the presence of these, speed has been reduced, besides the great risk of breakage which often occurs through this cause—a great advantage. Harrowing with steam power as compared to horses is the great speed that can be attained with safety, thus causing the land to fall by the harrows much more freely, and the treading of the horses' feet is avoided, which is a great consideration, especially in autumn, when putting in wheat seed. There is another thing I should like to see introduced in steam cultivation—viz., the attaching of Crosskill rolling, which I would consider quite practicable and of immense benefit.

Mr. SMITH, factor (Whittingham) asked Mr. Robertson whether his statement about dispensing with three pairs of horses on a farm of six pairs, by the use of these engines, was merely hypothetical, or was he aware of its being carried out practically by any farmer in this county or any other county? If a farmer could reduce his horse supply to the extent mentioned, and overtake his work in spring, harvest and other parts of the year seasonably, it was a really important consideration; but what they had to consider was what had been done, and not what any one supposed might be accomplished.

Mr. ROBERTSON said there had as yet been none of the baby engines and sets employed by a farmer in the county;



but his experience led him to believe that the saving he had referred to could be accomplished.

Mr. HARVEY (Whittingham Mains) did not think the horse supply could be reduced by one-half in that county by the aid of steam power. Steam cultivation was a very good thing in its way, but was well adapted for seed furrow? [A member: "Oh! yes."] He believed highly in steam cultivation on strong land, and he believed the steam engine of moderate power and moderate price would yet be the pioneer of agriculture in Scotland. They could not expect to do everything about the farm by steam; but it would be a great matter for a farmer to have it at his command. Some years ago double-furrow ploughs were all the rage; but he would like to know how many of them were now in use. While he did not believe that the number of horses could be reduced by one-half, he thought the occupants of strong clay farms were helpless individuals without the adjunct of steam.

Mr. JENKINSON (Kidlaw) thought Mr. Stein might have included level fields among the requisites for successful cultivation. On hilly and steep land such as his, a great deal of his steam power was no advantage. The ploughing by steam of one field of 25 acres last year cost him £18. It would have been cheaper with horses. It cost him 13s. 6d. per acre for the bare ploughing, not including coal or driving water, and 18s. to grub and harrow, and that did not include the ploughing up of the head rigs.

Mr. PATON (Standingstone) remarked that a great deal could be said both for and against steam power. On heavy clay lands it was a great advantage, and will be more extensively used there than it has been, but upon light lands farmers could plough quite as efficiently and cheaper with horses than with steam. What had given a great impetus to the use of steam on the farm was the great rise in the price of horses in recent years. If they could buy horses at £30 or £40, as they could have done several years ago, they would have heard less word about steam at the present time. He had employed steam once or twice, but he could not altogether say successfully. If they could get it in dry weather in autumn, it was very good, but with the general condition of the land in the short winter day steam cultivation often did more harm than good. One fault of steam was that it often went too deep, and took up a poor subsoil. On lightish land crops, as a rule, had been better after horse cultivation than after steam ploughing. Then, unless they had coals quite at hand, there was a great deal of horse labour in keeping coals and water to the engines. In spring if they employ steam power and have not horse power enough to harrow or crush down the newly-cultivated land, much moisture escaped, and in such a dry county as theirs a braird was then not easily got. His men complained of the land being more difficult to plough after being worked by steam than before. He thought that strange and scarcely possible, but he tried the plough himself and found that it was so. The reduction of the horse supply to the extent of three pairs in every six did not appear to him to be practicable. On a farm of that size three pairs would not accomplish the cutting and leading in harvest. There were many things about the farm which one would like to do with horses and could not manage with steam. Unless the cost to begin with was reduced to nearly one-half, or unless two or three farmers could arrange for a set between them, he did not see that the smaller farmers would invest extensively in steam tackle for general use on their holdings. Moreover, a skilled engineer would have to be employed with every set. It would be a great advantage, no doubt, for occupants of clay farms to have good engines of their own, but it was principally to companies that farmers generally must look for what steam cultivation they required. He was not sanguine of the number of horses being very largely reduced by the aid of steam on the ordinary East Lothian farm.

Mr. SMITH (Stevenson Mains) was one of the committee who examined the work done by what was termed "the baby engines" the other day at Elvingstone, and he was not without a little experience of steam-ploughing, grubbing, &c. In this county his experience had rather been against the present mode of steam cultivation. The engines and whole tackle he had found to be too cumbersome, and not very suitable for the ordinary work of a farm; but on visiting the manures at Elvingstone, on Tuesday, he was agreeably surprised to find that the "baby engines" worked so well. They might not be perfect, he did not believe they were, but they were a very considerable step in the right direction. They did the plough-

ing and cultivating remarkably well, and, they were, at the same time, light on the head rigs, very handy and suitable for traction engines. He thought they would be the means of reducing the number of horses on the farm, for he was convinced they would yet be made to lead out the manure, go to the station, and do a deal of traction work for which they had hitherto always employed horses. He should like, however, to see those "baby engines" more fully tried; but they certainly appeared to him to come nearer what was wanted than what he had previously seen. So favourably was he impressed with their utility that had he been entering such a farm as Morham Mains instead of going out of it, and if he got proper arrangements made with the landlord as to the drainage of the soil, he would get one of those new sets rather than employ so many horses as he required.

Mr. ROBERTSON remarked that, with the "baby engine" set, all the ploughing on a six pair of horse farm would be done by steam, leaving the three pairs of horses to do the cartages. Then, in harvest, the engines could be made to work the reapers, and the grain could be stacked in the fields, and, with the horses free from ploughing in winter, it could be carted to the barn as required.

Mr. PATON: It is not a good plan to stack grain in the fields.

Mr. ROBERTSON: If it turned out for our advantage to do so, I have no doubt we would suit ourselves to the circumstances. I have known barley gain 1lb. in weight by being stacked in the field over what was brought to the stack-yard.

Mr. DURIE (Barneymains) said in certain circumstances steam cultivation was a good thing. The engines which had hitherto been used, however, were not suitable for single farms. It would be very desirable if they could get a handy engine, so that they might be able to make the use of the machinery pay. But as yet he did not think they had been able to cultivate as cheaply by steam as by horses. It was only in an emergency that they had hitherto been able to employ steam profitably. Last season he had cultivated by steam, and the turnips were just as good on the end rigs and parts damaged by the steam tackle, and afterwards worked by horses, as were steam was used. In a field of potatoes he knew no difference in favour of the steam cultivation. What they wanted was a cheaper and more manageable tackle which a farmer could use for himself. He was in favour of a system worked by an engine at one end, with an anchor at the opposite end.

Mr. STEIN, in reply, said farmers had done themselves, in some cases, injury by grubbing too deep with steam power. Grubbing in winter was very dangerous, and so, to some extent also, was grubbing in spring. He did not consider Mr. Robertson's figures very accurate.

The CHAIRMAN said he thought it was the general opinion of the Club that on heavy land, when steam power could be hired at a moderate price, it was better to take it, and have their land well wrought up, than to be behind with their labour. He had employed steam several times, not upon light land, but upon the worst ground that he had; and he was sure that if any one present had had as much dirty land in his possession as he had some years ago, he would have been glad to see steam put upon it, for it was beyond the power of horses. But though he farmed about 800 acres, he could not see that it would be to his advantage to get a set of steam tackle to himself, as much of his land was not suited for such cultivation and much of it did not require it. He took it to be the opinion of the Club, that when a farmer had a stiff field, or anything more than ordinary, it was of advantage for him to get steam tackle to tear it up and put in into working condition.

The discussion here closed.

THE FARMERS' CLUB AT ROTHAMSTED.—Some members of the Committee, with Dr. Voelcker, the chairman of the Club, at their head, paid a visit to Rothamsted on Thursday, where the party was received by Mr. Lawes and Dr. Gilbert. A long day was spent on the farm in going through the several experiments made in the growth of grasses, wheats, and barley, the tour of inspection ending at the laboratory, where Dr. Gilbert explained how the results arrived at had been preserved for the last thirty years. Amongst those who subsequently partook of Mr. Lawes' hospitality were members of the Club from Herefordshire, Worcester, Wiltshire, Somersetshire, Sussex, Bedfordshire, Lincolnshire, Cambridgeshire, Oxfordshire, and Middlesex.

## A FARMERS' CLUB REPORT.

The following report to the Penrith Farmers' Club was read at the last annual meeting :

Before our successors are appointed, it is our duty and pleasure to present our report of the transactions and state of the club during our year of office, and we trust it will not contrast unfavourably with previous reports. Although our general meetings may not have been so frequent as on some former years, we trust they have been satisfactory. We have made our best endeavours to induce gentlemen of talent to address or read papers of interest to you, which you appeared to appreciate. The first meeting for business was in May last, when you appointed your officers and did us the honour to nominate us as your committee; and the next in June, when you listened to an interesting and amusing paper on Agriculture at Home and Abroad, from the Rev. J. Wilson. Having, from personal observation, noted how we might learn, even from the "heathen Chinee," with whose careful preparation and application of manure, and our own frequent inattention and neglect in that respect, he made "odorous comparison." At the same meeting your treasurer, Mr. Sweeten, produced his balance-sheet, signed by the auditors, showing a balance in your favour of £43 6s. 8d., exclusive of arrears. Owing to the constant engagement of members during the busy time of summer, no meetings took place till after harvest, when one was called to take into consideration a communication from the Central Chamber of Agriculture, on the subject of Road Legislation and Reorganisation of the Road System, and to prepare answers to certain questions on the subject, to which the Central Chamber requested replies and the opinion of this club. As might have been expected, there was great diversity of opinion, and considerable discussion took place. Mr. Oliphant Fergusson, taking the same view as the Central Chamber, moved a resolution in favour of a re-organisation of our road system, which was eventually negatived by an amendment of Mr. Jameson's "That this meeting, not having sufficient information on the subject, declines at present to answer the questions that have been so obscurely put." On February 2nd the "Rating Bill of 1874" was introduced for the consideration of the club by Mr. Tyson, who read an able and carefully prepared paper, explanatory of the bill, on which the members present (as ratepayers) were well qualified to give their opinions, which they did to such an extent as to necessitate an adjournment till the 16th for further discussion, which ended without any resolution being proposed. On the 24th of March, being Penrith Fair day, a special meeting was called to suit the convenience of Mr. Hedley, of Newcastle, whom we induced to visit us, and favour the club with a most interesting and valuable paper on the Breeding and Judging of Shorthorn Cattle as an Art. Taking the bull by the horns, he touched upon all the points of excellency, even to the tail-end, and suggested the appointment of one thoroughly qualified and trained judge only to give his decision at cattle shows. Mr. Hedley produced an ingenious table of points, as an aid and guide to a correct opinion, concluding with a short poetical description of a perfect animal. No reference being made to Irish bulls, as nearly all the members who made any remarks concurred with Mr. Hedley, there was not much discussion; but this paper was so much appreciated that it was resolved "That, with the consent of Mr. Hedley, this paper be printed at the expense of the club for distribution amongst the members." In April Mr. Thom, not feeling satisfied with the Agricultural Holdings Bill, joined issue with the Duke of Richmond, and very appropriately called the consideration of the club to a subject in which tenant-farmers must feel a deep interest. Mr. Thom in his speech opposed the bill on most of the clauses; and Mr. Jamieson, taking an opposite view, replied in an eloquent and telling speech in favour of it. As many of the members wished to give their opinions, an adjournment to that day week was agreed to, when the discussion was resumed, and, after some further expression of opinion, a resolution was moved and almost unanimously agreed to, "That in the opinion of this club the provisions of the Agricultural Holdings Bill are of a fair and equitable nature, as between landlord and tenant." Such, gentlemen, have been the occasions when you have been summoned by card; and at

those meetings other subjects of business, besides those mentioned above, have been brought forward for your consideration, one being a proposition from the gentlemen of the news-room for the use of our club-room, when not required by ourselves. Having discussed the proposition at the meeting in October, you gave your consent to the joint occupancy, leaving the terms and other arrangements to us, your committee. At a conference with the news-room committee such terms were proposed and accepted as we trusted would be mutually satisfactory, and at a subsequent general meeting you confirmed that arrangement, by which our rent is materially reduced, and the comfort and convenience of the members of the club not interfered with; and we hope the gentlemen of the news-room will also feel satisfied. It being thought desirable to have a horse fair in Penrith on the 21st of February, the day after Wigton Fair, it was proposed by Mr. Mounsey, at one of our recent meetings, and unanimously resolved, "That the Penrith Local Board of Health be requested to take the necessary steps for the purpose." From our experience of the courtesy of the Board of Health on many previous occasions in acceding to the wishes and suggestions of this club, we may confidently hope that your recommendation will be carried out. Our connection with the Central Chamber of Agriculture is still intimately maintained, and all their transactions duly communicated to this club. Your attention is called to such as may require your consideration, and your support and co-operation solicited. Our county representatives have shown their usual kindness and attention in forwarding to us such bills introduced into Parliament as we might apply for, or they considered would be of interest to farmers, or we might wish to discuss, and have shown their willingness to present and support any petitions we might think proper to send. We are at present in correspondence with several eminent chemists, with a view to secure the services of one of them to undertake the analysis of manures, oilcakes, and feeding stuffs, at a reduced rate to members of the club. The muster-roll of our members is still kept up to its complement by the addition of recruits (seventeen having joined our ranks this last year), who will fill the places of those we lose by removal to a distance, some unfortunately to that bourne from which we cannot expect their return. A large majority of our new members being tenant-farmers, and good 'uns, we may confidently say that the club still maintains its *prestige*, notwithstanding the sneers from seceding members that our meetings are composed of "local magnates," one or two loquacious members, who take too large a share in the discussions, and but of half-a-dozen tenant-farmers. At an early meeting your treasurer will lay his balance-sheet before you, and you have the "sweetening" assurance that the balance in your favour will be somewhat larger than last year, especially when the arrears flow in, of which, no doubt, he will give hints.

We think, gentlemen, you must admit that the club is as flourishing as ever. We have no lack of support, and only regret that many of our members residing at a distance can so rarely avail themselves of the advantages of our club-room, and join in our debates; and we may congratulate you on the good feeling and geniality that always has been, still is, and we trust ever will be, characteristic of this club—never indulging, like the Tipperary Farmers' Club, in a "discussion wid sticks," but showing our good-fellowship at this, the crowning meeting of the year. As previous reports have finished with a bit of doggerel, we will follow the precedent, and conclude ours with wishing—

Your lands woff till'd,  
Your barns woff filled  
With ample store of hay and corn,  
And good increase of fleece and horn;  
Your nags in condition, coats shiny as silk,  
And your farms like that land whence flowed honey and milk.  
May landlords and tenants together agree,  
To avoid litigation and save lawyers' fee,  
And, acting with honour and truth and good-will,  
Abstaining from greed,  
They never will need  
Agricultural Holdings or Tenant-Right Bill.

## THE GROWTH OF BARLEY AT ROTHAMPSTEAD.

Two or three weeks since a nobleman found, amongst the other duties of his station, that he was expected to take the chair at the dinner of an Agricultural Society; when, instead of getting through "as well as he could," he determined to educate himself for the office. He accordingly went down to Rothamsted, and became forthwith an advanced agriculturist: "so important did these experiments appear to him, that his first impression was that it was desirable for every proprietor, or, at least, some large proprietors in different parts of the country, to have experimental farms of this kind." And Lord Elcho went on to tell his friends in East Lothian of all he saw, and the inferences which he drew "from what he observed at Rothamsted, where three-and-twenty crops of barley had by scientific agriculture been grown in succession, the average of the whole being six quarters to the English acre, the last as much as the first. It naturally struck one when science, chemistry and agriculture, could do these things, and this stride had been made in these years, it was the duty of those conversant with dealings in land to look very narrowly into this question, and not simply accept the time-honoured system of lawyer-drawn leases."

Two or three essential points are at once raised here: it is evident enough that we do not grow as much barley as we require, and, again, that were we to do so, we should in the majority of cases only do this in defiance of certain covenants or the general tenor of an agreement. The first lesson taught at Rothamsted is that farmers must no longer be content with "the time-honoured system of lawyer-drawn leases." Everything you see there and we have seen it all during the last few days, goes to show that a thorough revolution is taking place in the art of agriculture, and that time-honoured systems can no longer be respected. At a meeting in Norfolk during this summer one of the judges, replying, as it were, to Lord Leicester, said, "though he found no fault with his lordship for throwing to the winds all sorts of restrictions which existed in his leases, he nevertheless felt convinced that the majority of West Norfolk farmers would still adhere to the four-course system. It might be that he was prejudiced in favour of that system, having practised it for more than thirty-six years; but he had yet to learn what improvement could be made upon the light barley-growing soils of West Norfolk." It is more particularly to the growth of barley that the Rothamsted experiments are just now directed, as nothing struck the deputation from the Farmers' Club which went down the other day so much as the success with which barley, alike for yield and quality, can be grown year after year.

This was, indeed, but in apt illustration of that which Mr. Lawes had been saying at the Club earlier in the season, when he went to show how, "upon my land, which partakes much more of the character of a wheat

than of a barley soil, crops of barley, good in both quantity and quality, may be grown for many years in succession. I must leave it for you to decide whether your own soils are suitable for the trial, and to what extent it may be desirable and profitable to follow such a course in practice. I propose to show—first, that by the aid of artificial manures good crops of barley may be grown with profit upon heavy land, and much more frequently than according to our adopted systems of rotation; secondly, that on such land it is more advantageous to grow barley after another corn crop by means of artificial manures than after roots consumed on the land. The soil upon which my experiments have been carried on is a heavy loam with a clay subsoil, resting upon chalk, at a depth of from 8 to 12 feet. It is not artificially drained. Before commencing the continuous growth of barley, it had grown the following crops: 1847, swedish turnips, with dung and superphosphate—the roots carted off; 1848, barley unmanured; 1849, clover; 1850, wheat; 1851, barley, manured with ammonia-salts. The first experimental barley crop was in 1852, and the land has been under barley ever since. Thus, in 27 years there have been grown one crop of clover, one of wheat, and 25 of barley, the last 23 of which have been under careful experiment."

The story of Rothamsted has been told over and over again, through the pages of the Royal Agricultural Society's *Journal*, and other more scientific publications, as well as in the Agricultural Press, by way of periodical visits and controversial communications. That, however, which we would more directly dwell on here is the value, as its value is, of course, dependent on its success, of the barley "experiment." For season after season, with artificial manure, and without manure, has the same description of crop been grown, fine in sample and prolific in yield, as this it is of all others that we chiefly require. When we call out for wheat the world is always ready to send in the supplies; but no other country but our own can grow the barleys which the brewer loves. Why, then, should we not make it our care to grow more of them? Because, forsooth, the four-course system interferes, or the lawyer-drawn lease interferes, or some other obsolete custom interferes, which possibly had its uses before artificial manures were applied, or science had lent a hand to practice, or we had got out of the groove of going thus far and no further. We go not so much with Mr. Keary in his protection of the light barley-growing soils of Norfolk, as with Mr. Smith, of Steventon Mains, who thinks the time has come when "restrictive laws should be abolished, and tenant-farmers who have large capital laid out on the land should have this more protected than at present."

## THE AGRICULTURE OF THE EAST.

The discussions which we have heard lately upon the affairs of Turkey, apart from political reasons for the maintenance of the power of the Sultan at Constantinople, possess an interest for Englishmen from the very large proportion of the national debt held in this country, and the tottering condition of Turkish finances. The sudden rise of Mehemet Ali in Egypt, and the conquest of Syria by his son Ibrahim Pasha, will be in the remembrance of many, and how the affairs of Western Europe

were well-nigh embroiled by our own action in restoring that country to its former owner, the Sultan. The state of Syria at the present day, compared with what it might have been under Egyptian rule, does not furnish a very flattering comment upon the sagacity of English statesmen, since the decay which pervades every part of the Turkish Empire reigns unchecked in this classic land of Scripture.

The feeling of insecurity that attaches to an incom-

petent government, causes the plains, where the soil is fertile, to remain uncultivated; whilst the mountains are tilled with astonishing industry, for there the inhabitants are inaccessible to the tax-gatherer of the State. No greater condemnation of the Turkish rule in these parts can be found than the description given by one of our representatives, the Vice-Consul at Beyrout, who recently made a tour, for the purpose of studying the agriculture of Northern and Central Syria, a portion of the country not often visited by travellers. The rich plains which lie adjacent to the Lebanon, sufficient, if properly cultivated, to sustain a large population, possess a few miserable villages and hamlets as its sole signs of inhabitants. The comparative comfort which marks the villages of the neighbouring hills is here wanting, while the dwellers are no less remarkable for the absence of that independent bearing, and moral and physical sturdiness, which characterises their more favoured brethren of the mountain a few miles off. Were the condition of things to be changed, so as to permit a portion of that industry, which is now employed in extracting from the barren soil a few ears of corn, to be transferred to these rich alluvial plains, the face of things would soon be changed, with profit alike to all concerned. The secret of this is to be found in the greater security for life and property enjoyed by the inhabitants of the mountains over those of the plains. The same anomaly everywhere attracted notice. The prosperous condition of the mountain villages, with their mulberry, fig, and olive gardens, and their patches of vegetables, formed a marked contrast with that of the few villages of the plains, whose food consisted mainly of dourra, or Indian cornmeal, and the produce of their goats and cows. With the former, the scanty soil needed constant labour and attention to draw from it the necessary subsistence; while in the latter, fertile, stoneless soil lay around in abundance. And thus, among the rocky ranges of the Ansariyeh mountains, and of those near Antioch, every patch of soil was carefully cultivated; and it was a common sight to see the Arab fellah laboriously ploughing, with his puny donkey or bullock, a strip of land, so studded with immense boulders as to oblige him to change the direction of his plough every two or three yards; while a short distance below him stretched uninhabited plains of great fertility.

Where the foreign element has been introduced, as in the case of the German colonies of Haifa and Java, examples of prosperity are given to the natives, which cannot fail to be productive of much good. It is to be regretted, however, that a sense of the benefits derivable from the like attempts to people the vast waste lands, and thus adding to the resources of the imperial treasury, does not seem to have been sufficient to overcome the feeling of jealousy which similar attempts appear to be regarded, and the deterrent effects of which are but too palpable in cases where Europeans or wealthy native Christians seek to employ their capital in landed enterprise in this country. One fact in connection with these colonies and their agricultural pursuits is worthy of note—namely, that the implements of husbandry of European make are found to be unsuited to the country, and they have consequently given place to the rude native implement which is found more adapted to the requirements of the land and the conditions of the climate. The question of the suitability of European modes of agriculture to these Eastern lands has long been a contested point with those few Europeans engaged in farming in Turkey. Evidence would seem so far to give the verdict in favour of the latter. The heavy plough and grubber are far too cumbersome and unwieldy for the Syrian oxen, animals of small size and endurance; on the other hand, the native plough—which costs about five shillings when

new, and acts like a one-tined grubber—strikes deeper into the soil, but does not so effectually turn it over, and is thus better adapted to a system of agriculture, the chief aim of which is to preserve the little moisture derived from the small rainfall by exposing the soil as little as possible. Harrows, thrashing, and reaping machines would, no doubt, answer on level lands, but one insuperable objection to the introduction of these and other useful implements for the saving of labour exists in the almost total absence of large farmers in Syria. Operations are chiefly conducted by peasants of small holdings, whose means are of the scantiest, while the lack of education and intelligence among them would prevent their becoming general.

The present condition of the proprietors in the plain of Beyrout and in Mount Lebanon, generally, is one of great indebtedness, and with small hopes of extrication, partly owing to bad harvests, but not unconnected with their extraordinary passion for the acquisition of landed estate. For instance, a landowner who becomes possessed of a few piastres, instead of using it to the improvement of his land, will buy more, and often mortgage the whole, paying a high interest, out of all proportion to what the property will return, and lay out the proceeds in more land. Bad harvests occur, the demands of the money-lender become pressing, and the proprietor soon becomes involved, and sinks deeper and deeper year by year. It is a great pity also that the Imperial Government cannot give attention and some encouragement to agriculture, and permit a small portion of the revenue of the vilayet to be properly expended in that direction. Large tracts of fertile land lie barren for want of moisture, which might be secured by the erection or restoration, at a small cost, of the aqueducts and dams, the vestiges of which are still to be seen, showing the industry and intelligence of past ages. In Syria, water alone is needed to change the desert into a smiling paradise of vegetation; but at the present time the precious fluid is allowed to run to waste, and little thought is given to its preservation or employment in works of irrigation.

The discovery of many of the Biblical sites has been made by the Palestine Exploration Society, who, in conjunction with a society formed in the United States for a kindred purpose, are preparing a map that will correspond to our own Ordnance survey. The former Society has already surveyed an area that reaches the amount of 4,430 square miles, leaving about 1,500 miles still to be filled in. The funds for this object are wholly supplied by voluntary contributions, without State aid, and the committee can now with reasonable confidence promise that a complete and exhaustive map of the whole of Western Palestine—which is their portion of the work—and including nine-tenths of the scenes of the Bible narrative, will be brought to England in the autumn of 1876, and given to the world about a year later.

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SALE OF THE DUMBLETON HALL ESTATE.—This estate, well known as having long been in the possession of the late Mr. Edward Holland, who made it a model of high cultivation, was offered for sale at the Mart, Tokenhouse-yard, London, by Messrs. Beadel, the other day. The attendance was numerous. The first bid was £100,000, which was run up to £175,000. The biddings afterwards were confined to two parties, and the estate was eventually knocked down at the sum of £185,000, which, with £8,000 for timber and underwood, made the total purchase money £193,000. The property was sold to the Rev. S. Kettlewell and Mr. James Stables, trustees of the late Mr. Samuel Eyres.

## THE YORKSHIRE AGRICULTURAL SOCIETY.

## MEETING AT DRIFFIELD.

The great Yorkshire meeting, held at Driffield last week will take rank with the best of its shows, both as regards the collection of animals and the admirably arranged yard; in fact, there was little to find fault with, as the shedding and stabling were all that could be wished, while there was a good stand, and rings at a nice distance from each other, one for the riding horses and the other for the agricultural and coaching classes, as well as the Shorthorns. Thus the visitors had an opportunity of seeing the horses and cattle out during the judging, at least on the first day, but on the Wednesday the crowd was so thick that many had to be content with the sight of the head of a horse in the agricultural ring. Much has been written about the size of a show-ring; but this, after all, is like a dining-table, and depends on the number of people expected. The judging of the Shorthorns in the horse-ring was a novelty, and so was giving the judges a catalogue with full particulars instead of the numbers only, as of yore. Many, and very many, object to this as unfair, and one judge of sheep told us that he put the catalogue into his pocket. Numbers only are decidedly the fairest, especially when a war rages between the partisans of Booth and Bates equal to that of the Red and White Roses. Then there are those who go quite as strong *pro* and *con*, for certain strains of blood in horses; as above all, it is unfair to the little man or beginner, when competing with a great or known breeder, and we fear, in many cases, when the catalogue is supplied, a Bombastes bull will stand but a poor chance with an Artaxominus.

He's but a general, damsel, I'm a king;

Oh, sir! that makes it quite another thing.

While others object to it with the cry of "Save me from my friends, who always give it against me as a point of honour, because I am their friend." Then why not stick to the numbers only? If there is not some good reason given for supplying the catalogue, we really hope some enterprising or blundering secretary will stick a few of the Booth pedigrees on to the Bates animals, and *vice versa*, and so with Stockwell and Vedette, just for the fun of the thing.

The horses were the strongest part of the show, but the eighty pounds, in three prizes, brought but three professors for getting weight-carrying hunters into the ring, one being Weather Star by Weatherbit, noticed at Alexandra Park and Taunton, in the reports of those meetings; while Zekeil by Brown Bread, out of Prince's Mixture by Malcolm, got more than his due, as he is a very poor one to look at. Vulean, the winner, is a bright bay by Thunderbolt, out of Alarm by Alarm, and a horse of nice symmetry and breed, with his hocks well-placed, but a little too much weight at his shoulder points. The thoroughbred stallions, which shall have served, or will serve, mares in the county of York, for a fee not exceeding £5 5s., came out much stronger, the thirteen making a very fair class, comprising Plough Boy by Van Galen, out of Village Maid by Stockwell; Dear Tom by Fandango, dam by Sleight of Hand; Worlton by the Mimmer, out of Beatrice by Voltigeur; Laughing Stock by Stockwell, out of Gaiety by Touchstone; Marlborough by Mousley, out of Miss Livingstone by Flying Dutchman; Landmark by Cathedral, out of Miss Agnes by Irish Birdcatcher; a three-year-old by Temptation, out of Peg Fife by Snowden Druhill; Field Marshall by Rataplan, out of Go-ahead by Melbourne; Cape Flyaway by Flying

Dutchman, out of Canezon; Loiterer by Stockwell, out of Ennui by Bay Middleton; Robin Rover by Nottingham, out of Fly Jago; Inveresk by Loughton, out of a mare by Arthur Wellesley, her dam Polly by Ratan; and Cassock by Cathedral, out of First Fruit by General Williams. The best of these was Field Marshall, a nicely-made horse throughout, with breed and power, and though by Rataplan, free from lumber. He is a pony by the side of such horses as Citadel and Angelus, but then he is a little big one, as the saying is, and likely to do the country more service than greater heroes. Dear Tom is very compact and powerful, with hunting character, if a little deficient in quality; still, we think he ought to have had second place. Then Loiterer, barring his ankles, is a hardy looking horse of fair form, and better made throughout than his half-brother Laughing Stock, which is not saying much for him. However, Laughing Stock was started as a prize horse by Mr. Cookson, when the Royal show was last held at Newcastle, and as Mr. Cookson is well-known as a respected breeder of thoroughbred stock, this, with the horse's pump-handle action, has gained him many admirers and many prizes. As a warning to any follow-my-leader judge, we may add that we heard Mr. Cookson say aloud to some one we were standing by at the ring side, that it was not his doing placing Landmark before Field Marshall, and that he did not go for big ones. Landmark is a handsome flat catcher, with grand trotting action, and a fine forehead, but he falls off behind the saddle, is high on the leg, and weak and stilty in his thighs and hocks, at least for a hunting sire. Mr. Garlitt, one of the bench, did not turn up till noon, and, as Messrs. Cookson and Walker could not agree on a verdict, Mr. Milward, of Thurgarton, was at first called in, but he gave way to Mr. C. Fitzwilliam, otherwise Field Marshall would have been first. The business was fearfully slow, as the judges did not go to work properly or fairly for lookers-on, as, instead of allowing all the horses to walk round the ring till they had sorted the corn from the chaff, or picked out what they considered the best, they had the whole lot, after going once or so round the ring, drawn up in the centre to go through a wearisome standstill business of an unpardonable duration. Cape Flyaway, from the same stable as Loiterer, and the same age, eighteen years old, has lots of good about him; and Ploughby, Cassock, and Robin Rover were useful country nags, though the great Marlborough looked more like coaching. Inveresk was rather leggy, and the Temptation colt had nothing tempting about him, nor had Whorlton, with a stiff, half-bred look. There was an entry of thirty-eight roadster stallions, and a great many of them in the ring—some of all sorts, though we failed to pick out a real downright New York or Yorkshire trotter among them equal to Fireaway, Merrylegs, the one-eyed Landseer, or a very neat bay, whose name at the moment we cannot recall; but he was well known, as he had that peculiar cuckoo-like noise coming from the sheath when going. Nor were there any that, for neatness, size, and action, equalled All Fours, of merry-going celebrity, nor of Norfolk Hero, of Taunton fame, although the class was a hundred to one better than the Royal. Still this estimate is not carried out by the verdict, as the third at Alexandra Park and Royal show this year takes the second place, and is an animal that we do not like. The first, Orlando, is a very flourishing

mover, and the third, Lanseer, a neat black and a goer. That nice old stager, Mr. Bourdass' Denmark, was looking very fresh; and we thought we caught a glimpse of Mr. Vary's Young Fireaway, which carried everything before him last year; but of this we are not certain, although we are sure of Prickwillow, a regular chip and unmistakable likeness of the beefy-shouldered hammering Polly of Sledmere, a mare that we have still watched with pleasure going over the grass at some of the capital local shows held at Driffeld, with a little Miss Major up, delight depicted in their countenances, and as loving as the immortal Thompson and his departed Chune. May they never, never part, at the expense of a broken heart. We have not time to describe the lot; and, though Prickwillow is not a pet of ours, we prefer the Alexandra Park decision to the Driffeld, which put him first and Perseverance third; and, as a solace to the vanquished, we say, Fear not, but try again; as, after all, it is but a matter of opinion. But let those who differ about such weighty matters always greet one another hereafter with a smile of some sort when they meet, even if it should remind one of a supper of buttermilk and sorrel sauce. The sixteen hunting brood-mares, with not much to find fault in any of them, made a first-rate class, with some very nice mares in the lot, saying nothing of the well-known Snowflake and the Ladies Derwent and Decanter, which have all been at the head of the poll in their turn, as Lady Derwent beat Lady Decanter at Sheffield, and Snowflake beat Lady Derwent at Malton, we think; while the pretty little Lioness beats old Go-ahead again, as she did at Sheffield. But Go-ahead has been overlooked before, as at Thirsk, years ago, when a mare called Slippers won, but which afterwards we saw overlooked, and Go-ahead getting the place, though one leading judge was in office at both places. And we are bold enough to say that had he a catalogue with the full particulars given instead of the numbers only, the mistake would not have occurred, and that he would have stuck to Slippers as the tailor's sponse did to scissors in a memorable dispute. It would take a column to give the prizes we have seen won by Lady Derwent, and her owner holds the Holderness Hunt Cup, value 100 guineas, won in an entry of 61 horses at Beverley, when six years old, beating, among them, Mr. Hall's Doctor, a hunter all over, that would have given Lady Derwent the stomach-ache in no time had she tried to follow him across country—a cup that will no doubt be handed down from generation to generation till the Hornbys of the future believe that their ancestor possessed the best hunter in all Yorkshire, instead of a petted, fed-up, sleek-coated, show-going beauty by Codrington out of—the catalogue sayeth not, but most probably a coacher of the Venus stamp—as handsome a mare of her kind as any in the yard. Alas! we thought this a sickener for the Master of the Holderness, but we find him in again for the salver; and we think Ashplant a tough-wearing, good-looking hunter, and Leotard, Leicestershire all over, to be worth any of the other three; still he is again doomed to mourn his sad fate as the secretary hoists the figure 3, and all is over. Mr. Jewison winning with a compact matchy trio, Had the Holderness horses had three Georges up that could show a nag like old George, who rode Mr. Jewison's chesnut, they might have done better; at any rate they could not have done worse. Two of Mr. Mayfield's were decent looking; but a six-year-old, by Cardsharper, had no ribs. There were seven hunting yearlings, the winner being of fair form, and the second a big one, rather high on the leg, by the hollow-backed Cathedral, which, though a getter of racehorses, stood no chance as a hunter sire in the ring. The winner in a small class of two-year-old hunting geldings is a deep, plain-headed

one, but a mover, and by Bay President, dam by General Williams, who was a great favourite and show goer some years back; but he always reminded us of a horse with his body slung as it were between his legs. The two-year-old hunting fillies, like the yearlings, were seven, the winner turning up in Triumph, and a very fine-grown, good-topped, blood-like one, rather light of timber and back at knee, with small second thighs: she is by Theobald, a prize taker at the Driffeld local shows, and a great favourite with the breeders; the second being another good-looking one, but with a thick forehead, out of Lady Derwent, by the bloodlike but hollow-backed Lozenge, another prize-taker in Yorkshire. Mr. Sharp's Snowdrop, by Theobald, was promising, with good thighs and hocks, well under for jumping. In a not grand class of three-year-old geldings, the now well-known prize-taker and champion of all the hunters at the Bath and West of England and Alexandra Park this year, Glengyle, who has taken up his abode at the Manor Farm, Catterick, was first, with Wilton Lad, a useful powerful chesnut, second, and a neat bay and a goer, by Baron Cavendish, third. Mr. Hutchinson, the owner of Glengyle, is also the owner of the Jester, a taker of nearly a thousand pounds in prize-money, who went round the ring in style, King Charming, who beat him at Taunton, not making his appearance to fight the battle over for the fourth time, as The Jester beat the King at Sheffield and Alexandra Park; but it was reported that his Majesty was suffering from a bilious attack, muscular rheumatism, or malingering. The Colonel is deep in his rib, but did not move well; and Barnstone, by Theobald, a very hunting-like horse, and nicely handled by his owner, gained second honours. Moslem, a nice bloodlike hunter (by General Hesse, a favourite stallion once in Northamptonshire, and a really nice horse, but not let down to his elbow enough by an inch) has much improved, and went and looked like a gentleman, so that we scarcely knew him, although we remember his four-year-old career well, when he went hog-backed through the country, with his breeder up, and even in that style contrived to carry off the second four-year-old hunter prize in London. Plotmauby is another deep, neat, bloodlike nag, and not unknown to the show-ring; as Mr. Stephenson's Whitelegs, Mr. Rouse's The Knout, Mr. Harrison's Queen Bess, Mr. Johnstone's chesnut by Orpheus, and Mr. Key's bay by Nottingham, attracted our eye. Many round the ring thought it was any odds on May Queen, a winner at Sheffield last year, and at Taunton this, in the three-year-olds; and the same opinion prevailed as to Talisman in the four-year-olds, which was verified, though Heir Apparent, to the eye, provided he was sound, should have had at the least second place, as nothing looked more like hunting, and we are quite certain nothing on the ground went better, as the way he gathered himself together and struck out with his limbs would have delighted the first oarsman of the Thames, a Master of the Horse, or a champion of the P.R. Wild Monarch, the second-prize horse, was deficient in form, and did not move kindly; and the nameless third-prize horse won in a trot, as he was not galloped. Mr. Booth's weight-carrier, Beckford, has fared since he won at Alexandra Park, and was much fancied by a commissioner from the Duke of Hamilton. Mr. Carrick's Young Palmerston, by Picador, Mr. Ellerby's Jerry, Major J. Graham's Lowlander, and Mr. Barker's Malton, looked more like business than any others of the thirteen; as Mr. Watson's Crown Prince, by Walkington, out of Lady Decanter, had very bad shoulders, while Mr. Newton's was common-looking, and Mr. Swann's Norman, by King Caradoc, had not good fore-legs. The decisions over the four-year-old hunting mares created a little astonishment,

as the prize mare, Sunbeam, the neatest of hunters to look at, though, as we have always said, with rather too much knee action in her gallop, played second to Minny, a leggy steeple-chasing-looking brown, by King Caradoc, with slovenly action; while Mr. Goodlife's Lady Mary, by Tom Tit, out of Evangeline by Lambton, of nice form and a sweet goer, was not noticed. Mr. Lett's Attraction, Mr. Budgett's Princess Caradoc, Mr. Lancaster's chusnut by Grand Master, and some others, were in the class. The verdict in the five-year-old geldings or mares, with twelve in, was Alexandra Park reversed, with Leading Article, a deep, rather short, and leggy horse, dividing them. The King of Diamonds, a prize horse with a big head, was also in the class, with Cashier and several more. The placing the Earl, a slack-backed old gentleman's horse, and apparently as slow as a coach, and Spellahoe, with his head out and heels straggling behind him in his gallop, before The Banker and Marshal M'Nahon, was another surprise, at least to the general public. Joe Bennett, who appeared very shaky on his forelegs, Mr. Jewison's Forest King, Mr. Preston's chesnut, Mr. Wilson's Carlton, were in the class, and some others; but Mr. Musgrave's Honeycomb was not sent. Nelly was no doubt the best looking one in a small class of roadster brood mares, but we think Mr. Horrocks Miller's handsome mare, Mabel Grey, ought to have had some of the money. The entry in the weight-carrying hacks ran only to three, a total which is easily accounted for, as Sir George Wombwell's Enterprise was the bogey that kept others away; but a capital class of hackneys up to 12 stone made amends for the short comings of their heavier brethren. Enterprise is by Volturno, a good-looking horse, who goes very wide behind, and has weak hocks; still he seems a favourite in Yorkshire, and is getting good stock. The judging of the agricultural and coaching classes did not commence until the Wednesday, as the ring was occupied by the Shorthorn judges on the Tuesday, and, as we have said before, the gathering round was so thick, that we were obliged to resort to the entrance and exit for a peep at the horses. The coaching stallions were a capital class of eighteen, with some nice-sized active horses, and a great improvement on the heavy shows of some years back, as it is quite evident there has been a demand for more blood, every one now-a-days wishing to go ahead. The pick of the eighteen were Candidate, Kisby, Favourite, Cyrus, and Emperor. Venus, now nineteen years old, looks almost as fresh and beautiful as she did seven years ago, when walking over for a tennet at Wetherby; but the prize-mouey has increased wonderfully since then, though the entry is much the same; and Venus, unrobed like the goddess of old, enters the arena, but, with all her charms, she has to play second to the buxom and more youthful Bonny, an ETTY-like beauty; while t'ould mare is as ethereal or free from coarseness as a nymph by Frost. Wasp is a very deep, nice-framed mare, and Mr. Wood's twenty-year-old by Venture full of character. The young classes were also well represented, though the two-year-old geldings and fillies were few; but the three-year-olds made amends, as they were first-rate. The thirteen agricultural stallions made a grand show, and prizes went, as usual, to the heaviest, while the active, nice-sized black Yorkshire cart-horse and five or six really neat animals in the brood-mare class were passed by the judges. Simon Pure and Hero are both very grand horses, the first being second at Alexandra Park this year, to Young Champion, who evidently suffers from foot-and-mouth, as he swallows more than his poor feet can bear; and as it was painful to see the once good mover go hobbling up and down the ring he was very properly put on one side. That lively goer, with the

comical countenance, Young Honest Tom, more of a cart horse than either of his victors, was third; and Lord Ellesmere's Prince of the Isle, Lord Leconfield's Royal Oak, Mr. Coxon's two Clydesdales, Marquis and Bismarck, with three or four blacks and browns, made up the lot. Robinhood, again, a two-year-old colt, is more like a dray horse; Compact Tom being quite big enough for agricultural purposes. There were four nice two-year-olds, two heavy and two light, with a good class of three-year-olds; while in the pairs of draught horses, with £20, £10, and £5, Mr. Freshney's Drayman and Honest Tom, who have carried all before them this year, were unopposed.

When travelling, your hand is continually in and out of your pocket, and thankful are we, though happy is the man who has his pocket full, that we have not to fork out for the travelling expenses, for such a family as that of Mr. Sharp, of Kettering, consisting of two Julias, a nameless young gentleman, a lady, and a nurse. Families increase, though this year the Shorthorn families are the same in number as they were at Sheffield, the Broughton circle being the only one exhibited at both meetings. Mr. Liuton was first on the list, but not last, though Mr. Stratton was last and first with his handsome trio—Mabel, five years old; Miriam, two years old; and Maiden, one year old. The Sheriff Hutton lot were Fragrance and her famous son Sir Arthur Ingram, with Sheriff Hutton Rose, twins by Serjeant Major, the sire of Sir Arthur Ingram, Irwin Rose by Lord Irwin, and Monthly Rose by Serjeant Major. The third were three good-looking cattle from Stand Hall—Rosa, Robin Rose, and Oxford Rose; and the fourth, Sir John Lawson's Clara, by Fitz Clarence, out of Cicily by Baron Warlaby, a grand broad backed old cow, full of character; while her nicely-made daughter Merry Lass, by Merry Monarch, was not a bit the cut of her dam, but Snowdrop is a modern edition of the old dame; and Sir Julius Benedict, by Royal Benedict, a smart, lengthy, even-promising calf, as Royal Merriment by Royal Benedict, is a pretty little chip of the old block. Sir John and Mr. Statter took extra prizes, very judiciously added to the class. The unsuccessful, though by no means disgraced, were Mr. Sharp and Mr. Lawrence, of Thornhill, Forres. Mr. Statter was unopposed in the Shorthorn families of a bull, cow, and their produce, with Oxford Cheerboy, Lady Graceful, and Lady Beautiful. The Shorthorn bulls of any age above three years are out, and some one sighs and says, "Ah, John ought to have kept him at home; look at his hollow flank," but, still, Royal Windsor won, with Duke Aosta and Robert Stephenson second and third. The others were Leeman, Knight of the Vale, Wydale, and Osberton; the absentees Telemachus and Lord Irwin. The verdict on the bulls above two was an echo of the Royal—Rosario, Rapid Rhone, and Baron Irwin, but the Baron cannot be content with such an estimate, and is about to emigrate to South America. Baron Sledmere and Windsor Crown were the unsuccessful, and British Baron and Telemachus VI. absentees. The grand lines of the Duke of Charnburgh were conspicuous among the bulls above one and not exceeding two, though Pioneer and Royal Irwin were there, and with Baron Bruow from Fawley Hall, Viscount Thorndale from Pocklington, Sweet Pea from Osberton Hall, Sockburn from Duncombe Park, and Oxford Don from Wharram, made a good class. Count Towneley, a promising bull-calf, of nice form, headed fourteen others. Vivandière, Blooming Bride, Rosebud the 4th, Lady Playful, and Mr. Suary's Princess III., were the competitors in the Shorthorn cow class. Vivandière was first, of course; but it is still a matter of grave doubt whether Blooming Bride should have taken precedence of the Royal Lady Playful. To the three prizes for three heifers do not give satisfaction, as



Rose of Lincoln beats Lady Alicia and Orange Chips; but when Winsome once more corrects the placing of Zvezda there are cheers. If these ever-varying verdicts fail in teaching the public anything about Short horns, they at least give people a hint to judge for themselves, and to be thankful for the glorious privilege of trial by jury and its glorious uncertainty. Winsome beat, further, beyond those placed, Moorish Captive, Lady Beaumont VI., Florentine, Onaida, and Lady Jeannette; Imperious Queen, a winner at Doncaster, beat Mabel Ruth, who made her first appearance, and Lady Danby, a prize-taker in the North, as well as Victoria Triumph and four others. Sir John Lawson and Mr. Staffer, with some nice dairy cows, were unsuccessful exhibitors. In the Alderney, Jersey, or Guernsey breed Mr. Brown had it all to himself, being first and second, as well as the owner of the other three.

When sheep meet sheep then comes the tug of war; and there was a capital show of Leicesters and Lincolns, both in the shearing and aged rams, the old sheep being considered the best by the judges. In an entry of thirty-five shearing Leicesters the second Royal was first, and the first the reserve number only. In the aged rams the Catterick flock held their own as at the Royal. The other rams were from the flocks of Messrs. Marris, Brown, Saller, Turner, Creswell, Coverdale, Simpson, Borton, Coulson, Kendall, and Leake. Mr. Cartwright and his Royal shearing held their own in an entry of seventeen Lincolns, and got a second with a big plain sheep which had not been before exhibited. Mr. Dudding's flock was represented, but his Royal sheep was not in the lot. Amongst the aged rams Mr. Marshall's three-shear, the second Royal, was first, and Mr. Haek's flock not represented; while Mr. Byron was first in gimmers, as at Taunton. The other exhibitors were Messrs. Wright, Clarke, Johnson, Pears and Heselnie.

There was an excellent show of pigs, from the sties of Lord Ellesmere, Messrs. Dove, Howard, Sedgwick, Duekering, Garbutt, Hatton, Harrison, and others. For further particulars see the prize list subjoined.

The implement exhibitors included Robey and Co., Lincoln; the Beverley Iron and Waggon Company; Clayton and Shuttleworth, Roston, Proctor, and Co., and Foster and Co., all of Lincoln; Garbutt; Seamer, Scarbro'; Marshall, Sons, and Co., Gainsbro'; Richard Hornsby and Sons, Grantham; Ransomes, Sims, and Head, Ipswich; Barford and Perkins, Peterborough; Hydes and Wigfull, Sheffield, Alton, Driffield; Fowler and Co., Leeds; Scholefield, Leeds; Good, Collingham, Menzies, Hull; Sawney and Co., Beverley; Marsden, Fiskin and Co., Leeds; Harrison, Lincoln; Bushell, York; Cooke, Lincoln; Coleman and Morton, Chelmsford; Coultas, Grantham; Rainforth and Son, Lincoln; Picketsley, Sims, and Co., Leigh; Merkiu, Market Weighton; Hall, Skipsa, Lowethorpe; Dale, Bridlington; Foley, Driffield; Foster, Pocklington; Crosskill and Sons, Beverley; Kearsley, Ripon; Mattison, Leeming Bar, Bedale; Pickering, Driffield; Wray, Leeming Bar; Sherwood, Bedale; Bamlett, Thirsk; Ord and Maddison, Darlington; Hill and Co., Pavement, York; Smith, Boston, Hull; Walker, Hull; Day, Son, and Hewitt, Baker-street, London; Pinkney, Driffield; Matthews, Son, and Co., Driffield; The Farmers' Company, Barton-on-Umber; Ayres and Chambers, Hull; Richardson and Co., York; the Driffield and East Riding Liscud Cake Company; McKay, King-street, York; Shields and Stainsby, Hull; Winkley and Co., Hull; Hall and Wood, Hull; W. E. Pickering; Tiger's Manure Works, Grovehill, Beverley; Beckwith, Watlass, Bedale; Souley and Son, Kirbymoorside, North Yorkshire; Hague, York; and W. Beverley.

## PRIZE LIST.

**JUDGES.**—CATTLE: W. Sanday, Radcliffe-on-Trent, Nottingham; G. Ashburn, Low Hall, Broughton-in-Furness; the Rev. L. C. Wood, Singleton, Kirkham. SHEEP: S. Jefferson, Preston Howes, Whitehaven; J. Lynn, Stroxtun, Grantham; H. Woods, Merton, Thetford, Norfolk. PIGS: W. Goodrick, Dilston, Corbridge-on-Tyne; W. Stead, Owlerton, Sheffield; R. Woods, Osberton, Worksop. HORSES—HUNTERS and ROADSTERS: J. Cookson, Neasham, Darlington; G. Walker, Eighy, Brigg, Lincolnshire; C. Garfitt, Whitegate, Northgate, Cheshire. HORSES—COACHING and AGRICULTURAL: W. Wood, Habrough, Ulceby, Lincoln; J. S. Stowell, Faverdale, Darlington; E. Godfrey, Thealy, Brigg. HOUNDS: The Rev. J. Russell, Dunnington, Barnstaple; Sir Reginald Graham; J. Hill, Brompton. SHOEING SMITHS: B. Cartledge, Sheffield; T. Plews, Stockton-on-Tees.

## HORSES.

Thoroughbred stallions for getting weight-carrying hunters.—First prize, £50, W. Lefevre, Hook House, Howden (Vulcan); second, £20, Col. J. Simpson Bailard, The Verlands, Cowbridge (Weather Star); third, £10, W. Bass, Wires Wall, Whitechurch, Salop (Zekiel).

Thoroughbred stallions for getting hunters, which shall have served mares in the county of York during the season of 1875, at a fee not exceeding five guineas each; or which will serve mares in the county of York during the season of 1876, at a similar fee. First prize, £50, W. and J. Hudson, Brigham, Driffield (Landmark); second, £20, J. Bowes, Streatham Castle, Darlington (Field Marshal); third, £10, R. Hutton, 74, Gloucester-place, Portman-square, London (Laughing Stock).

Roadster stallions.—First prize, £20, P. Kirby, North Duffield, Selby (Orlando); second, £10, T. Statter, Stand Hall, Manchester (Perseverance); third, £5, P. Triffitt, Alltheorpe Hall, Pocklington (Lanscer). Reserve: W. Laverack, North Cave, Drough, East Yorkshire (Matchless).

Three years old hunting geldings.—First prize, £20, T. H. Hutchinson, Manor House, Catterick (Glenlyle); second, £10, J. Sedman, Wilton, Pickering (Wilton Lad); third, £5, G. Lancaster, Morton Grange, Northallerton.

Three year old hunting fillies.—First prize, £20, S. B. Robson, Windle Beck, Gantow York (Golden Horn); second, £10, B. B. and T. B. Jackson, Thearne Hall (Treasure); third, £5, T. H. Hutchinson (May Queen).

Four year old hunting geldings.—First prize, £30, J. M. Tatterall Musgrave, Beverley (Tabman); second, £10, F. Hall, Barton, Darlington (Wild Monarch); third, £5, T. Ellerby, Whitwell, York.

Four year old hunting mares.—First prize, £20, R. Wyse, Auburn-hill, Malton (Manny); second, £10, W. Armstrong, Fairfield, Kendal (Sunbeam); third, £5, R. Swann, Askham Hall, York.

Five year old hunting geldings or mares.—First prize, £30, R. Toynbee, Atherston House, Lincoln (Valdarno); second, £10, H. Jewiston, Raisthorpe, York (Leading Article); third, £5, R. Barker, Malton (Liverpool).

Coaching stallions.—First prize, £20, J. Sherburn, High Catton, York (Young Candidate); second, £10, G. Burton, Thorpe, Willoughby, Selby (Risby); third, £5, C. Knaggs, Norton, Stockton-on-Tees (Favourite).

Agricultural stallions, three years old and upwards.—First prize, £30, R. Marshall, Kyringthau, Hill (Simon Pure); second, £20, J. Forshaw, Blyth, Worksop, Lincolnshire (Hero); third, £10, J. F. Crowther, Knowl Grove, Mirfield (Young Honest Tom).

Entire agricultural colts, foaled in 1873.—First prize, £15, F. T. Turner, Arnthorpe, Doncaster (Robin Hood); second, £5, R. Barrett, Hesse Common, Hull (Master of Arts).

Hunting brood mares and foals.—First prize, £30, H. Watson, Newbegin, Filey (Lady Deacenter); second, £20, E. Hornby, Flotmanby, Ganton, York (Lady Derwent); third, £10, G. J. Leighton, Osgodby, Scarbro' (Snowflake); fourth, £5, B. Hornby, Flotmanby Osgodby, Ganton, York (Lioness).

Coaching brood mares and foals.—First prize, £25, J. Reuder, Beacon Farm, Holme, York (Bonny); second, £10, F. Coulson, Castle Howard (Venus); third, £5, J. Thompson, White Moor, Selby (Wasp).

Roadster brood mares and foals.—First prize, £20, A. Kirby, High Grange, Market Weighton (Nelly); second, £10, T. G.



Mallory, Great Pabton, Licketing (Miss Minnie); third, £5, F. Cook, Thixendale, York (Flampon).

Agricultural brood mares and foals.—First prize, £30, E. H. Griffith, Manor House, South Duffield; second, £20, Earl of Ellesmere; third, £10, T. Statter (Jet); fourth, £5, S. Thompson, Skipworth, Selby (Diamond).

Two year old agricultural geldings or fillies.—First prize £12, Earl of Ellesmere; second, £7, J. Marlett, Hull; third £3, J. Leonard.

Three year old agricultural geldings or fillies.—First prize, £15, W. Bramley, Amcott's Villa, Doncaster (The General); second, £10, R. Lee, Tudhoe, Moorhouse, Spennymoor, Ferryhill (Clyde); third, £5, C. Beart, Stow Bardolph, Downham Market, Norfolk (Lioness).

Pairs of draught horses of any age or sex.—First prize, £20, H. Freshney, Grimoldby, Louth.

Two year old coaching geldings.—First prize, £10, W. Burton, Eastoft Hall, Goole; second, £5, J. Long, Whieldrake, York.

Two year old coaching fillies.—First prize, £7, G. Wadsworth, Lutton, Howden; second, £3, J. A. Beetham, West Harsley, Northallerton (Cleveland Lass).

Three year old coaching geldings.—First prize, J. Johnson, Brigham, Hull (Goldfinder); second, £10, J. Johnson (Peeping Tom); third, £5, W. W. Kirby, Hanging Grimston, Stamford Bridge.

Three year old coaching fillies.—First prize, £10, E. Robinson, Nafferton, Hull (Temptation); second, £5, G. J. Sigsworth, Stilton House, Helmsley (Darling).

Match pairs of carriage horses, not less than fifteen hands high.—First prize, £20, T. Statter; second, £10, G. Holmes, Bevel y.

Match pairs of ponies, not exceeding fifteen hands high.—First prize, £15, G. Holmes; second, £5, T. H. Miller, Singleton Park, Poulton-le-Fylde, Lancashire.

Horses or mares in single harness.—First prize, £15, T. Statter (Speculation); second, £15, C. W. Anderson, Kirk Hammerton Hall, York (Glitters).

Ponies in single harness, not exceeding fourteen and a half hands high.—First prize, £10, P. Matthews, St. Helen's-square, York (Tommy Dodd); second, £5, W. L. Watson, Mytongate, Hull (Fairy).

Hackney or roadster, from four to eight years old, and equal to carry fifteen stone.—First prize, £25, Sir G. O. Woodwell, Bart, Newburgh Park, Easingwold (Enterprise); second, £10, A. Robinson, 63, Wright-street, Hull (Ranlet).

Yearling hunting geldings or fillies.—First prize, £10, J. P. Crompton, Thorholme, Burton Agnes, Hull; second, £5, E. Hornby.

Two year old hunting gelding.—First prize, £15, W. Young, Beverley; second, £5, Major A. R. Harding, Beeston, Leeds (Young Eschequer).

Two year old hunting fillies.—First prize, £15, B. B. and T. B. Jackson, Thearne Hall (Triumph); second, £5, E. Hornby (Maid of Derwent).

Hunters, six years old and upwards, and qualified to carry fifteen stone with hounds.—First prize, £30, W. Munday, Wragby, Brigg (The Earl); second, £10, B. Hornby (Spelthoe); third, £5, W. Armstrong, Fairfield Villa, Kendal (The Banker).

Hunters, six years old and upwards, and qualified to carry twelve stone with hounds.—First prize, £25, T. H. Hutchinson, Manor House, Catterick (Jester); second, £10, J. Woodcock, Tibthorpe House, Driffild (Barnstone); third, £5, F. P. Newton, Norton, Malton (Colonel).

Three hunters, of any age, which have been in the possession of the exhibitor since January 1st, 1875, and have been regularly hunted during the last season.—Prize, a silver salver, H. Jewison, Kateshorpe, York (Clarithown, Mountain Buck, Terrington).

Hackney or roadster, from four to eight years old, and equal to carry twelve stone.—First prize, £15, E. Charlesworth, Rorley Villa, Bradford (Lady Derwent); second, £5, F. C. Matthews, Driffild (Ozone).

Ponies, not less than twelve and a half, and not exceeding fourteen and a half hands high.—First prize, £10, T. Mitchell, Bowling Park, Bradford (Bo-co); second, £5, E. Binnington, North Dalton Wold, Hull (Alice).

Ponies suitable for children, not exceeding twelve and a half hands high, to be ridden by boys under fifteen years of age.—First prize, £10, A. H. Farmer-Newcomen, Kirkleatham Hall,

Redcar (Jet); second, £5, Miss Mabel Wombwell, Newburgh Park, Easingwold (Blackie); third, £2, Miss Newton, Norton, Malton (Tom Thumb).

#### SHORTHORNS.

Families of Shorthorns, to consist of cow of any age, and two or more of her descendants.—First prize, £50, J. Stratton, Alton Priors, Marlborough (cow, and three of her produce: Mabel, Miriam, Maiden, calf); second, £25, W. Linton, Sheriff Hutton, York (cow, son, three daughters, and two grand daughters: Fragrance, Sir Arthur Ingram, Sheriff Hutton Rose, Irwin Rose, Monthly Rose); third, T. Statter, Stand Hall, Manchester (cow, and two of her produce: Rosa, Robina's Rose, Oxford's Rose); fourth, Sir John Lawson, Bart., Borough Hall, Catterick (cow, son, two daughters, and grand daughters: Clara, Merry Lass, Snowdrop, Sir Julius Benedict, Royal Merriment).

Families of Shorthorns, consisting of bull, cow, and their produce.—First prize, £30, T. Statter (Oxford Cherby, Lady Graceful, and Lady Beautiful).

Shorthorn bulls of any age above three years old.—First prize, £25, John Outhwaite, Baines, Catterick (Royal Windsor); second, £10, A. H. Brown, Duxford, Chathill (Duke of Aosta); third, £5, Messrs. Dudding, Pantou Loose, Wragby, Lincolnshire (Robert Stephenson).

Shorthorn bulls above two and not exceeding three years old.—First, £20, A. H. Brown (Rosario); second, £10, Lady Pigot, West Hall, Surrey (Rapid Rhene); third, £5, Earl of Ellesmere, Worsley Hall, Manchester (Baron Irwin).

Shorthorn bulls, above one and not exceeding two years old.—First prize, £25, J. Outhwaite (Duke of Chambergh); second, £10, A. H. Brown (Pioneer); third, £5, W. Linton (Royal Irwin).

Shorthorn bull calves, above five and not exceeding twelve months old.—First prize, £15, J. Snarry, Maccanots, Skelmer, York (Count Towneley); second, £10, W. Linton (Sir Hugo Irwin); third, £5, R. E. Oliver, Studbroke Lodge, Towcester (Silver Duke).

Shorthorn cows of any age above three years old, in calf or milk.—First prize, £25, J. Outhwaite (Vivandiere); second, £10, Messrs. Dudding (Blooming Bride); third, £5, T. H. Hutchinson (Lady Playful).

Shorthorn heifers, not exceeding three years old.—First prize, £20, Lady Pigot (Rose of Lincoln); second, £10, T. H. Hutchinson (Lady Alicia); third, £5, R. E. Oliver (Orange Clips).

Shorthorn heifers not exceeding two years old.—First prize, £20, G. Fox, Harfield, Winslow, Manchester (Winona XVI.); second, £10, Lady Pigot (Zvezda); third, £5, J. Outhwaite (Miss Fox).

Shorthorn heifer-calves, about five and not exceeding twelve months old.—First prize, £15, Lady Pigot (Imperious Queen); second, £10, J. R. Singleton, Givendale, Fockington (Mabel Ruth); third, £5, J. Outhwaite (Lady Dainty).

#### DAIRY CATTLE.

Cows for dairy purposes.—First prize, £10, G. K. Harland, Sowber Hall, Northallerton (Dairymaid); second, £5, E. Robinson, Nafferton, Hull (Lady Fanny).

Cows of the Alderney, Jersey, or Guernsey breed, in calf or milk.—First prize, £10, J. Brown, Rossington Hall, Bawtry (Smirk); second, £5, J. Brown (Taglia).

#### SHEEP.

##### LICESTERS.

Shearling rams.—First prize, £20, C. Turner, jun., Thorpe-lands, Northampton; second, £10, J. Borton, Manor House, Barton-le-Street, Malton; third, £5, W. Brown, Highgate House, Holme, Yorkshire.

Aged rams.—First prize, £15, T. H. Hutchinson; second, £7, T. H. Hutchinson; third, £3, G. Turner, jun.

Shearling gimmers.—First prize, £15, G. Turner, jun., second, £7, W. Brown, Highgate House, Holme, York; third, £3, J. Borton, Manor House, Barton-le-Street, Malton.

##### LINCOLNS.

Shearling rams.—First prize, £15, T. Cartwright, Dunstan Pillar, Lincoln; second, £7, T. Cartwright; third, £3, J. Pears, Mere, Lincoln.

Aged rams.—First prize, £10, W. F. Marshall, Branston, Lincoln; second, £5, R. Johnson, Westborough, Grantham.

Shearling gimmers.—First prize, £10, J. Byron, Kirkby Green, Stamford; second, £5, R. Wright, Nocton Heath, Lincoln.

## BORDER LEICESTERS.

Shearling Rams.—First prize, £15, R. Tweddle, The Forest, Catterick; second, £7, R. Tweddle.

Aged rams.—First prize, £10, R. Tweddle; second, £5 T. Foster, jun., Ellingham.

Gimmers.—First prize, £10, R. Tweddle; second, £5, R. Tweddle.

## SHEEP OF ANY DOWN BREED.

Shearling rams.—First prize, £15, W. Baker, Moor Barns, Atherton, Warwickshire; second, £7, T. Marris, The Chase, Uleby; third, £3, T. Marris.

Aged ram.—First prize, £10, W. Baker; second, £5, S. C. Pilgrim, The Outwoods, Hinckley, Leicestershire (Ambition).

Shearling gimmers.—First prize, £10, W. Baker; second, £5, S. C. Pilgrim.

## MOUNTAIN.

Rams of any age.—First prize, £10, J. Pickup, Newchurch, Manchester; second, £5, J. Medd, Bransdale, Kirbymoorside.

Shearling gimmers.—First prize, £5, G. Dewhurst, Rawtenstall, Manchester; second, W. Rudsdale, Danby Lodge, Yarm.

## EXTRA PRIZE.

Shearling wethers of any long-wool breed.—First prize, £10, J. P. Clark, North Ferriby, Brough, East Yorkshire; second, £5, J. P. Clark.

## PIGS.

## TWELVE MONTHS OLD AND UPWARDS.

Boars of large breed.—First prize, £5, Earl of Ellesmere; second, £2, J. Dove, Hambrook House, Hambrook, Bristol.

Sows of large breed in pig or milk.—First prize, £5, Earl of Ellesmere; second, £2, J. Garbutt, jun., South Cave, Brough, East Yorkshire (Primrose II).

Boars of small breed.—First prize, £5, Earl of Ellesmere; second, £2, R. E. Duckering, Northorpe, Kirton Lindsey.

Sows of small breed in pig or milk.—First prize, £5, R. E. Duckering; second, £2, Earl of Ellesmere.

Boars, black or Berkshire breed.—First prize, £5, J. Dove second, £2, J. Dove.

Sows, black or Berkshire breed, in pig or milk.—First prize, £5, R. E. Duckering; second, £2, J. Garbutt (Indian Lass).

Boar of any breed, not qualified to compete in classes 28, 30, and 32.—First prize, £5, Earl of Ellesmere; second, £2, Earl of Ellesmere.

Sows of any breed, not qualified to compete in classes 29, 31, and 33.—First prize, £5, W. Hatton, Addingham, Leeds; second, £2, Earl of Ellesmere.

## NOT EXCEEDING TWELVE MONTHS OLD.

Boars of the large breed, under twelve months old.—First prize, £5, R. E. Duckering; second, £2, R. E. Duckering.

Sows of the large breed.—First prize, £5, J. Garbutt, jun.; second, £2, Earl of Ellesmere.

Boars of small breed.—First prize, £5, Earl of Ellesmere; second, £2, Earl of Ellesmere.

Sows of small breed.—First prize, £5, Earl of Ellesmere; second, £2, Earl of Ellesmere.

Boars of black or Berkshire breed.—First prize, £5, R. E. Duckering; second, £2, R. E. Duckering.

Sows of black or Berkshire breed.—First prize, £5, R. E. Duckering; second, £2, J. Dove.

Boar of any breed, not qualified to compete in classes 36, 38, and 40.—First prize, £5, W. Hatton; second, £2, Messrs. Waite and Dobson, Upper Wortley, Leeds.

Sow of any breed, not qualified to compete in classes 37, 39, and 41.—First prize, £5, E. Harrison, Woodhouse Moor, Leeds; second, £2, Earl of Ellesmere.

Pens of three breeding sows of any breed.—First prize, £5, Earl of Ellesmere; second, £2, William Kay, 16, Chancery-street, Bank Top, Darlington.

## HOUNDS.

Unentered hound.—First prize, the Brocklesby; second, the Bramham Moor.

Two couples of entered hounds.—First prize, the Quorn; second, the Bramham Moor.

Stallion hound.—Prize, the Quorn.

Unentered hound, pupped since 1st December, 1873.—First prize, the Brocklesby; second, the York and Ainsty.

Two couples of entered hounds.—First prize, the Bramham Moor; second, the Brocklesby.

Brood bitch, having reared a litter since the 1st December, 1874.—Prize, the Burton.

## SHOEING SMITHS

First prize, £5, J. Burton, Royal Artillery, Sheffield; second £3, J. Yorke, Malton; third, £2, Farrier-Sergeant Naylor, Barracks, York. Commended: C. Dixon, Garton, Driffield; W. Humble, Cottingham, Hull; J. Bousfield, Welton, Brough.

At the annual meeting of the Council deputations were introduced from Bradford and Skipton.

Col. GUNTER, of Wetherby, proposed that Skipton be taken for the next year's show of the Yorkshire Agricultural Society. The hon. GEO. LASCELLES, of Sion Hill, Northallerton, seconded the proposition.

Mr. CLAYTON said that, as a Bradford man, he hoped the meeting would decide in favour of that town. Earl CATICART seconded the motion, stating that he was perfectly satisfied that whatever the Bradford men undertook they would carry out. To use an American phrase, he knew of no such "go-ahead" people in the kingdom. There was in the neighbourhood a population of above 200,000, and the local authorities would take care that the Yorkshire Society was amply provided for. Further, there was the consideration which neither the Royal and Yorkshire Society could afford to forget—the splendid shilling. A great deal had been said in favour of Skipton, and it was admitted that they had excellent travelling facilities.

On being put to the meeting only three hands were held up in favour of Bradford, and Skipton was declared carried by a large majority.

## WARWICKSHIRE AGRICULTURAL SOCIETY.

## MEETING AT LEAMINGTON.

The cattle were chiefly Shorthorns. The best aged bull was Earl of Waterloo 2nd, from Mr. Cheney's herd, exhibited by Mr. T. H. Bland; while his son General Rupee won in the calf class, beating the Royal winner Hudibras. In the second class for bulls Mr. Sharp's two-year-old won. In a large class of cows, Moss Rose, now again with Mr. W. Bradburu, was shown with a calf by her side, said to be calved on the 1st of May last, and consequently she was awarded the premier position, many preferring Mr. Sharp's red cow, put second. The two-year-old and yearling heifer classes brought out nothing particularly striking, the best being Lord Beauchamp's Ladybird 3rd and Mr. Vivcash's yearling Nannidia. Lord Beauchamp, as on many former occasions, obtained the principal prize for cattle for dairy purposes with well-bred Shorthorns, the whole of the other six entries in the class being also of this breed or

nearly allied to it. The best Longhorn bull was shown by Mr. Tomlinson, from the neighbourhood of Derby; but the cow and heifer prizes remained in the county, to the credit of Messrs. J. H. Bury and T. Satchwell. The sheep were mainly Shropshires, the exhibitors of other breeds, with the exception of the class for fat sheep, hailing from outside the county. Mr. G. Turner, jun., took five prizes with a like number of entries for Leicesters; Mrs. Goodwin every first prize for Cotswolds, with Mr. H. E. Raynbird and Mr. Wheeler's sheep second. Mr. H. J. Hopkins, the only exhibitor of other Long-wooled sheep, walked over with a big nondescript shearling, apparently a combination of Lincoln, Cotswold, and Leicester—a mixture affected by many Northamptonshire flockmasters. The Shropshire sheep classes introduced two new names as ram-breeders in the persons of Mr. George Graham and Captain Townsend. Mr. Graham

won the first prize and cup with a shearling of his own breeding possessing much of the character of Lord Chesham's sheep, from whose flock on the sire's side this ram is bred. Captain Townsend was second, and also showed two useful aged rams purchased from the Latimer flock, which both obtained notice. A solitary pen of shearling ewes, of good character, but in ordinary store condition, sent by Mr. T. S. Minton, secured the prize; whilst Mr. P. Street met with no antagonist in the Oxford Down classes; and he also took the cup for the best five fat sheep of any breed, his most formidable opponent being Mr. H. Stilgoe. There were thirty-one pens of pigs to compete for twenty-two prizes in thirteen classes; but as most of these amounted to no more than £2 the limited entry is not to be wondered at. Mr. Hicken, Mr. Duckering, Mr. Wheeler, and Mr. Jacob Dove won in the whites, and Mr. Heber Humfrey and Mr. John Spencer with Berkshires. The show of horses was large, several prizes of £40, £20, £15, and £10 being calculated to stimulate competition. Messrs. Yeomans brought their entire cart-horse Pride of England direct from Cirencester, where he was first, to achieve a like victory here, Mr. Wynn being second with a namesake and descendant of his noted A 1. Thunderer, by Thunderbolt, bred by Colonel Barlow, and now standing at Mr. A. Over's stables at Rugby, was the best hunting sire, the other horse, Young Omar Pasha, being better adapted for getting roadsters; and there were some good hunters and hacks.

## PRIZE LIST.

**JUDGES.**—CATTLE: T. Morris, Maisemore, Gloucester; R. Doig, Lillingstone, Buckingham. **SHEEP AND PIGS:** W. Power, Brancote; R. Garne, Aldsworth, Northleach. **HUNTING HORSES, HACKS, AND PONIES:** V. B. Watts, Melcombe Horsey, Dorchester; J. M. K. Elliott, Heathcote, Towcester. **AGRICULTURAL HORSES:** H. J. Newton, Campsfield, Woodstock; W. Baker, Moor Barns, Atherstone. **IMPLEMENTS:** E. Wortley, Ridlington, Uppingham. **CHEESE AND BUTTER:** — Jacks, Leamington.

## SHORTHORNS.

Bull, above three years old.—Prize, £10, T. H. Bland, Market Harborough.

Bull, over twenty months and under three years old.—First prize, £10, J. J. Sharp, Broughton, Kettering; second, £5, T. Harris, Bronsgrove.

Bull, over ten and under twenty months old.—First prize, £10, T. H. Bland, Dingley; second, £5, O. Viveash, Tewkesbury.

Cow in milk, above three years old.—First prize, £8, W. Bradburn, Wednesfield; second, £4, J. J. Sharp, Broughton.

Heifer, under three years old, in milk or in calf.—First prize, £8, Earl Beauchamp, Madresfield Court; second, £4, J. J. Sharp.

Heifer, under two years old.—First prize, £8, O. Viveash; second, £4, A. T. Matthews, Church Harborough.

## LONGHORNS.

Bull.—Prize, £5, T. Tomlinson, Southwood, Derby.

Cow or heifer in milk.—First prize, £5, J. H. Burbery, Kenilworth; second, £3, T. Satchwell, Knowle.

Cattle adapted for dairy purposes.—Pair of cows in milk, which have been used in the exhibitor's dairy for the last two seasons.—First prize, £10, Earl Beauchamp; second, £5, W. B. Gibbons, Eltington.

Fat steer from the grass.—Prize, a silver cup of the value of five guineas, W. Fairbrother, Burton Dassett.

## SHEEP.

## LEICESTERS.

Shearling ram.—First prize, £6, and second, £3, G. Turner, Thorpehead, Northampton.

Two-shear ram.—First prize, £6, and second, £3, G. Turner. Pen of five shearling ewes.—Prize, £5, G. Turner.

## COTSWOLDS.

Shearling ram.—First prize, £5, Mrs. Godwin, Deddington; second, £3, H. E. Raynbird, Basingstoke.

Two-shear ram.—First prize, £5, Mrs. Godwin; second, £3, executors of the late J. Wheeler, Long Compton.

Pen of five shearling ewes.—First prize, £5, Mrs. Godwin, second, £2, H. E. Raynbird.

## OTHER LONG-WOOLLED SHEEP.

Shearling ram.—First prize, £5, H. J. Hopkins, Monlton Grange Farm, Northampton.

## SHERPSHIRE SHEEP.

Shearling ram.—First prize, £6, and extra prize, G. Graham, second, £3, H. Townshend, Caldecote Hall. Highly commended; H. J. Sheldon, Brailes House. Commended: — Townshend and F. Lythall, Offchurch.

Two-shear ram.—First prize, £6, and second, £3, H. Townshend.

Pen of five shearling ewes.—First prize, £5, T. S. Minton, Goodrest.

## OTHER SHORT-WOOLLED SHEEP.

Shearling ram.—First prize, £5, and second, £3, F. Street, Harrowden House, Bedford.

Pen of five shearling ewes.—First prize, £5, F. Street.

Pen of five fat sheep.—Prize, a silver cup, value five guineas, F. Street. Commended: H. Stilgoe, Lower Clopton, and J. Baldwin, Luddington.

## HORSES.

## AGRICULTURAL.

Stallion which had been used in the county in 1875.—First prize, £15, Messrs. Yeomans, Pennymore Hay, Wolstanton; second, £10, W. Wynn, Stratford-on-Avon; third £5, T. Russell, Lower Shuckburg.

Mare, with foal at foot.—First prize, £10, T. J. Johnson, Willoughby; second, £5, Mrs. Bullock, Newnham, Henley-in-Arden.

Gelding under three years old.—Prize, £5, R. Timms, Branstone.

Filly under three years old.—Prize, £5, F. Tomlinson, Southwood, Ticknell, Derby.

Gelding under four years old.—Prize, £5, J. Canning, Sherborne.

Filly under four years old.—Prize, £5, S. Davis, Woolashill, Pershore.

Cart gelding above four years old that has been regularly worked.—Prize, £6, E. Humphries, Pershore.

Cart mare, above four years old, that has been regularly worked.—Prize, £5, W. Butler, Warwick.

Pair of agricultural draught horses that have been regularly worked up to the time of the show, the property of a tenant-farmer residing in the county.—Prize, £10, T. Russell. Highly commended: G. Cook, Grove Field. Commended: H. Stilgoe and J. Canning, Sherborne.

Pair of draught horses or mares.—First prize, a cup, or specie to the value of £20, F. Lythall, Offchurch; second, £10, J. Dugdale, Wroxall Abbey.

## HUNTERS.

Stallion adapted for hunting purposes, which has been used in the county in 1875.—Prize, £15, A. Over, Rugby. Only one other competitor.

Hunter that has been ridden in the past season with the Warwickshire, North Warwickshire, Atherstone, Pytchley, Bicester, Quorn, Lord Coventry's, Heythrop, and North Cotswold hounds.—First prize, £15, F. Thorne, 5, Waterloo-place, Leamington; second, £5, J. Cooper, Overstone, Northampton.

Hunter, four years old and upwards (to be jumped on the ground).—First prize, £15, W. S. Cooper, Hillmorton; second, £5, J. Hicken, Dunchurch. Commended: J. F. Liebert, 5, York Terrace, Leamington.

Heavy weight-carrying hunter, up to 15 stone; open to all England.—First prize, a cup, or specie to the value of £10, H. Ford, 7, Russell-street, Leamington; second, £10, H. Sanders, Brampton-hill, Northampton. Commended: W. Whitehead, Woolaston, Wellingborough.

Hunter, otherwise than a weight-carrier, up to 12 stone.—First prize (a cup or specie to the value of £40), P. Kench, Milverton; second, £10, R. Whitehouse, 28, Lower Parade, Leamington. Highly commended: J. Steedman, Meriden. Commended: T. H. Asheton, Temple Langherne, Worcester.

Weight-carrier, equal to not less than 15 stone, the property of a Warwickshire tenant-farmer, that has been regularly hunted during the past season with either the Warwickshire North Warwickshire, Atherstone, Pytchley, or Bicester hounds.—Prize, £10, E. Knott, Penny Compton.

Four-year-old gelding or filly adapted for hunting purposes, the property of a tenant-farmer farming not less than 100

acres of land, and residing within the limits of the Warwickshire and North Warwickshire Hundreds, and to have been in his possession not less than twelve months.—Prize, £10, H. W. Pratt, Owlington, Kingston. Commended and reserved: S. Gale, Beadesert.

Hunter which has been hunted during the last season with either the Warwickshire or North Warwickshire hounds, the property of and ridden by a tenant-farmer.—Prize, £5 G. Smith, Allston. Commended and reserved: J. Timms, Evenlode Grounds, Moreton-in-the-Marsh.

Half-bred two-year-old colt or filly, the property of and bred by a member.—Prize, £3, J. Gibbs, Cutler's Farm. Commended: C. M. Hamer, Snitterfield.

#### HACKNEYS AND PONIES.

Hackney exceeding 15 hands high.—Prize, £10, F. Fabling, Wormleighton. Commended: W. Smith, Bull's Head, Warwick.

Hackney not exceeding 15 hands high.—Prize, £10, G. W. Sanders, Woodlston, Wellinborough. Commended: R. Robbings, Kenilworth.

Pony above 13 and not exceeding 14 hands high.—Prize, £5, W. Tyler, 28, Frederick-street, Birmingham. Highly commended: W. T. Cooper. Commended: T. H. Ashton.

Pony above 12 and not exceeding 13 hands high.—Prize, £5, W. Tyler. Highly commended: P. P. Goodehill, Glen Parva Grange, Leicester. Commended: C. A. Jacobs, Clifton, Bristol.

#### PIGS.

Bear pig of the large breed (except Berkshire), under 18 months.—First prize, £3, R. E. Duckering, Kirtou Lindsey; second, £2, J. Hicken, Dunchurch. Highly commended: Executors of Mr. J. Wheeler, Long Compton.

Boar pig of the large breed (except Berkshire), above 18 months old.—First prize, £3, R. E. Duckering; second, £2, J. Dove, Bristol. Highly commended: T. S. Minton, Goodrest.

Boar pig of the small breed, under 18 months old.—First prize, £3, Executors of J. Wheeler; second, £2, J. Dove.

Boar pig of the small breed, above 18 months old.—First prize, £3, J. Dove; second, £2, R. E. Duckering, Northlope.

Boar pig of the Berkshire breed, under 18 months old.—First prize, £3, H. Humfrey, Kingstone; second, £2, J. Spencer, Villier's Hill. Highly commended: H. Humfrey, Kingstone Farm, Shrivvenham.

Boar pig of the Berkshire breed, above 18 months old.—First prize, £3, H. Humfrey; second, £2, R. E. Duckering.

Breeding sow, suckling pigs of her own farrow, and in milk at the time of show, of the large breed (except Berkshire).—First prize, £3, the Executors of J. Wheeler. No other entry.

Berkshire sow, suckling pigs of her own farrow, and in milk at the time of show.—First prize, £3, H. Humfrey, Kingstone Farm, Shrivvenham; second, £2, Executors of J. Wheeler.

Breeding pigs of one farrow of 1875 of large breed.—Prize, £2, J. Hicken, Dunchurch. No other entry.

Breeding pigs of one farrow of 1875 of small breed.—First prize, £2, Executors of J. Wheeler.

Breeding pigs of one farrow of 1875 of Berkshire breed.—First prize, £2, J. C. Greenway, Ashborne Hill. Highly commended: H. Humfrey.

#### CHEESE

Cheeses, not less than 70lbs. each, the property of the exhibitor, a member, and made of his own dairy in 1875, £5, and a medal to the dairymaid, J. T. Ralls, Little Preston, Earthinghoe; not exceeding 50lbs. each, the property of the exhibitor, a member, and made from his own dairy in 1875, £5, and a medal to the dairymaid.—First prize, J. T. Ralls, highly commended: W. W. Scriven, Dunchurch; J. Cigges, Arbury; and J. Mead, Wileombe. Commended: J. Briggs.

#### BUTTER.

5lb. of butter, the property of the exhibitor, and made from his own dairy in 1875.—First prize, £2, T. S. Minton, Goodrest; second, £1, and a medal to the dairymaid, F. F. Wells, Weston-under-Watherley. Highly commended: J. Hicken, Dunchurch; H. Stilgoe, Lower Clopton; W. W. Scriven, Dunchurch; and the Executors of the late J. Wheeler.

#### IMPLEMENTS.

W. G. Carr and Son, Warwick, for a general account-

ment; £1, Tasker and Sons, Andover, for drum guard to thrashing machine; £1, for patent stacking machine; £3, W. Peters, Carr's-lane, Birmingham, for collection of implements; £5, G. Bull, North Kilworth, Rugby, for horse rakes and collection of ploughs and scuffles.

**THE ROYAL DUBLIN SOCIETY'S CART-HORSE, AND SHEEP SHOW.**—The agricultural horses were not as good as they ought to be. The Royal Agricultural Society's Cup was awarded to Messrs. Mooney's two-year horse Eclipse; but we consider that Mr. Mongey's five-year-old horse Surprise, which got first prize in the aged class, had a better claim to it. Mr. Bonford and Mr. David Lindsay showed useful, well-bred stallions of the Clydesdale breed. Mr. Bonford's two-year-old filly, which got the prize in her class, has great substance and power. Mr. Hannan's Clydesdale mare is of a very useful description, and is well bred, which is a point of some importance where there are so many mongrel mares ranked under the head of agricultural horses. It is to be regretted that more encouragement is not given to the different classes of agricultural horses by the Society. The Royal Agricultural Society's Cup is, no doubt, something; but the other prizes are not sufficient to induce owners of really first-class horses to undertake the trouble, risk, and expense of sending their horses to Dublin. Masinissa was still the best thoroughbred stallion. Beginning with Leicester rams, there were six entries in the shearing class. Mr. Seymour Mowbray, who took first and second prize in this class last year, met with equally good fortune on this occasion. Mr. Mowbray's rams have good fore-flanks, and are well-bred, compact sheep. Mr. Meade took the third prize with a neat, nice-fleshed, useful ram; and a ram from Mr. Owen's flock was highly commended. In the aged section, Mr. Meade came in first with a three-shear ram, which possessed much substance, quality, and style. Mr. Owen's ram of the same age was second. This ram has a very good shoulder and back, beautiful quality of flesh, and good wool. Another ram from the Blesinton flock was highly commended. Lord de Vescei, who last year carried off all the prizes with rams of the Border Leicester breed in the shearing section, was this year winner of the first and third prizes in the section, with two very stylish animals. Mr. Thomas Robertson, Narraghmore, who does not often exhibit his Border Leicesters, took the second prize in the shearing section. Mr. Robertson's ram has a long and deep frame, good back, loins, and quarters, with mutton to the hocks, and a full fore-flank. Mr. Cosby had a compact, good-fleshed sheep highly commended. In the section of aged rams Lord de Vescei got first prize with a ram bred by himself, and possessing size and style. At the last show a ram belonging to his lordship was also first in this section. Mr. Cosby got the second prize with a ram bred by Lord de Vescei. Last year Mr. Going was the only exhibitor of Lincoln rams, but this year he met with new, and, as it proved, formidable competitors in Messrs. Davidson and Watson, whose rams took the first prize in the shearing class and first in the aged class; the ram which took the latter prize being the sire of their prize shearing ram. Those sheep are thick, heavy-fleshed animals. They are from the produce of ewes imported from Lincolnshire by Messrs. W. S. and E. Purdon for Killoughram. Mr. Going's rams, bred by Mr. Charles Clarke, Scopwick, Lincolnshire, got the second prize in both sections. They are, of course, well-bred sheep, and have both size and quality. The Roscommon breed was very fairly represented. The first prize in the section of shearing rams was awarded to Mr. Thomas Roberts for a ram entered under the name of Cavour. This ram has a good head, a compact, well put together frame, a capital back, and wool to the hocks. The Jury Challenge Cup, as a matter of course, was awarded to Mr. Roberts for this ram, being the second time he has held it, although not in consecutive years. Mr. Richard Flynn, who held the cup last year, came in for the second prize, leaving the third to another ram belonging to Mr. Roberts, which, like his cup ram, belongs to his well-known X tribe. In the aged class, Mr. B. Hannan took the first prize with a good backed and heavy woolled ram. Mr. Hannan is a new exhibitor, having only of late turned his attention to breeding Roscommon sheep, and he has made a good beginning, which, indeed, he

could not avoid doing, as he has got for his manager Mr. E. Gannon, who was long known as the trainer of Mr. Richard Coffy's prize Roscommons. Mr. Thomas Roberts got the second prize in the section with a ram bred by Mr. Coffy, but going back to his own X blood. This ram has great ribs and good quarters, quality, and style. Another ram belonging to Mr. Roberts was highly commended, a similar honour being awarded to a ram exhibited by Mr. M. J. Balfie. Major B. Smythe had no sheep entered this year. We are sorry to learn that he has been in delicate health for some time past, which has prevented him from devoting as much attention as usual to his flock, from whence came the cup rams of 1873 and 1873. The short-woolled breeds were entirely confined to Shropshires. In the shearing section Mr. Naper took first and second prizes. His first prize ram has a wide breast, well sprung rib, good back and haunch. His second ram is a shade longer than the first, and is better covered over the top of the head, and is altogether a very stylish sheep. He was shown last week at Shrewsbury, where he was highly commended. Mr. Crosby got the third prize with a compact, but not large ram, bred by

himself, and got by Mrs. Beach's Belfast Royal Show prize ram. A nice sheep, but rather open in the fleece, belonging to Mr. Naper, was highly commended. In the class of aged rams Mr. Cosby took the first prize with a two-shear sheep, bred by Mr. Naper. This ram was first in his section last year at the Wexford Royal Show, and first also at the Royal Dublin Ram Show. He did not show in good form, having recently suffered from an attack of foot-and-mouth disease. Mr. Seymour Mowbray took the second prize with a thick, lengthy ram. The judges entered a note in their book condemning the manner in which some of the rams in this class had been shown. That note, however, did not refer to any of the animals to which prizes were awarded. Mr. C. W. Hamilton was prevented from showing, owing to a slight outbreak of foot-and-mouth disease in his flock. Mr. Hamilton had seven rams entered, and we were glad to learn that matters have so much improved since last week that there is every probability that there is every probability that the Hamwood rams will be all right for the Royal show at Derry.—*The Irish Farmer's Gazette*.

### THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

MONTHLY COUNCIL: Wednesday, Aug. 4, 1875.—Present: Sir Watkin W. Wynn, Bart., M.P., Vice-President, in the chair; Mr. Cantrell, Mr. Druce, Mr. Hornsby, Mr. Leeds, Mr. Martin, Mr. Pain, Mr. Sanday, and Mr. Whitehead.

His Royal Highness Prince Christian, K.G., was elected a governor of the Society.

The following members were elected:

Acland, Charles T. Dyke, Sprydoncote, Exeter.  
Addison, John, Hodnell, Southam, Warwickshire.  
Anderson, Joseph Chapman, Avenue Farm, Long Sutton.  
Andrews, William, Nobold, Shrewsbury.  
Bassett, Richard K., Whitley Abbey Farm, Coventry.  
Blyth, Thomas P., The Fields, Southam, Warwickshire.  
Bond, James Henry, Heathfield, Tamworth.  
Cantley, Rev. Joshua, Thorney Abbey, Peterborough.  
Cartwright, Sidney, The Leasows, Wolverhampton.  
Chambers, John Edmund F., Mansfield Woodhouse, Mansfield.  
Chy, J. Spender, Ford Manor, Lingfield, East Grinstead.  
England, John, Chard, Somerset.  
Estcourt, George B., M.P., Newton House, Tetbury, Wilts.  
Fison, Samuel, Horningsea, Cambridge.  
Float, John Charles, Maldon, Essex.  
Foster, William, Westward Park, Wigton.  
Gilbert, Thomas Denny, Cantley, Barlingham, Norwich.  
Grose, Wesley Richard, Penpont, Wadebridge, Cornwall.  
Grove, Julia, E. C., Zeals House, Bath.  
Horton, Enoch, New Oxley Farm, Wolverhampton.  
Huxley, Clement, Fordhall, Market Drayton.  
Ingham, T. H., Skipton, Yorkshire.  
Malcolm, Louisa, Beechwood, Lyndhurst, Hampshire.  
Mundy, Edward Miller, Shipley, Derby.  
Newell, Evan, Escuan Hall, Towyn, Merioneth.  
Newton, William, Dogdean, Salisbury.  
Riddock, John, Yallam Park, Penola, South Australia.  
Robins, William S., Dunsley Hall, Stourbridge.  
Waldron, Clement, Cardiff.  
Watson, Frederick, Lynwood, March.  
Wedgwood, Alfred E., Holly House, Breadenheath, Salop.

FINANCE.—The report was presented by the Secretary, on behalf of Colonel Kingscote, 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 were found correct. The balance in the hands of the bankers on July 31 was £5,216 12s. 5d., the sum of £1,500 remaining on deposit. Bills to the amount of £8,498 were presented for payment, and the Committee recommended that £3,000 of the Society's funds be sold out for that purpose. This report was adopted.

GENERAL TAUNTON.—Mr. Hornsby reported that the Committee had examined the accounts arising out of the

Taunton meeting, and recommended that they be paid. This report was adopted.

GENERAL BIRMINGHAM.—Mr. Hornsby reported the recommendation of the Committee that the Secretary be authorised to meet the Town Clerk of Birmingham with a view to the settlement of the terms of the agreement with the Society. This report was adopted.

SHOWYARD CONTRACTS.—Mr. Hornsby reported that the surveyor's report had been received, and that the Committee recommended the payment of £1,000 to the contractor as the fourth instalment on account of the showyard and other works at Taunton, leaving a balance of £293 6s. 9d., which will become due in November. They also recommended the payment of the surveyor's account, amounting to £198 7s. 3d. This report was adopted.

VETERINARY.—Mr. Whitehead reported that the Committee moved for a grant of £25 (notice of which motion had been given at the last Monthly Council) for the purpose of testing a system of alleged cure for pleuropneumonia. The Committee had considered a letter from the clerk to the committee of the Brown Institution, in which it was stated that that Committee would undertake to carry out the veterinary objects of the Society, and suggesting a conference with the Veterinary Committee with a view to an arrangement being arrived at for that purpose. The Committee recommended that this proposal be adopted, and that the Committee of the Brown Institution be asked to draw up in detail a draft of their scheme, so that it may be circulated amongst the members of both committees, for their consideration prior to their meeting, which was fixed for November 2nd. The Committee had received Professor Simond's half-yearly report to Midsummer on the health of the animals of the farm, which they recommended should be published in the next number of the *Journal*. This report was adopted, and the grant of £25 was agreed to.

Mr. Whitehead, senior steward, presented a report in reference to a protest against the awards of the judges of implements—viz., Messrs. Haughton and Thompson's protest against the award of a first prize to Messrs. Nicholson's horse-rake. The stewards recommended that the Secretary be instructed to inform Messrs. Haughton and Thompson that the award of the judges is final.—This report was adopted.

A complaint from Mr. W. A. Fell as to the manner in which his one-horse mowing machine had been tried was also reported upon, and the Council declined to enter into the question.

A letter was read from Messrs. J. and F. Howard, complaining that the ring which had been provided for the exhibition of their automatic machinery had not been properly fitted up, and the Secretary was instructed to inquire in what way the Society had failed to comply with the terms of its agreement with Messrs. Howard.

On the motion of Mr. Cautrell, seconded by Mr. Druce, the Secretary was authorised to sign and seal an agreement with the Mayor and Town-clerk of Birmingham.

A letter was read from M. Drouyn de Lhuys on the recent trials of reaping machines conducted by the Société des Agriculteurs de France.

A request from M. Decauville for permission to publish a translation of Mr. Roberts's paper on Steam Cultivation, which appeared in No. 19 of the Second Series of the Society's *Journal*, was granted.

On the motion of Mr. Whitehead, seconded by Mr. Pain, the suggestions made at the general meeting of members in the Taunton showyard were referred to the Stock Prizes Committee.

Mr. Milward gave notice that at the November Council he will move, "That in future the country meeting shall commence on Wednesday instead of Monday, for this reason, amongst others, that Saturday and Monday, which are generally holidays in large towns, would be shilling days.

Mr. Randell gave notice that he will move in November, "That while under any circumstances it would be of the greatest importance to the members of

the Society to prove by a series of experiments made under every variety of soil and climate how far the accuracy of 'the estimated value of manure obtained by the consumption of different articles of food,' as given by Mr. Lawes in his valuable contribution to the last Number of the *Journal* of the Society, is confirmed by practical results, it becomes more especially important now that compensation to outgoing tenants for unexhausted value of purchased food will become universal. That it be referred to the Chemical Committee to consider in what way experiments may be conducted by practical farmers in different districts to demonstrate by this union of 'practice with science' the actual manure-value of the kinds of food most extensively purchased—say the first four articles in Mr. Lawes' table, with any others the Committee may select, the feeding value of each being also recorded. That as these experiments must extend over a period of at least five years, and will involve considerable expenditure, it will be desirable after 1876 to suspend for that period the trials of standard implements, affording meanwhile every encouragement to the invention of new implements or the improvement of others by public trials of such as appear to the engineers of the Society to possess sufficient merit to entitle them thereto."

The usual holiday having been granted to the secretary and clerks, the Council adjourned over the recess until Wednesday, November 3rd.

### SHORTHORN SOCIETY OF GREAT BRITAIN AND IRELAND.

A Meeting of the Council of this Society was held at the Society's Rooms, Hanover-square, on Tuesday, the 3rd instant. President, Lord Pearhyn, in the chair, Lord Skelmersdale, Colonel Kingscote, C.B., M.P., and Mr. H. W. Beauford.

The minutes of the Council meeting held at Taunton on July 12th were read and confirmed.

The following new members were elected :

Alexander A. J., Woodburn, Kentucky.  
Brownlow, Earl, Belton House, Grantham.  
Dalzell, Anthony, Stainburn, Workington.  
Evans, Humphrey, Woodburn, Kentucky.  
Mason, Charles, Dishforth, Thirsk.  
Nicholson, W. J., Willoughton Grange, Kirtton in Lindsey.  
Owen, F. Barton Grove, Hungerford.  
Paull, James W., Knott Oak, Hlinster.  
Phipps, P., M.P., Collingtree, Northampton.  
Phipps, R. Spencer, Parade, Northampton.  
Roberts, Joseph, Lower Clopton, Chipping Campden  
Senhouse, Humphrey P., Nether Hall, Maryport, Cumberland.  
Slattery, Denis F., Coolnagour, Dungarvan.  
Turbevill, Major, Ewenny Abbey, Bridgend.  
Wilson, Christopher W., High Park, Kendal.

**EDITING COMMITTEE.**—Colonel Kingscote reported that the Committee recommended that the references in the case of pedigrees of cows in the Herd Book be limited to such references as will be sufficient to trace the pedigrees.

That a list of the members of the Society be published at the end of the forthcoming volume of the Herd Book ; and that the index of bulls be omitted, the entries in the Herd Book being in alphabetical order.

That a complete set of the Herd Books be bound for the use of the secretary.

That applications having been received from Mr. Outhwaite, Mr. Jamieson, and others, asking for the insertion of bulls with only four crosses in the Herd Book, notwithstanding the rule of the Society to the contrary, and it having been represented that much hardship will

arise if such bulls be excluded, inasmuch as the breeders used them whilst Mr. Straford's rule was in operation, and before the Society's rule was adopted, in the expectation that they would be entered as theretofore, the Committee recommended that in all such cases the bulls be accepted for entry in the forthcoming volume, but that they be given in a special list, and that this exception to the Society's rule shall not apply in any future volume.

That 1,500 copies of vol. xxi. be printed, and that any volumes of the Herd Book which may be out of print be reprinted from time to time, as the finances of the Society will admit.

The question of duplicate names had been considered, and the Committee recommended that the same be adjourned until after the publication of the forthcoming volume of the Herd Book.

The Committee also recommend that descriptions in the Herd Book as to colour be confined to white, roan, red, and red-and-white, all sub-varieties of these colours being omitted.

This report was received and adopted.

**GENERAL PURPOSES COMMITTEE.**—Lord Skelmersdale reported that the Committee had again had under their careful consideration the draft of the proposed bye-laws and regulations, and also the suggestions made thereon by members of the Council, several of which the Committee had agreed to ; and they now recommended that the bye-laws be adopted by the Council.

That the Committee had read and considered an agreement with the secretary for his services to the Society, and they recommended it to the Council for adoption.

That the Committee had examined and passed the secretary's petty cash account for the months of June and July, and also his receipts for entries for the same period.

That the Committee had received the treasurer's report, and had examined the bank book, the balance in the hands of the Society's bankers being £650 18s. 11d.

That the Committee recommended that cheques be drawn for accounts to the amount of £53 2s. 8d., and that the salaries of the secretary and porter be paid when due.

The Committee reported that Mr. Strafford had handed over to the Society 2,000 of the back vols. of the Herd Book, with the exception of about 60 vols., which would shortly be delivered.

The Committee recommended that the Society's furniture, &c., be insured for £200, and the stock of unsold vols. of the Herd Book for £2,000.

The Committee also recommended that Colonel Kingscote be a member of the General Purposes Committee.

This report was received and adopted.

The draft of the proposed bye-laws was then considered, and unanimously adopted.

The report of the Committee appointed by the Council to investigate and report upon a dispute between Mr.

E. J. Coleman and Lord Beehive, referred to the Society for arbitration, was laid before the meeting and adopted. Thereupon the following resolution was proposed from the chair, and carried unanimously :

"That the Council receive and adopt the report of the Committee appointed to report upon the dispute between Mr. Coleman and Lord Beehive, and the Council are of opinion and award that Mr. Coleman has no claim against Lord Beehive in respect of this dispute so referred to the Society, and that the secretary communicate to the parties this award."

Mr. Beauford gave notice that at the next meeting of the Council he should move, "That the Council enter into an arrangement with Mr. Thornton, in reference to his *Quarterly Circular*, and continue the publication of the same."

Leave of absence having been granted to the secretary, the Council adjourned over the autumn recess until Tuesday, November 2.

## AGRICULTURAL SOCIETY OF NEW SOUTH WALES.

### SHEEP BREEDING.

At a meeting of the Agricultural Society of New South Wales, the Hon. G. H. Cox in the chair, Mr. John Smith, of Manarth, Bathurst, read the following paper :

The subject of sheep breeding, though already fully discussed, can never be considered exhausted whilst wool continues to be the life-blood of the colony. Annual discussions cannot but effect some good. In presuming to come before the Society with such crude ideas as my experience has suggested, I cannot but feel sensible of the disadvantageous position I take up, following the able essays of the Hon. G. H. Cox, than whom no colonist is better entitled to speak authoritatively on matters connected with sheep breeding. But, to use a figure of the late Sir Robert Peel, it is by the friction of ideas that light is emitted. If sheep farmers can be induced to give the colony the benefit of their experience, the young men now going into the bush may avoid some mistakes in laying the basement of their fortunes. I propose to compare notes with some English writers as to the origin of the best flocks, and the effects of climate, pasturage, and soil on the wool; to record my own experience in this country; and then briefly to examine our land laws as to the effects operating on the production of this staple article of the colony. I assume that the object of the sheep farmer is the cash return from his flock, and not exclusively the price per lb. of his wool. I start, then, with the maxim of Lord Somerville, that "The breed of sheep which, on any given quantity of land, will carry for a continuance the most wool as well as flesh, and both of the highest quality, is the breed to be preferred." How this result is to be secured in the different climates and on the different pastures of our extensive sheep walk, is the present subject of inquiry. Whether or not the progenitors of the Merino were introduced into Spain from Northern Africa, I shall not now stop to inquire; but whether the colour was white or black is a matter of more interest, as showing to what extent judicious selection may be carried. It is said by a modern writer on this valuable animal, that the sheep is a child of cultivation. It may be bred and managed so as to become almost all that the agriculturist and manufacturer could wish it to be; and if habitually neglected and abused, every good quality will gradually disappear. The Spanish Merino, from which our flocks descend, is thus described by Mr. Youatt: "The legs are long, yet small in the bone; the breast and the back are narrow, and the sides are somewhat flat; the fore shoulders are heavy, and too much of their weight is carried on the coarser parts. The horns of the male are comparatively large, curved, and with more or less of a spiral form; the head is large, but the forehead rather low. A few of the females are horned, but generally speaking they are without horns. Both male and female have a peculiar coarse and unsightly growth of hair on the forehead and cheeks; the other part of the face has a pleasing and characteristic velvet appearance. Under the throat there is a singular looseness of skin, which gives them a remarkable appearance of throatiness or hollowness in the neck. The

pile, when pressed upon, is hard and unyielding; it is so from the thickness with which it grows on the pelt, and the abundance of the yolk, detaining all the dirt and gravel which fall on it; but when examined, the fibre exceeds in fineness, and in the number of serrations and curves, that which any other sheep in the world produces. The average weight of the fleece in Spain is eight pounds from the ram and five from the ewe. The staple differs in length in different provinces. When fat, these sheep will weigh from twelve to sixteen pounds per quarter. The excellency of the Merinoes consists in the unexampled fineness and felting property of their wool, and in the weight of it yielded by each individual sheep; the closeness of that wool, and the luxuriance of the yolk, which enable them to support extremes of cold and wet quite as well as any other breed; the easiness with which they adapt themselves to every change of climate, and thrive and retain, with common care, all their fineness of wool under a burning tropical sun, and in the frozen regions of the north." And Lord Somerville observes: "The second property to be noted in this sheep is a tendency to throatiness, a pendulous skin under the throat, which is generally deemed a bad property in this country, and the very reverse in Spain, where it is much esteemed because it is supposed to denote a tendency both to wool and to a heavy fleece." The Spanish Merino was introduced into England by George III., in the year 1791; but it was not till 1804 that the first public sale of the progeny took place. At that sale the rams averaged £19 14s., and the ewes £8 15s. 6d. each. In 1808 the rams averaged £33 10s., and the ewes £23 12s. 6d.; and at the sale held two years afterwards thirty-three rams realised £1,920, thus averaging £58 each; and seventy ewes averaged £37 10s. per head. One ram fetched 173 guineas, and another 134. One ewe was knocked down at 72 guineas, another at 70. This sale was followed by the establishment of the "Merino Society," with Sir Joseph Banks as president, and fifty-four vice-presidents—patronage enough; but with all this flourish of trumpets the crosses with the English coarse-woolled sheep proved a signal failure. The cross was too wide, and the Merino was abandoned. Mr. Ellman, in his examination before the House of Lords, said: "He had abandoned the Merinoes from the difficulty he had in selling them in a lean state. The graziers did not like them. He had tried to fatten them himself, but found he could fatten three Southdowns where he could one Merino." And Mr. Coke, in his address to the Merino Society, says: "I feel it my duty to state my latest opinion of the effects of the cross of a part of my Southdown flock with Merino tups, and I wish it could be more favourable. From the further trial which I have made, I must candidly confess that I have reason to believe that, however one cross may answer, a further progress will not prove advantageous to the breeder." But had the English graziers proceeded by selection of the best progeny, instead of crossing with English sheep, they would have witnessed the full effect of the English meadow-land on the Merino fleece as well as carcass. The



English farmer, however, was breeding for mutton, and not for wool. What different results attended the introduction of the Merino sheep into Germany I need not dwell on; but in Germany the perfection of the fleece, and not the supply of mutton, was the object aimed at. That object was secured because it was steadily pursued, and with unwavering devotion. The Australian Merinos come principally through Germany, and not direct from pure Spanish flocks; hence the tendency, being the progeny of a cross, to individual instances of degeneracy to the parent stock of the German side, which are described as being "small, with long neck and legs, and the head, belly, and legs devoid of wool." Now, if these inferior animals are not carefully culled out of the breeding flocks they will be found to increase in number. There is a tendency in all animals to return to the original type, if man is idle. I quite agree with Mr. Cox that we possess in this colony sheep far superior to anything we can import from Europe—the natural result of judicious selection, exercised over flocks bred under the most favourable circumstances of climate, soil, and pasturage. The undulating western slopes of the great dividing range should turn out the Merino sheep in perfection. The superior softness and elasticity so attractive in the Australian fleece is, doubtless, the combined effect of climate, pasturage, and forest trees. The mildness of the winter admits of the proper nourishment of the wool without artificial feeding, and the general dryness of the climate is favourable to the retention of yolk; while the forest trees afford shelter in winter and shade in summer, thus modifying the action of the elements on the fleece. In Germany the sheep are so much confined in sheds, in order to preserve the fleece, that the muscular development is checked, the size of the animal diminished, and his constitution weakened. The progeny will be delicate. By free and moderate exercise in the open air, with such pasturage as will keep up his condition in winter and summer, and sheltered by the forest trees from extremes of heat and cold, you will have an animal symmetrical in figure, with a constitution adapted to the country, and bearing a fleece of superior excellence. That unsightly loose skin exhibited by the imported Negretti, so troublesome to the shearer, will have been filled out, and instead of the German you will have the Australian Merino. The German flocks are housed in winter, and, indeed, in summer also during rain. The fleece is thus preserved to the very tip, and it is to this protection from rain that is to be attributed the superior softness of the German over the Spanish wool. A British manufacturer (Mr. Jowitt), in his evidence before the House of Lords, says: "I began with the Spanish wool; I then changed to the German, on account of its superior quality—proving better and making a softer cloth. I was also able to spin it to a greater length—the very qualities in which the English wool is deficient." This uniform softness and elasticity of the fibre is only to be secured by keeping the sheep sheltered from heavy rains; but we have not yet attained that stage in sheep farming. The sheep farmer, however, should see that his sheep are adapted to his run; that is, he should keep such sheep only as will hold their condition in winter, and not attempt to keep large-framed sheep on mountainous or inferior country. Sheep that cannot be kept in condition will never pay. Nor should ewes out of condition be ever bred from; the offspring will be delicate and wanting in constitution, from deficiency of nourishment. But poor sheep produce the finest wool; and this has often deceived the purchaser of stud stock. The skin contracting from the loss of flesh, the fibres of the wool are drawn more closely together, the action of the air is excluded, and a thicker, softer, pile is produced. Every sheep farmer must have noticed the effect on the wool of the sheep removed from a poor country to rich pasturage. On this point Dr. Parry states: "The fineness of a sheep's fleece of a given breed is, within certain limits, inversely as its fatness. A sheep which is fat has usually comparatively coarse wool; and one which is lean, either from want of food or disease, has the finest wool." Another writer (Mr. Youatt) says: "Pasture has a far greater influence than climate on the fineness of the fleece. The staple of the wool, like every other part of the sheep, must increase in length or in bulk when the animal has a superabundance of nutriment; and, on the other hand, the secretion which forms the wool must decrease, like every other, when sufficient nourishment is not afforded." Nor must the effect of soils on wool be disregarded. Those graziers who have removed their flocks from the tablelands of this colony to the plains and sand-ridges of the Darling have been astonished at the change effected in the fleece, which could

hardly be accounted for by climate alone. An English writer observes: "There is no doubt that soil has much influence in producing harshness of the pile. A chalky soil notoriously deteriorates the softness of the wool. Minute particles of the chalk, being necessarily brought into contact with the fleece, have a corrosive effect on the fibre, hardening and rendering it less pliable." And Bakewell, states in his work: "In the northern parts of Derbyshire the mineral strata are so abruptly broken that two adjoining farms, separated by a small brook, would not unfrequently be found, the one on limestone and the other on silicious grit or sandstone. The difference of the wool on those two farms, and from the same breed of sheep, and particularly with regard to its softness, is so distinctly marked, and so well known, that the farmer would obtain 1s. or 1s. 6d. per tod more for his wool when grown upon the latter soil." When sheep were first taken to Queensland the effect on the fleece was very marked. The wool was harsh and dry to the touch, and light in weight, and would only sell in London at a reduced price; but in subsequent years these very qualities enhanced its value. The manufacturers had discovered that the absorption of oil, from this very dryness, had so far increased the weight as to balance the waste from scouring; so that Queensland wool of the same degree of fineness was worth more per pound than that of New South Wales. This deficiency in yolk on the arid parched downs of Queensland, where there is not a tree to afford shade, is doubtless to be attributed to the action of a vertical sun on the skin, though it is quite possible the fine sand taken up by the wool may have its share in the work. Nature supplies oil for the wool, but not in sufficient quantity to cope with a vertical sun and dust together. On the burning plains of the North-west it would be worth while to consider the expediency of erecting camping sheds for the flocks. A few rough posts erected, with a flat roof, formed by boughs and underwood thrown across, would afford shade during the heat of the day, and would be amply paid for by the fleece. If it is true that wool becomes hair within the tropics, the graziers in Northern Riverina and Queensland must be cautious in breeding "in and in"—every generation will be a step nearer hair. The ewe flocks should be carefully culled every year, and those exhibiting tropical proclivities, or light fleeces, rejected for breeding purposes, and fattened off; and then, by introducing rams of the best blood from colder districts the retrograde tendency will be retarded, and a fair clothing fleece maintained. But I am not quite sure that, by a careful selection for stud purposes of those animals, both male and female, that do not succumb to the climate, but continue to carry a good fleece, you will not, even without the introduction of fresh blood, maintain a flock that will yield the best return the run is capable of. The sheep will become acclimatised, but the effect of the climate must be watched. To attempt to grow combing wool in those warm regions would be to maintain a conflict against nature. Rams possessing the greatest possible density of fleece, and black with yolk, should alone be used—the yolk preserving the fibre from the action of the sun. I believe the Negretti to be the best sheep for such warm districts. But whilst I would not attempt to grow combing wool in Northern Riverina, I think, where the climate and pasturage are suitable, a fine combing wool should be cultivated, as being in shortest supply: such wool, for instance as Mudgee produces, can only be grown within a limited area, and must always command proportionate prices. It would, of course, be folly to attempt to grow combing wool in districts where the sheep cannot be kept in condition in winter, as well as on the parched plains of the interior. Wool to stand the action of the comb must be nourished all the year round. If the animal is allowed to fall off in condition, either in winter or summer, the wool will snap with the slightest tension at the part of the fibre then growing when the nourishment failed. In fact, if the sheep is allowed to get very poor, it will probably cast its wool altogether should the improvement in condition be sudden. In using the terms "clothing" and "combing," I must not be understood advising a departure from the Merino sheep. Two graziers starting with sheep from the same flock, one to grow combing, and the other clothing wool, each selecting for breeding such individuals as exhibit in the greatest degree the qualities required—in the course of a few generations each flock will have bent to the will of its owner. My experience teaches me that sheep form no exception to the golden rule that "Like produces like." On this theory the author I have already



quoted says: "Every one who has attended to the breeding of domestic animals must have experienced that, by careful selection of those from which he breeds, and with a clear and defined conception of the object he intends to effect, he may procure a progeny in which that object will be accomplished. In the new Leicester breed of sheep, a practical proof of this may be seen in the flocks of Mr. Buckley and Mr. Burgess. Both of these flocks have been purely bred from the original stock of Mr. Bakewell, and yet the difference between the sheep possessed by these two gentlemen is so great that they have the appearance of being quite different varieties, one owner having aimed at attaining merits of one description, and the other having aimed at attaining merits of a different nature." And again: "On this principle of selection the breeder will continue to proceed. The good qualities of his sheep, transmitted from one generation to another, are no longer accidental circumstances—they have become a part and portion of the breed, and may be calculated on with the greatest degree of certainty. They constitute the practical illustration of the term 'blood.' No animals will elsewhere thrive so well, or improve so rapidly, as on the pastures on which they and their forefathers have, generation after generation, been accustomed to wander." And, on introducing fresh blood, the author says, "He must select a ram from a soil and kind of food not dissimilar to his own, although at a distance perhaps as great as convenience will permit, with points as much resembling his own sheep as may be." Thus is illustrated that axiom with regard to all our domesticated animals—selection, with judicious and cautious admixture, is the true secret of forming and improving a breed. Nor must any sheep-farmer, however perfect his flock, relax in his watchful supervision of his maiden ewes: before putting his rams in they must be carefully culled. There will be some to reject—individuals exhibiting the characteristics of the original stock from which they sprang, but these individuals will become fewer with every generation. Mr. Youatt says: "The errors to be avoided are—too long continued and obstinate adherence to one breed; and, on the other hand, and even more dangerous, violent crosses, in which there is little similarity between the soil, the pasture, or the points and qualities of the animals that are brought together." The most conspicuous instance of success in forming a new type, by the process of selection, is, perhaps, that of Mr. Bakewell, with the New Leicester. This handsome animal is a purely artificial sheep, made up by judicious selection and rich meadow lands, and, perhaps, gives the best returns to a given quantity of food of any animal on British pasturage. But, hand the New Leicester over to the Australian shepherd and his dog, and what will he become in two or three generations? Just what his ancestors were. Nature again adapts itself to circumstances: that food which, with rest, supplied fat, will now be required to supply bone and muscle to enable the animal to travel from feed to water, and to run from the shepherd's dog. So, also, the Rambouillet. This sheep is a splendid specimen of what care, good feeding, and intelligent selection will effect; but can this fine figure be upheld on the arid plains of this country? The check to the sale of rams is the best reply. Much remains to be done in this country with sheep; but the animal must be adapted to the nature of the run on which they are depastured, and such only kept as will hold their condition all the year round. It would be waste of resources to attempt to keep the Rambouillet or the Leicester on poor or mountainous country. Small sheep might be kept in fair condition where larger animals would starve. The grazer must again exercise his judgment in creating, by selection, a type adapted to its pasturage, breeding only from such as keep in condition and produce wool. By breeding from very poor sheep, each succeeding generation will get weaker in constitution, and at last will probably die off, a prey to worms or other debilitating diseases. The depression in the wool trade, a few years ago, drove some squatters into the error of massing their sheep, pell-mell, in large paddocks, old and young together. This was a great mistake. Breeding sheep must be kept properly classed, or the increase will rapidly deteriorate, and, after two or three generations, will be as wild as the kangaroo. I must not be understood as speaking against the paddocking, but against the want of classification, involving indiscriminate breeding from old and young, good and bad. Paddocks should not be so large as to render classification impracticable. If

sheep will not pay for care and attention, they will certainly pay less without these essentials. The squatter, whose object is to sell and clear out, will go in for numbers; but the man who wants to derive an income from his flocks must attend to their domestication and improvement. The Hon. G. H. Cox, in the first valuable paper, referred to the immense loss sustained by the colony from the inferiority of the bulk of the sheep extending into the interior. This is mainly to be attributed to our land laws: the squatter, not being allowed to purchase a pastoral homestead, breeds up for numbers, with the view of stocking his run, and then going into the market, in the hope, too often illusive, of clearing out with a fortune. With this object in view he breeds from every ewe that has four legs, whether she carries wool or not, and that as long as she lives; and the ramsons will be such as can be procured at the lowest figure. The result is such as Mr. Cox so well describes—a large portion of the sheep will scarcely pay for shearing. But if the owner of the sheep could also feel himself owner of any considerable portion of his run, his system of sheep-farming would very different. It is not too much to say that of the twenty millions of sheep in New South Wales, one-half should be fattened off and replaced by wool-producing animals. Of course this is a work of time; but estimating the improvement at ninepence per fleece, on ten millions of sheep, we have a clear gain to the colony of £375,000 per year. If there is one article above all other productions deserving the fostering care of Government, that article is wool—one of the most valuable articles of commerce, of great value to this colony, of immeasurable value to England. This is eminently a wool-producing country. Prepared by nature for pastoral occupation, and every animal that would imperil the life of the shepherd carefully shut out, our advance in material wealth stands without parallel in the history of British colonisation; yet the producers of this wealth and prosperity seem to be a proscribed class scarcely entitled to the protection of the law. Free selectors are allowed to take possession of their improvements, under the value of forty pounds, without compensation! And what are the sins of the squatter, that his sheep-stations and reservoirs should be thus confiscated? Whom has he trespassed on, save the Kangaroo? He has driven back the kangaroo, and occupied his grazing ground by sheep. He has extinguished the bush fires, and converted the grass into wool. He supplies the entire population with wholesome beef and mutton, at a low price, and the British manufacturer with a raw material that gives employment to thousands, thus enriching both the colony and the mother country. It was wool that built our cities, that brought ships into our ports. It was the squatters who led the way across the Blue Mountains, who encountered the spears of the aborigines, and planted the germs of that ever-increasing source of wealth which has raised the Australias from the miserable penal settlement of Botany Bay to the front rank of British possessions. I will now briefly give my own experience in sheep-breeding, and in doing so will endeavour to keep as clear as possible of egotism. I commenced sheep-farming with the finest-woolled sheep I could procure. In the year 1848 I selected from the Australian Agricultural Company's flock, at Stroud, twelve of their finest-woolled rams; and I have since, on two occasions, imported pure Negrettis. I have also tried, but to a limited extent, the Rambouillet. I found the progeny of pure Saxon-merino rams delicate in winter, requiring warm country—those from Sturgeon's pure Spanish flock had better constitutions. For the last twenty years I have been endeavouring, by selection, to combine length of staple and fineness of fibre with weight of fleece and weight of carcase. At the first wool show held in this city, in 1862, at Mr. Mort's stores, I exhibited six rams, fleeces in the grease, under the motto, "Genus factum," averaging 11lbs. 7oz. per fleece. On that occasion I received the following letter from the principal wool broker: "Sydney, 15th January, 1862.—Dear sir,—I think it only justice to your Genus Factum wool to say that, although prevented from being classed for the Commissioners' medal, from its want of fineness, there can be no doubt but that it is one of the most profitable wools exhibited; and, by carefully following up the track you are now on, you will undoubtedly attain to what every one is looking for—namely, weight of fleece, combined with fineness of staple." At the exhibition held by this Society in 1870 I sent in eight rams' fleeces in the grease (in the non-competitive class), averaging 12lbs. 13oz.; and thirty ewes' fleeces (competi-

five class), the average weight of which was 9lbs. 2½oz., as published in the list of exhibits. In 1872 I exhibited six rams' fleeces, giving the average of thirteen pounds, less one ounce: and this wool, I may mention, received 130 points for fineness, beating Mr. Fisher's prize wool by 20 points. At that time the Gamboola wool was selling in London at from 15s. to 18s. per lb. in grease. In the March sales of last year 5½ bales realised 15s. per lb. And as to the value of the carcass: On the 14th of May last I sent 700 wethers to the Sydney market, which sold at from 15s. 9d. to 16s. 1d., reported by Messrs. Sullivan and Simpson, in *The Sydney Morning Herald*, as "much admired and the best flock we ever saw in Homebush;" by Harrison, Jones, and Devlin, as "a few very choice Merinos from the paddocks of Mr. J. Smith, averaging 70lbs.;" and by G. M. Pitt and Son, as "70 Merinos, bred and fattened by Mr. Smith. These sheep were the best ever offered at the Homebush yard, and made from 15s. 9d. to 16s. 1d., being the top figures of the year by over 2s. a head. We quote 56lb. wethers, at 13s." On the 2nd September I had another lot of 750 wethers at Homebush, sold by G. M. Pitt and Son, at 13s. These sheep were all fattened on the natural grasses, and not on lucerne, as stated by Messrs. Sullivan and Simpson. I have now given the weight of fleece, with price per pound and value of carcass, of the Gamboola flocks—*sheep that have never been crossed by any coarse-woolled breed whatever.* The value of the wool, I regret to say, has been very much depreciated within the last few years, by the presence of clover-burr; nor shall we see the Australian Merino in perfection till he is kept within fences, allowed to drink the morning dew, and to choose his own bed at night. The grass seeds too, are very destructive to the

sheep, as well as injurious to the wool, and grass seeds can only be controlled by fencing; but there are difficulties in the way of fencing Crown lands familiar to every grazier, which very much impede sheep farming. The succulent indigenous grasses are disappearing as the country becomes occupied, succeeded by the pernicious seed-bearing grass. In disposing of the lands on the banks of the western water-courses, I would suggest the expediency of reserving sheep roads leading from the table lands to the Darling River, in order to admit of migrations, as in Spain, as well as to facilitate the passage of fat stock to the markets. The more uniform the climate and supply of food, the better will the strength and elasticity of the fleece be preserved. I must not close this paper without paying a tribute to the Mudgee breeders. These gentlemen have done much for themselves by their attention to their flocks;—they have done more for the interests of New South Wales; By the high perfection to which they have brought their fleeces, they have drawn the attention of the whole manufacturing world to our staple product, and thus enhanced the value of all our wool, and imparted a *prestige* to our productions which this Society is wisely disseminating throughout Europe and America, and thus carrying out one of the great objects of the institution. NOTE.—On the 25th of November last Messrs. Mort and Co. sold 100 bales wool, marked L.N.S. over Gamboola (my sou's brand) at 12½d.; and on the 20th of January instant, 56 bales marked E.A.S. over Narroogal also from the Gamboola sheep (E. A. Smith's brand) at 12½d. per lb. in grease, topping the market.

A vote of thanks was given to Mr. Smith for his paper, the discussion of it being postponed.

## LOCAL TAXATION.

At the quarterly meeting of the Notts Chamber of Agriculture, held in Nottingham,

Mr. GODBER, of Balderton, said: I am quite aware that the subject for discussion at our meeting to-day is not one of a novel or enchanting character, but nevertheless it is one of such acknowledged importance that it cannot much longer be trifled with, either by the present or any other Government. The very magnitude of the question appears to have been a kind of bugbear both to the late and the present Government. The late Government surveyed the outworks, collected a mass of statistics, and made several abortive attempts to deal with the question; but, to use the words of the late President of the Local Government Board, they only touched the fringe thereof, and that with a very feeble hand. The present Government seemed to have inherited the same kind of timidity; instead of entering upon the task and confronting the difficulty, they decided to give the nation a sort of quietus in the shape of a few hundred thousands for the partial support of lunatics and a further addition to the grant given in aid of the police rate. It is not necessary nor is it my intention to go into a long and detailed argument to prove what is now admitted on all hands, both in and out of Parliament, that is that the local ratepayer is not only excessively but most unjustly burdened. The greatest financial authority of modern times has said that taxation is an evil, but if so it is unfortunately one from which it will be in vain to hope or pray for a full deliverance, but evil, like many other things, has its degrees. An evil may be on the wane, which in any case is a hopeful sign, or an evil may be stationary, and therefore not giving much cause for alarm, or an evil may be a growing one, which is one of its worst phases. This latter phase will, unfortunately, apply to the whole question of local taxation. There can be no doubt but that the old parochial system was open to great abuses, and some alteration was imperatively necessary, both for the better appropriation of the funds of the ratepayer and also as a check upon pauperism; but, unfortunately, at the time of the passing of the present Poor-law the altered position of the country from the days of Queen Elizabeth was not taken into consideration. At that time a sort of half-starved, half-developed agriculture formed nearly the whole of the wealth which this country could boast; her commercial, mining, manufacturing, and other gigantic interests, were then scarcely in their bud. In those days it was the law that everyone

should contribute to the relief of the poor according to his ability. This principle, excellent in itself, has been departed from, both as to the spirit and the letter. We have no means of ascertaining the income of the country at that time; but no doubt it has increased at the least ten-fold. But the enormous amount now expended, for so-called local objects, is still drawn from a very limited area, the wealth of the country considered. Thirty-two millions annually, or thereabouts, are expended on local objects, the amount being drawn from an assessment of one hundred and thirty millions, the whole income of the country being nearly eight hundred millions. We are aware of the difficulty of assessing personal property; its movable character presents almost insurmountable difficulties, we therefore entertain but little hope of relief in that direction, but a great portion of the local expenditure of the present day is of national obligation, and should be defrayed by the Imperial Exchequer. I believe the Poor-law to be wise and good, but Boards of Guardians have failed to a great extent so to interpret the law as to make it effective, either from a feeling of sympathy or by calculations of a mistaken character as to in or out-door relief, the latter having been most indiscriminately given. By such a course of mal-administration one great object contemplated, the suppression of pauperism, has been defeated, the rates have been unnecessarily increased, and the law itself brought into disrepute. This system of indiscriminate out-relief has also had a most demoralising effect upon the poor themselves. It has been destructive to a remarkable degree of that thrift, frugality, and economy so essential to a position of independence, so that although we have good grounds upon which to go to the Legislature for reform and for a diminution of our local burdens, it is at the same time quite clear there is room for reform and retrenchment nearer home, and our Boards of Guardians will do well to set about reforming themselves. There are few people who begrudge contributing to the relief of the destitute poor, but it is against the very costly machinery by which the law is carried out that the bitterest complaints are directed; and, in my opinion, these complaints are well founded, and we have already referred to the difficulty of laying personal property under a contribution to local rates. How to do this in a direct manner is a problem difficult of solution. To my mind there is only one way of getting over this difficulty, and one it

is which the altered circumstances of the country will fully justify. It is that the legislature should recognise the obligation to defray out of the Imperial Treasury the very costly machinery by which the provisions of the Poor-law are carried out. This burden has been created at the instance of the national will, and has been most unjustly charged to the local rates. If the country will insist upon such expensive machinery, it is but just the whole wealth of the country should pay for it. We would deal in the same manner with the administration of justice, the maintenance of lunatics, police, &c. It is unreasonable that these charges, which are certainly of national obligation, should be charged upon the local rate, and that a small moiety of the property of the country should be compelled to bear alone burdens which are truly national in their character and obligation. I have just a word as to the relief given to local rates by the Government during last session. As far as my own parish is concerned during the five years last passed, for every shilling the Legislature has given us with one hand they have taken away one pound with the other. He concluded by moving the following resolution: "That this Chamber regrets that during the present session her Majesty's Government has made no attempt to deal with the important subject of local taxation."

Mr. HELMSLEY seconded the proposition, and said he wished to take advantage of the 12th rule to introduce a friend not resident in the county to speak at a discussional meeting. (Hear, hear). He was sure the Chamber would not object to such a course, especially when he mentioned the name of Mr. Jabez Turner, who was so well known in the Central Chamber from the part he had taken in the discussions there.

Mr. JABEZ TURNER, from Peterborough, said, when he accepted the invitation of his friend Mr. Helmsley to attend their meeting, he did so for two reasons. The first was that he was anxious to learn anything new or novel on this subject, and the second one, which was the principal one, was that in his opinion an interchange of views between different Chambers of Agriculture by members visiting from one to the other, and occasionally taking part in the discussions, would have a remarkably good effect, and might be carried out with advantage throughout the whole of the kingdom. He therefore, at some little inconvenience to himself, made it his duty and pleasure to attend here, to add, if he could, to the interest of their proceedings, and to learn something from their opinions. Now, in speaking upon this subject of Local Taxation, which had been so ably introduced by Mr. Godber, so far as the general principles that gentlemen had enunciated, he thoroughly and entirely went with him, but he did not think that gentleman had gone sufficiently far into the subject, nor stood sufficiently firm by the standard which Local Taxation reformers took up when this question was first mooted—which was that personal property, as to the income derived therefrom, should bear its fair proportion of the local expenditure of this country. If they would allow him a few minutes he would travel back to the first time that he remembered the Local Taxation question being agitated throughout this country. At a meeting held at Leicester, during the visit of the Royal Agricultural Society in 1868, when sunbeams were more plentiful than at the present time, he attended a meeting of the members of Chambers of Agriculture generally when the subject was discussed. He then stated, on being asked to speak—he stated it advisedly, and he had never departed from it up to the present time—that a man who paid 3s. a year for the poor-rate, let him pay on what property he might, paid three times as much as he ought to do. It was a simple rule-of-three sum, inasmuch as the income charged to the poor-rate was less than one-third of that which was charged to income-tax. He had papers before him which thoroughly proved that—amongst others, the writings of Mr. Dudley Baxter, by whose death, he might remark *en passant*, the cause of local taxation had received a severe loss. Mr. Dudley Baxter showed that the income of the whole country was more than seven times that which was assessed to local-taxation purposes. This being the case, surely a monstrous injustice had been perpetrated, and one which had continued many years, and was now a growing evil. It became the custom, during his recollection, that whenever a Chancellor of the Exchequer—whether Liberal or Conservative, Radical or Tory—wanted any extra thing to be done, to put it on the rates. Whether a local or Imperial matter, it was a quiet and easy method of doing it by putting it on the rates. Well, there must be

some reason for that, and his own impression was that the people, and particularly the agriculturists, got so much accustomed to bear the burden of the rates, and so much accustomed to having the rates thrust upon them, that they came to look upon it as a matter of course to pay the collector whenever he came round without inquiry. If a penny in the pound was added to the income-tax there was a terrible row in the country, but an additional threepenny poor-rate was paid by the people like so many lambs. In the reign of Elizabeth a law was passed, which was still in existence, that every man should pay to the relief of the poor according to his ability. Mr. Godber had referred to the difficulty of assessing personal property, owing to its being of a movable character, but in Scotland, where they call things by their proper names, they did not hear of highway or poor-rates, but of public burdens, and those public burdens were levied according to the means and substance of the people. If this was done in Scotland why should it not also be done in England? For his part he saw no reason whatever. There was another question Mr. Godber slightly alluded to, and it was one often advanced, that if they did away with local expenditure they could not have local control. Why, what local control had they, as agriculturists, got now? If ever there was a term which was illusory it was the term local control. Why, they could not dismiss a porter at a union workhouse without the consent of the Poor-law Board. In fact, they had no local control. Her Majesty's Government had not, as Mr. Godber expressed it, made any endeavour to deal with this great question. The Government had behaved in this matter rather cleverly. After giving them two millions from the Imperial Exchequer for local taxation, they placed their most talented partisan, their actual leader in the movement, in the Government—took him off the Local Taxation Committee and comfortably muzzled him. They also took another gentleman from the ranks of the local taxation reformers and placed him in office, rendering it impossible to a certain extent for them to exercise that freedom of judgment they had hitherto done. There was one particular branch of this subject which must be thought to commend itself to all thinking men, and that was that it was entirely devoid of party politics of any kind. On the occasion when Sir David Lopes defeated the late Government the motion was seconded by Col. Amcotts, a devoted Liberal and adherent of Mr. Gladstone. That was a sufficient answer to the charge that this was a party question. He maintained that it was really and truly a national subject, when they looked at the immense property in trade and manufactures which paid nothing to the maintenance of the highways, the administration of justice, police, &c. He must say that in his opinion (although he agreed with the resolution) Mr. Godber had rather thrown cold water on a point which ought never to be forgotten by local taxation reformers—that was that they had nailed their colours to the mast, and would never rest satisfied until personal property paid its fair share to the burdens which were locally collected. Having reminded them that the figures of Mr. Goschen when he introduced his bill were found to be unreliable, and that he proposed to repeal that Act of Elizabeth which gave rise to the agitation now going on, he asked them never to forget that according to the law of England, as it at present stood, personal property was bound to pay its fair share to the relief of burdens locally raised. That way the point to keep before the minds of the rising generation.

Mr. ALLSEBROOK, of Wollaton, said: According to his view, the principle on which Mr. Turner took his stand was very sound—viz., that personal property should contribute its fair share to local burdens, and should be assessed in the same manner that land and real property were assessed. If he understood Mr. Turner rightly, if the present law was carried out fairly personal property would have to contribute the same as real property. As to the collection of the poor-rate, it did not seem that the difficulty was so very considerable. If they could assess personal property to income-tax for Imperial purposes, why could it not be assessed for local purposes? He saw no reason why that should not be done, and he thought putting this prominently before the taxpayers and the public generally, and showing them the justice of the principle would be their strongest point. He thought they should never be content until they had such an effective enforcement of the present law as would cover the principle now laid down. Farmers were accused of being a grumbling race, but there was no class of the community who had so much to grumble

at on this point as they had. Having complained that the representation at Boards of Guardians were very often almost like a farce, guardians very often attending very little, he said the reasons were urgent for a great change being made in this method of raising local taxation.

Mr. BEARDALL said there was one feature in the question which had not yet been touched upon. The weak point in their agitation was that they had not sufficiently appealed to the working classes. They were as much interested in this question as occupiers of houses, as those who occupied land, and they ought to be made aware how they suffered from it. They were told on the authority of Mr. Dudley Baxter that the class of persons called the masses was the class whose income realised something like 27 millions per annum. That class had not yet been appealed to, but it should not be forgotten that it was their vote which would settle this question. They (the agriculturalists) had had sufficient experience already as to the small amount of their power. They had discussed a number of questions in their local chambers and at the central, but as yet they had done very little. They (the farmers of England) placed the present Government in power and what had they got in return? (A voices: Promises.) Crumbs, as their esteemed annual deputy said on one occasion. They were crumbs, but not crumbs of comfort to him. They were bitter crumbs, and he must say that had been very much disappointed indeed with the conduct of the present Government. Perhaps it would not be out of place for him to relate a circumstance which occurred in Nottingham market in the week when the budget for the Session was placed before the country. One gentleman was asking another what he thought of the budget, and the reply was that the words "Sold again" ought to be printed on the hat of every farmer who was in the market that morning. So long as the discussion of the subject was confined to those interested in the land they would do nothing. They must let the working men, the great masses of the people, know that they were being just as much unfairly taxed as they (the farmers) were. There was no mistaking the fact, because although the rates might be compounded in small houses, the landlord charged them in rent, and instead of working men paying 2s. 6d. a week rent they paid 3s. 6d. to 4s., and often as much as 5s. or 6s. per week, for a very poor class of houses. The heavy rates that they paid were the cause of the very high house rents that they now obtained. The working classes, therefore, suffered just as much from the present system of taxation as the former; indeed, he was not sure that they did not suffer more at the present time. Mr. Rathbone had ably stated that part of the case. He was glad to find that in Manchester the matter was being taken up, and he thought it should be the aim of agriculturalists everywhere to show their urban friends that they did not look at the subject from a narrow or selfish point of view, but were seeking to put down an injustice which affected the great masses of the people. There was a great broad field for them to labour in, as regarded the manner in which this question affected the great bulk of society.

Mr. JOHN WALKER (Mattersea) forwarded the following, with the request to the Secretary that it might be read to the meeting: Thinking as I do that by leaving alone at our Chamber meetings the great question of local taxation, to go into other questions of far less importance, we gave the Government an opportunity to think that we only considered it as one of other important matters, I should still be inclined to believe that our statesmen know well that they are shirking a duty in not seeing this crying evil redressed, not by some sopping supplemental relief, but by a wholesome and wholesale redress and reformation. Mr. Disraeli knows well how it could be redressed, he knows that talk of one particular property bearing the burden as you may, it is not the rich landowners that suffer most, but our great producing community, and we must insist upon the system being revised. It is the pressure of the unemployed poor upon the employing power (and other burdens besides this have become part and parcel of the poor-rate) which causes the great evil in the rural districts as well as the large towns, and though Tenant-Right may want to be made general, so that all tenants shall quit as they enter, and be paid for all improvements which are natural, and also for permanent ones, if made with the owner's consent, still the owner of the land is the natural farmer of that land, between whom, as the producer, and the others, as the consumers, there is no go-between, except of his own creation, and the whole

right of the Legislature is this, to see that the stronger does not oppress the weaker. Everything is in degree, and the more an outgoing tenant has to receive, the more, of course, the incoming tenant has to pay, and high farming sometimes tends to exhaust itself. A great increase of Tenant-Right helps on, certainly, what is sure now to be somewhat the case, the increase of small farms in the neighbourhood of towns, and the concentration of land into fewer hands in the country districts, and the more to pay on entry the less likely for numbers to rise, though, at the same time, no Tenant-Right at all would lead to pauper holding. Give any but the owner some inherent right in the soil itself, beyond what belongs to the floating capital upon it, except on the owner's account and by his sanction, and you have the first step to communism, and to help on those brawling agitators who would upset the rights of property and further disarrange the springs of industry. I am a Malt-tax repealer, but the Malt-tax presses more upon one class of producers than another, that is as far as mere interest goes, whereas, with its repeal we want to adopt this sound and general law that, all being consumers, and all not being producers, all indirect taxes which cannot be dispensed with shall be placed on the fully manufactured article, leaving production free, and all direct taxes shall be placed so that everyone shall pay according to his ability to pay. This will have to be done if, as was declared in the House of Commons, free trade and unrestricted competition are to be the basis of English legislation, if right and justice are to be acknowledged instead of party warfare, which nullifies all good measures if they do not suit party purposes. I consider it a crying shame to England, a great slur on the integrity of her statesmen, Liberal or Conservative, to have let a session pass, for years past, without seeing the poor-rates, education rates, sanitary rates, police-rates, rates for the prosecution of criminals, and for the maintenance of public order, were not placed on the whole income of the people of England, without favour or degree, no matter from whence it was derived or from what source it came. I venture to say that in no state, however despotic, is there a more unjust and ungenerous way of taxing one-tenth of a community for the well proved good of the whole than exists in the local department of the taxation of England. To the floating capital embarked in farming is in a great measure owing the increased production of England, but that production is materially influenced by seasons, and it is not always the best farmed land that produces most, nor do I believe that in any of our best farmed counties that the production can be much, if at all increased. The farmer is subjected to the natural price of the world as to his produce, and not to the natural price of his own country; but he is subject to the natural price of his own country as to labour, and also to an artificial value put upon it at times, and he cannot put the price of production upon the article produced, nor can he adulterate the article he produces; therefore, when wages rise in agricultural districts it must be by emigration to some extent, or by an increased demand for labour in particular neighbourhoods, owing to exceptional circumstances. A great amount of animal food is now required in England, but we must remember that it was a bad season that caused the high price of meat this year, and last year none but young sheep could be sold even to the working consumer except at a price which was a loss to the producer. Thousands of large sheep were last year sold at 4½d. to 5d. per lb., and a great destruction of young mutton took place. When working men use their increased earnings, not to lay by for a rainy day and to keep themselves independent, but to compete in luxuries with the rich, I do not think it tends much to their advantage or the general good, and I question whether more rise from the ranks now than in times which certainly needed improvement. Easing Imperial by increasing local taxation, which has been the fashion of late years, was creating more evil and injustice by the means used than ever any good end could justify, and it has been more the fashion to lead the working man to think that he ought to miss his little but fair share of taxation than showing him how to toe the mark, and that increased earnings shall be the output of increased payment on his part, but I greatly question that payment being increased. Preach to agricultural labourers, or other labourers as you will, increased wages mean an increased price of produce, of course taking into consideration the fecundity of barrenness of seasons, as to which localities differ. It may seem the interest of the employed to sell his labour at the

dearest possible price, and the interest of the employer to procure it at the cheapest possible price, but it is the interest of both combined that the price of the product should be remunerative, or the price of labour must in time go down. Farming is not always identified in interest, as to the farmer who breeds and the farmer who feeds, which cannot always be combined. The farmer who breeds has not been well paid lately, and the one who feeds has been numerically crippled by adverse seasons. All we require from our Legislature is to make the taxation equal, so that every one shall pay as nearly as possible according to his ability to pay, to let capital and labour have their free intercourse, taking every one according to the result obtained, taking care that wealth once concentrated pays more in its degree than that which has not or cannot be concentrated. In this country it is easier to ascertain wealth through income than income through wealth, and a fairly adjusted income tax is the fairest and most just tax of all. What taxes are indirect, if put on the fully manufactured article with the others gathered as above, would leave us a legitimate free trade instead of the bastard one which was foisted upon us without equivalent. When the whole traffic of the nation was upon the through roads, toll-bars were established so that they who used the roads should pay for the roads, and this was rightly charged back upon the consumer, but when railroads became carriers, many village roads became more through roads than the old through roads were, and unless all roads were toll-barred, you must toll-bar none, and such things are a curse to commerce and are totally inconsistent with the progress and circumstances of the times in which we live, and therefore the roads must be maintained some other way. If all parishes pay for their roads, those parishes through which the through roads pass have the same right, and when tollbars were done away with the roads had no right to be thrown on the union rate, unless the railway rates which caused their removal were paid to the union and to the individual parish rate. So long as any tax is gathered from carriages, &c., it ought to be applied to road maintenance, and I deny that farmers have any right more than others to help to maintain roads, except the by-roads to and from the land, and which become by usage theirs. Property is now an ill-defined word, and wealth is a more fit word for our vocabulary. This is added to every year by the income which becomes concentrated, and also as it is being concentrated, and when it has assumed no form by which to classify it. I venture to think that when we fairly consider the incidence of our taxation, define what is local and what is Imperial, what are local rates and what are co-operative ways of raising money for general comfort in the towns, though paid for individually in the country, such as light and water, I say when this is fairly considered, and also what should be paid out of general wealth of all kinds, and what out of concentrated wealth alone, you would find that a justly adjusted income-tax, gathered down to the lowest point at which it could be gathered without favour, but in degree, and up to the highest as far as wealth can reach, no matter

from whence or how derived, would get very near to what everyone should pay according to ability to pay, and also for the right payment of all taxes, whether levied for present good, for future comfort, or for payment of past obligations. This last spreads out too great a field, perhaps to be traversed in our day, but as far as what we call local taxation is concerned, you can only call it local as to supervision, but not to payment, for all the income of this country is equally indebted to its good administration, and therefore everyone should pay according to his ability to pay, and none are more interested than the employed. That the employing power should not be crippled, but that the whole wealth of the country should bear the pressure of the indigent and those not having or not capable of employment.

Mr. TURNER drew attention to the important work which had been done by the Local Taxation Commission. Since 1879 the committee had successfully resisted 11 bills which would have entailed fresh burdens on local taxation, 24 having been withdrawn and 7 considerably modified.

Mr. HEMSLEY pointed out, in reply to Mr. Walker's statement, that there must be a class of expenditure which could not be removed from the local assessment. That being the case, it would be far better for Chambers of Agriculture to insist on a wider course of action. The injustice of local taxation had been admitted by the fact of steps in the shape of partial measures having been on several occasions offered. He thought Chambers of Agriculture should press on the Government to go to the root of the evil, rather than offer the crumbs which had been referred to. He was convinced that, sooner or later, Government would be compelled to take up this question.

Mr. GODDER, in reply, said as to the question of personal property, he was glad Mr. Farmer and others did not see the difficulties he had been led to see himself. He should be very glad if a thorough change were effected; but he saw a difficulty in coming at it. As to the income tax, there were a great many anomalies, irregularities, and hardships connected with its collection. Why he alluded to these difficulties was because that, in his opinion, his way of coming at the point would be more speedily accomplished, that was, if Government would recognise that a great portion of what was now contributed locally for local purposes ought to be paid out of the Imperial Exchequer, there would be a great amount of relief. He was glad to observe that associations were being formed in the towns, and that urban districts were with them on this subject. Such being the case, the day could not be far distant when the question must be gone into, and when the Government could exist that trifled with or deferred the matter any longer.

The CHAIRMAN said it appeared that all they had to do was to call upon the Legislature to put in force the Act of Elizabeth. He could not see why a man who invested his money in the funds, with Government security, should not contribute to local taxation as well as the man who invested his money in land.

The motion was unanimously adopted.

## MANCHESTER AND LIVERPOOL AND NORTH LANCASHIRE AGRICULTURAL SOCIETY.

### MEETING AT PRESTON.

The Shorthorns preponderate largely, but there were many empty stalls in the cow and heifer classes. Mr. J. Outhwaite's Royal Windsor was adjudged to be the best bull in the yard, and Vivandère the best cow. Royal Windsor was placed first also in the open class, Sir Arthur Ingram being second, and Leeman third. In the class for bulls above two and under three years old, the Earl of Ellesmere was first, with Baron Irwin; and Mr. J. Dickinson, Upholland, won the first prize in the class for bulls above one and under two years old, with Duke of Lancaster; Mr. Thomas Statter, Staud Hall, was second with Hero, and Mr. W. Linton third; and in the class for bull calves, Sir John Lawson, Catterick, was first with

Benedict. For cows, Colonel Towneley was second, and Mr. Thomas Statter third. In that for heifers above two and under three years old, Mr. G. Fox was first with Winsome 16th, and also for heifers above one and under two years old, with Melody. Col. Towneley, in the class for heifer calves, was first and third. The special prize for cows of any age, with produce, was won by Mr. Thos. Statter, with Rose, Robin Rose, and Oxford Rose. There were only two Channel Islands bulls entered, and the prize fell to Mr. T. H. Miller, who also took the first premium for cows or heifers. In the Ayrshire cow or heifer class Mr. R. Bowling, Lancaster, took the first, and Mr. Thomas Statter the second prize; and in that

for Welsh cows or heifers Mr. Griffith Jones, Mold, was first, and Mr. R. Humphreys, Beddgelert, second. The other awards for Shorthorn cattle were limited to tenant farmers resident in the society's district. The show of horses is large, is fully equal in quality to, and greater in number than, that of previous years. There was not a very large show of pigs. Most of the entries are familiar to frequenters of shows, and the judging to a great extent was a foregone conclusion. The Earl of Ellesmere took the great majority of the first prizes, and a large number of second. First prizes were also given to Mr. Blakey, Mr. J. Dove, Mr. B. G. D. Cooke, Mr. D. Ashcroft, Mr. T. Strickland, and Mr. Rigby, the secretary of the society. Mr. Thos. Statter, Stand Hall, offered two prizes—one for the best boar, and another for the best sow, of any age or breed, which were taken by the Earl of Ellesmere. The sheep pens were very well filled, and the Shropshires, particularly the rams, were a numerous and attractive class. The first prizes were divided by Mr. W. Baker, Atherton; Mrs. Sarah Beech, Brewwood; and Mr. W. Yates, Shifnal. In the Leicesters, Mr. T. H. Hutchinson, Catterick, took all the first, and nearly all the second premiums. The principal prizes for Lincoln or other longwools were divided between Mr. Thomas Wilkins, Duffries, and Mr. Wm. Norman, Aspatria; and for mountain sheep of any breed, the principal winners were Mr. R. Spencer, Cloughford; Mr. J. Pickup, Newchurch; and Mr. Geo. Dewhurst, Rawtenstall. The poultry show was not so large as usual. The agricultural produce was very creditable. The cheese and butter premiums were well contested, and in the competition for three cheeses, made in any part of the United Kingdom, Cheshire held its own against all comers, all three prizes going into that county. The first was given to Mr. J. Beckitt, Lawton; the second to Mr. G. Wood, Prescott; and the third to Mr. George Glassford, Knutsford. In the competition for three cheeses, about 30lb. weight, made in Lancashire, Mr. R. Maclereth, Ashton-with-Stodday, was first; and in that for cheese under 30lb. weight, made in Lancashire, Mr. W. Jolly, Preston, was the winner.

In the implement department the number of entries is smaller than last year. The premiums offered for the best arrangement of machinery, and worked by steam, for cutting, pulping, steaming, and otherwise preparing the feed of farm stock in the most economical manner secured six entries, and the first prize was given to Barford and Perkins, Peterborough. This firm is also showing a detached steaming apparatus, a set of steam ploughing tackle, and Campaign's patent anchor for steam cultivation, with Savage's improvements. The second prize for machinery for preparing the food of farm stock was given to Corbett and Son of Wellington, who showed a six-horse portable steam engine, connected with which is an apparatus for heating the water before it enters the boiler by means of the exhaust steam. Fed by this engine, too, there was a 12-bushel revolving steam can. The first prize for fixed machinery for churning, chaff cutting, and pulping roots by horse power was taken by Wood, Cocksedge, and Co., Stowmarket, and the second by Richmond and Chandler, Salford; the former firm also took a prize for a one-horse cart for general farm work; an equal prize being given to Grundy of Bolton. In the competition for implements for the cultivation of land by horse power, Corbett and Peele of Shrewsbury were first, and Standing of Preston second. Standing also took the second prize for an implement for cutting hay and corn crops and for preparing for stack or shed; the first prize being given to another Preston exhibitor, Warburton. The prize for a fixed fence in iron or wood was given to Peake of Liverpool, who was the only exhibitor in the class. Richmond of Colne won the first prize for dairy vessels, and Bradford and Co. of Salford the second. Bradford

took the first prize for a collection of articles of domestic use, the second going to Newton, Wilson, and Co. of London. For the best implement for sowing guano or artificial manure, the prize was given to Willacy of Penwortham, and the following other awards were made: Saddlery, Ashworth of Radcliffe; stable and cowhouse fittings, Musgrave and Co. of Belfast, and Willacy second. Among the other exhibitors of implements were Robey and Co. of Lincoln, R. Hornsby and Son of Grantham, Pickles, Sims, and Co., Fiske and Co., J. Fowler and Co. of Leeds, and J. and F. Howard.

## PRIZE LIST.

JUDGES.—SHORTHORNS: G. H. Sanday, Bedale; J. Atkinson, Stocksfield-on-Tyne. OTHER CATTLE: J. Dickenson, Upholland; J. Cliffe, Whitley Hall, near Northwich. LIGHT HORSES: W. S. Atkinson, Barrowby Hall, Leeds; G. Guy, Millfield, Wooter, Northumberland; A. Turnbull, Cornhill-on-Tweed, Northumberland. CART HORSES: W. Owen, West Derby; S. Rose, Great Raveley, Huntingdon. SHEEP: — Wilkinson, Wismarleigh; R. H. Masfen, Pendeford, Wolverhampton; Cresswell, Ashby-de-la-Zouch. PIGS: T. Dodds, Wakefield; J. Culshaw, Townley. POULTRY: R. Teebay Fulwood. DOGS: W. Lort, Birmingham; C. B. Spraight, Mill Houses, near Sheffield. GRAIN AND ROOTS: W. Forrester, Leyland; H. Neild, The Grange, Worsley; J. Hornby, Minshull Vernon. BUTTER: G. Jennison, Belle Vue; T. Muirhead, Manchester. CHEESE: Roger Bate, Tarporley. IMPLEMENTS: R. Mawdesley, Eccleston; J. Wright, Croxteth; R. Whalley, Bold; W. Scotson, Aigburth.

## CATTLE.

## SHORTHORNS.

Bull above three years old.—First prize, J. Outhwaite, Catterick (Royal Windsor); second, W. Linton, Sherriff Hutton (Sir Arthur Ingram); third, G. Fox, Wimslow (Leeman). Highly commended: M. O'Reilly, Dundalk (King Richard). Commended: T. Statter, Manchester (Oxford Cherboyl).

Bull above two but under three years.—First prize, Earl of Ellesmere (Baron Irwin); second, T. Atkinson, Ribchester; third, B. Bee, Bullsnappe Hall (Mountain Prince).

Bull above one but under two years.—First prize, J. Dickenson, Upholland; second, T. Statter; third, W. Linton. Highly commended: J. W. Askew, Whittington.

Bull calf above six but under twelve months.—First prize, Sir J. Lawson, Catterick; second, W. Linton; third, W. Bradburn, Wednesfield. Highly commended: Mytton Farming Co., Whalley.

Cow above three years old, in milk or in calf.—First prize, J. Outhwaite; second, Col. C. Towneley, Burnley; third, T. Statter. Highly commended: Rev. W. Sneyd, Keel Hall.

Heifer, two but under three years, in milk or in calf.—First prize, G. Fox; second, J. Dickinson; third, T. H. Jackson, Birkenhead. Highly commended: R. Thompson, Penrith. Commended: J. Sykes, Poulton-le-Fylde.

Heifer above one but under two years.—First prize, G. Fox; second, Col. C. Towneley; third, T. Atkinson. Highly commended: W. Lawson, Beamsley, Skipton. Commended: J. Dickenson.

Heifer calf above six but under twelve months.—First prize, Col. Towneley; second, J. R. Patterson, Barrow-in-Furness; third, Col. Towneley. Highly commended: J. Crabtree, Burnley.

Cow of any age, with two or more of her own or her female descendants' progeny.—First prize, T. Statter. Commended: T. H. Miller, Singleton; Sir J. Lawson.

## SPECIAL PRIZES.

Bull not exceeding three years old.—Prize, J. Outhwaite, Catterick.

Cow or heifer of any age.—Prize, J. Outhwaite.

Bull or heifer calf under twelve months.—Prize, Col. Towneley.

Bull, the property of a landlord who allows him to serve the cows of his tenants gratis.—J. Talbot Clifton, Lytham.

## OTHER BREEDS.

Channel Islands bull above one year.—Prize, T. H. Miller. Channel Islands cow or heifer.—First prize, T. Miller, St. Josephine; second, R. Smith, Manchester.

Ayrshire cow or heifer.—First prize, R. Bowling, Lancaster; second, T. Statter.

Welsh cow or heifer.—First prize, G. Jones, Mold; second, R. Humphreys, Beddgelert. Highly commended: R. Humphreys. Silver medal also awarded to R. Humphreys.

#### PRIZES LIMITED TO TENANT FARMERS.

Bull above two years.—First prize, T. Atkinson; second, B. Bee; third, J. Haydock, Heskin. Highly commended: B. Partington, Blackley.

Bull above one but under two years.—First prize, J. Dickinson; second, G. Ashburner, Broughton-in-Furness; third, T. Atkinson. Highly commended: J. W. Askew, Whittington.

Bull calf above six but under twelve months.—First prize, Mytton Farming Co.; second, R. Thompson, Mythop; third, J. Crabtree, Burnley. Highly commended: J. Hitchen, Tarpoley.

Cow above three years.—First prize, G. Ashburner; second, T. Atkinson; third, J. R. Patterson, Barrow-in-Furness. Highly commended: G. Ashburner.

Heifer two but not exceeding three years.—First prize, J. Dickinson; second, J. Patterson; third, B. Partington. Highly commended: J. Patterson.

Heifer one but under two years.—First prize, T. Atkinson; second, J. Dickinson; third, J. Harrison, Much Hoole. Highly commended: G. Ashburner.

Heifer calf one but under twelve months.—First prize, J. R. Patterson; second, B. Fletcher, Yeadon; third, J. Crabtree. Highly commended: T. Mercer, Clitheroe.

For dairy purposes, cow above three years.—First and second prizes, R. Saul, Woolphampton; third, B. Partington.

Heifer above two but under three years.—First prize, T. Rigby, Darvall Mill Farm; second, T. Atkinson; third, B. Partington.

Heifer above one but under two years.—First prize, B. Partington; second, G. Ashburner; third, Miss Fairhurst, Ormskirk.

Pair of heifer calves under twelve months.—Prize, Miss Fairhurst.

Two cows of any breed above three years.—Prize, B. Partington. Highly commended: R. Saul.

#### SPECIAL PRIZES.

Bull not exceeding two years.—Prize, J. Dickenson, Upholland.

Cow not exceeding three years.—Prize, R. Saul.

Heifer not exceeding three years.—Prize, J. Dickenson.

#### HORSES.

Stallion, thoroughbred, for getting hunters.—First prize, R. Brown, Preston (Restless); second, R. Hutton, London (Laughing Stock); third, J. Fearon, Whitehaven (Ouragon 2nd). Commended: P. Bullock, Latham (Grand Master).

Stallion, for getting roadsters.—First prize, J. Gill, Silsden (Merrylegs); second, T. Statter (Perseverance).

Brood mare, for hunters.—First prize, Earl of Ellesmere; second, T. H. Miller; third, E. Cartmell, Lytham.

Foal.—First prize, E. Cartmell; second, T. H. Miller.

Brood mare, for harness horses.—First prize, R. Hutton; second, J. Nixon, Ballam; third, B. Bee, Goosnargh.

Hunter, best leaper over hurdles and water, any age, and up to fourteen stone.—First prize, R. Mason, Dalton-in-Furness; second, R. W. France, Rawcliffe Hall; third, J. Fearon.

Carriage horses, match pair.—First prize, T. Statter; second, L. Rawstone, Hutton Hall.

Brougham horse, not less than fifteen hands two inches high.—First prize, T. Statter; second, T. Whittaker, Walton-le-Dale.

Hunter, four years old, mare or gelding.—First prize, W. Armstrong, Kendal; second, J. Whittaker, Walton-le-Dale; third, W. Johnston, Liverpool.

Hunter, three years old.—First prize, J. Lett, York; second, P. Blundell, Weeton; third, J. S. Atkinson, Northalerton.

Hunter, two years old.—First prize, T. H. Miller; second, W. Vernon, Tarpoley.

Hunter, one year old.—First prize, R. Bowling, Lancaster; second, T. H. Miller; third, W. Vernon.

Light or half-bred, three years old.—First prize, T. H. Miller; second, E. Fearuside, Wakefield; third, T. Helm, Cockerham.

Light or half-bred, two years old.—First prize, T. Helm; second, S. Leather, Northwich; third, H. Riding, Hindley.

Light or half-bred, one year old.—First prize, B. Bee; second, H. Riding.

#### CART HORSES.

Stallion, for draught horses.—First prize, Earl of Ellesmere (Prince of the Isle); second, T. Statter (Young Champion); third, Ashcroft and Sons, Mawdesley (Honest Lad). Commended: J. F. Crawther, Knowl Grove (Young Honest Tom).

Stallion-colt, foaled in 1873.—First prize, R. Barron-Holmes (Parteton); second, T. Statter; third, R. C. Richards, Clifton. Commended: H. Fisher, Kirkham.

Brood mare.—First prize, J. Waterworth, Wigan; second, E. Birch, Aintree; third, T. Statter.

Foal.—First prize, E. Birch; second, J. Waterworth.

Pair of draught horses.—First prize, C. W. Brierley, Rhodes House; second, C. W. Brierley; third, T. Statter.

Draught horse, single.—First prize, C. W. Brierley; second, C. W. Brierley; third, Earl of Ellesmere. Highly commended: Earl of Ellesmere.

Pair of draught horses, property of tenant-farmers.—First prize, T. Atkinson, Ribchester; second, E. Birch; third, J. Partington, Middleton. Highly commended: H. N. Fraser, Penrith.

Draught horses, four years old.—First prize, C. W. Brierley; second, J. Green, Nesseliff; third, E. Waterworth. Commended: R. C. Richards, Clifton.

Draught horse, colt, three years old.—First prize, J. Walsh, Garstang; second, E. Waterworth; third, T. Seed, Bashall Town. Commended: W. Shaw, Poulton-le-Fylde.

Draught horse, colt, two years old.—First prize, G. Rea, Salwick; second, T. Statter; third, T. Pearson, Nasby. Commended: Earl of Ellesmere.

Hunter of any age.—Prize, W. Armstrong. Commended: J. Fearon.

Pair of carriage horses, not exceeding fifteen hands.—Prize, D. Carlyle, M.D., Carlisle. Commended: T. H. Miller.

#### SHEEP.

##### SHROPSHIRE OR SOUTHDOWNS.

Shearling ram.—First prize, W. Baker, Atherstone; second, S. Beach, Brewood; third, W. Yates, Shilhal.

Ram of any other age.—First prize, S. Beach; second, C. Byrd, Stafford; third, W. Yates.

Ram-lamb.—First prize, W. Yates; second, S. Beach; third, S. Beach.

Three shearling ewes.—First prize, S. Beach; second, W. Baker, Moor Barns; third, W. Yates.

Three ewes, having reared lambs this year.—First prize, W. Baker; second, W. Baker.

Three ewe lambs.—First prize, W. Yates; second, C. Byrd; third, Sarah Beach.

##### BORDER OR OTHER LEICESTERS.

Shearling ram.—First prize, T. H. Hutchinson, Catterick; second, T. H. Hutchinson; third, J. Kitchin, Clitheroe.

Ram of any other age.—First prize, T. H. Hutchinson; second, T. H. Hutchinson; third, C. and W. Doveners, Beadle.

Ram-lamb.—First prize, T. H. Hutchinson; second, T. H. Hutchinson; third, C. and W. Doveners.

Three shearling ewes.—First prize, T. H. Hutchinson; second, T. H. Hutchinson; third, H. N. Fraser, Penrith. Highly commended: H. N. Fraser. Commended: H. N. Fraser.

Three ewes.—First prize, T. H. Hutchinson; second, H. N. Fraser; third, H. N. Fraser. Highly commended: H. N. Fraser. Commended: T. H. Hutchinson.

Three ewe lambs.—First prize, T. H. Hutchinson; second, H. N. Fraser; third, T. H. Hutchinson.

##### LINCOLN OR OTHER LONGWOOLS.

Shearling rams.—First prize, T. Wilkins, Duntfries; second, T. Wilkins. Highly commended: W. Norman, Hall Bank, Aspatria.

Ram of any other age.—First prize, W. Norman; second, T. Wilkins. Highly commended: W. Norman.

Ram lamb.—First prize, W. Norman; second, W. Norman.

Three shearling ewes.—First prize, T. Wilkins; second, T. Wilkins. Commended: W. Norman.

Three ewes.—First prize, T. Wilkins; second, T. Wilkins.

Three ewe lambs.—First prize, W. Norman; second, W. Norman.



## MOUNTAIN SHEEP OF ANY BREED.

- Shearling ram.—First prize, — Spuecer, Cloughford; second, T. Roddick, Mold.
- Ram of any other age.—First prize, J. Pickup, Newchurch; second, G. Dewhurst, Rawtenstall. Highly commended: T. Roddick. Commended: T. Roddick.
- Ram lamb.—First prize, J. Pickup; second, G. Dewhurst. Highly commended: J. Pickup.
- Three shearling ewes.—First prize, G. Dewhurst; second, G. Dewhurst.
- Three ewes.—First prize, G. Dewhurst; second, G. Roddick.
- Three ewe lambs.—First prize, G. Dewhurst; second, G. Dewhurst. Commended: T. Roddick.

## PIGS.

- Boar of large white breed, above one year.—First prize, Earl of Ellesmere; second, Earl of Ellesmere; cup, Earl of Ellesmere. Commended: J. Prescott, Preston.
- Breeding sow of large white breed, above one year.—First prize, Earl of Ellesmere; second, Earl of Ellesmere. Highly commended: J. Dove, Hambrook.
- Boar pig of large white breed, under one year.—Prize, R. Elakey, Preston.
- Pair of sow pigs of large white breed, under one year.—First prize, J. Dove; second, Earl of Ellesmere.
- Boar of small white breed, above one year.—First prize, Earl of Ellesmere; second, Earl of Ellesmere. Highly commended: J. Dove. Commended: Earl of Ellesmere.
- Breeding sow of small white breed, above one year.—First prize, Earl of Ellesmere; second, Earl of Ellesmere; cup, Earl of Ellesmere. Commended: J. Dove.
- Boar pig of small white breed, under one year.—First prize, B. G. Davies Cooke, Mold; second, Earl of Ellesmere.
- Pair of sow pigs of small white breed, under one year.—First prize, Earl of Ellesmere; second, B. G. Davies Cooke. Commended: J. Dove.
- Boar of the middle breed, above one year.—First prize, Earl of Ellesmere; second, Earl of Ellesmere.
- Breeding sow of the middle breed, above one year.—First prize, Earl of Ellesmere; second, Earl of Ellesmere.
- Boar pig of the middle breed, under one year.—First prize, Earl of Ellesmere; second, Earl of Ellesmere.
- Pair of sow-pigs of the middle breed, under one year.—Prize, Earl of Ellesmere.
- Boar of the Berkshire breed, above one year.—Prize, D. Ashcroft, Preston.
- Pair of sow pigs of the Berkshire breed, under one year.—Prize, T. Rigby, Winsford.
- Boar, Improved Essex, above one year.—Prize, T. Strickland, Thirsk Junction.
- Boar of any age or breed.—Prize, Earl of Ellesmere.
- Sow of any age or breed.—Prize, Earl of Ellesmere.

## GRAIN AND ROOTS.

- White oats.—First prize, J. Greateox, Burton-on-Trent; second, J. Marson, Stafford.
- Swedish turnips.—First prize, J. Greateox; second, R. Mackereth, Lancaster.
- Any other kind of turnips.—First prize, J. Greateox; second, R. Driver, Euxton.
- Long red mangel-wurzel.—First prize, R. Driver; second, J. K. Fowler, Aylesbury.
- Yellow mangel-wurzel.—First prize, J. Greateox; second, W. Wren, Reading.
- Globe mangel-wurzel.—First prize, J. Nelson, Garstang; second, W. Wren.
- Carrots.—First prize, G. Smith, Wheelton; second, H. Simcock, Burton Moss.
- Scotch cabbages.—First prize, J. Titterington, Fishwick; second, R. Driver.
- Round potatoes.—First prize, J. Rigby, Farington; second, R. Nelson, Whittle-le-Woods.
- Flat potatoes.—First prize, J. Rigby; second, R. Mackereth.
- Collection of farm and garden produce.—First prize, J. B. Jones, Fulwood; second, H. Simcock; third, J. Titterington; fourth, R. Driver.

## CHEESE AND BUTTER.

- Three cheeses, above 30lbs. weight each, made in Lancashire.—First prize, R. Mackereth; second, S. Salhouse,

Roseacre; third H. Blundell, Whittingham. Highly commended: J. Jackson, Roseacre. Commended: T. Porter, Clitheroe.

Three Cheeses, under 30lbs. weight each.—First prize, W. Jolly, Barton; second, J. Haydock, Heskin; third, T. Porter.

Three cheeses, above 50lbs. weight each, made in Cheshire, or in any part of the Society's district south of the Mersey.—First prize and silver medal, R. Prescott, Tarporely; second, J. Cliffe, Whitley; third, G. Prescott, Middlewich.

Three cheeses, under 50lbs. weight each.—First prize, G. Glassford, Knutsford; second, J. Beckett, Lawton; third, W. Moreton, Weaverham. Highly commended: E. Latham, Wettenhall.

Three cheeses, above 40lbs. weight each, made in any part of the United Kingdom.—First prize, J. Beckett; second, G. Wood, Prescott; third, G. Glassford. Highly commended: W. Moreton. Commended: J. Nelson, Garstang.

Six pounds of fresh butter, made in any part of the Society's district.—First prize and medal, J. Marston, Acton; second, G. Barge, Warton; third, R. Smith, Manchester; fourth, H. Neild, Worsley. Very highly commended: W. Clegg, Gossnargh. Highly commended: G. Halsall, Warrington; G. Haworth, Lower Darwen; and J. Cliffe.

Pot or crock of butter.—First prize, J. Marson; second, G. Haworth, Lower Darwen; third, L. C. Wood, Singleton; fourth, R. Whittaker, Clitheroe. Highly commended: B. Mason, Samlesbury; and J. Lloyd, St. Asaph.

## ARABLE FARMS.

- Farm of 150 acres and upwards.—Prize, W. Scotson, Aigburth.
- Farm above 80 acres.—Prize, M. Baldwin, West Derby.
- Farm above 40 acres.—Prize, J. Harrison, Euxton, Chorley.
- Dairy farm of 150 acres and upwards.—Prize, J. Roberts, Saltney.
- Dairy farm of 100 acres and upwards.—Prize, G. Millington, Middlewich.

## LAYING DOWN GRASS FOR MOWING.

- Twenty acres of clover or grass seed of upwards of 150 acres.—Prize, W. Johnson, Warrington.
- Fifteen acres of clover or grass seeds of upwards of 150 acres.—Prize, T. Langshaw, Speake, Liverpool.
- Ten acres of clover or grass seeds of upwards of 150 acres.—Prize, H. Williams, Orrell, Liverpool.

## LAYING DOWN LAND FOR PERMANENT PASTURE.

- Fifteen acres of pasture of 150 acre farm.—Prize, J. Trickett, Northwich.
- Five acres of pasture of 150 acre farm.—Prize, W. Hough, Mere, Knutsford.

JUDGES' REPORT ON THE PRIZE FARM.—Best managed farm of 150 acres and upwards, with less than one-third of its extent under the plough, and in such arable cultivation as is most suitable to its soil and situation—£20. There were five competitors for this prize, which was awarded to Mr. Scotson, Aigburth. This farm contains about two hundred and sixty acres of light, loamy soil, resting upon the red sandstone, a fair proportion of which is not naturally rich, the rock being at no great depth from the surface. The rest of the farm is, however, of a better and deeper nature. The cropping for the year is as follows, viz.: 11 acres in pasture, 14 acres in meadow, 53 in clover or seeds of first year, 14 in seeds a year older, 62 acres in wheat, 28 acres in oats, 32 acres in barley, 35 acres in potatoes, 2 acres in turnips, 4 acres in mangel wurzel, 1 acre in vetches, and 4 acres in garden, orchard, &c. The stock consists of 10 farm horses, 3 colts, 8 dairy cows, 2 heifers, 4 rearing calves, 37 ewes and lambs, 74 feeding sheep, 4 sows, and 2 pedigree bulls. The stock are fed upon grass, hay, grains, cotton-cake, and peameal. He uses annually about 12 tons of guano and nitrate of soda, with night-soil for top dressing, and 800 tons of horse and cow manure (500 of which are purchased), with some night soil for green crops. The draining, where necessary, has been done by himself, with the exception of some tiles found by owners. Over 5,000 yards of old fences have been taken up, and new made, partly thorn and partly wooden. Hurdles put down to the extent of 1,000 yards. He has also made at his own expense about 700 yards of farm roads, and which are at present in very good condition. The competition for this premium ran very close, all the farms being exceedingly well managed. Mr. Scotson's treatment of hay and green crops was everything that could be desired, the hay being well saved and



the mangels being as regular as could be made, with the prospect of a heavy yield. The potatoes are a large crop. He has also a most excellent barley crop, clean and heavy, and the seeds for next year promise well. The oats are as heavy as the land will carry. The wheat crop, being on the lighter side of the farm, is not quite so bulky as the rest of the crops, but is perfectly clean, and promises to yield well. He had also the good fortune to be thrashing wheat on the day of inspection, to meet the long-expected rise of the corn market. As soon as he ricks his hay he secures his stacks by thatching them, which is a very commendable course. The fences on this farm, as well as on those of the rest of the competitors, were in process of trimming, the protracted hay time throwing this fourteen days or so behind the usual time. Altogether, Mr. Scotson is following the maxim of using the land well, and getting as much from it in return by judicious management and liberal manuring as can possibly be got.

At the dinner Lord WIMMARLEIGH, the chairman, in alluding to the inauspicious weather, said that the only consolation he

could offer was the fact that the county coroner was present, and if anyone was drowned he would be properly looked after. The Council had done everything in their power to render this one of the principal agricultural meetings in the kingdom, and but for the unfortunate state of the weather he was perfectly certain that they would have had a meeting at Preston which could not have been surpassed even by the Royal Agricultural Society, and as it was, he thought he might say they never had in this county, upon the whole, such an exhibition as the one opened that day. As to the Agricultural Holdings Bill, he expressed his belief that it would benefit the tenant-farmers and agriculture generally. There were several things in the measure of which he did not approve; but he begged landlords and tenants to put a fair construction upon the Act, and they would find that the Government were justified in bringing in the bill and carrying it through Parliament. Whatever defects the bill might have, it secured to tenants the power to compensate themselves for improvements upon their farms, and if there was nothing else in it they ought to be thankful for it.

## NORTHUMBERLAND AGRICULTURAL SOCIETY.

### MEETING AT ALNWICK.

The cattle made up a good county show. The entries included winners at the Royal show at Taunton and at the Highland in Glasgow. For Shorthorn bulls, Mr. A. H. Browne took the first prizes with Duke of Aosta and his two sons. Of cows there was a good display, one of the features being the exhibition along with them of their progeny. The sheep were a very large entry, there being no fewer than 111 in the fourteen classes. The quality was also good, and the prize-takers included Mr. Forster, Ellingham, Chathill; Mr. Melvin, Bonnington, Wilkieston; Rev. R. W. Bosanquet, Alnwick; Mr. Snaith, Rochester; Mr. John Robson, Rochester; and other well-known breeders. The horses were another large entry. The horses for the field in the young stock classes comprised some exceedingly good animals. In the class of hunters of any age, confined to Northumberland and Durham, there were several weight-carrying animals. The winner in another class was the well-known Talisman. The horses for agricultural purposes, in the majority of instances, were a good class, and the blood horses were another fair show. Pigs were a much larger collection than has usually been seen at single day exhibitions, and among the prize-takers were: Mr. Jacob Dove, of Bristol; Mr. William Hatton, Leeds; Mr. Duckering, Kirton Lindsey; and the Earl of Tankerville. Of shepherds' dogs there were three large classes, embracing 85 entries. Of agricultural implements there were 25 stands, and 337 entries. The show was considered very good, although not so large as at Newcastle.

### PRIZE LIST.

JUDGES.—CATTLE: G. Drewry; A. Holker, Cark-in-Cartmel; H. Chandos Pole Gell, Doughton Hall, Warksworth; J. E. Topin, Musgrave Hall, Skelton; T. Gibbons, Carlisle; and G. Barber, Tillington, Alnwick. SHEEP: W. Smith, Cornhill; W. Turnbull, Belford; A. Wood, Corbridge; J. Weallens, Flotterton, Rothbury; W. Henderson, Belford; and R. Thornton, Cornhill, Kirkwhelpington. HORSES: H. McLaren, Sanderland; T. Hunt, Darlington; H. Thompson, Chathill; R. G. F. Howard, Lincoln; W. T. Searth, Staindrop; J. Hope, Edinburgh; J. B. Booth, Catterick; N. Milne, Melrose; and R. Calder, Edrom, N.B. PIGS: T. Gibbons, Carlisle; T. C. Booth, Northallerton; and G. Barber, Tillington, Alnwick. SHEPHERDS' DOGS: As for sheep. WOOL: J. W. Humble, Newcastle-on-Tyne. AGRICULTURAL IMPLEMENTS: J. Aitchison, Alnwick; W. Dodd, Bellingham, Alnwick; and W. Tat, Alnwick.

### CATTLE.

#### SHORTHORNS.

Bull above three and under seven years old.—First prize, £20, A. H. Browne, Doughton Hall, Chathill (Duke of Aosta); second, £10, the executors of the late Mr. G. Angus, Broomley, Stocksfield (Ben Brae); third, £5, Sir J. Sainburne, Bart., Capheaton, Newcastle (Duke of Moulines). Highly commended: Earl of Tankerville, Chillingham Castle, Alnwick (Red Cross Knight).

Bull above two and under three years old.—First prize, £15, A. H. Browne (Rosario); second, £6, W. and H. Walton, Appletree Shields, Langley Mills (Squire Marshall); third, £3, Lady Pigot, West Hall, Byfleet, Surrey (Bapt Rhone). Highly commended: W. and H. Morley, Sweetwells Stanhope (British Baron).

Bull above one and under two years old.—First prize, £15, A. H. Browne (Pioneer); second, £6, J. Outhwaite, Bainesse, Catterick (Duke of Chabring); third, £3, Duke of Northumberland, Alnwick Castle (Good Templar). Highly commended: M. Stephenson, Fourstones, Hexham (Second Earl of Derwent).

Bull-calf under twelve months old.—First prize, £3, Duke of Northumberland (Snowstorm); second, £2 (Gay Boy). Highly commended: Duke of Northumberland (Monarch).

Family, consisting of cow of any age, and two or more of her offspring.—First prize, £20, and silver cup, value £25, Lady Pigot (Lucky Star, Zvesda, and Sidus); second, £10, J. Sharp, Broughton, Kettering (Julia 1st., Julia 2d., and roan calf). Highly commended: Executors of the late Mr. G. Angus (Daisy, Daisy 2nd, Daisy 3rd, Daisy 4th). Commended: J. Wilson, Woodhoza Manor, Morpeth (Bloom, Woodbine, Blooming Queen, and Blooming Princess).

Cow.—First prize, £15, T. H. Hutchinson, Manor House, Catterick (Lady Playful); second, £6, Duke of Northumberland (Bracelet); third, £3, A. H. Browne (Primrose). Highly commended: Sir W. C. Trevelyan, Bart., Wallington, Newcastle (Storm Queen), and T. H. Hutchinson (Dairy Girl).

Heifer above two and under three years old.—First prize, £10, T. H. Hutchinson (Lady Alicia); second, £5, Lady Pigot (Rose of Lincoln). Highly commended: A. H. Browne, (Primula); J. Tweedie, Deuchrie, Prestonkirk, Dunbar (Red Tulip).

Heifer above one and under two years old.—First prize, £7, Lady Pigot (Moorish Captive); second, £3, Sir W. G. Armstrong, C.B., Rothbury (3rd Oxford's Welfare). Highly commended: Lady Pigot (Imperious Queen); J. Outhwaite-Catterick (Miss Fox and Lady Beaumont 6th). Commended: Lady Pigot (Flatterer); Sir M. W. Ridley, Bart. Blagdon (Miss Baby); Sir W. C. Trevelyan, Bart., Wallington (Acomb J.); Sir T. C. Constable, Bart., Broughton (Florentia Oneida); Sir W. G. Armstrong, C.B. (5th Princess of Oxford); J. Tweedie, Prestonkirk, N.B. (Grand Cherry and Rose of Eden); R. Harrett, Kirkwhelpington (Lady Wharfedale 2nd); J. J. Sharp, Broughton (Jasper).

Heifer-calf under twelve months old.—First prize, £3, Sir W. C. Trevelyan, Bart. (Damsor 3rd); second, £2, Duke of Northumberland (Maid of Windsor). Highly commended: Sir T. C. Constable, Bart., Brough (Princess Victoria Ouida).

## CHANNEL ISLES.

Cow or heifer any age.—First prize, £6, Sir M. W. Ridley, Bart.; second, £3, Sir J. Marjoribanks, Bart., Coldstream.

## AYRSHIRES.

Cow or heifer any age.—First prize, £6, Sir M. W. Ridley, Bart.; second, £3, Earl of Tankerville; third, £1, J. Graham, Paisley.

## SHEEP.

## BORDER LEICESTERS.

Ram, any age.—First prize, £10, T. Forster, jun., Ellingham, Chathill; second, £5, ditto. Highly commended: Marquis of Londonderry, Seaham Hall, Seaham Harbour.

Shearling ram.—First prize, £15, J. Melvin, Bonnington, Wilkinston, N.B.; second, £8, J. Clark, Oldhamstocks Mains, Cockburnspath; third, £3, Rev. R. W. Bosanquet, Rock, Alnwick. Highly commended: T. Forster, jun., Ellingham. Commended: J. Clarke, Oldhamstocks Mains, Cockburnspath.

Pen of five ewes.—First prize, £5, Rev. R. W. Bosanquet. Pen of five gimmers.—First prize, £5 and cup, J. Clarke; second, £3, R. Tweedie, the Forest, Catterick. Commended: R. Tweedie.

## CHEVIOTS.

Ram, any age above two shear.—First prize, £6, A. Snaith, Dudlees, Rochester, Wooler; second, £4, T. Elliot, Hindhope, Jedburgh. Highly commended: T. Elliot.

Two-shear ram.—First prize, £6, A. Snaith; second, £4, T. Elliot. Commended: J. Robson, Byrness, Rochester.

Shearling ram.—First prize, £6, J. Robson; second, £4, T. Elliot. Highly commended: T. Elliot.

Pen of five ewes.—First prize, £4, J. Robson; second, £2, T. Elliot. Highly commended: T. Elliot.

Pen of five gimmers.—First prize, £4, J. Robson; second, £2, T. Elliot. Highly commended: T. Elliot.

## BLACK-FACED MOUNTAIN.

Ram, any age above two-shear.—First prize, £6, J. McCracken, Blackhall, Kirkwelpington; second, £4, W. Charlton, Elleishope, Allendale. Highly commended: T. Elliot.

Two-shear ram.—First prize, £4, T. Elliot; second, £2, J. McCracken.

Pen of five ewes or gimmers.—First prize, £4, J. McCracken; second, £2, J. McCracken.

## ANY OTHER DISTINCT BREED.

Ram, any age.—First prize, £5, J. Gibson, Woolmet, DaKeith. Highly commended: J. Gibson.

Pen of five ewes or gimmers.—First prize, £5, J. Gibson. EXTRA STOCK.—Highly commended: Rev. R. W. Bosanquet, Rock Alnwick.

## HORSES.

## AGRICULTURAL.

Brood mare, with foal at foot.—First prize, £10, A. Cowing, High Morley, Haydon Bridge (Tibbie); second, £5, T. B. Howie, Kyle Cottage, Beal (Mary). Commended: Executors of the late G. Angus, Broomley, Stocksfield (Darling).

Brood mare in foal.—First prize, £10, and a silver cup value £15, for the best in classes 26 and 27, and the property of an exhibitor resident in the county of Northumberland only, Messrs. Hill, North Charlton, Chathill; second, £5, Messrs. Hill. Commended: J. Laycock, Low Gosforth, Newcastle.

Three-year-old gelding or filly.—First prize, £10, B. Spraggon, Nafferton, Stocksfield (Prince); second £5, R. Pye, Burnt House, North Shields (Prince). Highly commended: J. Thompson, Baillie Knowe, Kelso (Damsel). Commended: Messrs. Snowball, Hedley Grange, Stocksfield (Meg).

Two-year-old gelding or filly.—First prize, £8, J. and T. Scott, Field House, Acklington; second, £4, J. Dinning, Belford. Highly commended: J. Robertson, Rock Moor House, Alnwick.

Yearling colt, gelding or filly.—First prize, £8, J. Graham, Parcelstown, Longtown (Baron Lonsdale); second, £4, Messrs. Hill, North Charlton, Chathill. Highly commended: J. Lonsdale, Mosen, Belford.

Pair of mares or geldings, any age.—First prize, a silver cup, value £10, R. Stark, Summertford, Cundou, Falkirk (Duke and Marquis); second, £4, J. Chrisp, Rugley, Alnwick.

Highly commended: Lord A. Cecil, Orchardmains, Irnerleithen, N.B. (Kate and Belle).

## FOR THE FIELD.

Brood mare with foal at foot or in foal.—First prize, a silver cup, value £25, and £10, H. Watson, Newbegin, Fife (Lady Decanter); second, £5, J. Chrisp; third, £2, M. Wilkinson, North Kilvington, Thirsk (Smiling Beauty). Commended: L. C. Chrisp, Hawkhill, Alnwick (The Favourite).

Three-year-old geldings.—First prize, £5, J. D. Belford; second, £3, G. Chisholm, Chillingham Newton, Alnwick (Rue Bargain). Highly commended: Duke of Northumberland. Commended: J. Davison, jun., Tritlington Hall, Morpeth (Shareholder).

Three-year-old filly for the field.—First prize, £5, J. Baston, Baston, Lesbury; second, £3, J. D. Ogilvie, Mardon, Cornhill. Commended: L. C. Chrisp.

Two-year-old gelding for the field.—First prize, £5, J. Davison, jun., Tritlington Hall, Morpeth; second, £3, L. C. Chrisp. Commended: Earl Percy, M.P., Alnwick Castle.

Two-year-old filly for the field.—First prize, £5, J. E. Friar, Grindon Ridge, Norham; second, £3, J. T. Winton, The Cottage, Wooler.

Yearling colt or gelding for the field.—First prize, £5, L. C. Chrisp.

Yearling filly for the field.—First prize, £5, J. Rickerby, Wall Head, Carlisle; second, £3, Earl Percy, M.P. Commended: Duke of Northumberland.

Hunter of any age, confined to the counties of Northumberland and Durham.—First prize, a silver cup value 25 guineas, J. W. Annett, Ugham, Morpeth (The Arrow); second, £5, R. Clark, Beamish Park, Chester-le-Street (Bessomer). Highly commended: R. Dand, Huxley Hall, Acklington (Daylight). Commended: J. M. Farrell, Eighton Cottage, Gateshead (The Rajah).

Hunter, five and under ten years old, to carry not less than fifteen stones with hounds.—First prize, a silver cup value £25, and one half of a sweepstakes of 10s. each, G. Riddell, Corshope, Edinburgh (Monarch); second, £5, W. Turnbull, Horton, Belford. Highly commended: H. Jewison, Raisingthorpe, York (Charleston).

Hunter, five and under ten years old, to carry not less than twelve stone with hounds.—First prize, a silver cup value £25, C. G. Rayne, Lipwood, Haydon Bridge (Sunset); second, £5, W. Turnbull, Horton, Belford. Highly commended: J. Blencowe Cookson, Meldon Park, Morpeth (The Old Boy).

Horse or mare four years old.—First prize, a silver cup value £25, J. M. Tattersall, Musgrave, Beverley, Yorkshire (Talisman); second, £5, T. Wilson, Shotley Hall, Shotley Bridge (Honeycomb). Highly commended: R. Dand, Hauxley Hall, Acklington (Daybreak).

## HACKNEYS.

Horse or mare of any age, not exceeding 15 hands 2 inches high, and equal to carry fourteen stone.—First prize, a silver cup, value £20, Sir G. Wombwell, Bart., Newburg, Easingwold (Enterprise); second, £5 and a sweepstakes of 5s. each, C. J. Cunnigham, The Tofts, Morebait, Kelso (Zampa). Highly commended: C. Barroby, Dishforth, Thirsk (Qui Vive).

Horse or mare of any age, not exceeding fourteen hands, two inches high.—First prize, a silver cup, value £20, J. W. Pease, Hutton Hall, Guisbro' (Dandy); second, a sweepstakes of 5s. each and £5, T. B. Graham, Cow Stand Farm, Sunderland (Nimrod). Highly commended: A. J. R. Borthwick, Flintby, Maryport (Fanny).

## PONIES.

Horse or mare of any age, not exceeding thirteen hands three inches high.—First prize, a silver cup, value £15 and a sweepstakes of 5s. each, A. E. Burdon, Hartford House, Hartford Bridge (Judy); second, £4, E. Burdon, Sprite; third, £2, J. S. E. Fair, Overwells, Jedburgh (Baruey). Commended: W. Thompson, Waterside House, Alnwick (Topsy).

Horse or mare of any age, not exceeding twelve hands high.—First prize, a silver cup, value £10, J. W. Pease, Hutton Hall, Guisbro'; second, £4, R. Wallis, Old Ridley, Stocksfield (Donald); third, £2, L. C. Chrisp, Hawkhill, Alnwick (Browie). Highly commended: R. Deuchar, Broomlaugh House, Riding Mill (Toby).

## CARRIAGE HORSES.

Horse or mare, three or four years old.—First prize, £10, J. Purvis, Spotsnains, Kelso; second, £5, W. Jobson, Newton Barns, Chathill (Sir George). Highly commended: M. Davison, Long Bank, Alwrick.

## PIGS.

Boar of the large white breed, any age.—First prize, £5, J. Dove, Bristol; second, £2, Messrs. Howard, Bedford (Duke). Highly commended: J. Dove.

Boar of the small white breed, any age.—First prize, £5, R. E. Duckering, Northorpe; second, £2, W. Hatton, Leeds (Young Prince).

Boar of the Berkshire breed, any age.—First prize, £5, J. Dove; second, £2, R. E. Duckering.

Sow of the large white breed, any age.—First prize, £5, J. Dove; second, £2, R. E. Duckering. Commended: J. Taylor, Treby (Young Betty).

Sow of the small white breed, any age.—First prize, £5, Duckering; second, £2, J. Dove.

Sow of the Berkshire breed, any age.—First prize, £5, R. E. Duckering; second, £2, T. Wilson, Shotley Bridge. Highly commended: J. Dove.

Sow of a breed not eligible for the preceding classes, any age.—First prize, £5, W. Hatton, Leeds (Grand Duchess); second, £2, J. Dove. Highly commended: R. A. Nicholson, Cocker-mouth (Susie); W. Hatton, Leeds (Old Duchess).

Pen of three sow pigs of the large breed, any colour, under sixteen weeks old.—Prize, £2, R. E. Duckering.

Pen of three sow pigs of the small breed, any colour, under sixteen weeks old.—Prize, £2, Earl of Tankerville.

## SHEPHERDS' DOGS.

Rough-haired dog of any age.—First prize, £3, G. Fairbairn, Ladykirk, Norham (Cheviot); second, £2, J. Rutherford, Scrainwood, Rothbury (Tom); third, £1, J. Smith, Prendwick, Alwrick (Tyne). Highly commended: N. Beveridge, Elwick, Belford (Blake).

Rough-haired bitch of any age.—First prize, £5, and silver cup, value £5, A. Scott, Byrness, Rochester; second, £2, R. Thompson, Wood Market, Kelso; third, £1, W. Brown, Ladykirk, Norham. Highly commended: M. Wright, Charlton, Bellingham.

Smooth-haired dog or bitch.—First prize, £3, R. Bolton, Newstead, Chathill (Maid); second, £2, John Shorthose, Hartford Bridge, Crumlington (Meg); third, £1, J. Gullan, Earsdon East Forest, Morpeth (Vent).

EXTRA STOCK.—Prize, J. Wilson, Woodhorn Manor (Buzz).

## WOOL.

Five fleeces of Border Leicester wool.—First prize, £3, J. Henderson, Cornhill; second, £1, J. Henderson.

Five fleeces of half-bred wool.—First prize, £2, C. A. Thompson, Reaveley, Alwrick; second, £1, G. A. Thompson.

Five fleeces of Cheviot wool.—First prize, £2, T. Elliott, Hindslope, Jedburgh; second, £1, T. Elliott.

Five fleeces of black-faced wool.—First prize, £2, P. Hodgson-Huntley, Carham Hall; second, £1, T. Brown, Alham, Alwrick.

## WORCESTERSHIRE AGRICULTURAL SOCIETY.

## MEETING AT WORCESTER.

In the cattle department the Shorthorns, of which, notwithstanding a large per-centage of absentees, caused probably by the prevalence of foot-and-mouth disease in the Midland districts, about sixty were upon the ground, constituted the most prominent feature. The bulls exceeding two years old, of which ten put in an appearance, were again headed by the Marquis of Exeter's veteran Telemachus, which won the cup, value £25, for the best bull, and the Toddington Challenge Cup, value fifty guineas, for the best Shorthorn, male or female, of any age. The second prize was awarded to Mr. R. Stratton's Protector. With bulls above one and under two years old, Mr. Joseph Pulley was first with his roan, and the Marquis of Exeter second, with a son of Telemachus. The first place among cows in milk or in calf was assigned to Mr. Joseph Stratton; and the second to the Marquis of Exeter, for Moll Gwynne. In a small class of two-year-old heifers in milk, Mr. Joseph Stratton was first, and Earl Beauchamp second. The yearling heifers were, numerically, the strongest of the division. Here the Marquis of Exeter occupied the premier position with a granddaughter of Telemachus, which also bore away the palm for the cup for the best cow or heifer in the exhibition. The second prize was won by Queen of Ithaca, the property of Mr. Thomas Kingsley, of Tring, Herts, and the third by the Marquis of Exeter with Telemacina. The Herefords were in a minority, the entries numbering only about one-third those of the Shorthorns. Of seven bulls exceeding two years old only three came into the arena; but two of these were already distinguished—namely, Tredegar and Winter de Cote; and Tredegar won. Of the bulls above one and under two years old, two were sent by Mr. Wm. Taylor, who carried off the first and third prizes. In a small class of cows, Mr. Thomas Fern, Ludlow, was first with Lady Stanton. The heifers were few; Mr. John Harding, Bridgnorth, and Mr. J. Fountain, Ripple, taking

the honours for the two-year-olds, and Mr. Evans and Mrs. Edwards for yearlings.

The sheep were only moderate, but the Shropshire were fairly represented. Mrs. Smith was first, and Mr. W. F. Firmstone second, for ewes; the prizes for thraves going to Mr. Joseph Pulley and Mr. Firmstone. Among the shearing rams, which were the strongest class, Mr. Joseph Pulley took the lead with one, which ran a Cotswold, sent from Cirencester, a very close run for the cup. The Oxford Downs were indifferent; and the South-downs numbered only four entries, all by Mr. H. S. Waller, of Farmington, Northleach, to whom four prizes—three first and one second—were awarded. The long-wooled classes consisted of Lincoln and Cotswolds, the prizes for ewes being gained by Mr. T. W. D. Harris, Woolton, and those for thraves and rams by Mr. Swanwick and Mr. Raybird, Basingstoke. The pigs were an excellent collection, nearly every entry in the classes for boars and sows of the small breeds being named in the prize list. The most successful exhibitors are Duckerings, the Executors of Messrs. Wheeler and Sons, Mrs. Hewer, Mr. Dove, Mr. Fowler, and Mr. Swanwick.

The collection of horses of all kinds was extensive. The first prize for stallions of any age, suitable for agricultural purposes, was awarded to Mr. Wynn's Nonpareil, and the second to Messrs. Yeomans for Pride of Eglaudd, which was first at Leamington last week; the best of agricultural stallions under three years old being Mr. Stephen Davis's General. The thoroughbred stallion prize, open to all England, was again won by Citadel; and that for thoroughbred stallions which have been regularly on service in the county during 1875; or certified to be so in 1876, by Statesman, who occupied a similar position at Dudley last year. The best of the five-year-old hunters equal to 15 stone was Mr. W. Smith's Mayo; the best hunter equal to 12 stone, Mr. Goodill's Lady Mary; and the best five-year-old hunter without condition as to weight, the Earl of Coventry's Simon Pure.

## PRIZE LIST.

**JUDGES.**—CATTLE: S. Rich, Fearnall Heath, Worcester; J. Newton, Campfield, Woodstock; H. Haywood, Blakenere, Hereford. **SHEEP AND PIGS:** J. Coxon, Freeford, Lichfield; C. Hobbs, Maiseyhampton, Cricklade; J. Smith, Healey-in-Arden. **AGRICULTURAL HORSES:** H. Ridgely, Staverton, Ludlow; H. Lowe, Comberford, Tamworth. **HUNTERS AND OTHERS:** T. Cole, Thirsk; J. H. D. Bailey, Edwinstow, Ollerton, Notts. **IMPLEMENTS:** M. Savidge, Sarsden, Chipping Norton; J. J. Davis, Grinley, Worcester.

## CATTLE.

## SHORTHORNS.

Bull, above two years old.—First prize, £10, Marquis of Exeter, Burghley Park, Stamford (Telemachus); second, £5, R. Stratton, The Duffryn, Newport (Protector). Highly commended: Marquis of Exeter (Telemachus 6th). Commended: T. H. Bland, Market Harborough (Earl of Waterloo 2nd).

Bull, over two years old, the property of a tenant farmer resident in Worcestershire.—First prize, £5, T. M. Hopkins, Lower Wick, Worcester; second, £4, H. Pike, Mitton, Tewkesbury (Lord Worcester).

Bull, above one and under two years old.—First prize, £10, J. Stratton, Alton Priors, Marlborough; second, £5, Marquis of Exeter (Telemachus 6th).

Bull, above one and under two years old, the property of a tenant farmer resident in Worcestershire.—First prize, £5, T. Harris, Stoneys-lane, Bromsgrove; second, £4, O. Viveash, Sironsham, Tewkesbury (Hudibras).

Cow, in milk or in calf.—First prize, £8, J. Stratton; second, £4, Marquis of Exeter (Moll Gwynne). Highly commended: J. J. Sharp, Broughton Kettling (Prize Bud). Commended: Earl Beauchamp, Madresfield Court, Malvern (Lady Alair); B. St. John Ackers, Frinknash, Painswick (Queen of the Georgians).

Cow, in milk or in calf, the property of a tenant farmer resident in Worcestershire.—First prize, £6, T. Harris; second, £4, W. Woodward, Hardwick Bank, Tewkesbury.

Two years old heifer, in milk or in calf.—First prize, £8, J. Stratton; second, £4, Earl Beauchamp (Ladybird 3rd).

Heifer, two years old, in milk or in calf, the property of a tenant farmer resident in Worcestershire.—Prize, £6, J. Cooper, Powick, Worcester.

Yearling heifer.—First prize, £6, Marquis of Exeter (Queen of Hlaca); second, £4, T. Kingsley, Boar's Croft, Tring, Herts (Seraphina 6th); third, £2, Marquis of Exeter (Telemachus). Highly commended: R. Stratton (Queen Bess); O. Viveash (Nanidia).

## SPECIAL PRIZES.

Best pure-bred Shorthorn, male or female, of any age.—Prize, Toddington Challenge Cup, value 50 guineas, Marquis of Exeter's bull (Telemachus).

Best bull in the Shorthorn classes.—Prize, £25 (Telemachus).

Best bull in the Shorthorn classes, the property of a tenant farmer in Worcestershire.—Prize, £10, T. M. Hopkins's bull.

Best cow or heifer in the Shorthorn classes, the property of a tenant farmer in Worcestershire.—Prize, £10, T. Harris's cow.

Best cow or heifer in the cattle classes.—Prize, silver cup, value £10, Marquis of Exeter's yearling heifer (Queen of Hlaca).

## HEREFORDS.

Best animal in Hereford classes.—Prize, £20, No. 79, Mr. Taylor's bull (Tredegar).

Bull above two years old.—First prize, £10, W. Taylor, Showle Court, Ledbury (Tredegar); second, £5, S. Edwards, Wintercote, Leominster (Winter-de-Cote). Highly commended: W. Evans, Ludlow, Usk, Monmouth (Von Moltke 2nd).

Bulls above one and under two years old.—First prize, £10, W. Taylor (The Big Boy); second, £5, W. Evans (Alphonso); third, £2, W. Taylor.

Cows, in milk or in calf.—First prize, £8, T. Fenn, Stonebrook House, Ludlow; second, £4, S. Edwards (Myrtle 3rd).

Two years old heifer, in milk or in calf.—First prize, £8, J. Harline, The Greenhouse, Bridgnorth; second, £4, J. F. Hill, Bpple, Tewkesbury; third, £2, J. Prosser, Honeybourne, Broadway.

Yearling heifer.—First prize, £6, W. Evans (Von Moltke 2nd); second, £4, S. Edwards (Mable); third, £2, W. Taylor. Pair of dairy cows, in milk, any breed.—First prize, £8, T. Kingsley, Boar's Croft, Tring, Herts (Lady Knightley and Old Seraphina); second, £4, Earl Beauchamp.

## HORSES.

Stallion cart horse for agricultural purposes.—First prize, £25, W. Wynn, Ryon-hill, Stratford-on-Avon (Noupareil); second, £15, Messrs. Yeomans, Pennymore Hay, Four Ashes, Wolverhampton (Pride of England). Highly commended: S. Davis, Woolshill, Pershore. Commended: J. F. Buckle, Throckmorton, Pershore.

Stallion cart colt for agricultural purposes, not exceeding three years old.—First prize, £10, S. Davis; second, £5, F. Tomlinson, Southwood, Ticknall, Derby. Commended: S. Davis.

Cart gelding or mare, three years old or upwards, which has been regularly worked.—First prize, £5, E. Humphries, Pershore; second, £3, S. Davis. Highly commended: W. S. P. Hughes, Northwick Hall, Worcester. Commended: H. Allsopp, M.P., Hindlip Hall.

Cart or agricultural mare and foal.—First prize, £5, S. Davis; second, G. Groves, Whittington, Worcester.

Cart filly or gelding, two years old.—First prize, £5, F. Tomlinson; second, £3, G. Groves. Highly commended: S. Davis.

Thoroughbred stallion (open to all England).—First prize, £50, T. Gee, Dewhurst Lodge, Wadhurst, Kent (Citadel). Highly commended: A. Over, Rugby (Thunderer).

Thoroughbred stallion.—First prize, £30, T. Eades Walker, M.P., Studley Castle, Warwickshire (Statesman).

Hunter, above five years old, equal to 15 stone weight.—First prize, £25, W. Smith, Queen-hill, Upton-on-Severn (Mayo); second, £10, W. Whitehead, Wollaston, Wellingborough. Highly commended: F. Ames, Hawford Lodge, Worcester (Philosopher).

Hunter, equal to 12 stone weight.—First prize, £20, J. Goodhill, George Hotel, Huntingdon (Lady Mary); second, £10, R. Milward, Thurgarton Priory, Southwell (Emerald). Highly commended: T. H. Ashton, Temple Laugherne, Worcester (The Slinger). Commended: J. Garne, Churchill Heath, Chipping Norton.

Hunter, up to 13 stone, regularly ridden with the Worcestershire or Lord Coventry's hounds, the property of a tenant-farmer or tradesman in Worcestershire.—Prize, £10, T. H. Ashton (The Slinger).

Hunter, the property of a tenant-farmer resident in Worcestershire, equal to 15 stone weight.—Prize, £10, W. Smith (Mayo).

Hunting mare or gelding, under five years old.—First prize, £10, Earl of Coventry, Croom Court, Severn Stoke (Simon Pure); second, £5, H. H. Griffin, Hartlebury, Kidderminster.

Weight-carrying cob, not exceeding 15 hands.—Prize, £10, D. W. Barker, Mayfield House, Claines.

Hack, not exceeding 15 hands.—Prize, £5 5s., G. Carlless, Walnut House, Worcester.

Pony under 14 hands.—First prize, £5, T. H. Ashton (Oui Oui); second, £3, W. Sugden Armitage, The Field, Hampton Bishop, Hereford (Don Carlos).

Brood mare for producing hunters.—First prize, £10, G. B. Jones, Eight Oaks, Castlemorton. Commended: J. Hodgetts, Wyre, Pershore; Earl of Coventry (La Mundite); H. T. Bailey, Rosedale, Tenbury.

Mare, calculated to breed hunters, the property of a tenant-farmer in Worcestershire, with her foal at foot, or certified to be in foal, got by a thoroughbred horse.—Prize, £10, G. B. Jones. Highly commended: J. Hodgetts; R. H. Goddard, Tibberton, Droitwich (Venus).

## SHEEP.

Best animal in the sheep classes.—A silver cup, value £6, R. Swanwick, R.A., College Farm, Cirencester (Cotswold ram).

## SHROPSHIRE.

Five breeding ewes, having had lambs in 1875, and suckled them up to June 1st.—First prize, £5, H. Smith, New House, Sutton Maddock, Stinfal; second, £3, W. F. Firmstone, Churchill Court, Kidderminster; third, H. T. Williams, Allesborough, Pershore.

Five theives.—First prize, £5, J. Pulley, Lower Eton, Hereford; second, £3, W. F. Firmstone; third, £2, T. Eades Walker, M.P., Studley Castle, Warwickshire.

Shearling ram.—First prize, £5, J. Pulley; second, £3, H. Smith; third, £2, J. Pulley. Highly commended: J. Pulley; G. Graham, Yardley, Birmingham.

Ram of any age.—First prize, £5, C. Randell, Chadbury, Evesham; second, £3, H. Smith; third, £2, W. F. Firmstone.

Five theaves.—Prize, £1, W. T. Horniblow, Ripple, Tewkesbury.

Shearling ram.—First prize, £5, W. T. Horniblow; second, £3, H. Bailey, Rosedale, Tenbury.

Ram of any age.—Prize, £5, W. T. Horniblow.

#### SOUTH AND HAMPSHIRE DOWNS.

Five breeding ewes, having had lambs in 1875, and suckled them up to June 1st.—First prize, £4, H. S. Waller, Farmington, North Leach; second, £2, H. S. Waller.

Shearling ram.—Prize, £4, H. S. Waller.

Ram of any age.—Prize, £4, H. S. Waller.

#### LONG-WOOLS.

Five breeding ewes, having had lambs in 1875, and suckled them up to June 1st.—First prize, £5, T. W. D. Harris, Wootton, Northampton; second, £3, T. W. D. Harris. Highly commended: W. George, Rodmarton, Cirencester.

Five theaves.—First prize, £5, R. Swanwick; second, £3, H. E. Raynbird, Basingstoke.

Shearling ram.—First prize, £5, R. Swanwick; second, £3, R. Swanwick. Commended: R. Swanwick; H. E. Raynbird.

Ram of any age.—First prize, £5, R. Swanwick; second, £2, R. Swanwick. Highly commended: J. Wheeler and Sons' executors, Long Compton, Shipston-on-Stour.

#### PIGS.

Boar pig of large breed.—First prize, £5, R. E. Duckering, Northorpe, Kirton Lindsey; second, £3, J. Dove, Hambrook, Gloucestershire. Highly commended: J. Wheeler and Sons' executors.

Breeding sow of large breed.—First prize, £5, R. E. Duckering; second, £3, J. Dove. Highly commended: J. Dove.

Two hiltts of large breed.—First prize, £5, R. E. Duckering; second, £3, J. Dove.

Boar pig of small breed.—First prize, £5, R. E. Duckering; second, £3, J. Dove. Commended: J. Wheeler and Sons' executors. Highly commended: J. Dove.

Breeding sow of small breed.—First prize, £5, J. Wheeler and Sons' executors; second, £3, R. E. Duckering. Highly commended: J. Dove. Commended: Major G. H. Cuzalet, Bransford Court, Worcester.

Two hiltts of small breed.—First prize, £5, J. Wheeler and Sons' executors; second, £4, J. Wheeler and Sons' executors. Highly commended: J. Dove.

Boar pig of the Berkshire breed.—First prize, £5, Mary Hlewer, Sevenhampton, Highworth; second, £3, H. Humfrey, Kingston Farm, Shrivelsham. Highly commended: J. Spencer, Villiers Hill, Kenilworth. Commended: H. Humfrey; R. Swanwick.

Breeding sow of the Berkshire breed.—First prize, £5, R. Fowler, Aylesbury; second, J. Spencer. Highly commended: H. Humfrey; J. Dove.

Two hiltts of the Berkshire breed.—First prize, £7, R. Swanwick; second, £3, Mary Hlewer. Highly commended: H. Humfrey; R. H. Carter, The Hill, Wolverley; B. St. John Ackers, Prinknash Park; Richard Fowler, Aylesbury; Mary Hlewer, Highworth; and J. Wheeler and Sons' executors.

## THE PENRITH FARMER'S CLUB.

### A BRACE OF TAXES.

At the last meeting, Mr. William Heskett, of Plumpton Hall, in the chair,

Mr. BARKER read his paper as follows:—The title of the paper that I am about to read before you to-day is, "A brace of Taxes—the Land Tax and the Malt Tax." There may be those amongst you who will consider them a brace of sinners, and others that will take an opposite view; but, without expressing in this paper my own opinions upon them, I will bring them before you for approbation or reprobation, as the majority of the club may incline. Questions of taxation are not generally looked upon as being of a very exhilarating or enchanting character, and, if iniquitous or unjust, they are probably still less so when we are paying them. You will therefore excuse me if I endeavour to treat this subject in a way that may perhaps convey a little information to some without being tiresome to any. Having thus, as it were, struck the key-note, I will now proceed to the performance; but, to keep up the musical simile for a moment, I will endeavour to confine myself to the middle lines of the score, without going into the extremes; but, if I should here and there introduce a sharp or two that may seem to have a political or party significance, it will only be to illustrate principles, though I have no doubt the party opposite will think me a flat for doing so. But, if I cannot produce perfect harmony, I will endeavour, at least on this occasion, not to produce any grave discord. The land tax is not what may, perhaps, be termed a blazing question, but it is, nevertheless, a question that carries with it a considerable amount of injustice and inequality, and, more perhaps than any minor tax still existing, gives rise to acrimonious language and discussions amongst certain politicians. To enable me to form a just conception of it, I shall necessarily have to dip a little into the history of it, but I will promise to do so as briefly as possible, else you may think me a greater sinner than the tax. The first record of it is under the Saxon kings, but we need not go so far back as that. It will, however, be necessary to examine it from the Norman era. In the nineteenth year of the reign of William the Conqueror—a name I believe this club has heard before—the country was just recovering from a great fright, occasioned by the threatened invasion of the Danes. To devise means whereby to obviate the recurrence of such alarms the king caused his nobles to be assembled in council, and the Domesday

book was ordered to be compiled, and, when completed, the nobility were again assembled at Old Sarum, in Wiltshire, and the king, by his fiat, rendered conditional the tenure of land—that is, the holders of it were to find armed retainers, pay suit and service, and do sundry other things commensurate to the quality and value of what they held. These conditions, according to one set of political thinkers, were strictly in the nature of rent; but, as time rolled on, they began to be looked upon in the light of intolerable nuisances; and, such opinions gathering strength with age, matured at length into a deadly struggle between the aristocracy and the sovereign power, which, in the end, cost Charles the First his head and James the Second his throne. For the purpose of resisting Charles the First when he was attempting by unconstitutional means to raise a revenue, landlords of all grades rose up against him, and when successful they placed themselves at the head of affairs, and proceeded to authorise the discontinuance of the land tax and their own contributions to the exchequer from the land; but in lieu thereof they placed an excise duty on beer, cider, perry, and such liquors, but they magnanimously exempted from this impost their own home-brewed beer. The full effects of this step upon the common people and upon the mercantile and trading classes can only be estimated when we consider what was the way of life of our ancestors in those days. We have it on the authority of Lord Chief Justice Fortescue, in Henry the Sixth's time, that they never drank any water except by way of penance—and I am afraid there are still a good many who delight to walk in ancient ways—but, as tea, coffee, cocoa, chocolate, and such things were then entirely unknown in this country, beer was the almost universal drink of the people, therefore the excise duty fell with a crushing weight upon such as were not land-owners, for by these steps they had constituted themselves land-owners, instead of being merely land-holders as before, and for the space of twenty-eight or thirty years thereafter the land remained entirely free from this tax; but in the year 1692, in the time of William and Mary, money being urgently needed to prosecute a vigorous war with France, the land tax was re-imposed in the form in which it has existed down to our times; but the great peculiarity of it is that it continues to be levied upon an assessment or valuation of property made in the year 1697. I have gone into this outline of its history to show

you the grounds upon which certain politicians, and even prominent members of the late Government, always meet with minatory and threatening language any demand that is made in the House of Commons for relief of the burdens that affect land, one set of politicians seeing in these circumstances nothing but wrong carried out under

The good old rule, the simple plan,  
That those should take who have the power,  
And those should keep who can—

another set take exactly opposite views; but into these arguments we need not enter; but on the grounds of public policy it is not always well to deal with such circumstances as attend this tax in a way that they may speedily fall into the limbo of forgotten things, and in a minor tax, such as the land tax, it would be well if it were placed upon a fair and equitable basis, which is very far from being the case at present, for it is extremely unfair and unequal in its incidence, and the least consideration will show any one that the valuation of 1697 is entirely unsuitable to the present time, for much land that was then uncultivated and uncultivated, and therefore not rated to the tax, may have since then become extremely valuable, and yet be escaping this tax altogether; whilst, on the other hand, owing to its rise in value, the tax may at present be the merest fraction in the pound, whilst on the land that in 1697 was highly cultivated, but which may not since have increased much in value, the land tax may be, and no doubt is, a very considerable impost, although it does not produce a very large sum to the Exchequer. From a Parliamentary return made in 1836, it seems that in that year, on the then rateable value of Bedfordshire, the tax was 2s. 1d. in the pound; in Surrey, 1s. 1d.; in Durham, 3½d.; in Lancashire, 1½d.; in Scotland, 2½d.; Ireland being, as you are aware, entirely free of this tax. At the present time this tax bristles with the gravest inequalities and anomalies. But, not to take up your time, I will content myself with giving two examples. Lancashire last year, on a valuation of lands and tenements under schedule A of income-tax of £18,324,883, paid the same land tax as Herefordshire, on a valuation of £931,537; the latter thus paying about twenty times as heavily as the former. Cumberland, on a valuation of £1,129,049, paid about the same as Westmoreland, on a valuation of £446,812; the latter thus paying about three times as heavily as the former. But some of you may think these discrepancies arise from the land tax having been redeemed in a greater degree in those counties paying the lesser rate; but that does not appear to be the case altogether, though I am not prepared to say that it does not in a degree cause some of the difference, for I have not at hand any statistical information as to what has been paid by different counties under Pitt's Land Tax Redemption Act of 1796; but during the 79 years that Act has existed there has been paid altogether about £18,133,900, that being the capitalised sum on the annual amount of the tax that has been redeemed at twenty years' purchase, the terms of the Act, the figures being taken from the Government statistical abstracts down to last year; so that up to this date somewhat less than half the land was subjected to land tax by the assessment of 1697 has been redeemed. The total annual value of the land then assessed, which was the whole of the land then enclosed or then cultivated, was £9,893,430; but last year the assessments under schedule A of income tax, which is the area upon which this tax ought to be spread, if levied at all, was £148,914,250; and deducting from this the £9,893,430 that is still paying or has been redeemed, there is an annual value of property that is escaping this tax at present of close upon £140,000,000. Into the vexed question of whether this is a tax that ought to be extended and increased, as is contended by some, or done away with altogether, I am not in this paper going to enter or express an opinion; but it is manifest that the owners of land that are still paying this tax, or who have redeemed their land from it, have a grievance, as compared with those whose land is not paying its due proportion. And it will be a favourable opportunity when the question of local taxation comes up, as it must do shortly, to endeavour to have this very ill-understood question dealt with and rectified. In discussing such questions as this some one invariably asks what remedy is proposed? Should any one do so on this occasion, my answer by anticipation will be, I only undertook to bring this sinner before you, not to pass sentence upon him; but no doubt the matter is capable of easy adjustment; but some of you may perhaps think that the best way to improve this tax would be by the American plan—

that is, off the face of creation altogether; and really having in view the numerous boards and different local authorities, of one kind or another, all causing money to be expended, much of which must come from the land, I can hardly say there is not some reason for that view, for school boards, Poor-law boards, sanitary, local government, clerk of the peace, rating, and goodness knows how many other boards, are coming, like a plague of grasshoppers, or the Colorado beetle, a specimen of which figures so conspicuously on the mantel-shelf, to eat up every green thing on the land; yet we are frequently told in Parliament that land does not pay its fair share of taxation! The land tax has been many times and oft before the House of Commons, but it has always been shelved on some pretext or other; but probably the real reason that has prevented its being dealt with was akin to, if not identical with, that which prevented my Lord Dundreary's dog from wagging his tail—"because the tail was stronger than the dog." The Malt-tax is, in the opinion of many, a sinner of another type. It sits against all the canons of economic science, and for that has been condemned by nearly every public man of eminence that has appeared during this century—except perhaps Sir Wilfrid Lawson. I am not going into the history of this tax, but I will give you the opinions of a few eminent men, who have condemned it, and endeavoured to deal with it, but so far ineffectually. In 1833 Sir William Ingleby succeeded, in Parliament, in carrying a motion reducing the tax to 10s. per quarter; but the government of Lord Althorpe a few days later, by mixing the question up with a window duties bill, succeeded in getting the tax reinstated at 20s. 6d., at which rate it has remained ever since, except for a short time during the Crimean war. In 1852 Mr. Disraeli, as Chancellor of the Exchequer proposed to reduce the duty to 10s. per quarter, but he was defeated in his Budget and the Government retired. A Norfolk Chamber of agriculture about this time condemned it in these words: "Because it is a tax that is bad in principle—is a tax on an article in the first stage of manufacture—injurious in operation; because it offers a premium to the adulteration of beer, and because it prevents the free use of malt for cattle and sheep, enhances the prices of linseed and cotton-cakes, and other feeding-stuffs that are mostly of foreign production, and thereby increases to the consumers the cost of beef and mutton." In 1864 Mr. Gladstone, as Chancellor of the Exchequer, having, no doubt, in his mind the example of Mr. Disraeli, and not in his Budget, proposed to deal with it on the ground that it would be a betrayal of trust to the country, but he subsequently proposed and carried his malt for breeding cattle bill, a remarkable instance of the ask-for-bread-and-give-them-a-stone principle. In the debates upon it, Mr. Cobden said the duty ought to be extinguished by degrees, as no Government could put on another tax in place of it; but he thought it ought to wait until the sugar duties were gone; now they are gone, and we wait for the tax to do likewise. In 1865 Mr. Caird, a great authority in these matters, urged upon the Government the great importance to agriculture of having this tax repealed. Sir Fitzroy Kelly said, in reply, that the Government would remove it if a like amount was added to the Income-tax. Why did they not take him at his word? Mr. Bentinck, another great authority on all matters, said in debate that the tax ought to be abolished; and when there was a really good and strong Government they ought to re-impose the paper duties instead. Now would be a favourable time for him to endeavour to persuade his friends to try that experiment. In 1866 Mr. Disraeli, again Chancellor of the Exchequer, but careful this time, like the Scotch shepherd, not to fall twice over the same stone, did not propose in his Budget to deal with it, but, on being asked by his own supporters, said he could not do without the money, and if they insisted he must resort to direct taxation for a substitute, the consequences of which to the Conservative side of the House, said he, "I leave with them to consider;" they considered, and he heard nothing more on the subject from them. A great many other authorities have expressed like opinions, but these ought to be enough to satisfy most of you that this tax is a sinner; but as he last year produced £7,753,617 to the Chancellor of the Exchequer, you may be quite sure that he will look upon him in a very different light indeed; but as he is very fertile in sinking-fund schemes, some of which seem like tossing up a florn to see if it will not come down half-a-crown, perhaps he may devise some plan to reduce the malt-tax, if those interested in getting it reduced only make loud enough an outcry, for

people in these days who seek legislation must of necessity adopt the tactics of Oliver Twist—ask for a great deal, take what they can get, and then ask for more. These two taxes are now before you, gentlemen, and it remains with you to discuss them or not, as you think proper. If you come to a conclusion upon them, no doubt your views will have weight, and will at all events help to form public opinion, which in this progressive age is likely in the future to play a much more important part than it has done in the past, for the advancing intelligence of the people and the spread of education will cause all questions to be examined on their merits. A good deal has been said lately about discussing such questions as these in Farmers' Clubs, in the first instance, but, in my humble opinion, it is a step in the right direction, for the farmers of this country are as intelligent a body of men as any in the community, and it is a mistake to think that with their increased and increasing intelligence they will not take part in discussing public questions affecting their interests. No doubt in the past they have been content, in a great measure, to let others speak for them, but the days of that thralldom are past; the power of the Obandos clause in the Reform Act of 1832—which, in a great degree made the politics of a district the politics of the owners of the land in it—is gone by for ever. They have a perfect right, if they think fit, to examine and discuss any question, whether of local or of imperial policy, from their point of view, and it is an error to assume that these views will necessarily be antagonistic to those of their landlords. They are quite as able to understand that the good of their landlords is, to a great extent, the good of themselves, as some landlords are to understand that the good of their tenants is for their own good; for who ever heard of a landlord being benefited by a needy tenantry in a state of poverty? There is a mutual relationship between them that is not and need not be antagonistic; but in the future both will be free agents, and both are indisputably entitled to look at public questions from their own point of view, and it is a relief of the feudal times to which I have been referring to think otherwise. However, in many districts they are rapidly awakening to their true interests and true position in these matters, and their coming forward to take part in discussions on public questions is like the march of a new army upon a field of battle; and the way they are treated and met by either of the contending parties may eventually change the whole condition of the fight. Therefore that party will act wisely that endeavours to attach, and not detach, so powerful an auxiliary force.

Mr. C. THOMPSON asked Mr. Barker why he alluded to Sir Wilfrid Lawson? He understood that Sir Wilfrid Lawson was a large landowner; and it was very interesting to him to find that he had such a very strong opinion upon the question. He wished to know from Mr. Barker what were the precise views of Sir Wilfrid in regard to the malt tax.

Mr. BARKER: I cannot give you Sir Wilfrid's words on the subject. In general terms, I may state my belief that Sir Wilfrid's opinion is that if the malt tax were abolished altogether, it would make beer too plentiful.

Mr. JAMESON: It helps his own property tax.

Mr. BARKER said he merely expressed an opinion.

Mr. HOGARTH asked if it was usual for readers of papers to be catechised in the way that Mr. Thompson was catechising Mr. Barker? When a paper was read, it seemed to him that the best plan would be for each or any member to state his opinion about it, and then let everybody form their own conclusions respecting it. His own opinion was that the paper was really a common-sense paper; but, when people talked about the land tax being partial—some people paying land tax and others not doing so—they were travelling a little out of their course, inasmuch as no one was supposed to break the law under which the tax is imposed; neither could any person himself make a law which would exempt him from the provision of the existing Act. People who paid the land tax were discharging a duty which their land owed to the State. Mr. Hogarth went on to show that the land tax was part of the Imperial revenue. It was necessary for the Government of the country; and, like all other taxes, if it was abolished by another Act, a substitute would have to be found which would lay additional burthens upon other classes; in fact, there would have to be a new tax in lieu of the one now existing. There are the statistics that Mr. Barker or any one else could bring forward would have no weight as regarded the necessity of the tax, which was of a peculiar character, and

had long been imposed upon the land. Speaking of the malt tax, he said it was his decided opinion that barley, the product of the land, from which they had to make their rents, ought never to have been taxed. He believed it was not impossible to make malt from wheat; and invention had so far succeeded that spirits were being made from potatoes. Why, then, should barley, a particular kind of grain, be taxed, when other descriptions of produce, applied to a similar purpose, escaped altogether. There had been many attempts made to settle this grievance; but no Government, whether Liberal or Conservative, had ever really touched the matter at issue, simply because they wanted to shelve the thing and get rid of a difficulty. It was at one time proposed to reduce the malt tax to 7s.; but that was only an effort to stem the torrent which was bearing down upon the Prime Minister of the day; but it seemed that torrents were only like thunder showers—they only rolled for a time, and then passed away and are forgotten. No doubt the Government required money to carry on the affairs of the country. He was willing to concede that; and, if the land was to be taxed for that purpose, he hoped the imposition would be laid on in such a way that it would not be too grievously felt by those who bore the heat and burthen of the day.

Mr. C. THOMPSON, reverting to the subject to which he had previously alluded, said Sir Wilfrid Lawson had considerable interest in the cultivation of the land; and, therefore, it might be supposed he would have independent views on the malt-tax question. It was his object to elicit those views, so that as much light as possible might be thrown upon the whole matter. However, passing from that he must say that he had received a good deal of information from the two papers read by Mr. Barker, especially with regard to the land tax. Mr. Barker had referred to the early imposition of those taxes in a very interesting way, and his remarks were calculated to incite a good deal of thoughtfulness. Whenever the question came to be dealt with in Parliament difficulties would have to be met. The origin of the land tax would have to be gone into; and that and other matters the Government didn't like to tackle. It did seem to him amazing how our legislators overlooked questions of great national importance, because of the difficulty of dealing with them. The land tax was one of those questions that would have to be dealt with sooner or later, and he thanked Mr. Barker for having brought it before the club. When they came to the origin of the imposition they found that this was a tax laid upon the land for the protection of the State. After referring to the circumstances under which the tax was imposed, and remarking upon the inequality of the tax, he said they had as much right to look for the Legislature increasing the revenue from that source as from any other source whatever. That would be the course of legislation by-and-by. He could not see why there should be a restricted ownership of land in this country, unless there was an equivalent. Why, he asked, should the land not be as free as the air we breathe? We could not exclude anybody who was born in this country; we could not say "you have no business here." They had business here, and no one could deprive them of their right. It was his individual opinion, and he had never given utterance to it before hearing Mr. Barker's paper, that the time would come when the people of this country would demand that the whole revenue of the State would have to be derived from the land.

Mr. HOGARTH: What humbug!

Mr. JOHN NICHOLSON said he fancied the chairman could recollect the time when he went with him to Battersa Park after a discussion on the malt tax, and when they both condemned the Penrith Farmers' Club because they didn't want the malt tax repealed. They were both of opinion that the Penrith Farmers' Club had come to a conclusion that was contrary to the opinions of the farmers in the district. He had been an advocate for the repeal of the malt tax ever since it was first discussed. Mr. Nicholson, in the course of a lengthy speech, touched upon the Corn Law controversy and the Bill of Sir Robert Peel, which in 1816 abolished the Corn Laws in England. He also alluded to the effect of that measure which in some way at least, resulted in the return of a Whig Ministry, under Lord John Russell. He added that under the law which abolished a tax levied upon foreign corn the foreigner was allowed to bring his barley into England to be made into malt, on paying the same duty as English holders; but if it went back again to be sold abroad the duty was returned to the owner. In the



latter case the foreigner paid nothing towards the maintenance of our Government; and that was a fact which he ventured to say many gentlemen knew nothing about. Mr. Nicholson created much amusement by asserting that the foreigners who had this privilege in England could drink twice as much beer as we could. He proceeded to argue that the malt tax was a tax upon industry, and by a number of statistics showed how it affected the growers' interest. He had just heard an observation from Mr. Thompson, of Morland, which was very much opposed to his feelings; and he was certain if Mr. Thompson fairly considered the subject, that observation would be very much against his own feelings. He had just told them that the land would have all taxes to pay. Well, he believed it had nearly all to pay now. Mr. Thompson must be aware that there was a very large amount of capital in this country employed in various ways and yielding vast profits, which was not taxed to a tithe of the amount that was laid upon the land. Mr. Nicholson concluded by saying that he would like to see the malt tax repealed; and as an equivalent was needed, he would say put the tax upon the beer and not upon the barley.

Mr. JAMESON said the land-tax was laid on in 1692. It was a tax at so much in the pound on the yearly value of the land; but it was quite an exceptional tax, laid on for the purpose of helping the Government to carry on the war with France, and among other taxes laid on along with it, was the only one which had reached down to our times. The idea of anything like a uniform property tax was too much for the ingenuity of that age, which was so much short of the wonderful civilisation of our present period. The land tax affected the kingdom at the time in a most partial and unequal manner. In some of the southern counties, where patriotism ran high, the tax was heavy, but in many, particularly in Cumberland and Westmorland, and he believed in the north generally, the landowners got off very easily. It was stated that in Cumberland the opposition to it was so strong that one of the county members produced a pair of clogs in the House of Commons to show how the yeomen and farmers had to work. The upshot was that the land tax fell very lightly on those two counties, and of course it had remained unaltered until the present day. It was also to be observed that 70 or 80 years ago, the Government had got it into their heads to redeem the tax altogether, and not allow such an anomalous piece of legislation to exist, and they therefore gave an option to all landowners to redeem it by paying a lump sum down, and so get rid of it. He believed nearly one-half of the land tax of the kingdom had been redeemed. To lay on another tax was now impossible, for if it is attempted what is to become of those who have redeemed it out of their own pockets? Such a question as that, which was a pure question of taxation, ought not to be introduced into the club. The discussion of such a political question was for the House of Commons and not for a farmers' club. The malt tax, too, was a very old tax, and from it the Government raised a good deal of money—7½ millions, annually. On whom, he asked, did that burthen fall chiefly, and how was it to be replaced? He believed there were thousands upon thousands of well-to-do people, who never paid a farthing towards it.

Mr. HOGARTH: That is because they never drink beer.

Mr. JAMESON: If they do, the quantity is so very small that it is not worth notice. Those who bear this tax are the thirsty, droughty many, who earn their living by the sweat of their brow. The tax was paid chiefly by the poor. Sir Wilfrid Lawson had said that the poor drank far more beer than they ought to do, and that if you repeal the Malt-tax you would make beer more plentiful. No Government dared come forward and say, "We will tax this beer because the poor drink it." He didn't want to see the poor damaged in mind and character, and he didn't want to see the Malt-tax repealed, because nobody knew to what extent beer would be drunk. Mr. Jameson proceeded to show that malt could not be used profitably for feeding, and then asked, Where would the substitute fall? It must be a property tax. It might not fall very heavily on persons in the active pursuits of life, in the commercial, trading, and other industries, where fresh capital was being made from day to day. But what was to be said of that large class who live upon narrow and limited incomes, and have no means of reconquering themselves by advancing prices as dealers in commodities can do, for the higher property tax they would have to pay. It would be cruel and unjust to weigh them down by a heavy property tax.

One gentleman had said just now, "Why not lay all taxes upon the land, which belongs to the country?" "Why," Mr. Jameson asked, "let that question be mixed up with it at all?" He was inclined to think that there was something hidden behind such expressions. In fact, he thought there was a kind of incipient communism lurking in the minds of some men, who knew little about what they were talking, and cared nothing for the rights of others so long as it did not interfere with their own. Why, he asked, is land not to be protected as well as any other property? These communists will say, when a person buys land, "There is a hidden condition lying underneath, that all land really belongs to the State, and that the owner has only such an interest in it as the state may, in its wisdom, allow; that if the land is not dealt with as meets the advanced ideas of a progressive age, it ought to be taken from the owners, and put under state government." Where, he asked, was the justice or wisdom of such a nation? While the other propertyed classes of the community are safe in their various trading, commercial, and manufacturing pursuits, and industries comprising money investments, shares in railways, shipping, mining, and all sorts of speculative undertakings, and hedged round by the strength and security of the law, why was the ownership of land to be made an exception of, and by overburdened taxation rendered of next to no value, to suit the ideas of a selfish and self-conceited race, who will exclaim to the sufferers—"You may go to the workhouse, and be thrown desolate upon the world. We are men of progress; men of fine ideas; men who are mounted on the top of civilisation, giving a tone and spirit to the age. We will teach you what you are. We are the rulers and not you." That, he said, was the meaning of these communists, who owned little, if anything; but made it their business to interfere with the just rights of others. Mr. JAMESON concluded by referring at some length to the history of the Land-tax, maintaining that it was first imposed in 1692.

Mr. NICHOLSON said Mr. Jameson had been speaking upon a subject (the malt-tax) of which he was sure he had but very little experience.

Mr. THOM said he had listened with delight to the paper which Mr. Barker had just read to the club. He thought it was a paper which would very much interest the Penrith Farmers' Club. He (Mr. Thom) was not very well acquainted with the history of the land-tax. It seemed to him that Mr. Jameson had made a gross mistake when he said that the land-tax was first imposed in 1692, because it was first imposed about the time of the Norman Conquest upon all land that was then in cultivation; but since then the value of cultivated land had increased by something like an annual value of £148,000,000. When the land tax was first laid on, the owners paid upon an annual value of about £9,000,000, and that was at the time of the Norman Conquest. In his opinion, therefore, the holders of the land ought to pay upon the increased value of the land since that time. The State had lost the taxation due upon the £140,000,000 of income. He quite agreed with Mr. Thompson that the land did not pay the amount of taxation that it ought to pay, as was clearly shown by Mr. Barker's paper; and in his opinion the Penrith Farmers' Club, and every other club in the kingdom, ought to take up the question. They had heard a great deal from his friend Mr. Jameson at different times, to the effect that John Stuart Mill was a political robber. He should like to ask him what kind of robbers he calls the great landlords? John Stuart Mill had done no harm at all; but according to Mr. Barker the landowners were robbing the country of taxation on £140,000 of income.

Mr. HOGARTH: What stuff you talk.

Mr. JAMESON: It is all stuff, nonsense, and a complete fable.

Mr. THOM: It is not stuff, or a fable either; but a positive fact. If the land was valued at £2,000,000 at the time of the Norman Conquest, and it is now valued at £148,000,000, and the land was paying no more than it did then, wasn't that a robbery? He would ask his friend Mr. Hogarth if he called that stuff? Mr. Thom instanced the case of a clergyman who had charge of a chapel of ease, in another part of the county, which belonged to the Dean and Chapter. Three hundred years ago the clergyman was paid a shilling a day for his services; and at that time it was a fair return; but now the living had increased to £920 a year, and the Dean and



Chapter pocketed that sum, and paid the clergyman his shilling a day.

Mr. JAMES ATKINSON said his remarks would tend to confirm the views of Mr. Jameson. He was of opinion that if the malt tax was removed it would be of no benefit to the farmer, and he spoke as a farmer and a commercial man. He was convinced that the millster or the brewer would get the greatest profit, after all. He spoke on the question as a disinterested person, having no feeling one way or the other. If the malt tax were abolished he had no doubt many farmers would attempt to fatten their cattle upon malt. Having had some experience in the use of malt in cattle feeding, he could state positively that malt had no good feeding properties. A few years ago he had fifty bushels stored for feeding purposes, and both milch cows and cattle to be fed off were selected for the experiment. His experience on that occasion was that malt was not equal to the usual feeding stuffs. It had the effect of scouring the cattle and preventing them from thriving. He had also tried it mixed with oats, and the conclusion he came to was that malt, for feeding purposes, would never become beneficial to agriculturists. Then, with regard to the land tax. As Mr. Jameson had said, it was a tax that never could be taken off. He showed that other property besides

land had increased in value. The quantity of land could not be increased, though it appeared that a good deal had been brought under cultivation since the land tax was first imposed. Land was originally taxed for a particular object; and at a subsequent period an Act was passed to enable landowners to redeem the tax. As Mr. Jameson had clearly shown, it would be unjust to equalise another land tax, rendering it imperative that those who had and those who had not redeemed the tax should pay the same amount of land tax to the State. He did not see how Mr. Thompson had come to the conclusion that the land must bear all the burden.

Mr. Jabez Crosby also approved of the paper, and, in the course of some observations, said he was not one of those who objected to men belonging to other occupations than farming taking part in the discussions of that club. He was always glad to see those gentlemen come forward. Farmers were benefited by having their interests discussed by others; and he would always use his influence in obtaining a hearing for all members. If the removal of the malt tax would tend to the manufacture of more drink, he would say keep it on. Those who got the least drink fared the best.

A vote of thanks to the chairman closed the meeting.

## CARMARTHENSHIRE FARMERS' CLUB.

### THE USE OF GORSE.

At the quarterly meeting, Mr. R. R. Carver, Wenallt, in the chair, Dr. Hopkins read a paper on the advantages of furze or gorse.

Dr. HOPKINS said: At the request of many members of this club I have consented to introduce to your notice the subject of a valuable addition to green crops, nearly all of which have been submitted repeatedly to your consideration, although it is not altogether unknown to you in this part of the country, being indigenous to Wales, and like most indigenous plants, has been by many treated as being a troublesome weed. Nothing, gentlemen, has been sent by God without purpose, but the reverse, as in mineralogy. We have placed side by side, within reasonable distance of each other, the lime, iron mine, and coal, so that by the ingenuity, industry, and enterprise of man that most valuable of all metals—iron—is produced from these minerals. So with the farmers occupying the higher and poorer lands of this country. Providence has not left them wholly unprovided for in the wintry season of their lives, and has afforded them a hardy, vigorous, and healthy food for their stock, so as to enable them to compete in the production and maintenance of their stock, when the sunshine of summer and plenty has departed, with those living in lower and more favoured positions, and even to those in certain seasons a valuable crop such as I am about to describe would make them and their stock independent of nearly all the casualties that usually befall them. Our subject, today, gentlemen, is the gorse, furze, or whin, *Ulex europæus* of Linnaeus, a well-known shrub, and found wild nearly everywhere in the country, except wet places. It is fond of light and dry soils, and hilly situations here, and in the warmer or more temperate parts of Europe, but not in Sweden or in Russia or Poland, north of Craoow and Casen. It has been known as a nourishing food for cattle, horses, and sheep for a long time, and has been sown in many parts of England for that purpose, as well as for shelter and fences for game coverts, but its utility has been over-looked and almost neglected as a valuable green crop, in consequence hitherto of its taking too much time and labour to make it a profitable crop. Like the history of nearly all the transactions of farming, the treatment of the furze has passed through from the most rude inventions from time to time to the present time, to make it available for the food of the animals it is so eminently suited for. The earliest of these appliances was the pounding of the furze by means of a hammer of wood, covered with short chisels or knives, resembling somewhat the nails placed in a labourer's boot. The next attempt was the erection of water wheels that drove a number of pins of iron so near to each other in passing as to crush it with a few revolutions into a pulp. This plan, like the foregoing, was found to be slow, and therefore inefficient. The last attempt was made by the late

Mr. Spooner, M.P., of Birmingham, who essayed to crush the furze with two huge rolling stones similar to the mills used years ago for crushing apples in the making of cider. Mr. Chambers, of Idanelly, formerly had one of those mills, which I saw in motion, but I feel sure that it did not succeed to his satisfaction, otherwise it would have been continued. I myself went to about £400 expense in the erection of a water wheel of about 10-horse power, first to crush the furze with a mill supplied with steel teeth rotating in a corkscrew fashion, which had not the desired effect in the shape of despatch, and, moreover, I found that through being crushed it heated in a single night, so that the animals were no longer fond of it. I then proceeded to study how these inconveniences could be avoided, and at last I found that with a one or two-horse power chaff-cutter I could cut ten times as much in the time occupied by the crushing machine of about six horse-power, and besides, it did not ferment or heat but very little when kept in bulk. My next object then was to cut it for cows and sheep of half the size used for horses, which was easily effected by doubling the rotation of the fly-wheel to the feeding rollers adapted to the usual length, so that all the little prickles were nearly destroyed, and it could be taken in the hand like sawdust, and was greedily eaten by cows and sheep. The latter would be in the mountainous districts half decimated every winter in lying out were it not for the food and shelter this plant affords. My plan of feeding horses and ponies with it has been to give them as much as they will eat, and this will do for slow or farm work; but common sense will tell you, or any practical farmer, that furze does not contain every element necessary for really hard work, but with a feed of oats once or twice a day by itself, a horse can do any reasonable amount of work without losing flesh, which is, I presume, all that is desired. In any case it keeps him in health with a bright coat and is an antidote for broken wind and grease. The culture of this plant is very easy, and known, I think, to you all; however, poor hungry dry soils which would not be worth half a crown an acre can be made to pay 50s. to £10, for a continuance, by sowing the furze seed with your barley or oats, at the rate of 15lbs. of seed to the acre, and treated when sown as you do clover. They must be cut *biennially*; otherwise, if you take the advice of writers of no experience, you will by mowing them every year, as advised by them, soon destroy the plants. The first year after cutting, the shoots are about nine inches in length, but in the second year they advance to from three to four feet, which is a great advantage to the grower, and the crop on that spot will continue unimpaired. All manures are injurious to furze except lime, which is its best fertiliser. The shale taken from the bowels of the earth in the neighbourhood of coal seams grow furze with amazing success, as is seen on nearly all the coal tips of this country. I have

not had time to find out the exact cause, but think it is owing to the carbon contained in that refuse, which is the basis of all vegetation. Cows fed upon furze in winter give nearly as much milk and butter as in summer, the latter being a delightful colour and a beautiful flavour. The plant or shrub of which I have been treating may strictly be termed a fodder plant, and can be fairly placed by its produce and bulk at the head of all green crops. It costs least of all in production. It will per acre feed a greater quantity of stock. It contains a greater per centage of animal food than even carrots, mangolds, or turnips, and without any doubt whatever, will continue the supply longer than any other of these green crops without the trouble and expense of replanting and cultivating anew, which in this country is so difficult and costly. The conclusions from the researches of Saussure, Mulder, and Herman, on the way in which vegetation is maintained, are certainly at variance with these held by Professor Leibig, Boussingault, and Payen. Boussingault holds that plants receive a large amount of nutriment from the air; but also receive no inconsiderable amount of organic material directly from the soil. He believes the process of fallowing has chiefly the advantage of destroying weeds; that the system of rotations of crops does not depend on the injurious action of the excrements of plants, since Braconnet's experiments prove that such excrements are not produced, but it rather depends on the alteration of such plants as only extract nutrition from the soil like graminæ, and of such as take much nutriment from the air like the leguminosæ class of which furze is a close ally, and whose debris or stubble ploughed under is itself a good manure. According to Leibig's opinion assimilation of carbon from carbonic acid forms a large proportion of the organic matter of plants, but not wholly due to this cause. The nitrogen is in this instance of the furze obtained from the ammonia in the air as well as some from the soil. I shall now conclude the observations I have made upon the culture and use of furze, with the hope that the mistakes that others and myself have made with regard to its use will be of some benefit to you. It is almost an axiom that all of us benefit more in future by our failures than by our successes. In journeying the road of experience every traveller meets with a variety of disappointments and mishaps before he arrives at the desired end.

Mr. LEWIS (Gurry) was convinced that the subject of furze was one of very considerable importance to them, and he felt obliged to Dr. Hopkins for the exhaustive manner in which he had treated it. It was really an article of fodder very much neglected in this country, and particularly in the highlands, where it would be most valuable, because lilly soils will grow a grand crop of gorse, and it would, he was positive answer even in the vale of Towy if properly cultivated. One or two remarks which Dr. Hopkins made he felt that he could not agree with. It was that when oats were given along with gorse to horses, the horses try to throw away the gorse to catch hold of the oats. He believed, on the contrary, that the horse will take the gorse, and that he will take gorse sometimes when he will not take oats. Of course he only put this forward as his own opinion founded on his individual experience in the matter. Again, he certainly did not agree with crushing the gorse, an operation which he believed drives away very much of the sap; he would merely cut it, and cut it as small as possible, and then all horses and cattle would be anxious to get at it. He knew a case last season where a man had plenty of gorse on his farm, and the farmer did very well with it for feeding instead of paying £9 a-ton for hay. He thus kept his stock in good order. He knew that case well, for it happened under his own eyes in the parish of Llandyssilio, in this county, on the side of the Black Mountain. By the proper cultivation of gorse, some lands not otherwise worth half-a-crown an acre, where it would grow, might be made to produce a crop worth £10. Therefore, he regretted very much that there were not many farmers from the hilly country present to hear Dr. Hopkins's very able and instructive paper. He hoped the farmers would undertake to improve their machinery in order to reduce gorse to that proper state in which horses and cattle would enjoy it.

Mr. W. T. PHILLIPS said he had only one objection to make against the views so well put forward. Although it would seem much better to let the gorse remain uncut for two years, yet he found that in two years it always attained too much woody fibre to make it good as fodder.

Mr. D. PROSSER (Tygwyn) said that he found that after two

years' growth it was a nice crop, but if you cut it the first year you do away with the crop altogether.

Mr. JAMES (Carreg Cennec) said that, after listening to the excellent remarks of Dr. Hopkins and Mr. Lewis, no one could doubt that furze would answer very well in the hilly parts of the country, especially on land where the soil was very shallow and would produce nothing else. As to good land in the vale of Towy, he had great doubts about the advisability of introducing it as a feeding crop, and thought they could there employ the land better. He had heard of it bringing £10 an acre, but if that were so he thought some good land here produced crops of still greater value. If it were confined to the highlands where hay was very short, he had no doubt it would be one of the most profitable crops for fodder purposes.

Mr. S. BRIGHT (Carmarthen) said it was an admitted fact that they could grow furze, and there appeared to be a question about cutting it small enough. He thought that at this stage of the world they ought to be, and in fact were, good enough mechanics to cut it as small as they liked. They could cut it to the 1000th, 100th, or 10th part of an inch, just as they pleased, and if cattle could eat it at all they could eat it at that length. The cattle would then find it nutritious, but if not cut fine enough—if they offered the cattle stumps of a tree to eat—the food would be, to say the least, indigestible.

Dr. HOPKINS: Don't fear for that; the cattle are very discriminating. They will take care to eat nothing that is not fine enough.

Mr. H. THOMAS said he grew some furze on Tyllwydd farm, and, as Mr. Prosser could say, the crop was most prosperous. The two crops were each worth £21 a-year. (Mr. Prosser: They were six feet high.) He had now left them behind on the farm, and could not say how they fared.

Mr. PHILLIPS (Blaenauvair) said he had been growing furze for some years, and had found it better not to trust to it entirely, but to mix it with feeding different from what Dr. Hopkins had mentioned. He mixed it with chaff, straw, and sometimes corn. With regard to a furze crop making land worth £10 an acre, he very much doubted it. He should like to lay down much of his land in furze; only a small quantity, and to mix this with straw.

Mr. THOMAS (Gildardu) said he gave furze to more animals than the horse. He always fed six horses on it during the winter with a little wheat straw mixed. The horses went through their work capitally, while they were fed on this mixture, and got one feed of corn every day. He thought the best farmers in Carmarthenshire should take more to furze. He was obliged to Dr. Hopkins for his able remarks, and trusted all farmers would study the paper carefully when it was printed.

Mr. REES (Dyflwyn, Llanlovery) said that for the four or five years he had furze, it afforded his sheep excellent shelter in the winter, and held a good many foxes which destroyed the rabbits. But from the instructive paper Dr. Hopkins had read, he had no doubt it was a good crop for the hilly country. Indeed, a tenant of his own, living on the hills, assured him that he gave no oats to his horses last winter, but fed them on gorse, which he cut at two years old; and that these horses worked well and were in good condition. He could not speak from personal experience of this crop.

The CHAIRMAN said he had a farm some years ago on which he went into the gorse trade *con amore*. He thought he might as well make his fortune at once. He sent to the best firm he could think of for plenty of gorse seed, for which he was charged 2s. per lb. He had the land well cleaned, and sowed his crop, but as to the value his experience made him disagree with Dr. Hopkins. He had sown a beautiful crop, and determined to keep it uncut until the next year. Soon the foxes came in numbers and made their holes there. Soon after the foxes came Mr. Powell, of Maesgwynne, who at first salute exclaimed, "Hallo, Carver, old boy! well, I am glad to see you have got up capital cover at last." He (Mr. Carver) replied with some hesitation, that he had not thought of that; that this was fodder he had sown for his cattle. "Stuff!" said Mr. Powell, "a magnificent cover, that it is." Then came Captain Phillips, of Cwmgwili, with "Well, is it possible? You are turned sportsman, Carver, after all. How good of you!" His (Chairman's) experience in the furze line did not extend much beyond that period, and he could not therefore speak with authority on the subject.

Mr. R. LLOYD JONES proposed a vote of thanks to Dr. Hopkins, which was carried with applause.

Dr. HOPKINS said he fed forty horses during winter on furze and oats mixed. He found beyond all doubt that unless you put bars across the manger, the animals would spend the whole time in tossing up the furze to look for the oats. But, as he told them before, furze was not everything; if you put in another ingredient the horses will have it, but let them have furze *ad libitum*, and it will keep them as clean and as bright as a mole. One gentleman doubted that furze was worth

£10 an acre. Well, very near Llandilo Inze happened to be set at £20 an acre. In this, as in all other assertions, he (Dr. Hopkins) had kept under rather than over the mark—considerably under it. When one got up to lecture on a subject like this, it would not do to make fanciful and random assertions; it was foolish in such a case to practise “throwing the hatchet,” as the Americans called it. He thanked them for the patient hearing and consideration they had given the subject.

## THE PRIZE SYSTEM.

A vigorous effort is being made to induce the Royal Agricultural Society to abandon the system of practically testing the merits of machinery sent to the annual shows of the society for exhibition. It is argued in defence of this movement that the trials are very expensive, that they do no real good, and that they are in themselves eminently unsatisfactory. These points are urged by men of very great experience, some of them members of council, others members of the society. They, therefore, deserve consideration. If trials of implements and machinery are abandoned, the society will at once assume a new position. It will take different ground from any which for very many years it has filled; and a change of such importance cannot fail to exert a powerful influence for good or evil on the future of what is in some sense a national institution. Let us endeavour clearly and impartially to arrive at some definite conception of the value of the arguments on which the movement against the societies annual trials is urged. The first argument that the trials are extremely costly we need say very little about. If the society possess an income sufficient to pay for them, they ought to be paid for cheerfully, provided it can be demonstrated that they are worth the money. If, on the other hand, it is really a fact that the society cannot afford the expense, then the trials must be given up however useful they may be. No argument is required to prove that the abandonment is expedient. In such a case we should not have a question of expediency, but one of necessity to deal with, and it would need but one answer. Whether the society be or be not short of funds we are not in a position to say. Their receipts and expenditure are dealt with by competent men; and we have no doubt that the council, secretary, and treasurer, will administer the funds placed at their disposal judiciously. In short the argument that the society cannot afford to spend money on machinery and implement trials we regard as one with which we have little or nothing to do, and we shall not further refer to it. The second argument, that the trials do no real good, is totally different in character, and it is well to consider the theory on which it is based. It is urged that the natural progress of trade and the spirit of competition are quite sufficient to develop and bring to the highest possible perfection any class of agricultural machinery; and it is denied that the award of prizes by the society has given any stimulus whatever to the progress of agricultural engineering. That, in a word, and to use an example, the portable engine would be just as good as it now is, if makers of such engines never had a chance of entering into competition under the auspices of the Royal Agricultural Society. This is a very sweeping assertion, and it is unfortunately one which it is almost impossible to prove or disprove. We cannot say what would have happened if certain events which actually did take place had never occurred. But the argument is not wholly baffling. It is practicable to form an opinion as to its merits, and that opinion must be, we think, in favour of the assumption that competitive tests of portable engines really did do a great deal to render them the very perfect machines they are. The men who now urge that such tests were of little or no value in the sense of a stimulus to improve the portable engine, include in their ranks numbers of persons who have themselves taken prize after prize; men who have used every available resource of talent and capital to produce the most economical engine that it was possible to make. The competing engines were “racers.” In very few instances have they been built with any intention of selling them. To dispose of them at a profit would be impossible. Is it reasonable to suppose that any ordinary trade competition would have

induced firms like Clayton and Shuttleworth, the Reading Ironworks Company, Messrs. Luxford, to spend large sums on engines which could not be looked upon as ordinary trade products? We think it is not reasonable to suppose any such thing. Racers were built solely to win the Royal Agricultural Society's medals and prizes; and to the society the world is indebted for portable engines which will give an effective horse-power for 2 5 lb. of coal per hour. Some persons do not dispute our opinion on this point, we believe, but they argue that, having got “racers,” we have really got nothing; that racers are, in a word, a delusion and a snare; and that the winning of prizes by such engines operated unjustly and to the injury of men who, possessing neither the time nor capital required to produce racers, were still competent to build better engines than the ordinary commercial engines constructed by racing firms. To this argument we take unqualified exception. Even if it were true—which it is not—that a racer was unfit for actual service, we should still have the fact to deal with, and get over if possible, that an enormous amount of information must be acquired by any thoughtful, competent man who sets about producing a racer. He must perforce study all the points that constitute perfection; and we have only to look around us to see that those firms who have competed with more or less success at past trials build to this day the best portable engines that can be had. The Royal Agricultural Society did beyond question develop the portable engine. It may be possible that had the Society never existed or never given prizes the portable engine would have lost nothing. But such a theory does not admit of being proved, and, we think, we have shown that as a theory it is inconsistent with the actions of those who propound it. What holds good of the portable engine holds good of many other machines and implements—not quite to the same extent, however, for reasons which we shall refer to presently. The great body of purchasers of machinery really know very little about the merits of what they purchase in the first instance. They go to makers of established reputation, and there was and is no quicker way of reaching the public than by taking a Royal Agricultural Society's prize. Whether the prize is or is not rightly awarded is quite another question. The practical fact, as it stands, is that hundreds of agricultural implement makers are willing year after year to exert themselves to the utmost in the hope of obtaining a place in the annual competitions held under the auspices of the Society. The money to be won is a mere nothing. The medals are worth intrinsically but a few shillings. English and American engineers are too shrewd to play a game in which the stakes are so exceedingly high for nothing but barren honour. The fact is that, rightly or wrongly—we believe rightly—a Royal Agricultural Society's prize is indirectly of very great commercial value. This is the reason why dozens of competitors entered the lists this year at Taunton, as they did last year at Bedford, or the year before at Hull; and it is difficult to believe that any other stimulus could have existed which could so foster improvement as the system of publicly testing machinery and awarding prizes to that which did best. We are at a loss to see indeed how any spirit of competition could unaided, have produced any great improvement in agricultural machinery. Purchasers have no good opportunities of knowing what implement is best. They may compare notes now and then as to the quantity of coal burned by their engines, as to the work of a reaping machine, &c., &c., but they can arrive at no definite conclusions on the subject so long as the implement does its work fairly well. Some time since a Scotch firm advertised and urged it as a good

point, that they sold the heaviest portable engine in the trade. The engines worked very well, but they were not economical. A practical test under the auspices of the Royal Agricultural Society would have quickly placed the public in a position to understand exactly what were the merits and demerits of such a machine. Agriculturists have neither the time nor the opportunity to test machinery for themselves, and so long as the purchaser is unable to single out for himself the best from the fairly good, nothing is gained by making anything better than fairly good, and for this reason competition alone, and unaided by the efforts of the Royal Agricultural Society, would not have given us the perfect machines which agricultural engineers now make. We come now to the third argument against the trials with which we are dealing—namely, that they are unsatisfactory. We confess that we fear there is a great deal to be said in favour of this argument. If it can once be demonstrated that the results obtained in the trial yard or the field are fallacious, then the utility of the system is compromised, and those who, like ourselves, rejoice to see the society prosperous, must not shut their eyes to errors, mistakes, or abuses. We will go so far as to say that some very radical changes are essential in the system on which trials are conducted, and we are pleased to find that 1876 will bring with it changes which are at least in the right direction. As regards portable engine tests, we have nothing to say except that they are carried out under the auspices of the consulting engineers of the society with a care and accuracy which leave nothing to be desired. The trials are of such a nature that they admit of being managed with precision. But this is very far from being the case with trials of field implements, and it is in the system of conducting these experiments that changes are required. This is not the time nor the place to deal with the question fully; one or two points we may glance at incidentally. In the first place, no competitor should be permitted to send in more than a single implement for trial in each class. The immediate result would be that the labours of the judges would be wonderfully simplified, and time would be permitted to carry out the trials properly, which is notoriously not the case now. In the second place, it should be impossible for a single firm to take all the prizes. If but one reaper or plough, for example, were sent for competition, that reaper or plough, could take only one award. In the third place, trials of implements should be conducted at suitable seasons of the year. To put a lot of ploughs into a ley which has been baked by a burning sun for half a summer is absurd. Ploughs would not be used by a farmer at all under such conditions; and it would be quite possible for a very indifferent implement indeed to beat one very much its superior under such adverse circumstances. A hatchet will do work impossible to a razor, but the hatchet is not, as a consequence, an eligible shaving instrument. Again, it is absurd to put reaping machines into a field of upstanding stiff green rye, to learn from the work done in it how far a reaping machine will serve a farmer's purpose during a harvest. An admirable and somewhat ludicrous instance of the defect in the society's arrangements to which we refer was supplied at Bedford last year. The society offered a prize for machines to thin turnips. The machines were sent in dozens, and not a single turnip was to be found in the fields set apart for trying this special class of implements. So far as we are aware, there is no reason whatever that the trials should be carried out synchronously with the holding of the annual show. Wise councils have prevailed this year, and the tests of reaping machines next year will be postponed until there is really corn to cut worth the name. Our own opinions on the subject may be very briefly stated. We believe that the arguments of what we may term the opposition are not, taken altogether, without weight; but we fail to find that any argument has yet been adduced sufficiently powerful to induce us to think that the Royal Agricultural Society should abandon the system of testing machinery. We hold, however, that the progress of events and the remarkable development of certain classes of machinery have rendered a system of trial which was excellent some years ago in some respects obsolete, and that important changes in the method of conducting future trials are imperatively demanded. These changes should take the direction of reducing not the number of competitors, but the number of machines or implements sent in for competition; and the practice of carrying out the trials during the week preceding the opening of the showyard may be given up with manifest advantage in certain respects. We believe, further-

more, that the Royal Agricultural Society has done a great deal to improve agricultural machinery; and we feel certain that much useful work remains to be done by the society, and that will be done if care is taken to render its policy consistent with the progress of the age.—*The Engineer.*

## BATH, AND WEST OF ENGLAND, AND SOUTHERN COUNTIES SOCIETY.

The Council meeting was held at the Grand Hotel, Bristol, under the presidency of Mr. J. C. Moore-Stevens; there were also present Messrs. Jonathan Gray, C. T. Acland, J. D. Allen, H. Badcock, J. C. Be-t, J. T. Boscawen, C. Bush, R. H. Bush, R. R. M. Daw, A. F. M. Druce, T. Dyke, F. W. Dymond, C. Edwards, H. Fookes, W. R. Gilbert, C. Gordon, J. Hallett, J. D. Hancock, H. M. Holdsworth, J. Farnaby Lennard, H. A. F. Luttrell, H. St. John Maule, H. Mayo, J. Murch, S. P. Newbery, G. S. Poole, and J. Goodwin, Secretary and Editor.

**CROYDON MEETING.**—Mr. Herbert Williams, as chairman of the Finance Committee, brought up a statement of the receipts at the recent annual meeting, and received the sanction of the Council for the payment of prizes and other claims to the amount of £6,059. The several proposals having been seconded were carried unanimously. It transpired in the course of the proceedings that although a loss of several hundred pounds was incurred by the Croydon Meeting, the Society will not have occasion to draw on its funded capital.

To the Implement Regulations Committee, Capt. Best was added; to the Judges Selection Committee, Mr. H. Mayo, Messrs. H. M. Holdsworth and C. T. D. Acland were nominated stewards of the yard; Messrs. R. Neville and C. A. W. Troyte, Stewards of Implements (yard); Messrs. Knollys, Jones, and Dyke, Stewards of Implements (field); Messrs. H. Fookes, T. Dackham, A. Grenfell, and Col. Lennard, Stewards of Stock; Col. Luttrell and Mr. C. Gordon, Stewards of Horses; Messrs. R. H. Bush and C. Edwards, Stewards of Poultry; the Hon. and Rev. J. T. Boscawen, Steward of Horticulture; Mr. Jonathan Gray, Steward of Music; Colonel Luttrell, and Messrs. Grenfell and Maule, Committee of the Mess; Mr. H. St. John Maule, Steward of Refreshments; Mr. J. Gray, Mr. Knollys, and Mr. Moysey, Stewards of Plant; and Colonel Luttrell, Mr. R. Neville, Mr. C. A. W. Troyte, Mr. Arthur Grenfell, and Captain Best, Stewards of Arrangements.

**HEREFORD MEETING.**—With a view to the adequate encouragement of Channel Islands cattle at the Hereford Meeting, 1876, an addition of £100 was made to the amount granted for stock at the Bristol Meeting, thus raising it in the aggregate to £1,800. The amount allowed to stewards of poultry was increased to £225, with a view to offering the additional inducement of cups for pigeons. To the department of horticulture £130 was allotted.

The contract of Messrs. Fry and Son, of Bath, for the erection of the Society's shedding was renewed for a term of two years.

Acting upon the principle that the Society never offers prizes for competition excepting in its own showyard, and under its own immediate direction and management, a suggestion that the Council should give a cup for competition at the Frome Cheese and Butter Show was reluctantly negatived.

The following new members were elected: T. Wilce, Heytesbury; B. Scobell, Kingwell, High-Littleton; G. Fox, Wilmslow, Cheshire; Rev. H. A. Daniel, Stockland, Bridgewater; Colonel Calvert; and Captain Hathway, Clifton.

**SALE OF MR. MIDDLEWITCH'S CROFS.**—This sale took place on the farm at Blunsdon, near Swindon, 550 acres being submitted, of which 350 acres were wheat. Rivett cone wheat fetched £11 15s. per acre; oats, £11 7s. 6d. per acre; winter beans, £10 per acre, and over £5,000 was realised.

## THE ROYAL AGRICULTURAL SOCIETY OF IRELAND.

## MEETING IN LONDONDERRY.

A variety of reasons have been offered for the unmistakable failure of the meeting this year of the National Agricultural Society of Ireland, but none of much weight. In most sections it was a short show, the implement-makers giving it but little countenance, as on no previous occasion have so few firms been represented. Then, in the stock classes, the other breeds—such as Herefords, Devons, and Kerries—ran up to but small entries, as frequently with no competition; while the merits of the Shorthorns depended in a great degree on the presence of Mr. A. H. Brown's bulls and Lady Pigot's heifers, which, of course, took the two challenge cups.

With the exception of Mr. Turner's Leicesters, the sheep were a decidedly indifferent display; but there was some exception in favour of the pigs, which furnished better-filled classes than of late. There were only two thoroughbred stallions, nor was the cart-horse section well filled; but some "business" was made out of the jumping, the Irish being the only national Society which affects this puerile pastime.

## PRIZE LIST.

**JUDGES.**—**SHORTHORNS:** R. Stratton, The Duffryn, Newport, Monmouthshire; G. Atkinson, Bywell Hall, Stocksfield. **HEREFORDS AND OTHER BREEDS:** H. Haywood, Blakemore, Hereford; A. Allen, Marneck, Dairy, Ayrshire; E. Rae, Kiel House, Castlemaine, Tralee. **LEICESTERS AND OTHER LONGWOOLLED SHEEP:** G. Atkinson, Bywell Hall Farm, Stocksfield, Northumberland; A. Peterkin Hope, Broadland, Noblehouse, N.B.; J. Irwin, Raheen, Boyle. **SHORTWOOLLED SHEEP:** T. Wood, Asberton, Workson, Notts; R. Scott Skirving, Drummond-place, Edinburgh. **PIGS:** H. M. Richardson, Rosfad, Ballysciddy. **FLAX AND BUTTER:** The Rev. J. Bradshaw, Milecross, Newtownards. **THOROUGHBRED HORSES AND HUNTERS:** Colonel Ellis, Seaton Lodge, Omagh; G. A. Rochfort-Boyd, D.L., Middleton Park, Castletown, Mullingar; H. Haywood, Blakemore. **AGRICULTURAL HORSES:** R. Shaw, Barberstown, Straffan; R. Scott Skirving, Drummond-place, Edinburgh. **CEREALS:** J. Robertson, La Mancha, Malahide.

## CATTLE.

## SHORTHORNS.

Bull, calved on or after the 1st January, 1870, and previous to the 1st January, 1873.—First prize, A. H. Browne, Doxford, Chathill, Northumberland (Duke of Aosta); second, F. and W. Smith, Bellefont, Coleraine (Jove), bred by G. V. Hart, Kilderry. Highly commended: G. Cather, Carrichue, Londonderry (Abab).

Bull, calved in the year 1873.—First prize, and Pardon Cup, A. H. Browne (Rosario); second, the Earl of Dartrey, Dartrey House, county Monaghan (New Year's Prince).

Bull, calved in 1874.—First prize, A. H. Browne (Pioneer) second, R. P. Maxwell, Finnebrogue, Downpatrick (Czarowitz the Fourth); third, S. Smith, Cross, Londonderry (Amiehowen).

Cow in calf or in milk, calved previous to 1st January, 1873.—First prize, G. V. Hart, Kilderry, Muff, Co. Donegal (Dudem); second, S. Smyth, Cross, Londonderry (White Stockings). Highly commended: The Earl of Dartrey (Ladylike).

Heifer, calved in 1873.—First prize, Lady Pigot, West Hall, Byfleet, Surrey (Rose of Lucofn); second, Lord G. Hill, Ballyarr, Ramelton (Grana). Highly commended: J. Dunn, Ballykelly, Londonderry (Ethel).

Heifer, calved in 1874.—First prize, Lady Pigot (Flat-terer); second, Lady Pigot (Imperious Queen).

The Pardon Challenge Cup for two best yearling heifers.—Lady Pigot.

## HEREFORDS.

Bull of any age.—First prize, S. Gilliland, Brookhall, Derry (Young Sir Cupis); second, R. Hanna, Brook Vale, Monaghan (Master Brooke).

Hereford cow, in calf or in milk.—First prize, S. Gilliland (Pale Face Fourth); second, S. Gilliland (Flax Second).

## DEVONS.

Bull of any age.—Prize, J. G. V. Porter, Belleisle, Lisbellaw (Duke of Somerset).

Cow, in milk or in calf.—No entry.

## AYRSHIRES.

Bull of any age.—First prize, D. Patton, Trynanny, Glasslough (Bob); second, S. McNeill, Clooney, Waterside, Londonderry (Lewis). Highly commended: J. Watson, Derry.

Cow, in milk or in calf.—First prize, J. Watson, Waterside Derry (Beauty); second, D. Patton (Jennet); third, Sir F. W. Heygate, Bart., Ballarena, Londonderry (Fancy). Commended: G. Craig, Magilligan, Londonderry (Queen of Hearts).

Heifer, calved in 1873 or 1874.—First prize, J. Watson (Jessie); second, R. W. Newton, Bellevue, Londonderry (Daisy). Commended: G. Craig (Marion).

## KERRYS.

Bull of any age.—First prize, J. Robertson, La Mancha, Malahide (Busaco); second, Lord Enniskillen, Florence Court (Kilbride). Highly commended: C. Hammond, The Grove, Raphoe, county Donegal (Young Gavaghy).

Cow, in calf or in milk.—First prize, C. A. Smyth, Drumahoe, Londonderry (Jet). Highly commended: Lord Enniskillen (Hazelwood).

Heifer, calved in 1873 or 1874.—First prize, J. Robertson (Fuchsia); second, J. Robertson (Azalea).

## TENANT-FARMER'S PRIZES.

(Limited for competition to tenant-farmers whose poor-law valuation is under £100 per annum.)

Cow in calf or milk.—Prize, D. Patton, Trynanny, Glasslough (Primrose).

Heifer, calved in 1873.—Prize, D. Patton (Maud).

Bull, calculated for service at not more than 5s. limited to a radius of five miles from the town of Derry—a cup, value £10, J. Christy, Eagh Hall, Londonderry (Shah). Highly commended: D. Glenn, Killeenan, Waterside, Londonderry, (Roan Prince 2nd.)

(Open to tenants on the Honourable the Irish Society's estates only, whose tenements valuation is under £50.)

Two-year-old cow, in calf or in milk.—Cup, value £5, R. A. Macdonald, Ballyarnett, Derry, (Sno vnop). Two-year-old heifer.—Cup, value £4, R. A. Macdonald, (Woodac).

Yearling heifer.—A Cup, value £3, H. Blaney, Molenan, Derry.

## SHEEP.

The Cork Challenge cup, value 50 sovs.—For the best ram in classes 19, 22, and 25.—G. Turner, Jun., Northampton, with a pure Leicester ram.

## LEICESTERS.

Shearling ram.—First prize, G. Turner, jun., Thorpelands; second, G. Turner, jun.

Ram of any other age.—No competition.

Five shearling ewes.—Prize, C. T. McCausland, Drenagh, Newtownhamavady.

## BORDER LEICESTERS.

Shearling ram.—First prize, A. H. Smith Barry, Fota Island, Queenstown, County Cork; second, A. H. Smith Barry; third, G. Cather, Carrichue, Londonderry.

Ram of any other age.—First prize, C. T. McCausland, Drenagh, Newtownhamavady; second, A. H. Smith Barry. Commended: J. S. Cramsie, Ballinacree House, Ballymoney.

Five shearling ewes.—No entry.

LONG-WOOLLED SHEEP OTHER THAN LEICESTERS OR BORDER LEICESTERS.

Shearling ram.—First prize, B. Hannan, Riverstown, Killeen, Roscommon; second, B. Hannan.

Ram of any other age.—Just prize, B. Hannan; second, B. Hannan.

Five shearing ewes.—No competition.  
SHROPSHIRE.

A challenge cup, value 20 sovs, for the best short-woolled shearing ram.—No competition.

Shearing ram.—First prize, J. L. Naper, Loughcrew, Oldcastle, County Meath; second, J. L. Naper; third, J. L. Naper.

Ram of any other age.—First prize, C. T. McCausland; second, J. Peake, Mullaghmore, Monaghan (Choice). Highly commended: J. Peake (Prince). Condemned: J. Peake (Stamina); A. H. Smith Barry.

Five shearing ewes (limited for competition to tenant-farmers whose poor-law valuation is under £100 per annum).—First prize, J. Peake; second, A. H. Smith Barry.

Pen of five ewes which have reared lambs for not less than six weeks in 1875.—No entry.

Five shearing ewes.—No entry.  
PIGS.

#### COLOURED BREED.

Boar under eighteen months old.—First prize, J. Dove, Hambrook House, Gloucestershire; second, D. Glenn, Kiltennan, Waterside, Londonderry (Hopeful). Highly commended: D. Glenn.

Boar over eighteen months and under thirty-six months old.—First prize, R. F. Maxwell, Finnebrongue, Downpatrick (Conqueror); second, D. Glenn (Prince Patrick).

Breeding sow under eighteen months old.—First prize, D. Glenn (Sally); second, J. Molloy, Mountjoy-street, Dublin.

Breeding sow over eighteen months old.—First prize, D. Glenn; second G. Craig, McGilligan (Sally). Highly commended: D. Glenn.

Sow and litter of not less than six weeks, under five months old.—Prize, D. Glenn.

Three breeding pigs of the same litter, above four and not exceeding eight months old.—Prize, D. Glenn.

#### WHITE BREED.

Boar under eighteen months old.—First prize, J. Molloy, Mountjoy-street, Dublin; second, J. L. Napier, Loughcrew, county Meath.

Boar over eighteen months and under thirty-six months old.—First prize, the Earl of Wicklow, Shelton Abbey, Arklow, county Wicklow (Snowdrop 2nd); second, G. Hanson, Macleary, Drumcroon, Coleraine.

Breeding sow under eighteen months old.—First prize, J. Molloy; second, J. Dove.

Breeding sow over eighteen months old.—First prize, J. Dove; second, A. Traill, M.D., F.T.C.D., Ballylough House, Bushmills.

Sow and litter of not less than six pigs, under five months old.—No entry.

Three breeding pigs of the same litter, above four and not exceeding eight months old. (Limited for competition to tenant-farmers whose poor-law valuation is over £50 and under £100 per annum).—First prize, J. Molloy; second, J. Molloy.

Breeding sow over six and under eighteen months old.—First prize, F. and W. Smith, Ballemont, Coleraine; second, J. McElroy, Rosstownie, Waterside, Londonderry (Maud).

Breeding sow over eighteen months, in pig or with a litter under five months old.—First prize, J. McElroy (Kate); second, J. McElroy (Sally). Highly commended: F. and W. Smith.

Breeding sow. (Limited for competition to tenant-farmers whose poor-law valuation is under £50 per annum).—First prize, D. Glenn, Kiltennan, Waterside, Derry; second, R. A. Macdonald, Ballyarnett, Londonderry (Quadron).

#### DAIRY PRODUCE.

Firkin of butter, of not less than 65lbs. weight.—First prize, R. Hall, Upper Tully, Drumagore; second, J. McElroy; third, D. Hall, Tully, Waterside, Londonderry.

Cool of butter, not less than 30lbs. weight.—First prize, R. Hall; second, J. McElroy.

Cool of butter.—First prize, T. C. McElroy, Staidarran, Londonderry; second, D. Hall; third, B. Hall.

#### FLAX.

Bundle, not less than 14lbs. weight, of mill-scuted flax.—First prize, J. McNutt, Burnfoot, Derry; second, L. Love.

Bundle, not less than 14lbs. weight, of hand-scuted flax.—First prize, J. Hemphill, Wheatfield, Myroe, Londonderry; second, R. L. Porter, Cooley House, Bready, Strabane.

Six hanks of hand-spun yarn.—No entry.

#### THE IRISH SOCIETY'S PRIZE.

Set of cottage furniture, suitable for a labourer's cottage.—A cup, value £5, W. Peyton, Ballynashallog, Derry. Highly commended: C. Smith Inch, St. Colum's-court, Londonderry.

#### CEREALS.

Collection.—A medal, value £5, W. and H. M. Goulding, Dublin and Cork.

#### HORSES.

The Croker Challenge Cup, value 50 sovs, for thoroughbred stallion.—T. Lindsay, Killyleagh, county Down (Masanissa).

Thoroughbred stallion.—First prize, T. Lindsay (Masanissa); second, A. Boyle, Bridge Hill, Newtownlimavady (Dax).

#### AGRICULTURAL STALLIONS.

Stallion of any breed.—First prize and Society's cup, I. Martin, Ballyhenry, Newtownlimavady (Agricola); second, W. Coyle, Killybane, Eglinton, Londonderry (Comet). Commended: D. Donaghey, Killylaue, Newtownlimavady (Conqueror).

Agricultural brood mares in foal, or having produced a foal in 1874 or 1875.—First prize, H. M. Richardson, Rosfad, Ballycassidy (Jane); second, and Irish Society's second cup, W. and P. Barry McLearn, Foley-street, Derry. Commended: C. T. McCausland, Drenagh, Newtownlimavady (Jessy).

Mares calculated to produce weight-carrying hunters, in foal, or having produced foals in 1874 or 1875.—Not sufficient merit in class for first prize; second, A. Major, Queen-street, Londonderry (Lady Maud).

Agricultural fillies foaled in 1871.—First prize, B. Hannan, Riverstown, Killycuan (Sally).

Agricultural fillies foaled in 1872.—First prize, S. Foster, Ballinacross, Londonderry (Kate); second, A. Major (Lady Maud).

Weight-carrying hunters, not less than five years old, fit to carry 14 stone and upwards.—First prize, D. Watt, Richmond, Londonderry (Rangoon); second, W. Hamilton Ash, Gortin House, Aghadowey, county Londonderry (Oscar).

Hunters not less than five years old, fit to carry 12 stone 7lbs. to 14 stone.—First prize, J. Cooke, Boonihall, Londonderry (Duchess); second, A. Smyth, Drumahoe, Londonderry (Harlequin).

At the banquet, his Excellency the LORD LIEUTENANT said: In no period has the well-being of the country been more apparent than at the present moment. As an agriculturist, I think we have great reason to congratulate ourselves upon the favourable season with which Ireland has been blest. In England, the farmers are loud in their complaints of the rains, and the cold and ungenial weather they have experienced and they look forward to the prospect of deficient crops and an unsatisfactory harvest. We, on the other hand, have had a genial season, favourable weather, and a desirable absence of the inconvenient rains with which we know our Irish climate is unnecessarily liberal. I believe in all parts of our country the crops are in a flourishing condition, and everywhere there are indications which give reason to hope for an excellent harvest. And now, as regards the show of to-day, we must all agree that although it was not very large in quantity, it was good in quality. Mr. Browne's bull did great honour to your show, for it has carried off prizes in England and Scotland; and we must take off our hats to Lady Pigot's beautiful cow and two heifers. I am glad to be able to congratulate local exhibitors in the Yorkshire and Hereford classes, and in swine, which were particularly good. There were some excellent lots of sheep, such as those shown by Mr. Napier and others. The tenant-farmer classes were exceedingly creditable, and highly to be commended. I think we have sufficient evidence to show there has been no retrogression in the field of agriculture, or in the way of general improvement—a hope for which is substantially expressed in that part of the toast—"Prosperity to Ireland." When upon this subject, I may be allowed to touch briefly on some other of the resources of the country, and other sources of wealth as they exist in our day. Now I think one of the most important is the condition and the position of the agricultural labouring classes, as compared with former years. I believe that the underpaid condition of the Irish agricultural labourers, and the poverty

of those above them, were the cause of a depression which weighed upon the greater part of Ireland, and not only retarded the advancement of agriculture, but closed avenues which might afford employment to the people, and be a source of wealth to the mercantile community. I am happy to say we see a great deal of this depression removed. We see agricultural labourers receiving a fair day's wages, and mechanics and artisans in a position to look with satisfaction to the comparative remuneration in this country and England. My lords and gentlemen, there is one matter in connection with landed property to which I wish to refer. Now, who has not felt the great improvement in the labourer's condition, in the increased difficulty in finding labour, and the highly-increased price of it? And I must freely say that great and inconvenient as has been the expense which caused it, yet I had it with satisfaction as a salutary sign of civilisation and advancing progress. And I wish that I could also see an advancement in the direction of providing suitable dwellings for the agricultural labourers, more especially those depending upon the tenants of small and moderate-sized farms, where the labourer's accommodation is not on a par with the wages they receive. It is the increase of wealth in this country during the past twenty-five years that has caused this salutary change; and if we look to the returns of the Poor-law and the emigration returns, and compare them with the returns of twenty-five years ago, we see the great improvement in the condition of the labouring classes. By the Poor-law returns of this year, in the month of June there were 1,452 able-bodied paupers, and the total amount receiving poor relief was 75,000. And if we turn to the year 1850 we find, by the official returns, 300,000 put down for the corresponding period in that year. Emigration has decreased in this year of 1875 by 14,000 persons under the year 1874, the total number of emigrants for the half-year ending June, 1875, being 31,000, as compared with 45,000 in the corresponding period in 1874. And if we compare these figures with those of two-and-twenty years ago, if we go back to the years 1852 and 1853, we find the average in those years amounted to 100,000. We can, therefore, by comparing these figures, see how great has been the decrease that has taken place in the tide of emigration. I think we have just grounds for believing that the condition of the labouring classes is not only progressing, but that it is at present in a fairly satisfactory state; and we have at least reason to hope that the greatly increased wealth of the last twenty-five years, which has produced this salutary change, may be further increased. The returns, with regard to our wealth, show that the total of deposits in Government of India stock, in Irish savings' banks, and in trustee banks, amount in this year of 1875 to more than sixty-eight millions of pounds, being an increase of nearly one million over the amount at the corresponding period of last year, and an increase of ten millions over the amount at the corresponding period in 1865. We find that the deposits in Irish joint stock trustee banks amounted in June, 1875, to nearly thirty-two millions, showing an increase of two millions over the amount lodged in the month of June, 1874. I won't weary you by going into the balances at the Irish banks, further than to remark on one notable fact, which shows an increase on the savings in Ireland in 1840. The whole amount of bank deposits and cash balances in Irish banks then amounted to only six millions, and in the present year they amount to some thirty-two millions. I would not be doing justice to the inhabitants of this locality where we have met to-day, if I did not allude to the creditable way they have kept pace with the mercantile and commercial improvements of the time. We find, from official returns, that while the valuation of this town has increased sixteen per cent. within the last ten years, and the population fourteen per cent., that the tonnage of the port has increased in a still more remarkable manner. The tonnage, in 1840 being only 85,000, increased in the year 1865 to 200,000 tons, and in the present year it has increased to 600,000 tons, showing a gross increase of 400,000 tons within the last ten years. With regard to the amount of land under crops, there is very little variety or change from last year. The increase in one department is met by the decrease in another. There is this year about 65,000 acres under crops. The observation I have made about the crop may be also applied to the stock—a little advance on last year, yet there is very little change, the increase in one branch of stock being balanced by the decrease in another. There is only one crop which I

regret to see has not much decreased in Ireland—that is, the crop of weeds. I am constrained to say that our Northern farmers seem not a whit behind their other countrymen in the cultivation of that crop, and they seem to take care of the growth of that obnoxious ragweed or benweed. I remember being asked on one occasion by a gentleman, in sober earnestness, what was the yellow crop that covered the fields in Ireland? I confess I was unable to convince him or myself that it was grown for an ornament to the country, or to benefit the farmer. There is one other satisfactory element to which I wish to refer—I allude to the diminution of crime in this country. I find in the return of agrarian outrages and all other offences reported by the constabulary, a considerable diminution, amounting to nearly one-third in agrarian outrages, and a fair proportion in other offences. It may be quite possible that this is due, in some measure, to that repression which is, unfortunately, now necessary in some parts of the country, but it is satisfactory at all events that, whether from repression or better feeling, crime in this country has greatly diminished. And while on this subject I may say, though perhaps it is hardly within my province here, that the absence from disturbances which characterised the great O'Connell procession lately in Dublin was clear proof of good conduct and restraint on the part of the people. Whether such demonstrations are desirable is another question—the fact is none the less satisfactory that it was conducted with good humour, and an entire absence of anything like a breach of the peace, and was characterised throughout by general good order on the part of the people. My lords and gentlemen in a brief summary I have given you an idea of the commercial and agricultural state of Ireland. I have endeavoured to exaggerate nothing, to colour nothing, but to confine myself to what in reality were the facts with regard to the state of Ireland. We can see in this province—in this part of Ireland—and throughout the whole of Ulster the advantages that arise to the loyal and industrial people, who, as a rule, are upholders of the law and the Imperial constitution. We see the advantages that arise, and the security from such a settled state of society, in the advent and employment of foreign and external capital, and the great manufacturing interests which add such wealth to the Province of Ulster, and we must regret the more that in many parts of Ireland, capital—that most timid of all travellers—even capital locked up in Irish deposits, absolutely refuses to trust itself. And let me say, that I believe there are many parts of Ireland, outside of Ulster, where capital might be as profitably and as safely employed as in any part of Ulster. But, in this case, the sins of the few recoil on the heads of the many, and a large portion of Ireland remains to this day a sealed book to the capitalist, who would not scruple to squander millions on Honduras loans, Paraguayan bonds, and other speculations in South America.

## AGRICULTURAL REPORT.

### EAST ESSEX.

[ORIGINAL.]

The thrashing machine has been at work in this district on two or three farms, with very unsatisfactory results. A very fine-looking field of wheat, thirteen acres in extent, yielded only eight sacks per acre—a poor return from good heavy land, and from two and a-half good waggon loads of sheaves. But this is only what all close observers expected. The ears of wheat were so defective that it was certain the yield would be short. Of course, there will be many worse crops than the one referred to, that being much beyond an average one, as far as straw goes, even for this good corn-growing district. I expect to hear of six, and even of four, sacks per acre from light crops of straw. The barleys are badly laid and twisted, and the quality is very much injured. It is very hard and slow work to literally chop them up with the scythe, especially where they are tied down to the ground by that pestilent bell-line which is so prevalent this year. Most of the wheat is cut, but little carted, farmers being more anxious to get their bulky crops of barley up whilst the weather is dry.—Aug. 20.



## THE BIRMINGHAM HORSE SHOW IN BINGLEY HALL.

JUDGES.—R. G. F. Howard, Temple Bruer, Lincoln; E. Paddison, Ingleby Lincoln.

Thoroughbred stallions.—First prize, £25, T. Gee, Dewhurst Lodge, Wadhurst, Kent (Citadel); second, £19, A. Over, Rugby (Tanner).

Hunters, exceeding 15½ hands high, equal to 15 stone, five years old and upwards.—First prize, £30, W. Armstrong, Fairfield, Kendal (The Banker); second, £10, J. Goodliff, Huntingdon (Marshal Mahon); third, £5, C. C. Hayward, Southill, Biggleswade (Paramour).

Hunters, exceeding 15½ hands high, without condition as to weight, five years old and upwards.—First prize, £30, R. Barker, Malton, Yorkshire (Liverpool); second, £10, J. Gilman, jun., Lancaster-street, Birmingham (Master William); third, £5, Captain Gregg, Newbold Elms, Leamington (Oxford).

Hunters, not exceeding 15½ hands high.—First prize, £20, R. Milward, Thurgarton Priory, Southwell, Notts (Emerald); second, £10, H. A. Clark, Prospect House, Aspatria, Carlisle (Hoddy).

Hunters, four years old.—First prize, £30, and extra prize, J. Musgrave Fattersall-Musgrave, Beverley, (Tabasco); second, £10, J. Hornsby, Castle Gate House, Grantham (Jericho); third, £5, C. A. Jacobs, The Riding School, Clifton, Bristol (Wild Beauty).

Three-year-old colts and fillies, for hunting purposes.—First prize, £15, J. Wilkes, Heronfield, Knowle (Heron); second, £10, Miss A. Smith, Curborough House, Lichfield (Gipsy Girl); third, £5, Mrs. Tyler, Frederick-street, Birmingham.

Two-year-old colts and fillies.—First prize, £15, T. Watson, Whitacre, Coleshill (Sportsman); second, £10, the admistrix of the late W. George, Gayton, Northampton (Premier); third, £5, J. T. Bott, Manor Farm, Great Staughton, Haits (Barometer).

Hacks or roadsters, 15 hands 2 inches high and upwards.—First prize, £15, A. G. Bartlett, Prospect House, Redditch (Belle of the Ball); second, £5, J. H. Knowles, Dale End, Birmingham (Viscount).

Hacks or roadsters, 14 hands 3 inches high, and under 15 hands 2 inches.—First prize, £15, Major Quentin, Woodleigh, Cheltenham (Flycatcher); second, £5, S. Goodall, Leamington (Langush).

Cobs, exceeding 14 hands and under 14 hands 3 inches high.—First prize, £15, Miss Harrison, Eastland House, Leamington (Major); second, £5, F. A. Channing, Brunswick-square, Brighton (Beauty).

Weight-carrying hacks, exceeding 15 hands high.—First prize, £15, R. H. Milward, Birmingham (Lucy); second, £5, W. E. Franklin, Leamington.

Weight-carrying hacks, not exceeding 15 hands high.—First prize, £15, T. Statter, Stand Hall, Manchester; second, £5, T. H. Smith, Curborough House, Lichfield (Bobby).

## LADIES' HORSES.

Ladies' hacks, exceeding 15 hands high.—First prize, £15, C. A. Jacobs Bristol (Wild Beauty); second, £5, P. Hornsby, Grantham (Landlord).

Ladies' hacks, not exceeding 15 hands high.—First prize, £15, S. Kirby, City-terrace, City-road, Manchester (Streamlet); second, £5, G. Thorne, Bradford-street, Birmingham (Worcester).

## HARNESS HORSES.

Harness horses, 15 hands 2 inches, and upwards.—First prize, Mr. Statter; second, Mr. Campaign (Madcap). Highly commended: Mr. Mewburn (Rattler); Mr. Dawson (King Lud); and Mr. Sparrow (Empress).

Harness horses, 14 hands 3 inches, but under 15 hands 2 inches.—First prize, Mr. Gerring (Charley); second, Mr. Statter.

Harness colts, above 14, but under 14 hands 3 inches.—First prize, Mr. Low (Maritana); second, Miss Harrison (Major). Highly commended: Mr. Statter; and Mr. Teesdale (Wykeham).

Pairs of harness horses, 14 hands and upwards.—First prize, Miss Moffat (King of Spades and King of Clubs); second, Mr. Statter. Highly commended: Miss Harrison (Major and Marquis). Commended: Major Barlow.

Tandems, 14 hands.—First prize, Mr. Statter; second, Mr. Thorne.

## THE POOR-LAW CONFERENCE AT CARLISLE.

The fourth annual Conference of Poor-Law and Sanitary Authorities of the Northern Counties, comprising the counties of Cumberland, Westmoreland, Northumberland, and Durham, was held in the County Hotel, Carlisle. Mr. Cropper, of Ellergreen, High Sheriff of Westmoreland, was called upon to preside.

The CHAIRMAN, in opening the proceedings, said the manner in which the present Government had turned their attention to the special subjects discussed at these Conferences was a great encouragement. We now saw that various local subjects had gradually assumed importance which many of them had long wished might be attained. This year they had seen introduced into Parliament three most important measures, relating to Rivers Pollution, Local Government, and the Settlement of the Poor. The subject of Local Taxation had also been glanced at, and it, like others, would come up again in future sessions. It was therefore of importance that meetings like the present should during the recess discuss these subjects, because our senators, like ourselves, obtain a great deal of light from discussions like these.

The honorary secretary, the Rev. J. Elphinstone-Elliott, read a report, reviewing the proceedings of the three previous Conferences.

The Rev. Dr. SIMPSON, in moving the adoption of the report, remarked that excellent results had followed the representations of this and similar bodies. The Bastardy Laws had now become very much what they wanted them to be. With respect to the Friendly Societies, those who had paid attention to the bill before Parliament must be aware that the principle advocated in his (Dr. Simpson's) paper, and approved by last

Conference, had been almost entirely adopted in the bill. He strongly urged, however, that an official auditor should be appointed by Government, who would be required not only to certify the correctness of the accounts, but to give a certificate from time to time, stating that, so far as he knew, the tables of the society were sound, and that the society was in a solvent position. That was a most important point, and he hoped it would yet be obtained. As regards Local Taxation, since it was discussed at Glishead, two points out of three there dwelt upon had been conceded; namely, the Government now paid one-half the cost of the pauper inmates, and they had raised their allowance to the police from one-quarter to one-half of the total cost. Of course it was important that those who had the management of those funds should bear in mind that the funds, though they did not come from the ratepayers of the union, came indirectly from the taxpayers at large, and it would be a real misfortune if the fact that the funds were not raised directly from the local ratepayers should lead local authorities into lavish expenditure. He hoped that the Government would some day make a grant in aid of the maintenance of in-door paupers, and so offer an inducement to guardians to confine relief more and more to the house alone. We were, perhaps, not yet ready to apply that principle to its full extent; but there were few men who had spent their time at boards of guardians who were not coming to the conclusion that before long it would be necessary to apply the workhouse test universally.

The CHAIRMAN, speaking on the subject of friendly societies, said he felt we were on the eve of a larger system of friendly society work than anything yet contemplated. He



did not think the present hazy, uncertain system could go on much longer; and he thought it quite feasible to supersede the necessity of a poor-law by one registered, well-arranged friendly society, or provision-making society, for all the working classes. In that case, no disgrace could attach to a man who reaped in his old age that which he had laid up in youth; nor to the orphan or the destitute who were provided for at the cost of those who in like case would receive the same support. It had always been his (Mr. Cropper's) hope that the poor-law might lead to some such self-supporting system, whereby the working men of the country might depend on their own provision, which provision, by some kind of Government action, might be made permanent, secure, and general.

Mr. CULLEY said we would never be able to do away with outdoor relief, which was very desirable, until we had a national friendly society.

Dr. SIMPSON disapproved the proposal of a national friendly society, for it would not only be difficult to supersede the powerful societies now in existence, but it would impair the good spirit which the various societies evoked in those connected with them. His desire that there should be an official audit went only to this extent—that a competent man should report to the members whether their society was in a solvent state, leaving them, if it was not solvent, to take the proper steps for making it so, either by increasing their contributions or by lessening the allowance. We might trust the working men to do what was proper when once they knew the state of their affairs. The Government bill would be of great service, but he hoped provision would be made for a thorough audit.

Mr. CULLEY urged that if there was a Government audit and certificate of the soundness of a society, the Government would be responsible for its soundness. Thus the principle of a national friendly society was conceded.

Dr. SIMPSON: By no means. If I call in an auditor to look into my books, surely he is not responsible for paying my debts.

The CHAIRMAN expressed satisfaction that one matter agitated at a former Conference had now been conceded by the Government, namely, that a substantial allowance per head was granted from the Consolidated Fund towards the support of lunatics in asylums. That grant had led to many lunatics, hitherto kept in poor houses, being sent to asylums; and that was a great benefit, because the superior treatment in an asylum was much more conducive to early recovery than the treatment in a workhouse.

Mr. BIGGE asked what was the cost per head of lunatics in Cumberland.

The CHAIRMAN: 9s. 6d. per week.

Mr. BIGGE: In Northumberland it is 12s. 6d. The Government allowance is 4s. per head.

Mr. JOHNSON (Castleside) said the Committee of Management of the Cumberland and Westmorland Asylum had found a considerable increase of paupers since this grant had been made by the Government; so much so, the Committee had had to consider the question of increasing the accommodation at Garlands Asylum. Many weak-minded paupers had been sent to the asylum who had formerly been kept very well in the union workhouses; they were quite harmless persons, who gave very little trouble; but of course, on the guardians finding that these people could be maintained in the Asylum at no greater, if not at less, expense than in the workhouse, the chief inducement to keeping them in the unions was removed. It had been suggested that these harmless, weak-minded persons should be kept in a separate establishment, under a medical officer; as the cost of their maintenance would be much less in a separate place than if they were sent, as now, to our lunatic asylums.

Mr. FORSTER said that in Carlisle Union there had been a large increase in the lunatics; but whether it had arisen from the alteration of the law or from the habits of the people, he did not know.

Mr. MASON said that in the East Ward of Westmorland the Government allowance had in no manner affected the course of the Board. He thought the increase arose largely from their having no county lunatic asylum.

Dr. SIMPSON, embodying what seemed to be the general feeling, moved that if it should be found necessary to increase the lunatic asylums, owing to the fact that imbeciles and idiots, formerly maintained in workhouses or at home, are

now sent to lunatic asylums, separate accommodation should be provided for patients not dangerous to others.

Mr. JOHNSON seconded the motion.

A GUARDIAN from Sunderland believed the increase of lunatics was in the ordinary course.

Mr. ALLISON: It is the opinion of the superintendent of the Cumberland Asylum that the increase has arisen from the sending of this class of harmless lunatics.

Dr. SIMPSON said the idea found general support that it was desirable to send these harmless paupers to some kind of joint establishment; but it might be premature to come to a vote upon it, and therefore he would withdraw his motion.

Mr. JOHNSON said it had been suggested to the Cumberland Committee that it would be the most economical way of dealing with harmless lunatics by keeping them in a separate establishment.

The subject then dropped, and the vote of thanks to the Secretary was carried.

Dr. SIMPSON read a paper on the law of settlement, in which he said: And now, having called your attention on the one hand to the causes why it was found necessary in the reign of Charles to give parish officers authority to procure the removal from their parish of those not settled therein, and desirable ever since to retain that power should a person become chargeable; and on the other hand to the serious inconvenience, the hardship, and the expense which have arisen from the exercise of that authority, I venture to say, that before hastily deciding to abolish the laws of settlement and removal, as the shortest and speediest way out of the difficulty, we should carefully consider whether the causes, if not under the same, under some other form, have ceased to exist, and if not, whether the evils that have arisen admit of remedy. I. Have the causes ceased to exist? It is not likely we shall find them exactly in the same form as they showed themselves in the reign of the "Merry Monarch," and are described in the preamble of the statute to which I have previously referred, parishes neglecting to provide sufficient "stocks" for the relief of the poor, and paupers wandering from one parish to another where the "stocks" were most abundant and the conditions of relief most favourable to them. But we should have the same principle at work, one union administering relief under more stringent conditions, and thus bringing some pressure to bear upon paupers to find a residence beyond their boundaries; paupers preferring to reside in unions where the out-door relief was more common or more liberal, or the discipline of the workhouse less strict. It we could secure perfect uniformity in all unions as regards the proportion of out-door to in-door relief, the amount of pension allowed or of work required, and the discipline enforced in the workhouse, there might be no temptation to change from one union to another; but that we must not expect, not even if we had a national poor-rate; and if in any union there came before the guardians two or three instances, when it was known to or even suspected by the guardians that paupers had come from another union, of their own choice, to their union, under the impression that they would be more liberally dealt with, they would unconsciously harden their hearts, and give another turn to the screw, and every pauper in the union would feel the effects; and if they had a suspicion that a little pressure was brought to bear in neighbouring unions to induce paupers to cross the border line, would they not enter with spirit, adopt the same tactics, and strive to retaliate; and the paupers, as in the times old, would suffer from the contention. I do not say the evils would, or even could be as great as in the time of Charles II., but I contend that the germs still remain, and their possible growth should be provided against. There are, however, other ways in which the total abolition of the laws of settlement and removal might give rise to serious inconvenience. Take, for example, the case of a strike in some neighbouring county or union, and assume that the guardians of that union determined to deal with the matter firmly, as well as discreetly, and gave those applying for relief the alternative of work or want (and who could blame them? might they not remove themselves from the neighbourhood of their work, where no suitable work could be found for them, and demand from the guardians food and shelter? and would it not be obligatory upon the authorities of that place where they were found to contribute to relieve them? It is easy to say such a thing is unlikely; it cannot be said it is impossible; and I do think such a possibility should be guarded against. Labourers may

have a perfect right to combine for the purpose of raising wages, and refuse to work if their employers refuse to agree to their terms; and they may be quite justified in receiving help from their fellows to enable them to stand out, only when that help is voluntarily given; but when they fall back upon their right to have relief when destitute, they place themselves in a different position, and must expect to have the principle applied, for which there is high authority, "that those who won't work shall not eat;" and I for one should be sorry if any alteration or abolition of the laws of settlement and removal enabled them to escape from the application of that principle. Assuming, then, that the causes which induced the legislature to enact laws of settlement and removal are to some extent still existing, is it not possible so far to modify these laws as to remedy the evils and inconveniences that have arisen without abolishing them altogether? In directing your attention to some features of the law of settlement I have endeavoured to show you that the main cause of the evils that have arisen has been the difficulty, the ever increasing difficulty, of acquiring an original settlement, and the consequent necessity of finding and proving a derivative one. To remedy this, make it easy for any one to acquire an original settlement. Abolish all the many conditions now required, and return to the original method—residence for a certain fixed time. When the first statute relating to removals was passed a residence of forty days was considered sufficient to confer a settlement. That time was found by experience to be too short, and it would be well to extend it somewhat. There are naturally differences of opinion as to what length of residence should be required, varying from a few months to five years. I hold a strong opinion myself that in no case should the time required exceed twelve months (I should prefer six months). The reasons why laws of settlement and removal were needed are not stronger now than in the time of Charles II.; and if we sufficiently provide for the evils that did arise then, and may in a modified form arise again, if the laws of settlement and removal were entirely abolished, I think every purpose would be answered, and that good and sound rule observed—never by legislation interfere with individuals further than is absolutely necessary for the good of society. I would suggest then—that, retaining most religiously the great principle of the Poor-law, that whosoever destitution arises there it should be relieved, without reference to settlement, and making the union the area of residence and settlement instead of the parish, the birth settlement should be left as it is, and be *prima facie* the place of settlement, and that a certified copy of the entry of the birth in the register be sufficient proof of the fact; that a continued residence of six months in any union be sufficient to acquire an original settlement in that union; that families follow the settlement of the head of the family until his death or their emancipation; that a widow retain her husband's settlement (if he had one) until she acquires a settlement in her own right or by subsequent marriage; that children be emancipated at the age of sixteen, whether residing with their parents or not; that they retain the settlement their father had at that time or at his death, until they acquire an original settlement of their own; and that this rule apply to both legitimate and illegitimate children; that the same status of irremovability attach to persons requiring relief on account of accidents, sickness, not producing permanent disability, and widowhood, as does now, but the authorities of the union granting relief be empowered to recover the cost of such relief from the union in which such persons have a settlement; that the law of removal should apply to vagrants under certain specified conditions or continued residence and need of relief, though they may not have come to the union originally *animus morandi*.

Mr. CULLEY said there were serious difficulties in the way of totally abolishing the law of settlement, because in that case they would have a difficulty in dealing with the voluntary mendicant class. He understood Dr. Simpson to say that he would make the birth settlement give way to a residential settlement.

Dr. SIMPSON said of course the birth settlement was the *prima facie* settlement until another was acquired. But he would allow a residential settlement of six months to supersede the birth settlement, as any other acquired settlement now did.

Mr. CULLEY said it was evident Dr. Simpson meant that the

birth settlement must give way to a settlement to be acquired afterwards. He (Mr. Culley) would suggest there should be two bases of settlement—a settlement by birth, and a settlement acquired by residence, or, as it might be called, an industrial settlement. The great mischief now existing arose from derivative settlements taking precedence of the birth settlement. Now, he would make the birth settlement the primary settlement, but he would allow a settlement acquired subsequently by residence. But he differed from Dr. Simpson's proposal to allow the latter to be acquired by six months' residence. He would make the period five years, or three at least, so that there might be some proof of the man's *bona fide* endeavour to support himself in the place which was called on to maintain him. By this provision the vagrant class would be shut out. The children should have the settlement of their parents, until the age of emancipation, which he would fix at twenty-one, not at sixteen, as Dr. Simpson did. He would, however, reduce the period required for the status of irremovability from twelve to six months.

Mr. GRIMSIAW (Sunderland) said that at a meeting of guardians it had been decided that, rather than incur the dangers of a total repeal of the law of settlement they would rather not agitate the question at all.

The CHAIRMAN said there were 9,900 removals in the year 1868.

Mr. CULLEY gave statistics of removals in four Northumberland unions, and said that if from them they calculated the number throughout England last year, it would be about 4,200. He did not think that, until they had one Poor-law system for the United Kingdom, they could satisfactorily alter the status of irremovability as between England on the one hand, and Scotland and Ireland on the other. He found there was a distinct inclination on the part of the Irish paupers to bring over their aged relatives, and to maintain them until they had acquired a status of irremovability; and the guardians of many unions were strongly of opinion that if the status of irremovability were removed to one month, as some proposed, it should certainly not be applied to the Irish or Scotch. It was notorious also that the poor houses in Scotland were inferior to the workhouses in England; and such being the case, there was a temptation to the inmates of Scotch workhouses to come over to the more comfortable quarters in Carlisle or Berwick.

The CHAIRMAN said he was of opinion that it would be well if all removals could be done away with; but at present he would be content to concentrate their efforts to abolish derivative settle ments, which formed the large majority. Many of these settlements were unconnected with the pauper himself or herself, and were not acquired by any service rendered by him or her, but by service rendered by some other person in some other part of England, to which place the pauper had to be removed, because his or her father or grandfather had been born or had rendered service there.

Mr. ALCOCK did not agree with Mr. Culley in his proposal to reduce the status of irremovability. To reduce the period from twelve to six months would give rise to more evils than existed under the present system. He considered it would be a hardship if persons could not be removed to places where their friends and relatives resided, and not only a hardship, but it would be likely to make them confirmed paupers if they were to be kept in a place where they could not receive assistance from relatives or friends. He would make three years the period for acquiring a residential settlement, and he would keep the twelvemonths' status of irremovability.

The CHAIRMAN: You would override all other settlements by three years' residence?

Mr. ALCOCK: Yes.

Dr. SIMPSON said he went on the principle that in proportion as they made it easy to gain a settlement, in the same proportion would they induce the probability of removals. Children should derive their settlement from their parents until they attained one of their own.

Mr. CULLEY suggested as the basis of a resolution that the birth settlement should supersede all prior derivative settlements.

The Hon. SECRETARY said he would take a simpler and bolder course and abolish all settlements. The objections to that policy were mainly of a speculative kind, such as that herds of Irish would come over and swamp us; but similar fears had turned out groundless when union chargeability was established. If we had a national rate, and the guardians were

confined to indoor relief, he believed it would be the best plan of all. It was manifestly unjust to impose any restriction on a poor man taking his labour, which was his capital, to the best market he could find.

Rev. J. F. BEEGE pointed out a strong reason for the non-abolition of the law of settlement—viz., in regard to strikes. It was impossible now for a man on strike who refused work when it was offered him to fall back on the rates for support; but abolish the law of settlement, and he would be in a position to migrate to a neighbouring parish, and there being destitute, to demand relief.

Mr. R. A. AELISON thought it would be well to proceed on the lines laid down by Dr. Simpson. No doubt it would be very simple to abolish the law of settlement altogether; but it might work great hardship in the case of towns like Liverpool, which had a large floating population of poor Irish. The most prudent course seemed to be to amend the present law, so as to obtain from it the greatest amount of benefit and the least of disadvantage to all concerned. He thought, however, that six months was too short a period for giving a settlement.

Dr. SIMPSON said he also was once of opinion that the period should be longer, but he had seen reason to alter it. He urged that the feelings of the poor in the way of keeping their families together should not be disregarded; and by giving them a chance of acquiring a settlement easily, removals would scarcely ever be called for.

After some further discussion,

The SECRETARY proposed to cut the Gordian knot by totally abolishing removals.

Mr. TRISTRAM (Durham) seconded the proposal.

Mr. ATKINSON (Winderwath) quite agreed with the Secretary, and said he had been of that opinion for some time.

Dr. SIMPSON moved a general resolution, "That the laws relating to the settlement of the poor in England and Wales require to be modified and simplified." That would pledge nobody to details.

Mr. ALCOCK seconded the motion.

Mr. ELLIOTT (the secretary) as an amendment proposed that it was desirable to abolish the law of settlement entirely.

Mr. TRISTRAM seconded the amendment.

Three votes were given for the amendment. All the other members voted for the motion, which was declared carried.

The CHAIRMAN, in calling on Mr. Moore to read a paper on Boarding-Out, said it would be recollected that Mr. Moore read an excellent paper on this subject at their first Conference in 1872; and they might hail with satisfaction that they had arrived at a date when they were able to report on the results of a subject which was introduced by one of their members at the earliest meeting of the Conference.

Mr. MOORE read his paper as follows: I have been requested by the Standing Committee of the four Northern Counties to read a paper on "The progress of Boarding-out Orphan (Eauper) Children." Since the Conference, held at Gilsland, in August, 1872, when I brought this subject before the meeting, I have carefully watched the movement, and there is not the slightest doubt in my mind of the desirability of getting orphan children out of workhouses before they become institutionalised, and thus to secure their being drifted into the stream of useful labour, and so, more naturally, to take their places amongst healthy and industrious men and women. It may be laid down as a fact that the more children are associated with the workhouse, the more likely are they to return to it in after life, and that the prospect of rousing in their minds a spirit of independence and self-respect is more likely to be possible if they are early removed from the opprobrium of pauperism, and from contact with pauper institutions and associations. I want all orphan children taken out of the workhouse, or rather, I want to prevent them ever going into it. My meaning is, that whenever the time arrives of such destitution overtaking orphans, board the children out at once, and never allow them to enter a workhouse. My practical experience as to the working of the system since reading the paper at Gilsland, in 1872, has convinced me that the right people with whom to place the children can be found; in fact, there are more suitable cottagers to receive them than there are orphan girls to place out; and further, my experience has convinced me that we can find a high standard of cottagers willing to have the children, God-fearing people, who have a higher motive than mere profit; and I feel strongly that no child ought to be placed in any home where we do not know the people to be not only respectable, sober,

and moral, but who distinctly make a profession of religion. My wife and myself have made it a duty unexpectedly to visit those children placed out in the Wigton Union, and we are fully capable of bearing testimony to the healthful and happy appearance they possess, and the tidy and comfortable homes in which they are placed, and it has interested us to observe the strong feeling of attachment that has already grown up between them and their foster-parents. The homes in my neighbourhood were selected after much inquiry, and were found among small shop-keepers, married servants from respectable families, or labourers of well-known good characters. And many such homes are to be found, and as evidence of results all I ask is for any one to visit the homes of the children boarded-out from the Wigton Union, and they will be perfectly satisfied that the right places have been found, and further, I guarantee that the hearts of the visitors will be warmed by seeing so much comfort and evident mutual attachment. I could mention many more places where children are boarded-out, and I have not heard of one where it has been a failure. I am alive to the necessity which exists for supervision of the homes of these children. Independently of the regular official visits of the relieving officer, it seems to me that the guardians in each district ought to consider it part of their business to look in occasionally and see them (unexpectedly), and I am sure the ladies in the district would cheerfully undertake this, if so requested, for they are ever ready in works of love. Who can overrate the good influence which their kind-heartedness and delicacy of feeling would exercise over the future lives of these poor orphans? Fatherless, motherless, and alone! As one of the greatest writers of this age says, "There is no hopelessness so sad as that of early youth when the soul is made up of *wants*, and has no super-added life in the life of others." We shall always have the poor with us, and the direction at which our efforts should be aimed is to supply, as best we can, the home influences which pauper children have lost; this is the object of the system—to give the children of the parish the inestimable advantage of home-life and affections which it is simply impossible to secure to them by any other means. I am not going to weary you with a repetition of the reasons I advanced in my former paper, because I sincerely believe that the good which was then prognosticated is already resulting from the adoption of this system, and that the theory has been found to work out practically most encouragingly. As I said in my former paper, our object is to absorb these poor children into the general population, having first fitted them for their life, by their having themselves been the sharers of as working man's home, having associated with his family in its joys and sorrows, having had the individual responsibility of being a member of it. Proficiency in reading, writing, and arithmetic is essential, but less essential than a practical knowledge of the every day work of common life, thus enabling us to take care of ourselves, how to be helpful to others, how to perform our part in the world upon which we are to enter. The great school of instruction for this kind of knowledge is of divine institution—the family! So entirely do we take this for granted as a matter of course, that we are often apt to forget the wonderful *educating* influence of domestic life. In the home circle the child learns on a small scale what he has to practice at large, in after years; he is brought into relation with persons of different ages and sexes; his wits are sharpened and his judgment is matured by a great variety of personal experiences, in fact he learns common sense. I took part in a deputation on the 27th of last November, which waited on the president of the Local Government Board, the Right Hon. Selater-Booth, M.P., accompanied by Lord Delaware, Sir Charles Trevelyan, Mr. Francis Peck, and others, who urged upon the Government to encourage the boarding-out system by means of some special direct contribution from national funds, so as to place the "system" on an equal footing with district and union schools, which have the advantage of a Parliamentary grant for their teachers and other officers. The President admitted that it was a social interest whose importance it would be difficult to exaggerate. I do not wish to enter into the subject of district schools, because I have not personally investigated their success or non success; but, I may observe, Mr. Stansfeld, when at the Poor-law Board, employed Mrs. Senior, a well-known lady, to report upon them. She states that out of 245 girls, 62 per cent. have turned out unsatisfactory or badly. She has written a great deal in favour of the boarding-out system, and from her great practical experience it is well worthy perusal. The cost of district schools

is from 9s. to 14s. a-week, whereas the boarding-out is from 3s. to 4s. 3d. only. There is, however, no rule without exception; and I can bear testimony to the excellent arrangements of our friend Mr. Cropper's district school at Kendal. Hannah Archer, of Kingsdown House, Swindon, says, from her experience in carrying out the boarding-out system in the Hghworth and Saindon Union it has been a great success. F. A. H. Fitzgerald, Weybridge Vicarage, Harleston, writes: "If you could only see the difference between these children now and when they first came to us, I think you would say that the boarding-out plan had most completely met the wants of these poor children. They were pany, sickly little things, afraid of their own shadows; now they are becoming bonnie, bonnie children, able to hold their own in a good game of play, very fond of their fathers and mothers, as they call those whom they are living with. I can quite endorse Mrs. Senior's statement respecting the ignorance of some of the children brought up in workhouses." Miss Florence Hill writes: "She induced the Clifton guardians to board-out their orphans, and also the Bristol guardians, and both unions have found it to be a complete success, and strong mutual affection springs up between them and their adopted parents. As the schoolmaster does not get paid unless the children attend the school regularly, this fact ensures regular attendance." Mr. William Anderson, of the *Courant* newspaper, Edinburgh, read a paper in the month of June, and he says: "The boarding-out system in Scotland has been in existence about a quarter of a century, and has been attended with great success, having been the means of rescuing many children from crime and pauperism, and sending them forth into the world fitted to engage in the battle of life in a manner creditable to themselves, and with advantage to the commonwealth. He testifies that the system does neither encourage bastardy nor desertion, and it discourages latter, for he has tested the point." A schoolmaster informed him that during the whole of his experience of the boarded-out children, of whom he had had on an average from 15 to 22 at his school each year for 25 years, he had never heard a complaint from the parents of the ordinary pupils as regards their children associating with the paupers; that the children joined in all the games on an equal footing with the others scholars, and that he himself made a point of showing the same consideration to them as the others, and no complaints were ever made by the people of the village as to the conduct of the pauper children. He further states, "I have often known pauper children remain in the poor house for months as deserted, but when it was known they were to be boarded-out, individuals of their own class, who were interested in them, and who were never heard of before, often came forward and withdrew them. At Cork as many as 40 little paupers were taken away at once from the same cause, and the same thing has happened at Bath, Liverpool, Glasgow, and other places. And now, I have much pleasure in laying before you the facts of the working of the experiment in Cumberland, and I think you will agree with me that so far the progress is very satisfactory. From the Wigton Union all the orphan girls are boarded out, and there are cottagers now ready to receive more girls. As regards the boys, we do not succeed so well; we do not find so great a readiness on the part of the cottagers to take them, as they cannot put them early to such useful occupations, nor are they so helpful in many ways in the cottage home as are the girls. The Chairman of the Carlisle Board of Guardians writes to me as follows: "In reply to your inquiry about our boarded-out children in this union, they are considerably reduced in number, several having reached the age when the allowance ceases, and, with rare exceptions, we see no more of them: they in almost all cases remain inmates of the households where they have been boarded. I am of opinion that not one person in a hundred would be found who would turn them adrift after the allowance ceased. Of course, much depends upon their being placed with respectable persons at the outset. Regarding the allowance we make them, our Board consider it is about right—viz., 3s. weekly, two suits of clothes, and 6d. weekly to keep up the clothing, 4d. weekly for school-pence—total, 3s. 10d. in money weekly. I am of opinion boarding-out (with proper supervision) works well for both the children and the parish." The Chairman of the Brampton Board of Guardians says: "The question of boarding-out orphan children was considered at our board at Brampton, at their last meeting, and the unanimous opinion was, that it was in every way desirable to provide private homes for orphan

children, where suitable ones could be found, as tending in a very great measure to unfamiliarise them with the workhouse as a home, and consequently giving them feelings of independence which the workhouse life tends so materially to undermine. Our board thinks 3s. 6d. per week a sufficient sum to pay for each child, and this I believe is found to be so in Carlisle, where the plan, as you no doubt are aware, has been in operation for some time. At present we have no orphans in our union workhouse, and only three boys. We have been in the habit of sending our children to the National School at Brampton; we give them a suit of clothes, more like the dress of other children, feeling the old fustian suit stamped them as paupers; we have found the mixing with other children of great benefit to them. One pauper lad was for some time a pupil-teacher in the school, which shows that they were on a good footing there. We like as soon as possible—that is as, soon as they have fulfilled the requirements of the Education Act—to place them out with farmers and artizans, and we generally find they do well, with the exception of those who are of weak intellect. The subject is a most interesting one, and I am very glad to think that you who have given it so much thought are to give us a paper upon it at our next Conference." The Chairman of the Alston Board of Guardians writes as follows: "The board of guardians of this parish have adopted, with thorough approbation, the system of boarding-out pauper orphan children with relatives willing to accept them. Where such children have no near relatives, the difficulty is found of obtaining suitable persons to take them. All that surrounds the word 'home' is much to be desired for these little ones; and this no workhouse, however good its conduct, can supply. May your benevolent efforts in this respect have every assistance from Him who 'takes up' when 'father and mother forsake.'" The Chairman of the Whitehaven board of guardians says: "In reply to yours of the 28th instant, I beg to say that I think we have only two pauper children boarded out in this union, and that is in Gosforth, away from the squalor and crowd of the mining districts. Our union is not at all adapted for the boarding-out system; there is not one cottage in twenty but what is overcrowded already." From Cockermouth, including Maryport and Workington, twenty-two have been boarded-out, and in the report of their union I notice an example of what was mentioned earlier—a little boy, aged five, was boarded-out; after having been two years with his foster-parents he has been claimed by an aunt, with whom he still is without receiving help. I consider the Cockermouth result most encouraging. I have also received letters from the Chairmen of Penrith, Bootle, and Arthurton Unions, in none of which has this system as yet had a trial. Many of the guardians from Northumberland and Durham were present at the Gisland Conference in 1872, and said they would endeavour to get their unions to adopt the system. I hope some of them are with us to-day, and can give us information as to the result. I can but say, for myself, that each year only deepens my conviction of the necessity for the adoption of the system, and I feel sure that all thoughtful men, who know something of the needs around them, if they rightly understood the boarding-out system, would be the first to bid it God-speed.

The CHAIRMAN asked if Mr. Moore could give the number of children boarded-out in Cumberland?

Mr. MOORE: not exactly.

Mr. FIDLER: There are about 12 in Wigton Union.

Mr. MOORE: In Cockermouth there are 22. In Carlisle Union there are not so many, as they got situations for many, but they have adopted the plan in regard to all the children they have.

Mr. FIDLER (Wigton) said when the plan was adopted in Wigton Union a great prejudice was felt against it; but since it had been in operation the results had been exceedingly encouraging. They found the children well taken care of: they all seemed cheerful and contented. He did not think they had any children who were not boarded-out.

Mr. HEATLEY (Alnwick) asked if the system had been applied to deserted as well as to orphan children?

Dr. SIMPSON said it could not be well applied to deserted children, as the parents always had a claim over them.

Mr. MOORE said this was the one difficulty of the system, and in dealing with it the guardians must exercise their discretion. Let them inquire where the parents of the deserted children were. If they were really out of the country, and there was no prospect of them returning, by all means board

the children out. But if the father or mother was hanging about the district, and likely to come and clam the children, the board might get into trouble if it boarded them out. Therefore, the guardians must exercise judgment in the matter.

Mr. COOLEY (Alnwick) said the system had been tried in his union without any great success.

The CHAIRMAN said in Kendal Union there was an orphan house, built by Mrs. Howard, where the whole of the girls in the unions of Westmoreland and North Lancashire were maintained; the experience had been very satisfactory, immense advantage having been found to result from severing the child from all workhouse associations. Boarding-out boys had been tried in two instances, and had answered remarkably well. In the neighbourhood of Windermere there was an institution in which about 20 children, brought down from London, are kept, and the work succeeded uncommonly well.

Mr. ELLIOT said they had tried the system in Northumberland, but it had not been tried for a sufficient length of time to enable him to speak positively as to its results. He read a letter from his brother, saying that its trial had been most successful in the southern counties.

Mr. HIGGE said one reason why it had not succeeded in Northumberland was that the guardians did not offer enough money. The allowance to foster-parents was only 1s. 6d. a week.

Mr. MOORE: It is ridiculous.

Mr. COOLEY: We give 1s. 6d., and pay the schooling and provide an outfit.

Mr. MOORE: We pay 3s. and provide two suits of clothes. They cost at least 3s. 6d. a week, and we get the schooling back from the Government.

Dr. SIMPSON: How do you get it back?

Mr. FIDLER: We get it back by an evasion of the law—by giving a bonus.

Mr. ALLEN said the Alnwick guardians were not hearty in the matter. That was why it had not succeeded there.

Mr. COOLEY: Would you not make it too much a mercenary matter with the poor, if you give too large an allowance when the children boarded out?

Mr. MOORE: But I hold we do not give too much. I have boarded out the children in my district, and I have found as much practical sympathy with their fellow-creatures to exist among the poor cottagers as exist amongst people of the middle class. I have found a great amount of affection amongst them, and my experience in this matter has been a great lesson to me.

Dr. SIMPSON moved a vote of thanks to Mr. Moore for reading his paper. So far as Cumberland was concerned, the report was very satisfactory. He was glad to find that the majority of the unions in this county had adopted the system. Still there were many difficulties in connection with it. Allusion had been made to the amount of pay to foster-parents. Mr. Moore did not attach so much importance to the money question as to what may be called the sentimental question of the value of home influences, which was undoubtedly of great importance. As to deserted children, it would be most difficult to apply the system to their case. The great principle was to hold the balance justly between the pauper on the one hand and the ratepayers on the other; and unless they ascertained that the extra money would be repaid to the union by the improved character of the children, and by removing the probabilities of their becoming paupers again, he thought they were not justified in paying more money than they could be maintained for in the workhouse. But where it happened that the weekly allowance very little, if any, exceeds the workhouse cost, no one could find fault. In fact, he would exceed the workhouse cost; because when there was a prospect of reaping valuable results in future, they were fully justified in not being too economical.

Mr. JOHNSON (Castlestead-) supported the vote of thanks to Mr. Moore. He suggested that in boarding out it would be useful if one or two guardians periodically visited the homes of the children. In this country there were a number of illegitimate children who were always boarded out by their mothers, who often deserted them. The feeling of sympathy

between the middle and lower classes of this country was so good that we need have no fear that children would be taken simply for the money payment. As to boarding out deserted children, he had doubts whether they could do it legally; but he urged that guardians should be more active in prosecuting those parents who deserted their children. In Brampton Union they offered 3s. 6d., and he did not think it was at all too much. He thought it was consulting the best interests of the ratepayers when they brought up the children away from the workhouse in such a manner that they might have no traditions associating them with the workhouse.

The CHAIRMAN said the London board paid 4s. per week for the children near Windermere. The Kendal board paid 3s. 6d. In comparing this cost with that of maintenance in the workhouse, they must recollect that the latter did not merely include food and clothing, but also salaries and establishment charges, which made the average nearer 5s. 6d. a week. As to boarding out deserted children, it was found that the relatives of deserted children objected to their being boarded-out. They had no objection to their being brought up in a respectable institution like the workhouse, but they resented the idea of the children being put out; at least they thought that if there was anything to be got by boarding-out their little relatives they would rather have the advantage themselves.

Mr. ATKINSON (Winderwath) spoke very favourably of his experience of the system in West Ward union.

Mr. GRIMSHAW (Sunderland) also spoke heartily in favour of the system.

Mr. TRISTRAM (Durham) asked if any one could give the results of the working of the system in Scotland for the last quarter of a century? He was told it led to an increase of desertion and illegitimacy. The immediate effects on the children might be good, but the ultimate effects should be considered.

Mr. CULLEY said that in the district of which he was inspector he had found only one union—Berwick—where the system was well carried out. He believed they offered 3s. a week. The relieving officers visited the houses every six weeks, and every year the children were visited by an ambulatory committee of guardians.

The vote of thanks was carried by acclamation.

Mr. MOORE, in reply, reviewed the various suggestions thrown out during the discussion. He mentioned that he was first practically interested in this effort by what he saw near Kendal; and he got an architect to draw plans for the erection of a similar institution near Wigton. At that moment, however, the Carlisle guardians began to board-out their children, and he was glad they did so, for he was convinced the boarding-out system was infinitely superior to that of crowding the children together in one establishment. As to deserted children, he submitted that if parents should come to recognise their duty, and claim their children, he would let them have them. He was convinced that when the relatives of children heard of their being boarded-out, it would excite in them a feeling of pride, and in many cases they would themselves take the children. One thing which pleased his wife and himself very much was this—they found many of the foster-parents had known the parents of the children with them. "I knew that child's mother as well as I knew anybody," was said in several cases which he knew; and that feeling was a strong bond of affection between the foster-parent and the child. In cases where the system could not well be applied, or where the pig-headedness of the guardians impeded its realisation, then, at all events, let them send the children to the National School, where they would associate with the youth of the town or village.

Mr. MELVILLE, who cordially supported the system, urged the importance of appointing an intermediate officer between the relieving officer and the board of guardians.

THE APPROPRIATE TESTIMONIAL.—The Midland Farmers' Club has presented Mr. Mechi with ten Shropshire Down ewes and a ram, at a cost of about £60, in remembrance of the visit to Tiptree.

## THE FARMERS' GRIEVANCES.

At a meeting of the Bedale Chamber of Agriculture, Mr. CLARKE, said I have selected three or four grievances, from several others, which we, as agriculturists, may complain of. It is proverbial that an Englishman loves fair play, and that he despises any one who acts contrary to that rule. No doubt we, as Englishmen, pride ourselves on this, and find such things pleasant to our ears; but as to the real fact, what I am about to state will render this assertion doubtful. In the first place I instance the charge made by railway companies for the carriage of British-grown corn, in comparison with what they charge for that of foreign production. I have heard it stated, on good authority, that a merchant can go to Rotterdam, about harvest time, that he can buy corn grown in that country, and can ship it to an English port from there by rail to Burton-on-Trent for a less tariff than what is charged for conveying corn by railway companies for corn grown in this neighbourhood to the same place. I have also been informed that foreign corn is sent for a less tariff from Newcastle-on-Tyne to Leeds, than what is charged for English corn sent from Northallerton to Leeds. From Martlepool foreign corn is sent to Leeds at 1s. 5d. per qr., while wheat sent from Bedale to Leeds is charged 2s. Instances of this kind could, no doubt, be multiplied; but those quoted will suffice to prove there is little fair play shown in such cases to the British farmer. I distinctly wish it to be understood that I am not attributing this system of charging to any particular railway company, as, I am sorry to add, nearly all railway companies pursue the same un-English system towards us—that is, they have special rates for foreign corn. Yet I doubt not but that there are two bushels of English corn for one of foreign sent by railway. How strange it would appear if the Corporation of Leeds demanded 2d. per bushel for every one of English-grown wheat, sold in their corn-exchange, and only charged 1d. per bushel on foreign-grown! Yet this is the system pursued in this country of free trade and fair play towards the British corn-growers by several railway companies. It is said that these companies can either “mar or make;” I believe it to be too true, especially in small towns, as they can by their unequal tariffs, and other awkward ways, drive away their trade. My next grievance is the method which is practised in levying those new rates. No regard is paid to how such rates affect certain individuals: Government finds the horse saddled, and hesitates not to put a fresh burden upon him; and until recently he has quietly carried it. I am often surprised at the apathy displayed by landowners when those new rates have become law. They appear to me to be not free from blame in this matter. They seem heedless as to what their tenants may pay, so long as it does not touch their pockets. Probably, if new rates were levied upon them as owners for the first two or three years, things would be different. To speak freely upon this matter, it would only be doing justice to their tenants did the law compel them to do so. I scarcely can speak with patience when I refer to the system of levying the school rate, especially if we contrast the quiet manner the tenant-farmers have taken to the burden with the hubbub and row there was with certain classes of our countrymen about a twopenny income-tax. I sometimes wonder what sort of a hubbub we should have had with the commercial and trading classes had they been treated with the school-rate levied on the same principles as it is now levied upon the tenant-farmers—viz., upon twice their net income. Well, Mr. Disraeli's position would not have been worth twenty-four hours' purchase. But to revert to my statement, which to some may seem a paradox. I therefore beg to explain. Say a tenant-farmer rents a farm for £200 per annum, the rateable value of which is £190. If he be a successful farmer, he will make a net 10 per cent. upon the capital he employs, or about £100 per annum. Now as the rate is levied upon the rateable value, and not upon the net income, it is clear he is paying a double tax, or what is ostensibly considered a threepenny rate is in truth equal to a sixpenny income-tax upon his net income. Yet this heavy tax has been levied upon the tenant-farmer, and so far as I know, there are few landowners, if any, in the North Riding, who have lifted up their voice against this great and monstrous injustice. I am much afraid that the prevailing opinion amongst landowners is that all the rates are drawn from the land, seeing that it is let to their tenants subject to such and such out-

payments. Therefore, when any new rate is levied, or if the old ones become heavier, they regard such additional charges as burdens placed upon their own land, and that, should the tenants be dissatisfied, then they need but give the usual six months' notice to quit, and the reletting fixes the burden. It such be the case, I do protest against such plausible reasoning, I trust upon reasonable grounds. It cannot but be admitted that the capital employed by a tenant-farmer belongs to him, that it is his own in the same sense as the stock-in-trade of a trader who rents a shop. Then if so, the whole of the capital employed by tenant-farmers in agriculture belongs to them as a body or family, if you will allow the term, quite as much as the land belongs to the family of landowners. It would be well here to note that the farming skill and class of capital employed by tenants are quite as necessary to the land as the land is to skill and capital. They are each useless without the other. Then let us see how they act together. First, let us suppose a tenant hires a farm, and, with the rents he has to pay, he has also certain conditions to fulfil. After a series of years of successful farming the letting value has risen, say from 5s. to 10s. per acre (and this additional value apart from anything the owner may have done). Also, during the time he has occupied the farm the rates have increased from 1s. to 1s. 6d. in the pound upon the rateable value. Now the common custom of the country is that when the tenancy has come to an end the farm is re-let subject to the additional rent and rates. Such is the general practice, and has been so from generation to generation. Thus, the landowner has been getting more and more rent, and the tenant has had heavier and increasing rates to pay. (I here speak of the natural every-day value given to land, by good farming, and apart from drainage, buildings, &c., done at the expense of the owners.) Now I beg to inquire from whence have those increased rents and additional rates come? Certainly not from the landowners. Then where from? The answer is not far to seek, and I challenge denial that such additional value and increased rates are drawn from the capital belonging to the great family of tenant-farmers. From whence else can it come? It is matterless to me to talk of the calculations made when letting or reletting a farm, &c. If Tommy leaves the farm and John takes it, they are still members of that great family to whom the farming capital of this country belongs. And I beg here to add that, however indifferently a farm may be managed, even the greatest sloven leaves something behind which adds to the permanent value of the land he has rented. It is to such causes that the majority of the land of this country owes its present value; for it is due to what has been done to it and left in it by generation after generation of tenant-farmers. The next subject of grievance which I desire to lay before you is the present system of administering the Poor-laws. Lord Lyttelton, a few days ago, brought the matter before the House of Lords, and dwelt strongly upon the utter loss, among certain classes of our population, of those thrifty habits for which our country has so long been famed, and which, no doubt, have added so much to our national greatness. He also noticed that loss of self-respect which had now become so prevalent, instancing that parties would go to the board of guardians for relief upon the slightest pretence, and felt no shame in doing so. As for the practising economy, it was the last thing thought of, and that children, brought up in such a manner would transmit to a future generation those vices magnified. Those serious evils he attributed, in a great measure, to the system of giving out-door relief, and, as a remedy, suggested that it should be discontinued, except in extraordinary cases, such as when the head of a family, through sickness or accident, was unable to provide for his family. In that case, if his illness were likely to be temporary, he would advance him a loan until well, to be afterwards repaid by instalments; but, if the illness were of a permanent nature, then the house to be offered him; in all other cases, except old age, no relief to be given out of the workhouse. I cannot tell what is thought of this plan for meeting the evil complained of, but certainly something will have to be done, not only in the administering of the law, but also in regard to the rising generation, and their claim upon the poor funds. They ought to be taught thrift; for why should not the young men and women, who are now in the receipt of excellent wages, be made to contribute to what their parents, in many cases, are already recipients of? Why

not a young man, who may be wasting his one or two shillings per week in tobacco or some other wasteful folly, he made to contribute at least one shilling per week to this fund? Again, why should daughters parade about, in all sorts of finery, and never think of saving a shilling to assist a needful parent? I might continue this subject to a much greater length, but I think I have said sufficient to draw attention to the evils of the present system.

Dr. SPENCE, in moving a vote of thanks, stated that he coincided fully in the remarks made by the President; and that his observation, in passing through the country, quite confirmed him in his opinion, that great wrong was done in giving outdoor relief in its present form, unless under exceptional circumstances. That, comparing the general neatness and thrift of preceding generations with the present thoughtlessness and extravagance, they contrasted very unfavourably, and that it was now time to teach the rising generation economy, self-denial, and self-respect.

Mr. NEWCOMBE said he did not approve of what had been advanced respecting outdoor relief. One circumstance he knew of where a young widow had been left with three children. By giving her a small allowance, she was, by her own industry and careful habits, in addition to the relief, bringing up her children respectably; and to send her and her children to the union would not only break up her home, but would also be a serious charge upon the rates.

Mr. TEALE had been connected with a board of guardians for many years, and the law, as laid down, expressed that the house might be offered to all paupers, yet left a discretionary power with the guardians. They, the guardians, used that power as they thought the circumstances of the different cases which came before them deserved.

Dr. FOTHERGILL also stated that he had been connected with, and had seen the working of, the poor-laws for thirty years; that no doubt there were cases occurring difficult to arrange; still, the power was vested in the board of guardians, as to whether outdoor relief should be given or not.

Mr. SMITH, in referring to the questions before them that day, said that, as they were travelling from the foot to the head, he had a few remarks to make upon the second grievance, and more especially upon the school-rate, the evils of which he, as a tenant-farmer, felt most keenly. At the same time he wished it to be understood that none were more anxious than himself that all children should have a good, sound education, believing as he did that it would eventually repay the outlay. But he could not stand calmly and silently by, and not enter his protest against the injustice done to him (Mr. Smith) and his brother tenant-farmers. For why were they to be selected, and their incomes doubly taxed, and the wealth of the country to pay merely a pittance? He heartily concurred in a great portion of that which had been stated by the president, and thanked him for it, sincerely hoping that the farmers would become what they were not—anxious inquirers after what affected their interests so seriously, believing as he did that there never was a time when the united action of all interested in agriculture was more needed, if healthy progress were to be made.

Mr. ROBINSON expressed his surprise at the statements respecting the charges made by railway companies. He trusted they were overdrawn. It would be a great pleasure to him if, upon inquiry, they were found to be untrue—a duty he would take upon himself to ascertain. As a corn grower, he spoke for himself, and spoke feelingly; if found to be correct, it was a great and gross injustice to the British corn-grower, and one which, if it became publicly known, would certainly cause great and just indignation to be felt.

**THE HARVEST.**—Of the returns, 36 per cent. declare wheat to be an average crop, 57½ per cent. put it below an average, and only 6½ per cent. declare it over average. Barley is the best crop of the year, not more than 10 per cent. of the returns putting it below an average. Of oats, the returns are very various, and divided in nearly equal proportions amongst the three classes, above, below, and average. Beans and peas, which promised well, have been injured by the weather. The root crop is generally good, as in a wet season was to be expected. The hay crop, though heavy, has been badly made.

—*The Agricultural Gazette.*

## HOP PROSPECTS.

MAIDSTONE AND NEIGHBOURHOOD, Aug. 19.—Mould has made its appearance during the last two weeks to a considerable extent, and there is great fear that it will prove this year very destructive. Of course the hops have grown apace lately, and the gardens are loaded with fruit, but the expectations of a heavy crop are now gone. We shall not average, according to present appearances, more than 10 cwt. per acre.—MALLING: Here we have a lot of patchy burnt-up looking hops, and the mould is making great ravages. One large grower has been so affected by this terrible scourge that we are informed he has offered the produce of 100 acres at £1 an acre.—YALDING: Here on the high grounds the mould has not attacked the hops like it has in the low lying grounds of these parishes. We are free from vermin, and the crop will be a good deal over the average.—WATERINGBURY: Mould made its appearance in this parish very early, and we are sorry to say that it continues to spread daily. Sulphuring has been extensively resorted to, and although it has, of course, checked it, it has not stopped its ravages. This destructive pest is making great mischief, and destroying what was a week or so ago, the prospect of an abundant year.—BOUGHTON MONCHELSEA: In the high grounds the hops still look well, and the grounds are all in full hop. In the low grounds, however, mould is working its way silently and surely, and, in the opinion of several old growers, we shall have such a year of mould as has not been known for a long time.—STAPLEHURST: Besides mould we have red spider also, and the prospect of an average crop this season is, I think, gone.—DEBTLING: The hops in this parish have never properly recovered from the frosts and high winds of June and the beginning of July, and now mould has come to add to our misfortunes. A poor crop is what we all look forward to.—BEARSTED: The hops look well to casual passers-by, but upon examination it will be found that mould has made a very serious lodgment in the plantations, and the bine in places very slack. About the lower parts of the poles a yellow look is too often met with, showing a premature decay, which does not look well for the hops coming to proper maturity.—FARLEIGH: Upper grounds look well, and according to present appearances, there will be a heavy crop in them; but in the low grounds mould is doing its deadly work, and hundreds of acres will have very few hops worth the picking.—HENTON: Our hops have gone back during the week, notwithstanding the (apparently) favourable weather. Mould has set in with great virulence, and our crop cannot be up to an average.—SETTON VALENCIE: We are getting along well, except being troubled with mould in damp places. Hot weather would enable us to grow out of it, and give us a heavy crop.—BATTLE: During the last week the hops have made rapid progress, and notwithstanding slack and yellow bine at places; on the whole we are looking for a fair crop. Picking the early sorts will commence in a few days.—SALEHURST AND MOUNTFIELD: The state of the weather continues on the whole favourable for a heavy crop. The early sorts we expect will commence picking in a few days, and, on the whole we never saw hops do better than they are doing in the above named parishes. NORTHAM.—The favourable change in the weather is just suitable for the hops; our gardens generally are presenting a pretty appearance; the hops are fast coming out, and the bine clean. HAWKHURST.—Since our last report the hop garden has made a very favourable change. Some of the early sorts, it is said, will be picked next week. Mould has shown itself in places; as for vermin we have not much cause to complain. ROTHERFIELD.—Some of our gardens present a very pretty appearance; the hops being well grown, and very thick on the bine. In some gardens where the bine is very thick, slight traces of mould may be observed, in fact in one or two gardens sulphuring has been required. In about eight or ten days our farmers will commence picking the forward hops. ASHFORD.—We have splendid weather this week, and the fruit is maturing capitally. There is some mould, but it does not increase. We shall have a large crop. CRANBROOK.—The hop gardens are now looking most cheering, and prospects of a capital crop are daily manifesting themselves. Hot nights and days have forced the burr out into full flower, and the earlier sorts will soon be ready for the dryer. Sulphur and sunshine in copious applications have checked the mould, and a larger crop than at one time was deemed probable will be grown in this parish.—*South Essex Express*



**ASHTERTON.**—The atmosphere for the last week or line days has been more propitious. Sunny days and warmer nights have made a manifest improvement in the hopyards, but still the fruit is uncertain, and to insure a good crop the weather must be dry and fine. Picking will not be general before the middle of September. **BURGHILL.**—The hops have greatly improved during the last fortnight, and should we get hot sun-shine and warm nights for about the next three weeks we shall grow a nice crop. **CANON PYON.**—The last few warm nights have brought the hops forward well, but it is evident that the abundant crop so much talked of will not be seen this season. I feel certain we shall not get as many in this parish as in 1873.—*Hereford Journal.*

## SHEEP SALES AND LETTINGS.

**MR. TREADWELL'S OXFORD DOWNS, AT UPPER WINCHENDON, BY MR. MUMFORD.**—This sale was well attended by breeders, who bid freely for all the best sheep; but for the second-class sheep there was not so brisk a demand; however, a general average was reached of £16. There were buyers for Germany, who bought five sheep; while others went into Cornwall, Yorkshire, Cambridgeshire, Bedfordshire, and Oxfordshire. Mr. Brassey's agent obtained No. 4 for 41 gs.; Mr. C. Howard, No. 33, for 38 gs.; Mr. G. Wallis, No. 25, for 23 gs.; Mr. Fawcett, of Leeds, No. 5, for 40 gs.; Mr. Wm. Balford, No. 3, for 45 gs. Sixty-four sheep were offered, and all sold, many of the lower-priced rams going to farmers in the neighbourhood. The sheep were considered to be the best lot ever offered at Winchendon—very big and neat in colour and coat. Mr. Milton Druee's Royal show-line, who has been let for the season to Mr. Treadwell, arrived during the morning, and was much admired.

**MR. T. BROWN'S COTSWOLD RAMS, AT MARIHAM.**—100 ram-lambs and 90 shearlings were brought out for sale. The competition was not very brisk. The highest price for a lamb was £11 15s., which was given by Mr. Childs. Mr. Chambers hired one at £10 15s., and two others were taken at 10 gs. each by Mr. Childs and Mr. King respectively. The highest price given for a shearing ram was £21, at which price three lots were hired by Mr. T. Allen, Mr. R. Garne, and Mr. Brassnett respectively. The 100 ram-lambs realised a total of £754 15s., an average of £7 11s. The 90 shearling rams averaged £10 17s., the total realised being £976 14s. 6d. The grand total of the prices realised was £1751 9s. 6d.

**MR. JAMES HALL'S LEICESTERS, AT SCARBORO', YORKSHIRE.** The number offered was 61—50 shearlings and 11 aged sheep. The shearlings made an average price of 45 9s. 10d., against £7 14s. 6d. last year. The aged rams averaged about £13 each. The total amount realised was £530, giving an average price of £9 6s. 6d. For one ram the high price of £86 2s. was obtained, Mr. Hutchinson, of Catterick, giving that sum. Amongst the principal buyers were Mr. Jordan, of Eastbourne, who gave £20 and £21 respectively for two rams. Next came Mr. Mattinson, of Newbald, to whose bid of £16 another sheep was lot. Mr. Richardson, of Arnold, gave a similar price for another. The other top prices were: Mr. Harrison, Wharum, £15 10s.; Mr. Abrahams, Bryan Mills, £14 5s.; Mr. Wright, of Humbleton, £13; Mr. Thomas Whipp, of Eton, £10; Mr. Nonabel, of Wansford, £9 10s.; and Mr. James Langdale, of Lockington, £9 10s.

**AT CIRENCESTER RAM FAIR, Messrs. Moore and Hill** sold 40 rams for Mr. C. Barton, of Colne St. Dennis, at the average of £15 2s. 6d., against £16 3s. last year for 18 sheep. One of these sheep realised the high price of £97 13s., another £40 19s., a third £29 8s., and a fourth £27 6s. The same auctioneers disposed of 28 rams for Mr. Edward Fowler, of Aston Farm, at an average of £10 17s., against £8 18s. last year. Mr. T. Clarke, of Frampton Mansell, sold 13 rams, and the average was £7 5s. 4d., against £7 last year. Mr. James Villar sold for Mr. H. Cole, of Ashbrook, 22 rams, at an average of £11 11s., against £8 15s. 6d. last year; for Mr. E. Handy, Sierford, 25 rams, at the average of £12 13s., against £11 12s. for 50 sheep last year. Mr. T. Porter, of Bampton, sold 14 sheep, at an average of £7 7s., his last year's average being the same within a few shillings. Mr. T. B. ale Browne sold one ram at £10 10s. Mr. C. Hobbs sold 30 Oxfordshire Down rams, which brought an average of £13

2s. 6d., against £11 16s. last year. Mr. Handy's No. 3 was sold to Mr. Slatter, of Stratton, for 47 gs., and No. 22 from the same lot made 42 gs., and was bought by Mr. Brown, of Swindon. Messrs. Acock and Hanks sold for Messrs. T. and S. Gillett, of Kilkenny, 17 rams at an average of £12 19s., against £7 1s. 5d. last year for a like number. Mr. G. Hewer, of Northleach, sold three rams at an average of £10 3s. 2d., against £7 1s. last year. Mr. J. Gillett, of Langley, sold seven, averaging £7 8s. 3d., against £10 14s. 8d. last year for 18 rams. Mr. Russell Swanwick, of the Collage Farm, let and sold 21 rams at the average of £10 10s.; a similar average was realised last year. Messrs. Acock and Hanks offered 11 rams from the flock of Mr. R. Jacobs, of Bury Barns, and they averaged £9 6s. 1d., against £9 9s. 1st year. Mr. C. Pimell, of Westrell, had seven rams sold, averaging £10 19s. Mr. Charles Gillett, of Bibury, sold nine rams; average £6 13s. Mr. J. Pedley, of Bibury, sold 18 rams; average £14 9s. 4d., last year's average being £9 2s. 8d. for 20 rams. Mr. C. Barton, of Fifehead, sold 33 rams at an average of £8 7s. 1d., against £11 12s. 9d. last year. Mr. J. Walker, of Compton Abdale, sold 12 sheep, averaging £9 12s. 6d., against £9 1s. last year. Acock and Hanks also sold for Mr. W. H. Fox, of Bradwell Grove, some Oxfordshire Downs. The prices realised were not very startling, but they maintained a steady firmness throughout. Two of Mr. Pedley's sheep sold for 31 and 24 gs. respectively, the buyers being Mr. Thomas, of Cowbridge, and Mr. Cooper, of Daglingworth. One of Mr. Swanwick's sold for 21 gs. to Mr. Priestman, of Leigh.

**MR. MASTFEN'S SHROPSHIRES, AT PENDEFOURD, BY MR. FREECE.**—There was a steady trade throughout at fairly remunerative figures, ranging from 42gs. paid by Mr. Joseph Beach, to 8gs., several going at such figures as 21gs. Mr. Coxon 25gs., Mr. Booth 20gs. (let), Mr. Clare 35gs., Lord Strathmore 36gs., Mr. Horley 20gs., Mr. Coxon 36gs. A two-shear was let to Mr. Foster at 31 guineas. The ewes ranged from 70s. to 109s., averaging nearly 90s. per head.

**MR. BENNETT'S HAMPSHIRE DOWNS, AT CHILMARK, BY EWER AND WINSTANLEY.**—The following prices were realised: Mr. F. Moore, of Littlecot, 49gs.; Mr. E. Dibben, Bishopstone, 37gs.; Mr. A. Budd, Quidhampton, Overton, 17½gs.; Mr. Hoddinott, Snerborne, 10½gs.; Mr. R. C. Iles, Middleton Farm, Warminster, 10½gs. The average of the prices obtained at the letting was £18 2s. 6d. The prices for the rams and ram-lambs sold averaged from 42gs. to 4gs. The following purchases were made: Mr. A. Budd, 42gs.; Mr. P. Chapman Saunders, Watercombe, 18gs. and 15gs.; Mr. John Read, New Court, 13gs.; Mr. W. Gay, White-parish, 13gs.; Mr. John Friend, Tarrant Hinton, 11gs. Mr. Webb, Wallop, 11gs.; Mr. Pinnegar, Coombe, 9 and 8½gs.; Mr. Walter Read, 9gs. The average on the whole sale was 102s. per head.

**MR. C. WATERS' HAMPSHIRE DOWNS, AT SALISBURY, BY MR. J. WATERS.**—The average of the six letting lambs was £20 18s. 3d. Mr. Newton (Dogdean) securing lot 3 at 45gs.; Mr. Carpenter (Burcombe) lot 5 at 25gs.; and Mr. Moore, (Littlecot) lot 4 at 17gs. The average of the 64 lambs sold was £10 2s., Mr. Hayter (Woodyat's) purchasing lot 25 at 21gs. and lot 70 at 11½gs.; Mr. Coombes (Barford) lot 20 at 18½gs. and lot 19 at 14gs. Mr. Lunn (Whitechurch) lot 25 at 18gs.; Mr. Warwick, lot 50 at 17gs.; Mr. White (Charage, near Mere), lot 30 at 16gs., lot 46 at 14gs., and lot 45 at 13½gs.; Mr. G. Read (Charford), lot 55 at 16gs.; Mr. Blake (Chiltem), lot 60 at 50gs.; the average of lambs let and sold being £11 1s. 7d. The two teeth rams were then let and sold at satisfactory prices.

**MR. J. GIBLIN'S RAMS, AT LITTLE BARDFIELD, BY MR. FRANKLIN.**—The sale commenced with the Cotswolds. No. 28 fell to the bid of Mr. W. P. Chalk for £14 10s., No. 6 going to Mr. Johnson, of Thurlow, for £13 10s. Among the other purchasers was Mr. Alham, who took three at £10, £9 15s., and £7 5s. Three others went to Mr. H. Free, at £9 10s., £7 5s., and £14 5s. Mr. James Welch took No. 4, at £10 10s. Mr. H. Rolfe secured two: Mr. B. and, of Chickney, six; Mr. T. Chalk two, at £12 and £10; Mr. Loti, two, at £11 and £10; Mr. G. Perry, three. Altogether 35 Cotswolds were disposed of, at an average of £8 2s. 1½d. Next in order came the Oxford Downs. The prices for the working sheep ranged from £5 10s. to £14 5s., the highest priced one going to Mr. H. Free. Mr. T. Chalk took two, at



£12 and £10; Mr. Lott, No. 46, at £10; Mr. A. Bolton, of Carby, one at £11; Mr. Squier secured five for £15 10s.; Mr. G. Perry two, at £7 10s. and £9 5s. In this division 19 were sold, averaging £5 16s. 11d. each, being the highest average attained since 1867.

MR. GERMAN'S SHROPSHIRE'S, AT MEASHAM.—The first shearing, the winner of the second prize at the R. A. S. E. at Taunton, was let for 50 guineas to Mr. W. H. Clare. The other rams ranged from 9 to 27 guineas, giving an average of £17 3s. each. The ewes averaged £4 each.

MR. F. BUDD'S HAMPSHIRE EWES, BY MR. HARRIS.—The 200 ewe lambs made an average of 7ss. 6d., the 220 two-teeth ewes 106s. 2d., the 160 four-teeth ewes 105s. 4d., the 220 six-teeth ewes had 96s. 1d.

MR. GEORGE FLETCHER'S COPSWOLDS.—Mr. Villar sold forty eight shearlings, averaging £16 13s. 9<sup>3</sup>/<sub>4</sub>d., one making 71 guineas.

WINCHESTER RAM SALE.—Mr. Harris had a ram letting and sale at the Corn Exchange, when 141 rams from the flocks of Lord Ashburton, Messrs. G. Budd (Cliffenden), Arnold (Weston), J. and F. Ray (Pwyfor), Burrough (Leben Stoke), Trask (Northington), Wheeler, Pink (Hambedon), Easton (North Waltham), and Warwick (Martyr Worthy), were offered, and of these 111 were sold, the average being a little over £6 each. Mr. Budd's eighteen averaged £5 5s., the highest prices being 13<sup>1</sup>/<sub>2</sub>, 10, 8<sup>1</sup>/<sub>2</sub>, and 7<sup>1</sup>/<sub>2</sub> guineas. Messrs. Arnold made 6<sup>1</sup>/<sub>2</sub> and 6 guineas. Messrs. Ray averaged £6 15s. with nineteen lambs, the highest being 10<sup>1</sup>/<sub>2</sub> guineas (given three times), 9, 8, and 7 guineas. Mr. Burrough made 12<sup>1</sup>/<sub>2</sub>, 8<sup>1</sup>/<sub>2</sub>, and 7<sup>1</sup>/<sub>2</sub> guineas; and Mr. Warwick with twenty-nine lambs made 13<sup>1</sup>/<sub>2</sub>, 11<sup>1</sup>/<sub>2</sub>, 10<sup>1</sup>/<sub>2</sub>, 9<sup>1</sup>/<sub>2</sub>, and 8<sup>1</sup>/<sub>2</sub> guineas, his flock averaging £7 3s. 6d.

MR. G. WALMSLEY'S RAMS AT RUDSTON.—The average was about the same as last year. The highest price, £27, was given by Sir Tatton Sykes. Some of the rams, however, only brought £5 10s. or £7.

MESSRS. FISHE'S RAMS AT LECONFIELD.—Fifty shearlings, mostly, if not all, descendants of a sheep from the late Mr. Torr, were disposed of at prices varying from £16 to £5 5s. The total amount realised for the shearlings was about £440, or something under £9 a head. The first thirty lot averaged £10 a head, but the subsequent lots reduced the average. Some two-shears were afterwards let at from £5 5s. to £8 5s. a head.

MR. RAULENCE'S EWES AT BULBRIDGE.—Messrs. Ever and Winstanley sold by auction, on Wednesday, the remainder of this flock. Some of the lambs were too young to be sold at the last sale, and it was these which were disposed of on Wednesday. Mr. Newton, for lot 4 gave £17 17s., and for lot 16, £11; Mr. E. Dibben, for lot 13 gave £10 5s.; Mr. Hooper, lot 10, £10 5s., and lot 31, £6; Mr. Parson, lot 1, £7 5s., and lot 34, £6 5s.; Mr. Read, lot 17, £5 10s., lot 3, £5 5s., lot 28, £5, and two lots at £4 10s.; Mr. W. Bennett, lot 2, £6; Mr. F. Moore, lot 25, £6; Mr. R. Brine, lot 19, £5 10s.; Mr. R. Egg, lot 5, £4 15s.; Mr. Barnes, lot 6, £4 15s.; Mr. H. art, lot 22, £4; Mr. Holdsworth, lot 24, £4; &c. The average was £4 17s. 3d. per head.

MR. DIBBEN'S RAMS AT SALISBURY, BY MESSRS. EWER AND WINSTANLEY.—There were ten ram-horns to be let, which realised the following prices: No. 1, for the season, 10<sup>1</sup>/<sub>2</sub> gs. (Mr. Pinckney); No. 2, ditto, 8 gs. (Mr. J. Terry); No. 3, to the 6th September, 12 gs. (Mr. Brown); No. 4, for the season, 9 gs. (Mr. W. Read); No. 5, to the 5th September, 29 gs. (Mr. Ivamy); No. 6, for the season, 7<sup>1</sup>/<sub>2</sub> gs. (Mr. Brown); No. 7, to the 15th September, 10<sup>1</sup>/<sub>2</sub> gs. (Mr. W. Flower); No. 8, for the season, 10<sup>1</sup>/<sub>2</sub> gs. (Mr. W. Flower); No. 9, for the season, 21 gs. (Mr. W. Flower); No. 10, to the 10th of September, 15 gs. (Mr. W. Bennett); the average being about £15 per head. There were 76 ram lambs to be sold. The following prices were realised: 11 gs. (Mr. Trask), 11<sup>1</sup>/<sub>2</sub> gs. (Mr. E. Pinckney), 5 gs., 7 gs. (Mr. Silience), 29 gs. (Mr. Read), 9<sup>1</sup>/<sub>2</sub> gs. (Mr. Keevil), 5<sup>1</sup>/<sub>2</sub> gs., 8 gs. (Mr. Silience), 10<sup>1</sup>/<sub>2</sub> gs. (Mr. Lockyer), 26 gs. (Mr. Ivamy), 22 gs. and 20 gs. (Mr. Trask), 21 gs. (Mr. Cave), 20 gs. (Mr. P. Brown, 18 gs., 11<sup>1</sup>/<sub>2</sub> 10<sup>1</sup>/<sub>2</sub> gs., and 3 gs. (Mr. Simpkins), 17<sup>1</sup>/<sub>2</sub> gs. (Mr. T. J. Hayter), 17 gs. (Mr. Higgins), 15 gs. (Mr. Holdsworth, steward to the Earl of Pembroke), 13<sup>1</sup>/<sub>2</sub> gs., 12<sup>1</sup>/<sub>2</sub> gs., and 9<sup>1</sup>/<sub>2</sub> gs. (Mr. A. Blake), 12<sup>1</sup>/<sub>2</sub> gs. (Mr. Harris), 12<sup>1</sup>/<sub>2</sub> gs. (Mr. Horne), 11<sup>1</sup>/<sub>2</sub> gs. (Mr. Pinckney, Berwick). The prices ranged from 29 gs. to 5<sup>1</sup>/<sub>2</sub> gs.; the average being £11.

MR. MANSELL'S, AT ERCALL.—Up to the present year Messrs. Mansell have had a joint sale of rams, selected from both the Ercall Park and Adeott Hall flocks, but these have now become sufficiently extensive to enable Mr. Mansell, sen., to find material for one day's sale at Ercall, whilst his son takes Bingley Hall as the place for the disposal of the Adeott sheep. Owing to the entire failure of the root crop on the farm last winter, the sheep were backward in condition. Five were let for the season and thirty-three sold; the average for the whole being close on £17. Lord Chesham purchased No. 6, a R. A. Show sheep, at 90 gs.; Mr. Stubbs securing No. 1 at 51 gs.; and Colonel Linc. No. 20 at 49 gs. Others made 25, 20, and 18 down to 6 gs. Lord Chesham secured an old sheep at 20 gs. Purchases were also made by or on behalf of Lord Leigh, Mr. Berkeley, Mr. Nock, Mr. Brewster, Mr. Jukes, and Mr. Stedman. The ewes, only in ordinary store order from the pasture, made from 100s. to 67s. 6d., averaging slightly under 80s. per head. Lythall and Clarke, of Birmingham, conducted the sale.

MR. COXON'S, AT FREEFORD.—Mr. Preece submitted thirty shearlings and four older sheep to competition. The first shearing was of good size long, and level, and made 35 gs. for the season to Mr. Bawell, Ireland. No. 2 made 24 gs., to Mr. Garduer; and No. 7, a well-formed shearling with a nice head, found favour with Mr. German, at 40 gs. No. 8, a good wether-getter, made 17 gs.; and the other shearlings ranged from that figure down to 6 gs. The first old sheep was Ranger, exhibited at Taunton, and used last year by Mr. German, who now purchased him at the high figure of 100 gs. The ewes were a good lot, free from black wool and with good skins, and made from 12 gs. each, which was paid for the show shearing ewes, downwards.

BINGLEY HALL.—A large proportion of the stock was bought for export to Canada and Kentucky; and several Irish and Scotch flockmasters also made selections. Mr. E. Lythall's fifteen rams made from 6 to 20 gs. each, Mr. Nock's from 9 to 32 gs., two being let at 30 and 17 gs. respectively. Lord Willoughby de Broke's averaged 13 gs., Mr. W. Yates's 7 to 14 gs., Lord Sudeby's 6 gs., Mr. Sheldon's 7 to 16 gs., and Lord Wenlock's about 6 gs. Mr. Pully's thirty ranged from 10 to 40 gs., and averaged close on 20 gs. each. Mr. F. J. Mansell's rams made from 8 to 23 gs., three being let at 13, 16, and 25 gs. respectively. Those of Mr. Picken made from 5<sup>1</sup>/<sub>2</sub> to 6<sup>1</sup>/<sub>2</sub> gs., Mr. Horley's 6 to 12 gs., Mr. Long's 5 to 6 gs., Mr. Jowitt's 7 to 17 gs., Lord Leigh's 5 to 6 gs., Mr. Bostock's 5<sup>1</sup>/<sub>2</sub> to 6<sup>1</sup>/<sub>2</sub> gs., Mr. Mnor's 6 to 10 gs., Sir Robert Peel's 5 to 10 gs., Mr. Graham's 7 to 18 gs., Mr. R. O. Leicester's 4 to 6 gs., Mr. F. Lythall's 7 gs., Mr. Hubbard's 5 to 6 gs., Mr. Grimwood Cooke's 6 to 10 gs. The ewes were for the most part low in condition. Mr. Yates's made from 50s. to 92s. 6d., Lord Willoughby de Broke's 50s. to 60s., Mr. E. Lythall's 60s. to 70s., Mr. Sheldon's 60s. to 75s., Mr. Tolefree's about 60s., Mrs. Tolefree's 55s., Mr. T. J. Mansell's 81s. to 112s. 6d., averaging nearly 100s.; Mr. Chattock's 52s. to 63s., Mr. Bickford's 50s. to 54s., Mr. B. Long's 55s. to 63s., Mr. R. O. Leicester's 70s., Mr. Grimwood Cooke's 100s. The sale was conducted by Lythall and Clarke, of Birmingham.

MR. GUNNELL'S RAMS.—Shearing rams: Messrs. Parsons £5 10s., Oakey £6, J. Graves £7 15s., Boyce £15, Linton £25, Boyce £10 10s., Cole £10, Allen £11 and £13 10s., Linton £11, Waters £12 10s., Hawkins £9, Linton £15, Hawkins £11 10s., Linton £17, Allen £5 5s., Hawkins £9 10s., Linton £25, Hawkins £10, Boyce £13 10s., Turney £6, Linton £9 10s., Wagstaff £10, Frohock £8 10s., Waters £8, Wagstaff £9 10s., Gunnell £7 10s., Allen £8, Piggott £8 10s., Haslop £8 5s., Turney £8 15s., Oaky £6 10s., Wilson £8 5s., Cullum £6 15s., Grain £8, Haslop £6 5s., Allen £8, Turney £8, Linton £10, Phillips £8, Male £6 5s., Hawkins £6, Oakey £7, Scott £7 5s., Oakey £7, Haslop £5 10s., and £6, Papworth £6, Linton £27 10s., Papworth £6 5s., Brown £7 10s., Ivatt, £5 10s., Papworth £7, Scott £5 15s., Adams £7 and £5 10s., Banyard £10 10s., Waters £8 10s. Ewes, five in each lot: Messrs. Street 69s. each, Brown 88s., Street 66s., Rowley 88s., Street 71s., Paul 73s., Street, 69s., Brown 70s., Allen 73s., Paul 78s., Allen 73s., Baker 70s., Brown 71s., Baker 69s., Living 64s., Brown 67s., Allen 62s.

MR. G. W. LANGDALE'S RAMS.—Many of the rams are from the flock of Mr. C. Clark, of Seorick, and every one was disposed of. The flock realised about £475—an average of £9 10s. per sheep. The highest price obtained was £26, which was given by Mr. E. Riley,

off Kipling Cotes, for lot 20. The same gentleman also bought lot 12 for £22 5s.; £22 10s. was obtained for lot 5, and £21 10s. for lot 9. The remaining prices were as follow: Lot 6, £21 10s., and lot 10, £12, Mr. Barker; lot 11, £16 15s., Mr. Craggy; lot 16, £14 10s., Mr. England; lot 1, £10, and lot 25, £11 5s., Mr. Baiuton; lot 2, £10 10s., Mr. Jackson; lot 15, £10, Mr. Hall; lot 18, £10 10s., Mr. Stephenson; lot 21, £11 10s., Mr. Buttle; and lot 24, £10, Mr. Grant. The upset price was, as usual, £5 5s.

**MR. ALLEN'S RAMS AT MARKSHALL.**—There were 40 ram lambs brought into the ring, which were hired at prices ranging from £9 downwards, the average of the whole number being £4 10s. 9d. Fifty shearing rams were put up, and the highest fetched £26 (being hired for the Norwich Corporation farm), the average price for the lot being £8 10s. 9d. Four two-shears fetched about £5 5s. each.

**MR. H. ROBINSON'S RAMS AT CARNABY.**—There were 67 animals brought into the ring, and everyone was let, realising a total sum of £745 10s. The 40 shearlings made an average of £11 13s. 4d., and the two shear £9 17s. 7d. Several sheep fetched high prices. No. 53 was let to Mr. Doran, Kilham, for £26; No. 14 to Mr. Tramer, Poston, for £20; No. 15 to Mr. Wright, Gramsmoor, for £20; No. 1 to Mr. Cranswick, Thornholme, for £18; No. 10 to Mr. Harrison, Grindall, for £18; No. 57 to Mr. Doran, Kilham, for £17; and No. 12 to Mr. Milner, Middledale, for £18.

**CAPTAIN SMITH'S RAMS AT MARTON LODGE.**—Fifty-five rams were put up, the first 20 to be let, and the remainder to be sold. Of these 33 were disposed of, the shearlings making £6 10s., and the two shear £7 10s.

**MR. STAMPER'S LEICESTERS AT HIGHFIELD.**—There were offered a flock of 30 shearlings and 25 aged sheep. The shearlings made an average of £5 5s. each, the highest price paid being £16 10s., by Mr. Feetenby, Nunington. Of the 25 shearlings offered, Mr. Johnson, of Brigham, Hull, took the highest priced, £15 5s.; and the lowest, £5 5s., was taken by Mr. Cattley, of Stearsby. The average of the 25 aged sheep was £8.

**SALE OF SHROPSHIRE SHEEP, BY MR. FREECE.**—The Shropshire sheep breeders' forty-seventh annual sale and show took place in the cattle market, Shrewsbury, on Thursday and Friday. The number of animals on the catalogue was as follows: Shearling rams 176, two-shear rams 11, three-shear rams 10, four-shear rams 3, stock rams 9—among the latter being Carbuncle, Bruce, Young Ensdon, Fidelity, Lord Tredegar, &c. The lots of Mr. Fowler, Mr. Edgar, Mr. Cotterell, Mr. R. Edwards, and Mr. Horton, fetched fair prices. A four-shear ram, sire Midlothian, belonging to Messrs. Fenn and Harding, 14 gs. Mr. Musgrove bought one for 25 gs. A shearing ram, sire Bruce, sire of dam Nobleman, fell to Mr. Harwood for 26 gs. Mr. Davies bought a shearing ram, sire Lord Wenlock, for 12 gs. Lord Chesham's two dozen, which included some very fine Shropshires, formed one of the principal items in the sale. A shearing ram, sire Marquis of Bute, dam Newcastle, went to Lord Vernon for 85 gs.; do, dam Nocks, second prize, to Mr. Graham, for 22 gs.; ditto, dam Old Radford, 17 gs., to Mr. Headford; ditto, dam an Oxford, first prize, 16 gs., to Mr. Jones, Norton; ditto, sire Marquis of Bute, 20 gs., to Mr. Juckles; ditto to Mr. Hartopp for 14 gs.; ditto to Mr. Smith for 60 gs.; ditto, Mr. Riley, 70 gs.; ditto, sire Lord Kingston, sire of dam Duke of Manchester, to Mr. Jowett, 100 gs.; ditto, sire Lord Kingston, sire of dam Oxford Hero, Mr. F. H. Smith, 61 gs.; ditto, sire No. 12, sire of dam Old Latimer, Mr. Pumphrey, 21 gs.; ditto, sire No. 12, sire of dam Mansells, No. 8, to Mr. Richard Jones, 41 gs.; ditto, sire No. 12, sire of dam Oxford Hero, to the Earl of Lismore, 20 gs. Mr. Craue had a grand lot as usual. One shearing was let to Mr. Masfen for 80 gs. Mr. Evans, of Uffington, had 24 grand animals. Amongst the purchases were: Mr. Horton, Yardley, 23 gs.; Mr. Milner, 11 gs.; Mr. Wright, West Felton, 18 gs.; Mr. James, 9½ gs.; Mr. Oswell, 30 gs.; Mr. Juson, 10 gs.; Mr. Robert Ray, Market Drayton (let), 15 gs.; Mr. S. Miller, 13 gs.; Mr. Bach, 18 gs., &c. Mr. Minton exhibited eight; one, a son of Conservative, fell to Mr. Mason for 27 gs., and another to Capt. Wilhams for 28 gs. Mr. Bowen Jones had six animals. Mr. Wyatt purchased a three-shear, sire Calcot, sire of dam Conservative, for 18 gs.; Mr. Rogers for 14 gs., a shearing, sire Houghton Hero, sire of dam Turpin. Mr. C. R. Keeling, of Congreve, Stafford, had ten lots of shearing rams.

On Friday the sale commenced at eleven o'clock, and comprised a collection of pure-bred ewes from the most celebrated flocks in the kingdom. Mr. Crane's 35 shearing ewes and stock ewes realised an average of 80s.; Mr. Evans's (Uffington) 60 at 70s. to 105s.; Mr. T. Horton's (Harnage Grange, Salop) 25 at 67s.; Mr. M. Williams's (Dynton) 25 at from 70s. to 10 gs.; Mr. J. W. Minton's (Porton) 30 at 65s. and 120s.; Mr. Andrews's (Nobold) 20 at 70s.; Mr. W. Fowler's 20 at 70s. to 90s.; Mr. Bach's 35 at 65s. to 85s.; 40 belonging to Lord Willoughby de Broke fetched 67s. 6d.; Mr. Edwards's 15 sold at 195s.; the 40 of Mr. Thomas's 85s.; Mr. J. B. Jones's 50, 75s.; Mr. R. Jones's 65 fetched 65s. and 104s.; Mrs. Franks's 55 sold at 75s. 6d.; Mr. W. Jones's 20 at 60s.; Mr. R. Fowler's 36 at 65s.; Mr. G. Horton's 25 at 65s. and 95s.; Mr. P. Everall's 20 at 70s.; Mr. R. Barber's 20 at 87s. 6d. and 105s.; Messrs. H. and W. Bromley's 20 at 90s.; Mr. Adney's 15 at 55s.; Mr. E. Dickin's 12 at 60s.; Mr. Myott's 10 at 60s.; Messrs. J. and G. Crane's 20 at 70s.; Mr. C. G. Wingfield's 15 at 70s.; Mr. Joseph Crane's 20 at 60s. and 75s.; Mr. S. Groves's 20 at 65s.; the representatives of the late Mr. W. B. Lloyd, 20 at 60s.; Mr. Lloyd's 20 at 65s.; Mrs. Houtt's 25 at 57s. 6d.; Mr. Hiles's 20 at 65s.; Mr. R. L. Burton's 60 at 57s. 6d.; Major Lovett's 15 at 55s.; Messrs. C. and J. Calcott's 20 at 60s.; Mr. S. Dickin's 10 at 57s. 6d. Upwards of 2,000 sheep were disposed of.

**OXFORD RAM FAIR.—OXFORDSHIRE DOWNS.**—Messrs. Franklin and Gale had a lot of ram-lambs to sell by auction at this fair on Wednesday last, from the flocks of Messrs. H. Gale, Parker, Allin, Allin, and Franklin. Trade was good throughout, every lamb being sold, some of the most choice making as much as 20gs., 24gs. and 29gs. each. The following shows the result of the different sales: Mr. H. Gale's 70 lambs sold at prices ranging from 4 gs. to 20½ gs., the average being £7 1s. Mr. Parker's 50 lambs made from 4 gs. to 29 gs., the average being £9 2s. 3d. Mr. P. Allin's 20 lambs averaged £5 2s. Mr. J. Allin's 20 lambs averaged £5 8s. 6d. 40 lambs, bred by Messrs. W. T. and T. Franklin, were sought for at the average of £11 16s., the prices ranging from 5½gs. to 24 gs.

**MR. F. R. MOORE'S RAMS.**—This sale and letting took place at Britford Fair, by Mr. J. E. Rawlener. The average of the ten letting lambs was £11 6s. 9d., Mr. Newton securing lot 3 at 32 guineas; Mr. J. Read, lot 7 at 12 guineas; Mr. Spaeknan, lot 8 at 11½ guineas; Mr. Andrews, lot 5 at 10½ guineas; Mr. Cheyney, lot 2 at 10 guineas; and Mr. Coles, lot 1 at 9 guineas. The average of the forty-nine lambs sold was £11 6s. 8d. The two two-teeth rams sold for 15 guineas and 14 guineas.

**OXFORD DOWNS AND COTSWOLDS BY MESSRS. PAXTON AND CASTLE.**—Mr. J. Roberts' lot comprised 40 Oxfordshire Down shearing rams, for which the highest price was 47 gs., and the lowest 8 gs., making an average of £15 9s. Mr. H. Gale purchased an old sheep of this flock, which had been used three years, for 34 gs. Mr. C. Gillett, of Cote House, Banpton, Faringdon, had about a similar number. The ram which fetched the highest price was purchased by M. A. Brassey, the sum being 28 gs. The lowest price was 10 gs., and the average £16 10s. 6d. Fifteen Oxford's ram-lambs, the property of the Earl of Jersey, realised from 11 gs. to 4 gs., averaging £6 8s. 6d. Nineteen Cotswold rams, the property of Mr. C. Gillett, of Lower Haddon, made from 11 gs. to 4 gs., being an average of £7 6s. Mr. S. Smith, of Somerton, had a lot of 18 Cotswolds, which sold at an average of £12 10s. 6d., the highest price being 16½ gs., and the lowest 8½ gs. A lot of 12 Cotswolds, the property of Messrs. T. and S. G. Gillett, of Kilkenny, averaged £11 5s. One fetel el 21 gs., and the lowest price obtained was 8 gs. Ten Oxfordshire Down shearing rams, from the flock of Mr. Davis, Sevenhampton, made an average of £11 15s.; 12 Oxfordshire Down shearing rams, bred by Mr. R. W. Hobbs, Kelmscott, realised an average of £7 10s. 9d., and 10 rams offered by Mr. W. G. Hatton, of Lower Farm, King-ton near Tettsworth, fetched an average of £6 3s.

**MR. CHARLES CLARK'S LONGWOOLS AT SCOPWICK.**—Fifty shearing, and several older animals were penned for sale, and the buyers and prices were as follows: Mr. S. Stonesby, two at 13 and 34 guineas respectively; Mr. Allison four at 12½, 10, 7½, and 7 guineas; Mr. Hole, 8½; Mr. Burt, 18; Mr. T. Kirkham, 12; Mr. T. Kirkham, 52; Mr. Rawlinson, 7½ and 15; Mr. Davy, 75; Mr. C. Clarke, 60 and

22; Mr. Stevenson, 15, 16, 12, and 76; Mr. Holland, 48 and 20; Mr. Mackinder, 14; Mr. Pepper, 14; Mr. Allen, 10, 6, and 7½; Mr. Dudding (Banton), 10 and 47; Mr. Dudding (Howell), 7; Mr. Towle, two at 6 and three at 6½; Mr. Wilson, 8; Mr. Howard, 18; Mr. Gilbert, 10, 14, and 12½; Mr. Green, 6½; Mr. Bourne, 7½; Mr. P. Blankney, 7½; Mr. Fox, 7½; Mr. Godson, 8; Mr. Martlet, 10½; Mr. Rudgud, 11. One four-shear, Mr. Casswell, 30; one three-shear, Mr. J. Kirkham, 60; one two shear, Mr. Holland, 13; and one two shear, Mr. Allen. The average realised was £17 14s. 6d.

LAMBS AT HAWICK. — Messrs. Oliver and Son commenced their second lamb sale for the season at Hawick on

Thursday. There was an immense attendance of farmers and buyers—it was perhaps the largest gathering ever seen here. Prices ruled high. The classes sold yesterday were three-parts and half-breds, a few crosses, and some other sheep. The lambs were generally up from the corresponding sale of last year 6s. to 10s. per head, and in some instances 14s. and 15s.

MR. MATTERSON'S RAMS, AT NORTH NEWBALD.— They made an average of £7 a-head. The best of the stock was sold as follows: £20 by Mr. G. Scott, Market Weighton; £15 10s., Mr. J. Whipp, Eton; £13 10s., Mr. S. Stephens, Goodmanham; £12 5s., Mr. Usher, Low Hunsley; £11, Mr. Peal, Newbald Lodge.

## REVIEW OF THE CORN TRADE DURING THE PAST MONTH.

The month of July being almost unprecedented in its fall of rain and low temperature, we are glad to have to record that the threatened damage to harvest has given way to the general firmness of the harvest month of August, for, though in its midst the cloudy and occasional rains were ominous we have experienced a fair portion of really summer weather, which has proved the saving of the crops. The laying of the corn by heavy storms has made reaping laborious, and in many cases beyond the power of machinery, and, with labour scarce, it has been very expensive; but a fair portion has already been gathered in much better order than expected, and should it hold fine a little longer, all will be saved. It was not to be expected that, with an unfavourable blooming time, and such a downpour as followed, the samples of this season could not be anything like equal to those of the last; but there will yet be a fair portion of moderately good corn, in fine condition, with which to commence the present season. A reaction, as a matter of course, has set in with regard to prices, for, with the sun doing ample duty, and foreign receipts of large dimensions, millers, who had been threatened, and began to appear as large and anxious buyers, soon saw their opportunity, and, leaving the market to itself, pretty much had their own way; the decline, therefore, may be estimated at 2s. to 3s. per qr. on old English and foreign qualities; and the new samples have also been placed at an equivalent reduction. Their quality and condition, though improved, certainly do not come up to the standard of last year, or even ordinary years; but let us be thankful for what we have got, and that foreign growths will make up our deficiency. So far as we have gone, the yield seems less, as well as the quality inferior; but to what extent this applies is not as yet known. It seems, however, much the same in other parts of Europe, and if so, as the season advances, there may be a new rally in prices for the farmers' help. In France it is very decidedly so. In Austria, Hungary, Poland, and some parts of Russia, the same complaints are made, and even in Germany there are rumours of deficiency in several localities; while America, with an extended growth, tells the same tale. Of course, at the opening of the season, prices for a time will be unsettled; but when we come more clearly to know what the deficiency may be, rates will be more settled. We do not, ourselves, apprehend they will, for the present, much vary from those now current. The following were the prices recently obtained at the several places named. The best white wheat at Paris 51s., Berdianski at Marseilles 50s. 8d., Ghirka 47s. 10d., Polish wheat at Antwerp 50s., wheat at Liège 53s. 6d., at Bruges 50s., at Verviers 53s., at Brussels 51s., old wheat at Maestricht 52s. 6d., new 50s.; wheat at Hamburg 52s. cost, freight, and insurance, at Berlin 46s. at Cologne 51s., at Stettin 46s., at

Mulhouse 53s., at Breslau 45s.; soft wheat at Algiers 41s. 6d., at Mayence 53s., at Pesth 47s., at Danzig 53s., at New York red spring No. 1 41s. 6d. per 480lbs.

The first Monday of the month being a Bank-holiday, we commence with the first Wednesday as its substitute. After good foreign arrivals for the previous week, and but little of home-growth, this morning's supply of English was scanty, though plentiful from foreign parts. The weather being fine, the attendance was limited; but English qualities were held at the rates of the previous Monday, with only a small demand. The plentifulness of red foreign made holders willing to quit samples at the previous Wednesday's decline of 1s. to 2s., per qr. but lower they would not go, so little business was done. White, however, having become scarce, factors obtained 1s. above the quotations then paid. Cargoes afloat were held at 6d. to 1s. more money.

The wheat trade in the country exhibited a material difference in prices. Some were without any change; some were 1s. to 2s. lower; some again were 2s. to 3s. down, and St. Ives quoted a fall of 3s. to 4s. On the other hand, Louth was rather dearer, and Stockton noted a rise of 1s. to 2s. Liverpool was 1d. to 2d. per cental higher on Tuesday, with a further advance of 3d. to 6d. on Friday. At Edinburgh, as well as at Aberdeen, there was no change. Irish wheat at Dublin brought 25s. to 26s. per barrel, and foreign was rather more in favour.

On the second Monday there was a small supply of English wheat, with a good arrival of foreign. The show of fresh samples this morning was very limited, and the weather having become unsettled, prices were raised 1s. to 2s. A parcel of new Talavera appeared, of moderate quality, and brought 60s.; the other samples were not satisfactory, and were not offered for sale. There was also a foreign trade of moderate extent, at the same advance. Cargoes afloat brought full prices. The unsettled weather had its influence also in the country; there was a general advance of 1s. to 2s., and in several cases the rise was 2s. to 3s. per qr. Liverpool on Tuesday was 6d. per cental dearer, but on Wednesday half this was lost. At Edinburgh there was a rise of 3s. per qr. At Dublin Irish samples brought 1s. to 2s. more per barrel, and foreign 2s. to 3s. per barrel.

On the third Monday there was a small supply of English wheat, but an unusually large arrival from abroad, say nearly 100,000 qrs., one-third of this being from America alone, with very large arrivals from Dantzic, Russia, and Australia. Though but little English was on show this morning, it included about 500 qrs. of new, of poor quality, which sold at 47s. to 53s.; old sorts were down 1s. to 2s. per qr., with only a slow sale. The foreign trade, by the bright weather and heavy arrivals, was almost at a stand-still, and to sell anything required a reduction of 2s. to 3s. per qr. Cargoes off the coast

were also 2s. down. The fine weather continuing till Thursday night, the country markets all came lower, the reduction generally being 1s. to 2s., and in some cases 2s. to 3s. Liverpool was down 3d. to 4d. per cental on Tuesday. On Friday the market was rather lower for red wheat. Saturday's markets were mostly 1s. to 2s. lower, and a few 3s. to 4s. Edinburgh was down 2s. to 3s. Aberdeen was unaltered, but Glasgow was 6d. to 9d. per boll cheaper for wheat. Irish wheat at Dublin brought 1s. per barrel less money, and foreign 1s. 6d. per barrel.

On the fourth Monday there was but a small supply of English wheat, but plenty of foreign, two-thirds of which were from America. There was very little old wheat on the stands this morning, and only a small quantity of new rather improved in quality, but still not fine. With the finest wheat continuing, prices were 1s. to 2s. lower, with a dull trade. Foreign was also lower, white 1s., and red qualities 2s., without much doing. Floating cargoes were also reduced 2s. per qr.

The arrivals into London for four weeks were 9,675 qrs. English, 249,017 qrs. foreign, against 10,076 qrs. English, 182,110 qrs. foreign, for the same period in 1874. The imports into the kingdom for the four weeks ending 14th Aug. were 4,484,997 cwts. wheat, 501,047 cwts. flour, against 3,828,039 cwt. wheat, 415,314 cwt. flour in 1874. The London averages opened at 52s. 2d., and closed at 51s. 4d. The general averages commenced at 47s. 5d., and closed at 51s. 9d.

Flour, influenced by the decline in wheat, has been exceedingly dull, and in the last two Mondays was certainly 2s. to 3s. lower to sell, Norfolks not being a ready sale at 37s. Foreign qualities were reduced 2s. per sack, and about 1s. 6d. per barrel, the latter being difficult to place, at 28s. to 29s. per barrel. The London receipts for four weeks were 57,167 sacks English, 20,029 sacks 57,673 barrels foreign, against 41,809 sacks English, 5,248 sacks 28,079 barrels foreign for the same period in 1874.

The receipts of British Barley have been exceedingly small, but there have been good average arrivals from abroad, chiefly of grinding qualities. The malting trade being over the value of English and Scotch have been quite nominal, and foreign during the month has declined fully 1s. per qr., being worth about 26s. to 30s. for light to heavy grinding sorts. Our own crop this year, though considered to be the largest crop of the season, is reported as very poor in quality, no business in it yet having transpired, and, indeed, scarcely a sample shown.

The imports into London for four weeks were 159 qrs. British, 58,050 qrs. foreign against 359 qrs. British, 19,178 qrs. foreign in 1874.

The malt trade has been dull and drooping all through the month, holders being more anxious to sell, especially since the fine weather.

Of maize there have been large arrivals, especially on the fourth week: prices till then had been pretty steady, but they gave way fully 1s. per qr., with great difficulty in sales; mixed American and Danubian were worth about 35s. per qr.

The London receipts in four weeks were 87,286 qrs., against 123,034 qrs. for the same period in 1874.

The supplies of English oats have been very short; of Scotch only one small lot has appeared; of Irish none; but the foreign arrivals have been very free, and nearly three-fourths of them from Russia; a portion of these latter, being undried, have been a heavy sale on the market, but fresh corn, whether Russian, Swedish, or from other parts, has been easily placed all through the month, with very little difference of value, being, perhaps, about 6l. per qr. lower; but inferior light qualities have quite given way 1s. per qr.: 38lb. Russians were worth 21s. 6d. on board ship, and 40lbs. 26s. 6d. per qr.: 38lbs.

Swedish 25s., and 40lbs. 27s. 6d., these latter were a good sale. This crop is the best they have in France this year, though prices have but little given way, fine heavy corn in Paris being worth 28s. 6d. per qr.

The arrivals into London for the four weeks were 644 qrs. English, 90 qrs. Scotch, 326,460 qrs. foreign, against 677 qrs. English, 910 qrs. Scotch, 239,928 qrs. foreign for the same period in 1874.

The supplies of English beans have been moderate, but the foreign arrivals have been good. Values have been unusually steady, though high, all the month, there having been a good country demand; while maize and barley have been comparatively low. Egyptian beans are worth 40s.; Italian, of which there have been large receipts, 47s.; English Mazagans, 46s.; Harrows, 50s. to 52s.; and small as much as 56s.; so that this is the dearest corn in the market; but on receipt of new samples, if in fair condition, we may expect lower rates. The imports into London in four weeks were 1,567 qrs. English 10,136 qrs. foreign, against 1,031 qrs. English, 12,875 qrs. foreign in 1875.

The supplies of English peas have been small, but fair of foreign, though nearly all white, and mostly from Canada. Home-grown hog feed have nearly disappeared, and the new, in small quantities, have been held at 45s. for duns, not certainly a fine sample, and said to be a poor yield; while good white foreign are freely offered at 43s., available for horse feed is not in demand as boilers. The London receipts in four weeks have been 597 qrs. English, 6,503 qrs. foreign, against 1,285 qrs. English, 9,491 qrs. foreign in 1874.

The supplies of linseed having only been moderate and stocks low, prices had rather improved, and are likely to keep firm. During the rainy weather there was a disposition to speculate in cloverseed, which, however, was checked by the smallness of stocks; but since it has become fine there has been less inclination to invest, as one of the old proverbs is, "A hot August always makes seed;" but small holders keep to former values, and especially for trefoil; while white mustard has been advancing, and good rapeseed, being scarce, has sold well.

## CORN IMPORTED AND EXPORTED

FOR THE WEEK ENDING AUG. 14.

	Imported into			Exported.	
	Engl'd.	Scot'd.	Ireland.	British.	Foreign
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Wheat.....	845861	98254	192510	41	612
Barley.....	184521	8804	24178	95	...
Oats.....	388640	21911	...	211	143
Rye.....	6413	...	...	...	69
Peas.....	29445	6161	...	111	...
Beans.....	6953	6132	...	20	...
Indian Corn.....	292745	31712	135082	...	...
Buckwheat.....	3133	3200	...	...	...
Total.....	1801611	179474	3,1770	481	824
Wheat Flour.....	133573	19855	14050	163	5
Barley Meal.....	3	...	...	...	...
Oat Meal.....	...	...	...	153	...
Rye Meal.....	10	...	...	...	95
Total.....	133586	19855	14050	316	100
Grand Total.....	1933200	199320	367820	797	924
Malt.....qrs.	...	...	...	2008	...

## FOREIGN GRAIN ENTERED FOR HOME CONSUMPTION DURING THE WEEK ENDING AUGUST 21.

Wheat.....	cwts.	336728	Peas.....	cwts.	3178
Barley.....	"	85967	Maize.....	"	18887
Oats.....	"	223513	Flour.....	"	5499
Beans.....	"	1181			

Printed by WATSON and HAZELL, 265, Strand, London.

# LONDON AND COUNTY BANKING COMPANY.

ESTABLISHED IN 1836, AND INCORPORATED IN 1874 UNDER "THE COMPANIES ACT, 1862."

SUBSCRIBED CAPITAL...£3,750,000, in 75,000 SHARES of £50 EACH.

PAID-UP CAPITAL .....	1,200,000	} £1,425,790
INSTALMENT ON NEW SHARES .....	223,790	
RESERVE FUND .....	525,000	} £636,395
INSTALMENT OF PREMIUM ON NEW SHARES .....	111,895	

DIRECTORS.

T. TYRINGHAM BERNARD, Esq.	FREDERICK HARRISON, Esq.	WILLIAM NICOL, Esq.
ROBT. ALEX. BROOKS, Esq.	WM. CHAMPION JONES, Esq.	A. HODGSON PHILLPOTTS, Esq.
THOMAS STOCK COWIE, Esq.	E. HARBORD LUSHINGTON, Esq.	WILLIAM HENRY STONE, Esq.
FREDERICK FRANCIS, Esq.	JAMES MORLEY, Esq.	JAMES DUNCAN THOMSON, Esq.

JOINT GENERAL MANAGERS—WILLIAM MCKEWAN, Esq. and WHITBREAD TOMSON, Esq.  
 CHIEF INSPECTOR. CHIEF ACCOUNTANT. SECRETARY.  
 W. J. NORFOLK, Esq. JAMES GRAY, Esq. GEORGE GOUGH, 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, W. MCKEWAN, } Joint General  
 WHITBREAD TOMSON, } Managers.

## 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:—

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. HERBATH, the celebrated Analytical Chemist:—  
 Bristol Laboratory, Old Park, January 16th, 1881.

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 carcass. 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 64 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 of 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.

"B" 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 APPLIANCE..... 2/4, 4/5, 2/3, & 1/2.

# LONDON AND COUNTY BANKING COMPANY.

ESTABLISHED IN 1836, AND INCORPORATED IN 1874 UNDER THE "COMPANIES' ACT, 1862."

SUBSCRIBED CAPITAL, £3,750,000, IN 75,000 SHARES OF £50 EACH.

## REPORT ADOPTED AT THE HALF-YEARLY GENERAL MEETING, 5TH AUGUST, 1875.

The Directors, in laying before the Proprietors the Balance Sheet of the Bank for the Half-year ended on 30th June last, have the satisfaction to report that after paying Interest to Customers and all charges, allowing for rebate, and making provision for ordinary bad and doubtful debts, the Net Profits amount to £165,929 2s. 10d. This sum, added to £18,936 9s. 5d. brought forward from the last account, produces a total of £184,856 12s. 3d.

They have declared an Interim Dividend for the Half-year at the rate of 16 per cent. per annum, which will absorb £96,000, and after reserving £8,093 15s. to meet Interest accrued on New Shares, there remains a balance of £82,762 17s. 3d. to be carried forward to Profit and Loss New Account.

The Directors regret to report that an exceptional loss has been incurred through the failure of Messrs. A. Collic & Co., whose drafts upon various firms, amounting to £213,398 17s., held by the Bank, have not been, or will not be paid at maturity, or in full. To meet this loss the Directors have transferred from the Reserve Fund and placed to a special account the sum of £75,000, which, with the balance of Profit and Loss carried forward, will in their judgment be an ample provision for any deficiency that may arise.

The Reserve Fund, after the above deduction, stands at £696,895.

The Directors have the pleasure to report that they have elected Mr. Robert A. Brooks (of the firm of Messrs. Robert Brooks & Co., of St. Peter's Chambers, Cornhill), to a seat at the Board, vacant by the retirement of Mr. N. Alexander.

The rules and regulations for granting retiring and other allowances to Officers of the Bank, having been submitted to Counsel for consideration, he has advised that it is desirable that the resolution passed by the Proprietors at the Annual General Meeting, held on 4th February last, authorising the Directors to grant those allowances, should be confirmed by the Proprietors at an Extraordinary Meeting, which, in conformity with notice already given, will be held after the conclusion of the present Meeting, when the resolution referred to will be submitted for confirmation.

The Dividend, £1 12s. per Share, free of Income-tax, will be payable at the Head Office, or at any of the Branches, on or after Monday, 16th instant.

### BALANCE SHEET OF THE LONDON AND COUNTY BANKING COMPANY, 30TH JUNE, 1875.

Dr.	Cr.
To capital paid up..... £1,200,000 0 0	By cash on hand at Head Office and Branches, and with Bank of England..... £3,200,484 3 1
To instalments received in respect of new shares ..... 223,790 0 0	By cash placed at call and at notice, covered by securities..... 2,989,906 17 3
	Investments, viz.:
To reserve fund..... 525,000 0 0	By Government and guaranteed stocks..... 2,021,814 16 9
To instalments received in respect of new shares..... 111,895 0 0	By other stocks and securities..... 82,103 7 6
	2,103,918 4 3
To amount due by the Bank for customers' balances, &c. 21,249,000 17 1	By discounted bills, and advances to customers in town and country..... 14,831,608 1 3
To liabilities on acceptances, covered by securities..... 1,960,488 6 0	By liabilities of customers for drafts accepted by the Bank (as per contra)..... 1,960,488 6 0
	16,792,066 7 3
To profit and loss balance brought from last account.. 18,936 9 5	By freehold premises in Lombard-street and Nicholas-lane, freehold and leasehold property at the branches, with fixtures and fittings ..... 421,815 9 10
To gross profit for the half-year, after making provision for bad and doubtful debts, viz..... 445,438 7 7	By interest paid to customers..... 102,915 0 7
	By salaries and all other expenses at head-office and branches, including income-tax on profits and salaries..... 123,412 17 10
	£26,734,549 0 1
	£26,734,549 0 1

### PROFIT AND LOSS ACCOUNT.

To interest paid to customers, as above..... £102,915 0 7	By balance brought forward from last account..... £18,936 9 5
To expenses, as above..... 123,412 17 10	By gross profit for the half-year, after making provision for bad and doubtful debts..... 445,438 7 7
To rebate on bills not due, carried to new account..... 53,190 6 4	
To dividend of 8 per cent. for half-year..... 96,000 0 0	
To Reserve to meet interest accrued on new shares..... 6,093 15 0	
To balance carried forward..... 82,762 17 3	
	£464,374 17 0
	£464,374 17 0

We, the undersigned, have examined the foregoing Balance Sheet, and have found the same to be correct.  
London and County Bank, 29th July, 1875.

(Signed) WILLIAM NORMAN,  
RICHARD H. SWAINE, } Auditors.  
STEPHEN SYMONDS,

By Order, GEO. GOUGH, Secretary.

**LONDON AND COUNTY BANKING COMPANY.—NOTICE IS HEREBY GIVEN** that a DIVIDEND on the Capital of the Company, for the Half-year ended 30th June, 1875, at the rate of 16 per cent. per annum, will be PAYABLE 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 16th instant.

By Order of the Board,  
W. McKEWAN, } Joint  
WHITBREAD TOMSON, } General Managers.

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# THE FARMER'S MAGAZINE.

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DECEMBER, 1875.

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*The Duke*

# THE FARMER'S MAGAZINE.

DECEMBER, 1875.

## PLATE.

### THE DUKE: A PRIZE CLYDESDALE STALLION.

THE PROPERTY OF MESSRS. E. & A. STANFORD, EATONS, STEYNING.

The Duke, foaled in 1867, was bred by His Grace the Duke of Hamilton, at the Home Farm, Hamilton, Scotland, and purchased by his present owners in 1869. He was got by that celebrated Sir Walter Scott, out of Bell, by Lothian Tom.

The Duke is a rich brown bay, with black legs, rising 8 years old, standing 17 hands high, and possessing great muscular strength, good symmetry, and hardy constitution.

The Duke has won the following prizes, which are the only times he has been exhibited: In 1872, the second at the Royal Agricultural show at Cardiff; and highly commended and reserve number at the Royal Counties at Windsor. In 1873, the second prize at the Royal Agricultural show at Hull; first at the Royal Counties at Southampton; and highly commended at the Alexandra Park. In 1874, the second prize at the

Royal Agricultural show at Bedford; the first at the Royal Counties at Reading; highly commended and reserve at the Bath and West of England at Bristol; and commended at the Alexandra Park. In 1875, the second prize at the Royal Agricultural show at Taunton, second at the Bath and West of England at Croydon; second at the Royal Counties at Portsmouth; first at Slinfold; first at Tunbridge Wells with silver cup for the best horse in the show of any description.

Several of The Duke's stock have also taken prizes at the above show and at many local shows, and have been sold at high prices; the Messrs. Stanford last year selling some weaners at 80 guineas each, three-year-old fillies at 150 guineas, and in October last a yearling colt for 160 guineas. They have still some very superior colts and fillies by him for sale.

## THE FARMERS' CLUB.

### ROOT CROPS AS AFFECTED BY SOIL MANURE AND CLIMATE.

The first monthly meeting of the Club, after the usual suspension during the summer and autumn, was held on Monday November 1st, in Salisbury-square, when Dr. Voelcker, the Chairman for the year, introduced the subject approved for consideration—viz., Root Crops as affected by Soil Manure and Climate.

On taking the chair, Dr. VOELCKER said that, as he should have the pleasure of addressing them at some length that evening, he would not, in opening the winter session, make a speech on the prospect of agriculture, the weather of the past season, or the character of the harvest, though such topics were very interesting to farmers; but he had one announcement to make, which he was sure would be gratifying to the members of that Club—namely, that at a Committee meeting held that afternoon, it had been unanimously agreed to elect for the chairmanship for the ensuing year, Mr. Thomas Hurley—(cheers)—a gentleman who was well known to be a thoroughly practical farmer, and whose example in the neighbourhood in which he lived, had been attended with the most beneficial results. A gentleman,

OUR SERVICES.

too, of great energy and public spirit, and one who, besides being an active member of the Royal Agricultural Society, had long manifested great interest in the welfare of the Farmers' Club (cheers). He had great pleasure in making that announcement, and having done so he would now ask Mr. Lucas, who was the Chairman last year, to take the place which he then occupied.

Mr. E. M. M. LUCAS having then succeeded to the chair, and expressed his confidence that the introduction of the subject by Dr. Voelcker would prove deeply interesting,

Dr. VOELCKER proceeded to read the following paper: The members of the Central Farmers' Club, I trust, will not expect of me a paper on root-crops which treats systematically on the preparation of the land, the application of manure, mode and time of sowing, and subsequent management of the various root crops usually grown in this country. There is hardly a single Farmers' Club in England, if at all occupied with agrical and domestic, at which subjects specially related to the practical management of root crops have not been discussed, more or less fully, by many able men,

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whose skill and experience as farmers entitle them to speak on practical matters with greater authority and benefit than a chemist, whose daily occupation and mental bias are formidable obstacles in giving due prominence to purely practical details, in the observance of which success in cultivating root crops so largely depends. Disclaiming, therefore, at the outset the intention to read a systematic paper on the management of roots, I desire to bring before you some points which it strikes me are not always kept in view by root growers, or upon which more precise and certain information has to be gained before we can duly appreciate the influence of soil, manure, and climate upon the quality and weight of the roots usually grown in England. The remarks which I shall have the pleasure to make I trust will present points of attack, and open the way to a useful discussion. The principal root crops grown in England are turnips (*Brassica rapa*), swedes (*Brassica campestris*), mangolds (*Beta vulgaris*), carrots (*Daucus carota*), and parsnips (*Pastinaca sativa*). There are numerous varieties of turnips, swedes, and mangolds, greatly differing in size, shape, and quality; and, according to their real or supposed superiority and suitability to particular soils and districts, some kinds are held in greater favour, and are more extensively cultivated, in one locality than in another. The varieties of carrots and parsnips grown in England are less numerous than the tribe of turnips. In the selection of the particular kinds of roots, farmers, as a rule, are more frequently guided by chance and habit than by an experimental knowledge of the true merits which characterise particular varieties. A useful discussion might be raised on the merits of different varieties of turnips, swedes, and mangolds, with special reference to their feeding and keeping qualities, and their suitability for particular soils and climates. This subject embraces a very wide range of observations, and, treated in a comprehensive and thoroughly practical manner, would not fail to engage the interest of an agricultural audience. Is it, however, not my intention to enter upon so interesting a topic which cannot be fully and profitably discussed this evening, for the subject set down on the card reminds me to confine my remarks to points connected with the influence of soil, manures, and climate upon root crops. Although sugar-beets are not much grown in the British Islands, I shall have to refer specially to that crop, inasmuch as its chemical history has been more carefully and intelligibly studied than that of any other root crop, and because, by these studies, a number of facts have been ascertained which are not only interesting and intrinsically valuable to the continental sugar beet grower, but also to the cultivator of root crops of every kind, and in every climate and country. All the varieties of roots usually grown by farmers are biennial plants. Such plants, I need hardly remind you, in the first year of their existence produce an abundance of leaves, chiefly from atmospheric food, and, through the medium of the leaves, elaborate the assimilated plant-food into sugar, pectine, albuminons, and other organic compounds, which are stored up gradually in the more or less matured root during the autumn or colder months of the first year. These food constituents, accumulated in the root, are expended again in the second year in the production of a flowering stalk and seed, with the ripening of which the life of biennial plants terminates. Besides atmospheric food—from which, indeed, the bulk of our root crops is derived—certain mineral matters are no less essential to their life and luxuriant development, for experience has supplied abundant proof of the fact that without a sufficient supply of

lime, potash, phosphoric acid, and other mineral constituents, present in the ash of turnips, mangolds, &c., these crops do not thrive, and are liable to various diseases, such as finger-and-toe, and at the best produce but a scanty crop. The mineral, or ash-constituents of roots, are thus absolutely necessary to their healthy growth, and the full development and storage of food in the bulbs; and, as the ash-constituents of plants can only be supplied either by the soil, or the manure that is put upon it, we recognise at once the important influence of the soil and manure upon the growth of roots. Before offering any remarks on the influence of the soil on the character of root crops, I would invite your attention to the following tables, representing the average composition of the ash, both of roots and leaves of the principal root crops:

AVERAGE COMPOSITION OF THE ASH OF ROOTS—CARBONIC ACID DEDUCTED.

	Numbers of analyses	LEAF-ASH.									
		Potash.	Soda.	Lime.	Magnesia.	Oxide of iron.	Phosphoric acid.	Sulphuric acid.	Silica.	Chlorine.	Carbonic acid in original ash.
Turnips ...	38	49.8	7.8	11.7	2.6	0.9	10.3	11.8	1.3	5.0	14.0
Swedes ...	7	38.9	14.0	12.8	4.2	0.8	10.4	13.7	1.9	4.2	12.9
Mangolds ...	12	46.6	18.4	5.9	4.8	0.8	8.3	3.7	4.0	9.3	19.0
Sugar-beet ...	40	48.0	10.4	6.4	9.5	1.0	14.4	4.7	3.8	2.3	13.7
Carrots ...	10	37.0	20.7	10.9	5.2	1.0	11.2	6.9	2.6	4.9	17.9
Parsnips ...	4	46.7	2.7	15.7	6.0	1.3	15.8	5.6	2.4	4.0	14.5
Turnips ...	37	27.6	5.1	33.2	2.6	2.0	7.3	13.1	3.5	7.7	12.7
Swedes ...	3	21.9	13.3	30.2	3.2	2.0	6.4	10.6	4.8	11.0	8.4
Mangolds ...	4	25.5	23.3	10.1	9.7	1.3	5.4	7.2	3.3	17.8	14.5
Sugar-beet ...	7	21.9	16.6	19.5	18.1	1.3	7.3	7.9	3.1	5.7	8.0
Carrots ...	7	17.6	18.2	32.1	3.9	3.0	3.8	8.2	5.2	8.0	19.1

The ashes of all the roots are, on the whole, of a similar character, but the range of variations in the ash-constituents is great, especially in the case of the leaves. The most constant and important ingredients in the ash of root crops are potash and phosphoric acid; and lime also, it will be seen, enters largely, although in variable proportions, into the composition of the ash of roots, whilst chlorine and soda appear to be most variable, and less essential, and more indifferent mineral constituents of root crops. The ash of the leaves differs materially from that of the roots, the chief differences being observable in the much larger proportion of lime and chloride of sodium in the leaves than in the roots, with a smaller proportion of potash and phosphoric acid. The quantity of plant-food removed from the soil by root crops is very large—much larger, indeed, than the amount of mineral matter which is taken from the soil by wheat, barley, and other cereal crops. Assuming the average crop of turnips to be 17 tons of roots, and the proportion of root to leaf 100:30; of swedes, 14 tons roots and proportion of root to leaf 100:15; mangolds, 22 tons roots' root to leaf 100:37; sugar-beet, 10 tons roots, root to leaf 100:25; carrots, 10 tons roots, root to leaf 100:10; the quantities of the different ash-constituents removed in the crop will be in lbs. per acre about as follows:

	Potash.	Soda.	Lime.	Magn. nit.	Phos- phoric acid.	Sal- phuric acid.	Chlo- rine.	Silicic.	Total ash.
Turnips, root .....	108.6	17.0	25.5	5.7	22.4	25.7	10.9	2.6	215
" leaf .....	40.2	7.5	48.5	3.8	10.7	19.1	11.2	5.1	146
Total crop .....	148.8	24.5	74.0	9.5	33.1	44.8	22.1	7.7	361
Swedes, root .....	63.3	22.8	19.7	6.8	16.9	22.3	6.8	3.1	163
" leaf .....	16.4	9.2	22.7	2.4	4.8	8.0	8.3	3.6	75
Total crop .....	79.7	32.0	42.4	9.2	21.7	30.3	15.1	6.7	238
Mangold, root .....	191.1	75.4	21.2	19.7	34.0	15.2	40.6	16.4	410
" leaf .....	71.4	63.2	2.91	27.2	15.1	20.2	49.8	9.2	289
Total crop .....	262.5	140.6	53.3	46.9	49.1	35.4	90.4	25.6	699
Sugar beet, root .....	76.8	16.6	10.2	15.2	23.0	7.5	3.9	6.1	160
" leaf .....	25.6	19.4	22.8	21.2	8.5	9.2	6.7	3.6	117
Total crop .....	102.4	36.0	33.0	36.4	31.5	16.7	10.6	9.7	277
Carrots, root .....	73.2	40.4	21.3	10.1	21.8	13.5	9.6	3.9	165
" leaf .....	44.0	45.5	80.2	9.7	9.5	20.5	22.2	13.0	230
Total crop .....	117.2	85.9	101.5	19.8	31.3	34.0	31.8	16.9	445

It will be seen from the preceding tabulated statement that a moderate crop of turnips, amounting to 17 tons of roots takes from the soil upon which it is grown as much as 364 lbs. of mineral matters; a crop of 14 tons, 238 lbs.; and 22 tons of mangolds as much as 699 lbs. from every acre of ground. By far the largest proportion of the mineral matters thus removed from the land consists of potash, and the quantity of phosphoric acid taken up by root crops from the soil is also considerable, and much larger than the amount carried off in a good crop of wheat or barley. Root crops thus exhaust the land to a greater extent than cereals of available mineral constituents, and I may add they also exhaust the land rapidly of its nitrogenous constituents. Many persons regard root crops rather as restorative crops in a rotation, whereas in reality they exhaust the land far more rapidly of available plant-food than cereals, if the roots are not consumed upon the land. No crop affords so good an indication of the agricultural condition of land as a crop of swedes or mangolds. On naturally poor soils, or on land exhausted by continuous cropping and grown without a sufficient supply of manure, the poverty of the land manifests itself much more strikingly in the scanty root crop than in other crops of a rotation; and, on the other hand, a high agricultural condition, or great natural fertility, shows itself strikingly in the heavy root crops which are raised on such land. This circumstance explains the universal practice to manure the land liberally for roots, more especially for mangolds, which, it will be seen by the preceding figure,

remove more plant food from the soil than any other root crop. It also explains the policy of consuming the roots upon the land upon which they have been grown, and supplies a good reason to landowners to refuse their tenants to sell roots off the land without special agreement, in which provision is made for ample restoration of the elements of fertility which are removed from the land in the shape of roots. In good practice, however, roots enrich the land, and put it in good heart for the succeeding crop—not because the root crops take little or nothing out of the land, but because, as a rule, roots are liberally manured, and the produce is either wholly or in part consumed upon the land, and the elements of fertility are thus practically retained on the farm. The large demand which roots make upon the land, both for mineral and organic food-constituents, clearly points out the intimate connection between the character and condition of the land and the root produce, which may be reasonably expected from the different descriptions of soils. Every good farmer knows full well that some soils are naturally better adapted to root culture than others, and that the character of the land not only affects the weight of the produce, but also the feeding and keeping qualities of the roots. For instance, it is a well-known fact that turnips grown on peaty soils are not to be compared in point of feeding qualities with roots grown on a naturally rich alluvial soil, or a good loamy friable soil. Again, soils destitute of lime and potash, like many light sandy soils, are liable to produce turnips affected by Anbury, or the disorder known as finger-and toe, and there are certain free-growing soils, upon which roots ripen prematurely, and turn out spongy and innutritious, whilst on stiff clays, not brought into a friable condition by autumn-cultivation, roots do not arrive at maturity, and yield but a scanty crop. Allow me to illustrate this part of my subject by referring to some examples which have been brought under my notice at various times. In the first place, let me direct your attention to the subjoined analysis, representing the composition of a good friable clay-loam, with a fair admixture of sand, a soil admirably well adapted to the growth of sound, nutritious swedes and mangolds.

COMPOSITION OF A GOOD TURNIP LOAM.

Moisture .....	4.575
Organic matter .....	6.327
Oxide of iron .....	4.713
Alumina .....	5.544
Lime .....	1.391
Magnesia .....	.717
Potash .....	1.714
Soda .....	.678
Sulphuric acid .....	.101
Phosphoric acid .....	.116
Chlorine .....	.006
Silica .....	71.058

100.000

Here we have soil in good friable condition, and of considerable depth, containing all the elements which enter into the composition of the ashes of root crops. It will be seen that this soil contains, practically speaking, enough potash to supply the wants of many heavy crops of roots; that it contains a fair proportion of lime, and as much phosphoric and sulphuric acid as is generally found in fairly fertile soils. It also embodies a good deal of organic matter, and, in short, meets largely all the requirements in plant food for root crops. Land of that description may, therefore, be expected to produce

heavy, sound, and nutritious roots. In contrast with this rich turnip loam, I place before you the results which I obtained in the examination of two poor sandy soils from a farm in Wiltshire. These soils contained in a 100 parts—

	No. 1.	No. 2.
Organic matter and water of combination	5.36	4.82
Oxides of iron and alumina	5.78	12.16
Carbonate of lime	.25	.15
Phosphoric acid	traces	traces
Sulphuric acid	.08	traces
Magnesia and alkalies	.41	.46
Insoluble siliceous matter (chiefly sand)...	88.12	82.41
	100.00	100.00

Both were taken by me from a light sandy field, on the slope of a hill, in a district where the land abounds visibly in limestone and calcareous gravel. Several turnip fields surrounding the gently sloping hill from which the samples were taken I ascertained were moderately stiff calcareous clays, and the turnips grown there had a healthy appearance, and promised a fair average yield. On the side and top of the hilly field, on the other hand, there was not a sound turnip to be seen, except on two isolated spots, upon which I subsequently learned a cart of gas-lime had been unloaded the preceding year. The roots were so much injured by Anbury that it was not considered worth while to send sheep over the field. The soil No. 1 was taken from the top of the hill, where the turnips were most affected by Anbury, and No. 2 soil was a bright, red-coloured soil from the slopes of the hill, where the turnips were likewise much diseased. A glance at the analyses of the two soils shows that both contained merely traces of phosphoric, and scarcely more lime; whilst the potash, soda, and magnesia together did not quite amount to ½ per cent. Bearing in mind that an average crop of 17 tons of turnips removes from the land as much as 148 lbs. of potash, and 74 lbs. of lime, or altogether 364 lbs. of mineral matters, it is evident that the deficiency of available ash-constituents, and more especially the want of lime and potash in the sandy field, fully accounted for the failure of the root crop, and the diseased state of the turnips in this field. It not frequently happens that, as in the case before us, on similar light soils, turnips make a good start, and at first grow remarkably vigorously up to the time of thinning out, soon after which they make no further progress and gradually dwindle away almost altogether, evidently for the want of the appropriate plant-food in such soils. In such cases, the first thing that should be done with the land, is to apply to it a good dressing of lime or marl, or gas-lime, if it can be obtained at a smaller expenditure of money. Lime, in some shape or other, often proves to be an effectual remedy against Anbury in roots, and without a sufficiency of this necessary constituent, no root crop can come to perfection. In addition to lime, however, poor sandy soils on which turnips fail should be well manured with ordinary dung; for as lime supplies only one of the elements of fertility, and does not meet, therefore, the natural deficiency of potash and other essential food-constituents for root crops, common dung, which contains all the fertilising elements required by roots, meets better the natural poverty of poor sandy soils than most artificial manures. It is an interesting circumstance, that on the spot of the field upon which gas-lime had been unloaded the preceding year, the turnips were sound, and of a fair size. There was another place, occupying only a few square

yards, in the corner of the same sandy field, which presented a remarkable contrast to the rest of the turnip field. On this spot the roots were perfectly healthy, and of a good size, and it appeared that on this spot a dung-heap had been set up in previous years. The subsequent examination of samples of soils from those green spots of the turnip field showed that both contained a much larger proportion of lime and alkalies than the rest of the field where the turnips failed. We thus have presented to us here interesting practical illustrations of the intimate relation which subsists between the character and chemical composition of the land, and the root-produce grown upon it. Turnips affected by Anbury, I may observe in passing, I find are much richer in nitrogen and in mineral matters than sound roots, as will be seen by the following results, which I obtained in the analysis of a turnip attacked by this disorder.

COMPOSITION OF A TURNIP ATTACKED BY ANBURY.

Water	88.02
*Aluminous compounds	3.56
Sugar, pectine, and digestible fibre	3.67
Woody fibre	3.27
Mineral matter (ash)	1.48
	100.00

\*Containing nitrogen..... .57

On an average sound nutritious turnips contain about 91 per cent. of water, and not more than 1½ to 1¾ per cent. of nitrogenous compounds, and much less than was found in the diseased roots; and it appears from these, and numerous other results to which I shall have to refer presently, that a high percentage of nitrogen and of ash in roots rather indicate immaturity, and by no means superior feeding quality. Roots grown on peaty soils, it is well known, frequently are spongy, and of a low feeding quality. Peaty land often is greatly deficient in lime, and in that case the turnip-crop is liable to finger-and-toe. Such is the character of two soils from Shropshire, which I analysed a great many years ago with the following results:

	No. 1	No. 2
Moisture	2.77	4.03
Organic matter	21.15	37.92
Oxides of iron and alumina	5.15	1.91
Carbonate of lime	.80	.52
Magnesia and alkalies	.88	.25
Insoluble siliceous matter	69.25	55.37
	100.00	100.00

On No. 1 white turnips grow well up to certain time, and then die off, and on No. 2 soil they suffer from finger-and-toe. Here, then, we have some further examples, which show that the deficiency of lime and probably of other mineral matters in the soil and the excess of organic matter greatly affect the character of roots grown upon such land. The preceding examples amply illustrate the intimate relation which exists between the character of the root crops and the nature of the land upon which they are grown. Before speaking of the influence of various kinds of manures upon roots, it appears to me desirable to a clear understanding of the remarks which I shall have to make on this head, to refer, as briefly as possible, to the average composition

of the principal root crops, and to consider the various conditions which regulate their nutritive value.

AVERAGE COMPOSITION OF ROOTS.

The following table, founded on numerous analyses, shows the average composition of different root crops.

	Turnips.	Swedes.	Mangolds.	Sugar Beets.	Carrots (white Belgian).	Parsnips.
Water .....	91.5	89.5	88.5	84.5	87.0	82.0
Albuminous compounds .....	1.1	1.5	1.5	1.5	.7	1.3
Fat .....	.2	.2	.1	.1	.2	.5
Pectine, &c. ....	1.5	1.9	1.0	.9	1.2	1.2
Starch .....	—	—	—	—	—	3.5
Sugar .....	3.0	5.0	5.5	9.5	6.5	3.0
Cellular fibre .....	2.0	2.1	2.4	2.5	3.5	7.5
Mineral matter (ash) .....	.7	.7	1.0	1.0	.9	1.0
	100.0	100.0	100.0	100.0	100.0	100.0

The amount of dry feeding matter, it will be seen, is largest in parsnips and smallest in white turnips. In the former we have as much as 18 per cent. of dry substance, and in the latter only 8½ per cent. If we arrange the different root-crops according to their percentage of water and dry substance we get the following order: 1, parsnips; 2, sugar-beets; 3, carrots; 4, mangolds; 5, swedes; 6, turnips. As regards the nutritive or feeding values of these different root-crops, I am inclined to place them in the same order, assigning the greatest value to parsnips and the least to turnips. The amount of solid matter in equally well-matured roots, it strikes me, may be fairly taken as the measure of their comparative feeding value. Well-matured roots, it will be seen, contain a considerable amount of sugar. The largest proportion occurs in sugar-beets, the smallest in turnips. Upon it the feeding value of roots greatly depends. Excepting parsnips, in which a certain proportion of sugar is replaced by starch—a constituent which serves the same ends in the animal economy—the percentage of sugar in roots affords a good means for judging of their comparative feeding values. Thus we have in:

Sugar-beets	9½	per cent. of sugar on an average
Carrots.....	6½	"
Mangolds...	5½	"
Swedes.....	5	"
Turnips ...	3	"

The order, based upon the percentage of sugar, it will be noticed, coincides with that based upon the percentage of dry matter in roots. Whether we judge of the nutritive value of well-ripened roots by either standard, the practical result is the same. The proportion of sugar, as a rule, rises or falls with the percentage of water and dry matter in the roots.

Starch occurs in considerable proportions in parsnips, and in small quantities in ripe mangolds, carrots, and swedes. With the maturity of the last-mentioned crops the starch disappears and becomes converted into sugar. The percentage of albuminous compounds and of ash constituents in different root crops on the whole do not vary in well-matured roots in the same degree as the percentage of sugar. The ease is different in immature roots. Such roots, according to their comparative state of maturity, exhibit a much greater range of variations in nitrogenous matter and ash. I find invariably the percentage of nitrogen and of ash much larger in roots at the earlier stages of their growth than at a later; a high percentage of nitrogen and of mineral matter in roots, therefore, are no indications of their high feeding value, but the reverse. Briefly stated, the nutritive value of different root crops depends largely upon their state of maturity, or in other words upon the percentage of dry matter, and the proportion of sugar in the dry substance of the roots. Unripe turnips and mangolds not only are poor in sugar, and for this reason not so nutritious as well-matured roots, rich in sugar, but they also contain a number of organic acids, which, together with an excess of imperfectly elaborated nitrogenous substances, appear to be the chief cause of the unwholesome properties of unripe roots. If such roots are largely given to stock it is well known they produce scour, and otherwise disagree with the health of sheep or cattle. Of the organic acids present in roots oxalic acid, a powerful vegetable poison, is the most important: it has been found in mangolds and sugar-beets, and probably occurs in all unripe roots. Oxalic acid occurs in mangold and turnip leaves in still larger quantities than in their immature bulbs. Midday found .22 per cent. of oxalic acid in sugar-beet, .43 per cent. in the stalk of the same root, and as much as 1.56 per cent. in the leaves. The presence of so large a quantity of this poisonous acid in mangold and turnip tops explains the scouring effects which mangold tops produce when cattle are fed upon them in considerable quantities. In passing, I may notice that the leaves of root crops contain much more nitrogen than the bulbous roots, and as turnip or mangold tops in regard to nutritive properties are not to be compared with the roots, we have here positive proof of the fact already pointed out that the feeding value of root crops is by no means proportional to the nitrogen which they contain. That this is not merely a theoretical proposition, is clearly shown by some direct feeding experiments which Mr. Lawes made in 1848, and fully described in a paper published in Vol. VIII., Page 495, of the *Journal* of the Royal Agricultural Society of England, with a view of testing practically the feeding value of four lots of white turnips, grown with different kinds of manures. Mr. Lawes determined the amount of dry organic matter which was consumed to produce 100 lbs. of live weight in sheep fed upon white turnips from his experimental field. The following tabulated statement explains itself:

NATURE OF MANURING.

	Mineral Manures only.	Minerals with Ammonia.	Minerals with Rapecake.	Minerals Ammonia and Rapecake.
Dry substance in the fresh turnips	6.37	8.42	7.73	7.88
Ash in dry roots...	6.69	7.13	8.21	8.92
Nitrogen in dry roots .....	1.76	2.68	2.36	3.20
Dry organic matter consumed to produce 100 cwt. of live weight...	lbs. 228	lbs. 1321	lbs. 2371	The sheep lost weight.

The turnips grown with minerals only (superphosphate and alkalis) were over-ripe and pithy; the second lot, which gave the best result, were fully ripe; the third and fourth lots were unripe. The most unripe turnips, containing the highest percentage of nitrogen and of ash, it will be seen gave the worst result when employed as food. These interesting experiments strikingly exemplify the influence of manures on the composition and feeding quality of turnips. Let us now examine a little more minutely the modifying influence of different kinds of manuring agents on root crops. Land highly manured with rich dung from the fattening boxes or stalls induces luxuriant and vigorous growth in root crops, and, as is well known, has a tendency to develop over-luxuriance in the tops. This is the case more particularly if the dung is derived from fattening beasts, liberally supplied with oilcake and artificial food rich in nitrogenous constituents. If the autumn turns out fairly dry and warm, the roots in highly-manured land continue to grow vigorously, the bulbs swell to a large dimension; and if the weather in September and October continues warm and dry, a heavy weight and fairly ripe roots result from the liberal use of rich dung. But should the autumn be cold and wet, too liberal an application of good, well-rotten dung is apt to maintain the luxuriant tops in a vigorous, active growing condition, at a period of the year when the crop has to be taken up, and the result is an immature root crop of a low feeding value. Although the bulbs may be of a good size, they turn out, when grown under such conditions, watery, deficient in sugar, and not nearly as nutritious as they would have been had a more moderate dressing of dung been put upon the land. The main cause of the immature condition and low feeding quality of mangolds grown with an excessive quantity of rich dung is the comparatively large amount of ammoniacal and nitrogenous constituents in the dung, for numerous field experiments have shown that the peculiar tendency of ammonia salts, and of readily available nitrogenous substances is to induce luxuriant leaf development and vigorous prolonged growth, which results frequently, in our fickle climate, in a more or less immature condition of the roots. There is thus danger of over-manuring root crops; and the desire to produce heavy crops of mangolds not unfrequently leads practical men not to appreciate sufficiently this danger. It is quite true mangolds are very greedy feeders and no doubt some soils will swallow up almost any amount of dung; but at the same time it has to be borne in mind that all land is not alike, and that there are many naturally rich clay loams containing immense stores of plant-food, which requires only to be brought into play by good cultivation in order to become available to plants. I am much inclined to think that it is a mistake to manure soils of the latter description too liberally with dung, even for mangolds, and that in many cases a more economical result, and certainly a better quality of mangolds, although not so heavy a crop, would be given, if instead of all the curmious dressings of dung which are often applied to that crop, the land were manured in autumn with only half the quantity of dung, and the seed drilled in with 3 to 4 cwt. of superphosphate or dissolved bones which manures, as we shall see presently, have a tendency to produce early maturity in roots. We frequently hear of complaints that mangolds scour, or do not keep well. Complaints of this kind are only the expressions in other words for the immature condition of the roots, and in many cases the cause of this undesirable condition has to be sought in the excessive amount of ammoniacal or nitrogenous constituents which are applied to the mangolds in the shape of heavy dressings of dung. The same remarks apply with equal force to the exclusive and too abundant use of Peruvian guano, sulphate of ammonia, and nitrogenous manures in general. The special effect of all ammoniacal and nitrogenous manures in general, as already stated, is to produce luxuriant leaf-development, to induce prolonged and vigorous growth, resulting in an immature and watery condition of the bulbs. Luxuriantly-growing roots always contain more water, as a rule, more nitrogen, and mineral or ash-constituents, than less vigorous plants of the same age; and hence large roots, generally speaking, are far less nutritious than better-matured roots, of a moderate size.

For illustration of this fact I quote the following comparative analyses:

	Water.	Nitrogenous Constituents.	Sugar.	Carrel, &c.	Crude Fibre.	Ash.
Mangel 9lb.....	91.85	1.34	2.86		2.54	1.41
„ 7½lb. ...	89.48	1.24	3.95		4.51	.82
Mangel 4lb.....	89.77	0.73	7.68		.89	.93
„ 1 to 2lb.	86.90	0.61	10.51		1.07	.91
Sugar-beet 5¼lb.	88.01	2.08	5.60		1.93	2.38
„ „ 1½lb.	84.35	1.17	8.10		5.28	1.10

Small mangolds approach sugar-beets in composition, whilst large sugar-beets are hardly better than common mangolds, and monster beets are even less nutritious than well-matured mangolds of fair average size. Monster roots, as is well known, are always very watery, poor in sugar, and almost useless for feeding purposes. The contrast in the quality of excessively big and moderately-sized roots is very striking, as will be seen by the following analyses, which I have grouped together, with an average analysis of 15 samples of beets, grown in 1869, in the neighbourhood of Lavenham, in Suffolk.

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.
Water .....	83.75	84.08	91.35	91.50	82.46
Crystallisable sugar.....	10.56	10.98	4.05	3.89	11.06
* Albuminous compounds ...	.98	.78	1.35	1.04	.81
Carrel and colouring matter	.62	.68	.84	.86	.66
Crude fibre (pulp) .....	2.98	2.71	1.72	1.90	3.87
Mineral matter (ash) .....	1.16	.77	1.19	1.21	1.14
	100.00	100.00	100.00	100.00	100.00
Specific gravity of juice.....	1.0279	1.0646	1.0352	1.0338	1.06218
At a temperature of .....	58° F.	58° F.	58° F.	58° F.	64° F.
Weight of roots .....	2½ lb.	1lb. 10½oz.	16lb.	12½lb.	2½ to 3½lb.
* Containing nitrogen ... ..	.149	.155	.216	.167	on an average

The sugar-beets which were grown in Suffolk, it will be seen, were fully as rich in sugar as the French roots, and in all

Nos. 1 and 2 were sugar beets grown in France; Nos. 3 and 4, two monster roots grown at Duscott Park, Berkshire; and No. 5, Lavenham beets.



respects quite equal to them for the manufacture of sugar. Whilst the Lavenham beets contained 11 per cent. of sugar and only 82 per cent. of water, the big Berkshire beets—one weighing 16lbs., and the other 12½lbs.—contained only 2.89 or 4 per cent. of sugar respectively, and in round numbers as much as 91½ per cent. of water. This high per-centage of water is accompanied by a larger amount of albuminous compounds and of mineral matter than the proportions in roots containing very much more solid feeding matter. A large amount of albuminous matter and of ash indeed indicates immaturity and poverty in sugar, a condition characteristic of big, excessively-manured roots. Numerous examples in illustration of the difference in the quality of large and small and moderate-sized roots will be found in my paper on the composition of sugar-beets, published in the *Journal* of the Royal Agricultural Society some years ago. Whilst speaking of large and small roots, permit me to say a word or two upon the childish practice of exhibiting monster roots at agricultural shows, and of giving prizes for such roots. Surely, by dint of manure and plenty of elbow-room, it is no great art or merit to grow monster turnips and mangolds. Such roots may delight or astonish women or children; but what, it may well be asked, is the use of such productions? and why should prizes be awarded to monster roots, which generally contain from 93 to 94 per cent. of water, and but little sugar, as the following analysis of a big green barrel turnip will show? In this root, weighing 19lbs., I found:

Water .....	94.103
* Albuminous compounds.....	.615
Pectine, gum, and a little sugar .....	3.171
Crude fibre (pulp) .....	1.535
Mineral matter (ash).....	.576
	<hr/>
	100.000
* Containing nitrogen.....	.008

The general influence of dung upon the weight of the produce and the quality of the roots is well known to practical men, and well illustrated in detail by the following experiments, which were brought under my notice in 1869. Three lots of sugar-beets, of four roots each, grown experimentally at Glasnevin, near Dublin, on analysis, were found by me to have the following composition:

	No. 1.	No. 2.	No. 3.
Water .....	85.60	85.59	89.09
* Albuminous compounds .....	1.17	1.66	1.27
Crystallisable sugar .....	8.56	7.87	6.73
Pectine, &c. ....	.54	.75	.45
Crude fibre (pulp) .....	2.87	3.06	2.48
Mineral matter (ash).....	.96	1.07	.98
	<hr/>	<hr/>	<hr/>
	100.00	100.00	100.00
* Containing nitrogen .....	.236	.267	.204

The average weight of the three lots of roots was about the same in each case, and amounted to about 2lbs. per root. The beets marked No. 1 were sown in drills, on the 13th to 15th of May, 21 inches apart, and 6 inches in the row; no manure was applied, the previous crop (mangolds) having been manured at the rate of 25 tons per acre; estimated produce per acre, 13 tons 2 cwt. 3 qrs. No. 2, sown 14th and 12th of May, in drills 27 inches apart, and 6 inches in the row; farmyard manure was applied at the rate of 12 tons per acre; previous crop, swedes; estimated produce per acre, 19 tons 2 cwt. 3 qrs. No. 3, sown on the 16th of May, in drills on the flat, 21 inches apart, and 6 inches in the row; farmyard manure was applied at the rate of 25 tons per acre; previous crop oats, followed by rape as a stolen crop; estimated produce 19 tons 5 cwt. 2 qrs. per acre. These experiments are interesting, as showing the prejudicial effect of the direct application of farmyard manure to sugar-beets, especially if the crop is sown as late as were the roots in the Glasnevin experiments. Without manure, it will be noticed, the beets No. 1 yielded 8.56 per cent. of sugar, with a moderate dressing of farmyard manure; No. 2 produced 7.87 per cent.; and No. 3, with a full dressing of farmyard manure, 6.73 per cent. of sugar. Peruvian guano, sulphate of ammonia, dried blood, and flesh-refuse, and, generally speaking, all nitrogenous manures, either should not be used at all or only sparingly for roots on stiffish land and all soils which contain a good deal of clay, and are naturally cold and unfavourable to a vigorous and rapid growth. On the other hand raw, or better still dissolved

Peruvian guano, is an excellent manure for root crops upon light land, which, like most productive sandy soil and friable turnip loams, favours the quick and vigorous growth of roots, and is conducive to early maturity. On such soils the application of ammoniacal or nitrogenous manures prolongs the period of growth of roots and their assimilation of atmospheric food, and it is mainly for this reason that Peruvian guano and well-rotted dung are held in such high estimation by Scotch farmers for producing the heavy crops of roots that are generally grown on the light lands in the West of Scotland. As a rule, the fields intended for roots, I believe, with most good farmers, are best dunged in the autumn. Ammoniacal manures, such as guano and sulphate of ammonia, should be sown broadcast in autumn or early in spring, and not be drilled in with the seed, for all ammoniacal manures, contrary to the generally-received opinion, have a tendency rather to check than to promote the early growth of the young plant, for which reason such manures should be well distributed, and emanated with a large body of soil, and not be placed into too close a proximity with the young turnips and mangold plants. I have made a good many field experiments on this subject, and find that on moderately stiff soils rotten dung, Peruvian guano, and sulphate of ammonia, and all nitrogenous manures, which later in the season sustain a vigorous and luxuriant growth, in a remarkable degree, retard the progress of turnip and mangold plants in their earliest stages of development. It is not on highly-manured land, but on naturally poor and unmanured sandy soils, that turnips come soonest to the hoe. I have noticed repeatedly that on recently-manured land the fly destroys the young plants much more effectually than on soils dunged in autumn, and believe the explanation of this fact, which is well known to many farmers, is supplied in the circumstance that on the autumn-dunged land the nitrogenous constituents of the dung get more thoroughly distributed in the soil than is the case when the dung is put upon the land in spring, when the young turnip plants come into a more direct contact with the dung, in consequence of which the earliest growth of the young plants is retarded to an extent which gives the turnip little time to clear off the plants. Nitrate of soda has the same general effect upon root crops as nitrogenous manures, but it appears to be more energetic in its action, and, on the whole, to be a useful addition to bone manures, and to increase the produce in roots more considerably than salts of ammonia. Its effect is especially marked upon mangolds, and to my knowledge heavy crops of mangolds have been produced upon rather light land by 1½ cwt. of nitrate of soda, 2 cwt. of common salt, sown broadcast, and 4 cwt. of dissolved bones drilled in with the seed. With regard to the use of salt as a manure for root crops, I would observe that salt checks over-luxuriance in the tops, and prolongs the period of active growth. In consequence of this specific action it may be employed with benefit as an auxiliary manure for swedes and mangolds upon a light land; but, according to my experience, it does no good, and, in quantities larger than 3 cwt. per acre, rather diminishes than increases the root-produce upon heavy land. Potash salts, in some field experiments which I have tried in different parts of the country, have shown that potash has a decidedly beneficial effect upon root crops on poor, sandy soils; whilst on the majority of land, and notably upon clays or clay loams, or soils in a good agricultural condition, salts of potash do not increase the produce. The special effect of superphosphate, dissolved bones, and similar phosphatic manures, is to produce early maturity; and hence phosphatic manures are employed in practice very largely, and with much benefit, by root growers. In free-growing light soils it is desirable either to use dissolved bones in addition to half a dressing of farmyard manure as a manure for roots, or to spread broadcast 2 or 3 cwt. of dissolved Peruvian guano and 2 cwt. of salt, or 2 of guano and 1 cwt. of nitrate of soda and 2 cwt. of common salt, and to drill with the seed 3 to 4 cwt. of dissolved bones. On the heavier description of soils it is preferable to use mineral superphosphate for roots, especially if the land has been dressed in autumn with a moderate quantity of dung. The addition of ammoniacal manures to superphosphate has a tendency to retard the maturity of the root crop, for which reason mineral superphosphate, applied alone to the stiffer classes of soils, generally speaking has a better practical effect upon the produce than dissolved bones or mixed ammoniacal and phosphatic manures. On account of the valuable property of

readily available phosphates to cause early maturity, neither turnips nor mangolds, nor, indeed, any root crop, in my judgment, should be grown without superphosphates, 3 or 4 cwt. of which per acre are best drilled in at the time of sowing. Thus much with regard to the special effects of the principal fertilising matters upon root crops. It will appear that a knowledge of the *rational* action of the various manuring matters, and a due consideration of the variable character of soils, and the peculiarities of the prevailing climate in a district, will enable a root grower to compound for himself in the most suitable manner, artificial manuring mixtures, or to confine himself to the use of purely mineral superphosphates, and to reap the benefit of his knowledge in the shape of heavy and sound root crops, at a more moderate expenditure than the farmer, who, in the selection of the manures he applies to his root crops, is not guided by a proper consideration of the principles involved in the economic application of manures, and who depends, in a great measure, upon the recommendations of the local manure merchants and agents, who, naturally enough, are loud in praising their special compounds. There remains for our consideration one more fertiliser upon which you will, perhaps, expect me to say a few words. I refer to town sewage, which, as you are aware, has been applied with more or less beneficial effects to roots, especially to mangolds. Without doubt town sewage is a most useful fertilizer for root crops, especially for mangolds, provided it be applied to the land at the right time and in proper quantities. Town sewage may be employed with great advantage repeatedly in large doses during the first two or three months of the growth of the root crops. In dry springs especially, the liberal application of sewage cannot fail to be of the utmost utility to farmers who can command a supply of this liquid fertilizer. It then encourages an early, luxuriant, and healthy development of leaves, by which sugar is afterwards elaborated from atmospheric food and stored up in the roots. Almost any quantity of town sewage may be applied to root crops during the first two months of their growth; but subsequently, and more especially when the bulbs have reached a considerable size, sewage should be withheld, or otherwise the crop will not properly ripen, and will be not worth much for feeding purposes. It is important to bear in mind that the more completely the supply of soil-food is withheld during the late summer months, the more fully the roots will ripen, and the richer they will become in sugar in consequence. Town sewage is held in bad repute by not a few farmers, whose experience leads them to suspect that there is something or other in sewage prejudicial to the production of sound roots of good feeding qualities. I believe this is a mistake, for sewage contains nothing inimical to the healthy growth and development of roots; and the examination of mangolds and sugar-beets has shown me that perfectly sound and nutritious roots can be grown with town sewage. At the same time I may state that some of the worst and least nutritious mangolds which have ever been analysed by me were grown with sewage; and I have herefore come to the conclusion that ill success with sewage as a manure for mangolds in most cases is due to its injudicious use, and not to any inherent bad qualities which it has been supposed to possess.

My remarks on the dependence of root crops upon the character of the soil upon which they are grown, and upon the composition of the various manures employed, have already occupied so much of the time that can be devoted to the subject appointed for our evening's discussion, that little or no time is left at my disposal to dwell upon the influence of the climate upon the quality of root crops. I regret this the less, because under this head, with one exception, I have not any remarks to offer which are based on special and personal experience, and I hardly think it profitable to allude to matters of common observation, with which most agriculturists are familiar. The exception to which I allude has reference to the cultivation of the sugar-beet, not usually grown in England. Doubts have been expressed as regards the suitability of the English climate to the production of beets so heavily rich in sugar to satisfy the demands of the manufacturer of sugar. Having had a good deal of experience of beet-root culture, I have no hesitation in saying that our English climate on the whole is favourable to sugar-beet culture. Our summers are quite warm enough to ripen sugar-beets sufficiently, and to produce roots rich in sugar, in proof of which I might quote numerous analyses of sugar-beets,

clearly showing that they can be grown of as good a quality, in many parts of England, as on the Continent. This crop does not require an excessive summer heat, in order to come to perfection. Indeed, sugar beets do not do nearly so well in Central France or Germany, nor in the South as in the North, where the summer temperature is much lower. It is not so much heat as a dry and unclouded sky during the autumnal months, which makes the sugar in the beet. A bright and dry August seems to do more for sugar-beets than almost any other condition, however favourable it may be to the luxuriant growth of this crop. Sugar-beet culture, therefore, is not likely to succeed well in a great part of Ireland and Scotland, nor in the southern and south-western counties of England, nor in localities in which the late summer and autumn are, as a rule, wet. On the other hand, the climate of the eastern and northern counties, and of the east coast of Scotland, is by no means unfavourable to the cultivation of sugar-beets, so that in all districts where common mangolds do well sugar-beets may also be grown successfully.

Mr. J. K. FOWLER (The Prebendal Farm, Aylesbury) said he had listened with great attention to the excellent paper of Dr. Voelcker, and it appeared to him that a great portion of that paper was intended to convey to the farmers of England the necessity of paying far more attention to the cultivation of sugar-beet than to that of other roots. Having seen a good deal of the cultivation of sugar-beet in the eastern counties, he was so impressed with the advantage of it, that he determined to practice it himself. For the last three or four years he had grown sugar-beet in the neighbourhood of Aylesbury, but he had found that, measured by present money value, it was not equal to the growth of mangolds or swedes. He thought that a great deal might be done for the more successful cultivation of beet after a few years' experience in the matter. People generally were accustomed to grow the roots at a distance of from twenty-four to twenty-seven inches apart. Dr. Voelcker, while speaking of the actual value of the manure, and of the meat-producing qualities of various roots, had not alluded to the fact that a root crop was really a fallow crop, and that they had to consider, not merely the meat-producing qualities of a crop, but also the effect of the crop as part of the system of cleaving, and of preparing the land for the growth of cereals. The growth of roots twenty-seven inches apart allowed ample scope for proper cultivation, and on the rather deep alluvial soil of the Vale of Aylesbury he had found that a useful practice to adopt for the production of large roots. He had found that the white Silesian sugar-beet could be grown less than twenty-four inches apart, and he had found 20 to 22 inches apart ample, and he could grow from 16 to 20 tons per acre. There was great difficulty in getting sugar-beet up from the soil, because it buried itself very deeply, much more difficult than there was in getting up mangold or swede. The same remark applied to parsnips and to carrots. He had grown both of these, and he had found great difficulty in getting them up on the rather close soil of his district. He mentioned these facts merely to show that practically they must keep in view the influence of roots as fertilisers for the fallows on their farms. He was rather surprised that Dr. Voelcker omitted to mention the growth of kohlrabi. That was a most valuable root, and he believed that many farmers in Huntingdonshire had abandoned the cultivation of swedes for that of kohlrabi. He had found that by the time his roots were carted home they cost him from £12 to £14 an acre, and he would assume that he grew twenty tons per acre. He had been informed by men who had studied the matter carefully, that you could not put roots down the throat of an animal so as to produce more than £9 an acre, and supposing these figures to be correct, they clearly could not expect to get a very good return from the root crop in the first year. Let him mention one test of the value of roots. In throwing down a certain number in his farmyard he had found that pigs always went to the white Silesian beet in preference to any other roots; their next favourite was the long red mangold, and after that they would go to the swede, while the last thing they would go to was the white turnip. That was a practical illustration of the value of different kinds of roots for feeding purposes. When they studied Dr. Voelcker's paper at home, they would be able to go much more deeply into the subject than they could do while listening to it that evening, and he was sure they would all agree with him that their thanks were eminently due to the Doctor for the pains which

he had devoted to the subject. He agreed with that gentleman that it was quite useless to grow roots to the size to which they had been grown, merely to obtain prizes. Whatever credit might be due to Samuelson, Gardiner, and others for their turnip-cutters, it should be remembered that it was not easy to pitch such roots as he referred to into the machine; and, in his opinion, it would be best to adopt a medium course, and not go in for sensational roots any more than they went in for sensational farming generally.

Mr. L. A. COUSMAKER (Westwood, Guildford) said, as an old practical farmer, and a successful grower of roots, for about five-and-thirty years, he wished to make a few observations on that subject. His observations applied to a strong clay soil in the South of England, and particularly to mangold wurzel. He thought that the first object in growing roots should be to grow them with as little expense as possible, and to produce as good a crop as possible, and when they had got a good crop they should feed it off, so as to produce the best results in the animals. With regard to the production of mangold, he entirely agreed with Dr. Voelcker about autumnal cultivation. He had found that, with a moderate quantity of long dung, say about 12 tons to the acre, carted on to wheat or barley stubble, and ploughed in early and as deeply as possible, they could go through the whole of the winter, and then if the ground were in a good state in the spring it might be scarified, and 2 cwt. of guano and 5 cwt. of salt might be advantageously deposited in the soil. He quite agreed with Dr. Voelcker that the manure ought not to come in contact with the seed; but if it were well mixed with the soil, harrowed down, in due course of time rolled down, nothing more need be done. He did not think they could have a more moderate manure for a crop of mangold wurzel than a dressing of 12 tons of long dung in the autumn, and 2 cwt. of guano in the spring. He quite agreed that immature roots were not proper things to feed upon. He thought that mangold wurzel ought not to be used, if it could possibly be avoided, before Christmas. If they had early turnips to begin with, swedes to succeed them, and mangold wurzel afterwards, when it was of the quality that it ought to be, and swedes had deteriorated, they might hope for satisfactory results. He had, indeed, fed animals on mangold wurzel this year up to the month of September. Having a clay soil, he had a great difficulty in keeping sheep in winter. He grew tares succeeding mangold wurzel. He stored up a great portion of his mangold crop in the field, and he fed the two together, and in the last summer he had fed and fattened sheep on tares and mangold without using any oilcake at all, until the mangold was gone. In the South of England they could grow mangold; it could not be grown in the North so well, where farmers grew swedes and turnips of much superior quality to those which were grown in the south. Climate had a good deal to do with the sort of roots which must be grown. Then, as to the sort of mangold to be grown, there could be no doubt that the long red was the most productive. There was one sort which had been introduced this year, which had been highly prized, both for size and quality—he meant the ox heart. The two best qualities of mangold that he knew of, was what was called Sutton's "Golden Tankard," and the intermediate sorts, which were grown about 19 inches apart. He knew of no mangold which was equal to the "Golden Tankard;" there was as much difference between that and other sorts of mangold, as between a swede and a white-flesh turnip (Hear, hear).

Mr. C. M. CALDECOTT (Holbrook Grange Rugby) said there were one or two points on which he had the misfortune to disagree with Dr. Voelcker. The Doctor said that mangold wurzel had more feeding qualities than swede turnips. Having been a feeder of beasts for about 16 years, towards the latter part of that period he found that his swedes failed, and he was obliged to substitute for them mangold wurzel; and he believed that mangold would not compare with swedes for feeding qualities. Again, he differed from what Dr. Voelcker said, with regard to sewage manure. He presumed that what he referred to was not manure made from sewage, but sewage spread on the land, because they all knew by something more than hearsay, that manure made from sewage was hardly worth the trouble of carting from a distance. Dr. Voelcker said, that sewage applied to green crops was very useful for the first two months. He (Mr. Caldecott) had for many years had opportunities of observing the effects of the

use of sewage on land near Rugby. He had seen it used on root crops for the first two months of their growth. In that case the sewage utterly overhauled the plant with weeds, and the utmost amount of produce was about 7 tons per acre after an enormous expenditure of labour. He believed that the application of sewage after the plant had got on—say in July—would be most useful; but if it were applied with the seed, it would, in nine cases out of ten, beat any farmer who tried to grow roots in that way.

Mr. H. J. LITTLE (Coldham Hall, Wisbech), said he thought that practical experience bore out the remark of Dr. Voelcker that an excessive application of farm-yard manure would deteriorate instead of advancing the growth of root crops. He wished, however, to speak particularly about mangolds. He was not at that moment a grower of turnips. Last year he had a piece of land cultivated in the ordinary way. It was of a deep alluvial nature. It was a wheat stubble manured with farm-yard manure. In the autumn it was deeply ploughed for mangolds, which, according to the usual custom of that part of the county, was to be cultivated in the spring. He ordered his foreman to apply 12 tons of farm-yard manure, and shortly afterwards he was much struck with the fact, that either through the carelessness of that man, or that of the man who actually spread the manure, at least 20 tons an acre were laid down. The land was drilled with mangolds in the ordinary course, and with a small quantity of artificial manure, chiefly superphosphate, in the spring. The first crop of mangolds having been eaten off by the wire-worm, the land was drilled again, on the 14th of May, with long red mangold. The tops of these continued growing so vigorously until last week that it was almost impossible to move among them. They were taken up, and a very fair crop was the result; but the crop was by no means greater than what he obtained on other parts of the farm, where about half the quantity of farm-yard manure used there was put in, and where there was an equal dressing of artificial manure. The tops continued growing so vigorously as to prevent the roots from attaining any great size. As regards the analysis of different kinds of roots, he might observe that a very extraordinary experiment was reported in the *Agricultural Gazette* of last year, by Mr. Lawes. It seemed, from the account given, that some mangolds, taken from a farm in Ireland, contained exactly double the quantity of feeding materials that were contained in other mangolds grown on the same farm; in other words, 40 tons of mangolds per acre being grown in one field, their feeding qualities did not exceed those of 20 tons per acre grown in another. They must not, therefore, be too proud of growing enormous crops of mangold, seeing that their neighbours on the other side of the hedge, with half their crops, might have much better feeding properties. There was another practical point to which he wished to allude. It was generally the case, he believed, with mangold growers, that they looked out for some field on their farm which, being in high condition, they thought they could safely reckon on a good crop of roots. He believed it was not necessary to do that. He knew that on strong loams mangold might be grown for a number of consecutive years, or in alternation with grain crops. In a field on his own farm, which lay conveniently near the homestead, his predecessor and himself had grown alternate crops of mangolds and wheat for the last fourteen years without a break. This year the crop amounted to 36 tons an acre; and as long as he could grow such crops in alternation with fair crops of wheat, he would continue the practice (Hear, hear). As to the size of roots, although they might despise large roots because they contained a large proportion of water, they should remember that a large quantity of roots were very useful in "filling the belly" of animals, to use a homely phrase. Last year, in his own district, they grew only about 20 to 25 tons of mangolds an acre, but it was not unusual to average 35 to 40 tons an acre on good farms. He could assure Dr. Voelcker that in that district, with their large quantities of straw to convert into manure in the yards, he would willingly have exchanged his 20 tons an acre of the 1874 crop for 40 tons an acre, even if the latter contained no greater amount of nutriment in the aggregate. With regard to climate, it astonished farmers in the eastern or southern counties to find that in Scotland, in some parts of Wales, and in Ireland, no less than 40 tons per acre of swedes could be grown, and that they possessed such fattening qualities as were not to be found in the roots in the district which he had just mentioned; and

he would like to know how it was that such immense crops possessed such very valuable feeding qualities.

Mr. J. J. MECHI (Tiptree Hall, Kelvedon, Essex) said he was rather an old mangold wurzel grower, having grown it for thirty years, and always on one plan, corresponding with that described by Mr. Coussmaker. Late in the autumn he spread on the land a heavy dressing of shed manure taken from under animals that had been fed with cake and corn. That manure, not having been made into a dungheap, was first ploughed into the land with three horses, followed by ploughing with four horses. He thought it was most material that the subsoiling should be done in that way. The land remained in that condition until the spring. Late in March or early in April about 3 cwt. of Peruvian guano and 1½ cwt. of common salt were scarified in, and the seed drilled. This year he had obtained as much as 40 tons per acre of red mangolds, and about 30 tons of other sorts. He had grown as much as 43 tons per acre on stiff soil. He never attempted to grow them on light land. As to what Mr. Caldecott said about the relative qualities of swedes and mangold, he (Mr. Mechi) believed that he was decidedly wrong. There was decisive evidence against this view, for early numbers of the *Journal* of the Royal Agricultural Society contained an account of a long course of experiments carefully carried out by the late Lord Spencer, which resulted in proving that the feeding properties of swedes are inferior to those of mangolds; the former contained 90 per cent. of water, while the latter contained only 88. Of course, a good deal depended upon the mode of feeding mangolds; for none of themselves could get fat while they were being purged. He agreed with Mr. Fowler in what he said respecting kohlrabi; he had always grown it, and he believed it was one of the most important of roots (Hear, hear).

Mr. H. TRETHERY (Silsoe, Ampthill) said, like Mr. Fowler, he regretted that Professor Voelcker did not enumerate kohlrabi among the roots, for he considered it one of the most valuable roots that they had. The Professor mentioned a case in which there was a heap of gas lime placed in one part of a field, and a heap of manure in another, and in which the roots were afterwards sown, and he said these were the only two pieces of the land where the roots were healthy. He (Mr. Trethewy) could quite understand the reason of that. He had seen instances in which, under a precisely similar state of things, kohlrabi had produced a most healthy, luxuriant crop, and the swedes were full of finger-and-toe. Therefore, he did not think it was because of those deposits that such good effects were produced; he thought that if the land had been treated in the ordinary course for kohlrabi, different results would have followed. He had noticed a piece of land about one-half of which was sown with kohlrabi, and the other half with swedes, the treatment being precisely the same, and the kohlrabi yielded an excellent plant, while the swedes were eaten up with finger-and-toe. The fact was, he believed that, as was often the case as regarded clover, the land had become tired of swedes, while kohlrabi being a new plant it flourished vigorously in consequence (Hear, hear). With regard to the influence of climates there could be no question better mangolds could be grown in the South of England than in Scotland, and that in Scotland farmers could grow much heavier crops, and a better quality of swedes, than could be grown in the South. He had witnessed that for himself, and could bear testimony to it; and he did not join with those who expressed surprise on the subject, as, in his opinion, climate entirely accounted for it. The only exception which he ever met with to the rule was near Morecambe, in Lancashire, where farmers grew mangolds which were equal to almost any that were produced in the South of England.

Mr. C. S. READ, M.P.: Is that by the sea?

Mr. H. TRETHERY continued: Yes, it was by the sea. Dr. Voelcker attended to the storing of mangolds, and, if he understood him aright, he attributed their keeping in some measure to their growth. He (Mr. Trethewy) believed that their keeping depended very much on how they were stacked (Hear, hear), provided they were taken up under the same circumstances. A great deal depended, in his opinion, upon whether the rows were laid east and west, or north and south. If they were laid east and west the action of the sun, after a severe night's frost, would tell upon the thatch, or whatever the covering might be. If they were laid north and south they would not be subject to the same influences. They must all have

noticed something of that kind in the case of thatched buildings. If a thatched building ran east and west, the north side of the thatch would always stand longer than the south side, therefore they ought to follow the same rule with regard to the stacking of mangold wurzel, as in that of thatched buildings, and if they did they were almost sure to derive benefit from it. With regard to the feeding of mangolds, one speaker remarked that the value of the roots depended very much upon the time at which they were consumed. He thought so too. He thought it would be almost a waste to consume mangolds now; his cattle were eating mangolds at that moment produced last year. The value of it was certainly not as great as it was the year before. If they kept mangolds properly the waste would be very little, and the longer they kept the roots, in reason, the better they were (Hear, hear). In the county in which he lived—Bedfordshire—they had very frequently a good flush of grass. This kept their beasts going on very well till June or July. Then, perhaps, instead of the grass growing to a perpetual verdure, as was the case in some of the more favoured counties, it began to ripen and run to seed, unless they had a considerable rainfall, and that was the time when the mangolds became valuable. With regard to the weight of some red roots, he could not help thinking that Mr. Fowler had rather over-estimated it. He could never, himself, get up to 40 tons an acre, and he fancied that those gentlemen, who thought they had grown such excessive weights, did not always weigh the roots themselves. [A voice: "Perhaps your land is not so good as theirs" (laughter).] With respect to kohlrabi, he thought it was one of the best roots they had. Allusion was then made to the common turnips, swedes, carrots, par-nips, and the rest; and kohlrabi possesses this advantage, that, through sowing it at proper seasons, you might have it from September till March, and he ventured to assert his belief that it would supply more keep per acre than turnips or mangolds, or any other roots.

Mr. C. S. READ, M.P., said: During the summer and autumn he had been over a very large extent of the land of England and Scotland, and his attention had been drawn to that part of the subject which Dr. Voelcker treated of last and least—he meant climate. Mr. Trethewy said he did not wonder at the difference between Scotland and Norfolk as regarded the production of swedes and mangold wurzel. He (Mr. Read) wondered very much, because, from some cause or other, he found it more difficult every year to grow a decent crop of swedes. Instead of immature ripe roots they had prematurely ripened roots (Hear, hear). Whether it was that the land was getting sick, and tired of growing swedes, or whether other manures were required to regulate the growth, it was more difficult every year to produce a crop of swedes. He had heard, with a feeling of satisfaction, that Mr. Fowler expected to grow this year 20 or 25 tons of swedes per acre. They had wretched crops in Norfolk this season, and he did not believe the average of the county would exceed 10 tons. He had tried kohlrabi, but after seven or eight years' experience he was obliged to give it up. On the other hand, he contended that they were right in increasing their growth of mangolds. Mr. Trethewy had told them that they should not use mangolds till July. [Mr. TRETHERY: "June or July."] He contended that they might use them in October with great advantage. [Mr. TRETHERY—"Last years' growth"]. No, this years' growth. He did not keep so much money at his banker's that he could afford to keep mangolds more than a twelve-month. He maintained that if they pulled mangolds up, for a fortnight or three weeks at this season of the year, before using them, they might then use it immediately. A friend of mine has been feeding his sheep with mangolds for the last six weeks, with the best results. He knew very well that keeping rendered the properties more valuable; but when he heard a gentleman explain, as Dr. Voelcker did, of the large quantity of water in roots, he must remind him that in these days, when such a large quantity of dry provender was used, roots might be found very useful indeed, although they did contain a large quantity of liquid. Last year he made a very rude remark about a statement of Mr. Neild about his swedes. He understood him to say that the average weight of a crop of swedes which he had grown was 40 tons per acre [Mr. NEILD: "I grew 46 tons"]. He understood that the average quantity was 40 tons, and he said he questioned the statement. He was quite sure that if any gentleman was to go from the east to the west of England, and again into

Scotland, he would be perfectly astounded at the difference in the growth of swedes. He had met with more diseased roots, more yellow and white and blue leaves on the best piece of swedes that he had, than he saw in the whole of Scotland. The difference was perfectly marvellous. The Scotch had grown turnips quite as long as they had, and more successfully; and they did not vary the crops so much; and, therefore, the cause could not be merely that the land was tired of the swede, and he believed that it was entirely climate. They were altogether getting out of the system of growing swedes in Norfolk. As regarded kohlrabi and cabbage, although they yielded excellent crops, he thought Dr. Voeleker was quite justified in not mentioning them, because they did not come under the head of roots. What they had chiefly to look to in the eastern counties, and in the south of England, as regarded roots, was the extension of the growth of mangold-wurzel. He was quite sure that it might be advantageously grown at smaller intervals than they had been accustomed to grow it. Mr. Fowler mentioned an interval of 27 inches, but he would recommend the adoption of smaller intervals, and there would be no difference in the matter if an 8-inch hoe were used to cut out the plants.

The Rev. E. SMYTHIES (Hathern Rectory, Loughborough) said a very interesting question bearing on climate has been raised by Mr. Little, namely, how it was that the land in the North of England and Scotland grew such large crops of swede turnips as compared with the South. Between Carlisle and Portpatrick, a distance of about 100 miles, he saw recently not less than 10,000 acres of swedes growing, and he never beheld more magnificent crops. He enquired particularly into the manner in which they were grown. He had an opportunity of going over one large dairy farm, the occupier of which dairied 212 cows, and was making what was called Ayrshire Cheddar, and that man never grew less than 200 acres of swedes in the year. He saw the crop, and anything more beautiful there could not be. No manure was used there except artificial manure, and, indeed, he did not see how any other could be used, as the crops were grown on hills of considerable height. For 200 acres of swedes the occupier used last year artificial manure of the value of £1,180, being within a very small fraction of £6 per acre. Looking at the excellent feeding quality of those enormous crops of swedes, he began to think that that portion of the kingdom enjoyed a climate and a range of temperature which we, perhaps, little suspected. Close alongside the fields of swedes he saw fuschias as large as small forest trees, and magnolias growing, and other evidences of a climate which farmers in the South did not possess. At Silloth, not far from Carlisle, it had been found that the mean temperature of the year was a trifle higher than that of Torquay. What was the explanation of that? The Gulf-stream, he believed, and nothing else (Hear, hear), and unless they could introduce that stream into their rivers they could not have the climate which was necessary to enable them to grow such magnificent crops of swedes. As regards the mangold crops, there was now a little revulsion of feeling in the case of strong land. The most successful grower of mangold that he had ever known, a man who had won numerous prizes for large roots, and also for his yield per acre, had told him that year that he thought he should give up growing mangold altogether. In a large portion of the midland counties, if you grew mangold in such a season as this, you could not get half a crop of wheat after it; and if you grew barley, it would be of very inferior quality. Nothing seemed to overcome the evil effect of drawing off a crop of mangold in such a season as the present; so long as he could get cotton-cake and straw, he would prefer to winter his beasts with them. As to sowing mangolds and swedes together, the result was like the fat kine eating up the lean kine. The mangolds were very small, and the cause of that appeared to be that the swedes like gluttons monopolised so much of the manurial value of what was put on the land. He had made up his mind not to grow mangold, except to a very limited extent, in future.

Mr. R. H. MASFEN (Pendeford, Wolverhampton) agreed with preceding speakers that their warm thanks were due to Dr. Voeleker for the very able manner in which he introduced the subject, he was much struck with the amount of nitrate of soda which he recommended to be used in addition to other fertilisers in the growth of mangold. Mr. Smythies made a very pertinent remark with regard to what was taken from the land by a heavy crop of mangold; and it

applied to all root crops; but it had often struck him that in discussions of that kind men who had grown a particular crop in speaking of it were apt to forget where that crop had gone to. If farmers obtained 40 tons of mangolds, it was very silly to suppose that the succeeding crop would not suffer. He had himself grown large crops of mangold, consuming them in the most beneficial manner for the farm. He had arrived at the conclusion that the mangold crop was very exhaustive; and if they grew an exhaustive crop, they must put something in the land for the succeeding crop, or the next harvest must suffer. They all knew that the Isle of Anglesea was remarkable for the production of extraordinary weights of roots, and it was generally found, when the cultivation was at all up to the standard, the roots were very good in particular districts. As Mr. Read had well remarked, the turnips in Norfolk were irregular, and often of a bad quality. In the North of England they were just the opposite, and he attributed that difference to the fact that in the eastern counties dry weather often prevailed for a long period, and was often succeeded by a considerable rainfall, and that the two things, not harmonising well together, resulted in an unsatisfactory crop. In Scotland, in Anglesea, and in Ireland farmers had very little of that difficulty to contend with; they had a more uniform temperature, which was favourable to the growth of roots. They heard a great deal from Dr. Voeleker about artificial manure, and very little about the manure made at home. He would be glad to learn from him what crop he would recommend as best on which to use home-made manure, and what were the best kinds of manure for different kinds of crops—whether it was the manure of horses, cattle, or pigs. He thought the Doctor might have given them some very useful hints on that subject. As regarded the free use of nitrate of soda, he had generally found the succeeding crop unsatisfactory.

Mr. T. HORLEY (The Fosse, Leamington) wished to make one or two remarks respecting the consumption of mangold-wurzel early in the season, alluding first to the practice of farmers in a district near where he lived, where mangels had been grown almost exclusively for the last ten years. He referred to the neighbourhood of Stratford-on-Avon. He had there found that farmers generally had given up growing swedes, and taken to growing mangels, which they began to consume as early as the month of October. There could be no doubt that the consumption of mangels, and indeed of roots generally, was very much on the increase. One grand mistake consisted in giving animals too much of that kind of food at the commencement. Many persons in that room might remember the name of the late Mr. Adkins, who was one of the best farmers in his (Mr. Horley's) part of the country. Mr. Adkins told him that a sheep should never take at the commencement more than 7lbs. or 8lbs. of roots a day, and the neighbourhood of Stratford-on-Avon, in the vicinity of which Mr. Adkins lived, might challenge England to produce a better lot of shearlings than were to be found there (Hear, hear). It was a great mistake to give any kind of roots too liberally, either to sheep or cattle, at an early period. With regard to the keeping of mangels, no doubt keeping improved the quality; but farmers generally, like himself, had not such a large cash-balance at their bankers that they could afford to wait two years (laughter). He was very glad to find that the autumn cultivation of roots was so much increasing, because he had in his own district seen that plan followed for five-and-twenty years with great advantage. He was rather surprised to find that, amid all the progress now made in agriculture, Mr. Mechi still adhered to the system of using three horses for one furrow with one plough, and four with another to follow, when, if he had a steam plough, he might do all that was necessary with one operation (Hear, hear). He concurred in what Dr. Voeleker said respecting the use of superphosphates. His own practice was to apply about twelve loads per acre of farmyard manure as soon as possible after harvest, and to steam-plough the whole of the land. Two or three days before sowing he applied artificial manure—guano and superphosphate, or guano and nitrate of soda—whether it were for mangels or swedes; and, occupying a strong land farm of about 900 acres in extent, he had never lost a crop of roots or missed obtaining mangels for fifteen or twenty years. He grew about the same quantity of swedes as of mangels, but the land was never touched after the steam-plough until he planted the

seed. The more the soil was worked the better was the effect on the plant. In the present season mangels were very variable in his district; there was, in fact, a greater variation than he had ever seen before. As to the date of planting, he had always planted as soon as possible after the 15th of March. This year he planted one piece of land on the 12th of March, and another on the second week in April, and the result was a difference of more than ten tons an acre in favour of the early sowing. With regard to the planting of swedes along with mangels, he had thought that that practice was now almost extinct, because the result was that the swedes were so much more rapid in their early growth, that they smothered the mangels. When he first began to grow mangels, the usual practice was to put a few swedes in. If he wanted to grow a few swedes for a particular purpose, he then sowed half-an-acre or so, but he never put in the seed with his general mangel crop, because that tended to smother it. The general growth of roots should, he thought, be as uniform as possible throughout the farm, and he believed that no operation on a farm required greater caution or care than the growing of root crops (Hear, hear).

Mr. F. SHERBORN said there was one remark in the early part of Dr. Voelcker's valuable paper which had remained unnoticed by previous speakers, and which struck him rather forcibly—viz., that "root crops extracted from the soil a much larger amount of mineral substances than corn crops." (Dr. Voelcker assented). Now he had been hoping to see all restrictions on cropping gradually removed; hitherto they had been in the direction of corn crops, and farmers had been encouraged to grow roots by every means possible, but what Dr. Voelcker had stated—and no one would doubt his authority—would, he feared, alarm landlords in a new direction; he hoped, however, the latter would not take note of what had been stated, or interfere in any way whatever with the cultivation of root crops.

Dr. VOELCKER: Grow as many as you like, but don't sell them off the land.

Mr. H. NEILD (The Grange, Worsley, Manchester) was surprised at being told in effect, that evening, that cabbages were not a root crop. He really did not know what else to call them, and, with all deference to Mr. Read, he must say he thought they were becoming most important, while, for his own part, he considered them the best crop on his farm. As for kohlrabi, he was confident that it was one of the most valuable roots they could have, but when the farm was overrun with vermin (rabbits). Yes, that would have the lion's share of the crop! He had hoped that Mr. Read would say something on a subject which was very interesting; not merely to farmers, but also to ratepayers generally—he meant the use of town refuse or sewage, and the

best mode of applying it for the feeding of plants. He was not there to advertise a particular kind of manure, but he would say that there were important districts of England where the use of the waste and refuse of large towns, and of dead animals and slaughter-house refuse were employed. One or two experiments which he had made tended to support the views of Dr. Voelcker, that, generally speaking, it was unwise to give a heavy dressing of farmyard manure. He would name a case of cultivation of mangolds, where he had substituted for three loads of farmyard manure, one of manufactured town refuse. The result upon the crop was an increase of 7lb. per each 10 yards in the drills in favour of the mixed manures. The largest grower of mangold that he had met with lived in the neighbourhood of Liverpool, and he had known that man bring to the scale 54 tons per acre, which was in a great degree produced with the aid of sewage from Liverpool. He was rather surprised to hear mangolds applauded so much in comparison with swedes. As regards such crops, he had found that farmers, having burnt their fingers at one end of the stick, had taken hold of the other; they had jumped to conclusions, instead of being guided by carefully continued practice. He regretted that Dr. Voelcker did not include in his elaborate paper any mention of potatoes. Notwithstanding what Cobbett said, that was a very important root. He himself grew 30 or 40 acres of potatoes, and there was no root the action of which told more upon tillage.

The CHAIRMAN, in summing up the discussion, said he quite concurred in the opinion that the paper of Dr. Voelcker was one of the most valuable papers that had ever been read before the Club, and he was sure they would all agree with him that the discussion had been most interesting (cheers).

Dr. VOELCKER, in replying, said he might have entered more fully into the question of differences of climate, but he could not have said anything with which every intelligent farmer was not, he believed, perfectly familiar. Every farmer, who was at all familiar with the subject, must be aware that a far better quality of swedes could be grown in the north than in the south, and that in the most parts of Scotland and especially nearer the west coast, no Scotch farmer would ever dream of growing mangolds. The swede requires a uniform temperature, and ripened quite late in the season, having come originally from Sweden, and it permanently required moisture. As regarded weight, he saw a short time ago, in Ayrshire, a crop of 40 tons to the acre, and 35 tons were commonly grown. In that part of Scotland it had been found profitable to use 10 cwt. of bone dust, 5 cwt. of Peruvian guano, and 5 cwt. of superphosphate per acre. The reason why he did not mention kohlrabi was that he regarded it as a cabbage.

On the motion of Mr. J. Bradshaw, seconded by Mr. Meeli, a vote of thanks was given to Dr. Voelcker for his paper, and thanks were afterwards voted to the chairman.

## THE WORKING OF THE PRIZE SYSTEM.

In the face of another attempt from Mr. Raudell to get rid of the prize system by a side wind, nothing could testify stronger to the efficacy of the system than the reports of the stewards on the implement trials at Taunton, as given in the new Number of the Royal Agricultural Society's *Journal*. These reports serve to show not only how thoroughly the several classes of implements were proved, but how necessary such a public examination still is to incite the energy and invention of the manufacturer. As we pointed out at the time of the meeting, and as Mr. Whitehead, the senior steward, now says officially, "the number of mowing machines which competed at Taunton was considerably greater than at Manchester or Plymouth;" so that it is evident enough, Mr. Raudell and his more or less open attacks notwithstanding, that the interest amongst the implement makers themselves in the prize system is not dying out; the more especially when we find all the houses most famous for this kind of machinery represented in the trial fields at Taunton: Housby, Samuelson, Walter Wood, Burgess and Key, Harrison and McGregor, Kearsley, and others. As to

the authority of these trials, Mr. Hemsley, an old judge himself, says in his valuable report, which speaks still further to the fact, that "the Society was fortunate in securing the services of three experienced gentlemen as judges in the mowing machine classes," as these were Colonel Grantham, Mr. John Hichen, and Mr. J. W. Kimber; while the senior steward was "struck with the energy, assiduity, and intelligence of the judges as a rule; and at Taunton, during the trials of mowing-machines, it was refreshing to see how hard the three judges worked. No judges, moreover, from what class or in what way they might have been selected, could have displayed more impartiality, greater intelligence, or a more thorough practical knowledge." We put every faith in this testimony, as we would again refer to the reports supplied for its full confirmation; while Mr. Hemsley upholds the practical value of the system as now conducted by demonstrating that but for these trials "farmers would be compelled to compare machinery in their own hands privately, with much inconvenience and perplexity to themselves; and it is

extremely doubtful whether, if such a plan had been relied on, this generation would have witnessed anything like the present degree of perfection in agricultural machines; any which get well through these severe tests and examinations may be considered safe ones to buy." And yet *The Times'* reporter, having been duly primed, of course, wrote disparagingly of the implement judges as "farmers more or less competent to form an opinion," as "liable to unconscious predilections," and so forth; making, it will be seen, no distinct charge, but inferring an incapacity, which a man like Mr. Hemsley directly contradicts. A firm exhibiting at Taunton had the good or bad taste, as may be, to reprint all this on the back of its trade cards; but surely Mr. Whitehead, in mentioning the matter, should have published the name of the firm, which is very possibly—for we ourselves never saw that Janus-faced circular—prominently represented on the new Agricultural Engineers' Association.

Following on will be found a report of the first general meeting of this body, when, amongst other business, committees were appointed to maintain existing foreign customs' tariffs and regulations when favourable, and to obtain their amendment when otherwise—to look to the charges of railways, carriers, and Societies—and to watch any proceedings in Parliament. One main point with the meeting however, was the establishment of a summer agricultural exhibition, annual or biennial, to be held by preference in London, and "under the auspices of the Royal Agricultural Society." If this contemplated exhibition be one of stock and machinery, it must go far towards taking the annual show out of the Society's own hands; or if it be an exhibition of implements only, to be held by preference in London, there can be little promise of its success. In the course of a week or two we shall have such an exhibition in London; but in conjunction with a show of stock, when, day by day, not only will the stalls but the galleries be crowded; whereas, as a meeting held for the display of machinery only, not a hundred visitors would travel to London to see it, and not as many more go up to Islington from the City or the West-end, the North or the South. Moreover, an implement exhibition "held by preference in London" would necessarily be an exhibition without trials, without premiums, and without interest—a mere mart without attraction to secure custom. This is the more palpable from the attention of the Council of Agricultural Engineers being about to be called to "the present system of trials of, and awards to, implements as imperfect and unsatisfactory;" whereas another Society of Agricultural Engineers, from which this would seem to have grown, went more directly to the issue some years since, on the plea that the time had arrived, from improvement having advanced so far, for the abolition of the prize system. And yet since then we have now manufactured that which had looked like an impossibility, a prize one-horse mowing machine, and arrived at a variety of improvements in other ways. The Agricultural Engineers say "the trials are imperfect and unsatisfactory;" the stewards at Taunton say the trials were thorough and reliable; and, so far at variance, the Council of the one body is about to seek the countenance of the other.

The Royal Agricultural Society publishes for the use of its members a Journal, now again very ably conducted; its members have also certain other small rights and privileges; but its vitality centres on its summer show. Even more, despite the timidity of men like Mr. Randlell and one or two others, who argue as if the Society's chief object were to save money rather than to spend it, this summer show still flourishes exceedingly; and there is thus a noticeable peculiarity in the proposal that it

should give its countenance to another summer show, where, if stock be included, the opposition must be direct, and where, if not from the very locality—say the Hall at Islington—implement trials must be abandoned.

## AGRICULTURAL ENGINEERS' ASSOCIATION.

The general meeting of the members was held at the Westminster Palace Hotel, on Tuesday, November 2nd, when the Rules were discussed and revised.

A ballot was taken for the first Council of the Association, which resulted in the election of Messrs. B. Stuartson, M.P., R. C. Ransome, J. Shuttleworth, R. Fowler, J. Howard, Aveling, Morton, Griffin, Barford, Mr. Samuelson was elected chairman, and Mr. Howard and Mr. Shuttleworth vice-chairmen. The following resolutions were passed:

That a committee, consisting of Mr. Samuelson, Mr. Howard, and Mr. Clench, be appointed to take steps to maintain the existing foreign customs' tariffs and regulations when favourable, and to obtain their amendment when otherwise, on the occasion of the impending revision of our commercial treaties.

That Mr. Barford, Mr. Morton, Mr. Eldison, Mr. Norfolk, and Mr. Hunt be a committee to inquire into the charges of railway companies and other carriers for the transport of agricultural machinery, with a view to their equitable adjustment, and the extension of the system of through rates at home and abroad, and to report to the Council.

That, in the opinion of this meeting, it is desirable that an agricultural exhibition should be held annually or biennially in one or other of the largest centres of population during the summer months, by preference in London, and under the auspices of the Royal Agricultural Society of England; and that the Council be requested to take such steps as they may deem advisable to accomplish this object.

A committee, consisting of Mr. Nicholson, Mr. Float, Mr. Hunt, and Mr. Collison, was appointed to report to the Council what steps should be taken with a view to the reduction of the charges made to exhibitors by the Royal and other Societies, and to co-operate with the Council in regard thereto.

That the present system of trials of and awards to implements is imperfect and unsatisfactory, and that it is desirable that the subject should occupy the attention of the Council at an early date.

That the Council be requested to watch any proceedings in Parliament relative to the Patent-laws.

**THE SHAFESBURY SHOW.**—This annual show, on Wednesday, was very small, although two or three classes were tolerably well filled. This cause of their slackness of competition was that which has done similar injury for several years past—viz., the prevalence of foot-and-mouth disease. Barring one Shorthorn, all the cattle exhibited were Herefords. Mr. Eli Benjafield took first prizes for dairy cows and three-year-old heifers; Mr. A. Hiscock, those for young heifers and young bull; Mr. N. Benjafield showed the best bull of any age; and Mr. W. Drew took four second prizes. There were a few sheep, including some Down ewes and lambs belonging to Sir P. F. Grove, which were awarded first prizes. In the horse show the best hunter was adjudged to be a three-year-old owned by Mr. G. Genee, and the first prize for cart mare was won by Mr. J. D. Allen.

**THE EDUCATION SCHEME IN CHESHIRE.**—At a meeting of the Cheshire Chamber of Agriculture at Crewe, on Saturday, the following resolution was carried unanimously: "That the committee appointed on the education of farmers' sons be empowered to arrange with the head-master and trustees of the Sandbach Grammar School to receive boys under this scheme after the Christmas vacation; that the committee have conference with the head-master, draw up and issue a prospectus of the course of studies to be pursued at the school, and cause advertisements of the same, and exact terms agreed upon, to be inserted in the papers."



## THE OPENING OF THE WINTER SESSION.

A prize root, like a prize ox, is often enough little more than a costly exercise; cultivated for a Cup, or as an advertisement at a far greater outlay than the individual return can ever hope to repay. "You may grow turnips on the top o' your head," as one of the old school put it, "if you only give 'em *sile* and dressing enough;" as when going for specimen plants the main requisites are "aeres" of room, and "loads" of manure. This was one of the points at the Farmers' Club on Monday, where the discussion turned once again on the practical rather than the political element, which has naturally preponderated of late, and the talk, as one of the speakers put it, "reminded him of old times." Dr. Voelker, the Chairman, spoke at length on the growth of root crops as influenced by soil, manure, and climate, in a paper which never flagged, and created, moreover, a debate in every way worthy of the introducer. It was certainly throughout one of the best evenings which the Club has enjoyed for some time past, as it served to show how valuable these occasions may be made. Beyond, however, the uses of certain roots in certain quarters, how the soil and climate of the North may suit one, variety, and that of the South or the West another the moral which the Professor sought to inculcate was that any root to be of any service should not be forced beyond a medium size. A crop or piece of mangolds of uniform growth and weight may furnish a lesson for others, and thus be well worthy of official inspection, but the half-dozen leviathans paraded should have no better aim than to amuse the townspeople, who admire alike the proportions of a mammoth beast and a mammoth bulb. "Small mangolds approach sugar-beets in composition, whilst large sugar-beets are hardly better than common mangolds, and monster beets are even less nutritious than well-matured mangolds of fair average size. Monster roots, as is well known, are always very watery, poor in sugar, and almost useless for feeding purposes. The contrast in the quality of excessively big and moderate-sized roots is very striking." So decisively declares Dr. Voelker, as there is much more to the same effect in his address against the danger of over manuring under the desire to produce heavy crops; while the meeting went very much with him in this view. Mr. Fowler, the next speaker, said "it was quite useless to grow roots to the size which they had been grown merely to obtain prizes;" and there was a continual *Hear, hear* when anything against this abuse of fashion was advanced. It thus becomes a question whether at the approaching exhibitions the judges should not be instructed to read over Dr. Voelker's paper before proceeding with their duties, and so be prepared to prefer quality to size, and give the premiums to roots of substantial worth to the farmer. It is not so long since that we saw in a Gardening Magazine definite rules laid down for the guidance of judges of potatoes, carrots, and so forth, in order to prevent the possibility of their erring. They were simply to go by the scale and the tape—the one would tell them of the heaviest, and the other of the largest growths; as seldom has a falsar principle been put about, and we might almost go so far as to say the less a judge of roots has to do with weights and measures the better. In judging a horse, an ox, or a sheep we would not let a man of any experience befool himself in this way; but leave the feet and inches, the stones and pounds, to the butchers, salesmen, and critics, whose wont it is to work with live and rule.

At the Central Chamber of Agriculture on Tuesday

the first business was the presentation of one of those reports from the Local Taxation Committee, which, according to a daily contemporary, Mr. Pell read—a very marvellous performance, if the honourable gentlemen ever succeeded in doing as much. Our impression was, the rather, that everybody might read such a report, as that nobody did, although we give our readers the like opportunity with the members of the Chamber. The more immediate matter, however, before the Council was the diseases of stock, which was treated much as this matter now is by agricultural bodies—that is, to ward off the foreign cattle, and establish the importation of the Irish; and in this way, even up to interviewing Mr. Disraeli, will the farmers and their friends continue to shirk rather than to meet the difficulty. The most indisputable evidence shows that infected animals are still habitually sent in from Ireland, as it is not of so much consequence how the disease has been engendered, as the fact of beasts being regularly landed here in such a condition. In the face of such half-measures, by which it is idle to imagine that the thing can ever be stayed, is it worth troubling ourselves about Foot-and-mouth or Pleuro? The truth is, as has been confessed before now, the graziers would prefer to encounter the risk of contamination to having their supplies of Irish stores cut off; for the Irish beast is daily improving into a kindly, quick-ripening animal, whose loss would be sorely felt wherever he has been used. Disguise it or ignore it as we may, the actual case is very much as Mr. Dent has just put it: "The custom of the farmers in this district is to purchase lean Irish stock at the fairs at York, Knaresborough, and Wetherby; to keep them about nine or ten months, and then sell them fat from the pastures. I have at present under my eye two lots of these cattle, in number about 150. Half of them cost about £12 each, and have all suffered from the disease during the last three or four weeks, and are now nearly all right and looking bright and well. If the owner had wished to sell them again while affected with the disease, he would undoubtedly have lost money; but they are now not one penny the worse for the object for which he bought them, and I cannot see that he has sustained any pecuniary loss. The other lot were beasts of lower value, the price being about £9 each. They are smaller and in low condition, and, as I see them every day, several appear to suffer much from lameness; but they are gradually recovering, and I expect that in a fortnight's time they will be all right again. Some will say the farmer has lost a fortnight's grass keep on each beast, and that the animals have received a check in their growth. At this time of year I do not think the fortnight's grass for each beast is of much value; and I have frequently heard farmers say that the beasts picked up ground far faster than they lose it." In plain truth, the farmer cannot afford to lose his Irish stores; and until Ireland, the now hotbed of disease, can be treated like other countries beyond our shores, deputations or Commissions—save the mark!—can avail little or nothing. The meeting simply was not in earnest, as note the chief or only evidence offered here. Mr. Wilbraham Egerton, M.P., said of the third resolution, "it appeared nothing more nor less than a sham. He had not heard anything in support of the assertion that the contagious diseases of their animals arose from the importation of animals from foreign ports. He had very often heard it stated that they were caused by animals coming from Irish ports, and it would be far more effectual to apply restrictions in that case than in the other; but that was impossible—the country would



not stand it." Mr. Gardiner, from Essex, said "if quarantine were established, those who sent store animals to this country would make a better selection. Irishmen, as well as foreigners, would then be careful to send only store animals that would bear the test of transit. He had himself suffered greatly in consequence of the non-establishment of quarantine, and through trucks not being properly cleansed. He bought seventy Irish bullocks, and within seven days after they reached his farm they had foot-and-mouth disease. A quarantine of seven days' duration would have prevented that." Mr. Ackers, from the West of England, felt that "the first resolution would be of very little use unless the word 'foreign' were left out before 'imported.' In that part of the country the view taken was—and he believed it was correct—that disease was, he would not say imported from Ireland, that being an open question, but generated in trucks and ships connected with that country, and they thought they could trace the spread of foot-and-mouth disease in that way throughout the West, and thence through the greater parts of the rest of England." And so on; the Council looking and pulling dead against the stream.

He's but a foreigner, disease home-bred I bring—  
Oh, sir, that makes it quite another thing!

There was a day, and not a very distant one either, when in framing a notice of the proceedings of the Royal Agricultural Society the chief aim was, apparently, to say as little as possible; Mr. Jenkins has improved upon this, and the reports of the Council now tell us what the Council is really doing. There was a deal of business to get through on Wednesday, when Mr. Milward carried his motion, without a dissentient, for the re-arrangement of the summer show-week, so as to catch the additional shillings of the half-holiday Saturday, and, what was once termed "the tailors' holiday," on the Monday. An endeavour, however, to extend the meeting to another shilling day was promptly negatived, the exhibitors of horses already tiring of the long week's work; though, as something of a boon, they will henceforth have the privilege of removing their nags for the night. Mr. Randal's proposal for the establishment of field trials was referred to the Chemical Committee; but another attempt to get quit of the implement trials by a side wind was promptly and properly rebuked. This custom of re-opening questions already decided is, to say the least of it, in very bad taste.

## ENGLISH SUBSERVIENCY AND SCOTCH INDEPENDENCE.

A very suggestive contrast was spoken to at the annual meeting of the Scottish Chamber of Agriculture in Edinburgh. Mr. Harper, in opening the discussion, drew attention to the recent doings of Lord Darnley, and more particularly to those of the Cobham Hall tenantry: "If they had acted as sensible men they might have allowed their landlord and tenant to fight out their own battle, and at best remained passive, instead of giving their influence to the strong against the weak. What a painful position these tenants must now feel themselves in!" And then, "as illustrative of the comparative independence and position which the Scottish tenantry hold," Mr. Harper proceeds to the Fenton Barns eviction, when "What did the numerous tenantry on the same estate? What did the tenantry on the other estates in East Lothian? What did the trading and manufacturing classes? Aye, what did several landlords' factors?" They did not fear to be "identified" with Mr. Hope; they did not express their full confidence in the landlord; they did not turn their backs on the weak to side with the strong, but they gathered together with a very different object, that of showing substantial sympathy to the outgoing tenant. They presented him with his portrait, they gave a piece of plate to his wife, and other tokens of the father's worth to his children; as, proud rather than shy of that they were doing, they crowded round him at a public dinner.

The moral which a Scotch farmer deduces from these two cases is a very strong one; let us take it in Mr. Harper's own words: "The tenant-farmers of England are yearly tenants and tenants-at-will, and those of Scotland under nineteen years' lease. I wish you to mark the *subserviency* of the one to the *independence* of the other to their landlords, when both landlords, in the opinion at least of other classes, had committed a blunder and a wrong. Why is this? Englishmen, as a class, are warm and generous in their feelings, and love fair play. I am firmly persuaded that their living so long under the system of yearly tenancy has driven all independence out of too many of them, and has caused them to bow their minds and their wills on all social and political questions,

be they Whig or Tory, to those held by their landlords." The charge, we repeat, as conveyed in the point of the contrast, is a very strong one, and yet this is in a measure supported by what has occurred, or rather has not occurred, here in England over the English case. The trading and manufacturing classes living and trading under "the very nose" of Lord Darnley, have done all they could do to honour an independent gentleman by electing, now for a third time, Mr. Lake Mayor of Gravesend; but, so far as we know, in suggestive contrast to the crowds who gathered about Mr. Hope in Haddington, not a solitary tenant-farmer at any of the many recent meetings which have taken place in London and elsewhere has had a word to say on the Chalk eviction. Nay, we believe that *The Milk Lane Express* is the only English, as distinguished from any Scotch, Agricultural Journal which has dwelt on the conduct of the Cobham Hall tenantry. The other tenant-farmers of England would appear to have passed the subserviency of these people over as a matter of course: they might have endangered their own yearly tenancies had they stood aloof, or done even less than that which they did do, while our contemporaries have been so generally satisfied with Lord Darnley's recantation, that they seem to have had no time to deal with his Lordship's tenantry. Certainly, putting this special and very isolated cause aside, the curious indifference with which two or three more recent county elections have been adjusted, would look to warrant the indictment that too many English tenants "bow their minds and their wills, on all social and political questions, be they Whig or Tory, to those held by their landlords."

And Mr. Harper said so much ament a debate on Tenant-Right. Ten years since, or even less, Tenant-Right was a cry which, if not scouted, was but little understood in Scotland, where farmers' politics mainly centred over the advocacy of long leases and the opposition to the law of Hypothec. Tenant-Right, however, even here in England, has rarely been appreciated without the aid of a case in point; and it was a case in point which fairly woke up all Scotland to the importance of the subject. It was found, as we have

continued to say for the last five-and-twenty years, that even the much-cherished lease was incomplete without the attachment of compensation covenants, and the martyrdom of Mr. Hope served to convince not only his fellow farmers in Scotland, but to convert here in England, Mr. Caird, for many years the most powerful opponent which the cause had to encounter. The consequence is that the Agricultural Holdings Act for England is to be followed by a very similar bill for Scotland, in discussing the principle of which in Edinburgh the other day many of the speakers denounced the English measure as a failure. It is not our intention in this place again to enter on the merits or demerits of the Act, but the very recognition of the principle by the legislature has already done more good than some were prepared to ever allow it. As Mr. Smith, of Balzordie, said, in opposing an adverse motion, "He objected to this, because it means to say that unless they could get a really good bill, such a bill as would thoroughly settle this question, in deed, a bill which was compulsory, they should have no bill." We are not aware that the Scotch farmers are more strongly represented in the House of Commons than the English farmers; but we do know that in the Upper House some of the more prominent of those in opposition to the Duke of Richmond's Bill were Scotch peers of large possessions, and it might be as well, at least in the outset, for the Scotch farmer to be content with what he can get, providing always that this does not shelve the agitation against the law of Hypothec. According to the Speaker of the House of Commons, a right honourable gentleman who by this time must have some tolerable experience of the subject, "the Act will induce landlords and tenants to come together to frame agreements upon a more liberal basis. According to my own judgment the best agreement, both for landlord and tenant, is a long lease, with liberal covenants; and that is far better than any scheme which Parliament can devise. And if through the operation of the measure of last Session long leases, with liberal covenants, shall become the rule and not the exception, Parliament will have conferred a lasting benefit upon the agricultural interest." The Act, then, will make all fair and square; for through its operation the English tenant will recover that independence which "has been driven out of him," and his subserviency will evaporate with his yearly tenancy. Be it noted that we are giving the Scotch reading of the English question.

### THE COBHAM HALL TENANTRY.

Nothing could be more sudden and nothing more complete than the retraction of Lord Darnley. By the one post his lordship is endeavouring to maintain his position by arguments damaging only to himself, and by the next, within a very few hours, writing to Mr. Lake in regret that "he gave a notice to quit the farm," offering "to withdraw it," and hoping that the "friendly relation of landlord and tenant may be re-established." It is not difficult to recognise the motive power here. Had the correspondence not been published, Mr. Lake would have been turned out of his occupation, his brother tenants would have turned their backs on him, and a troop of horse would have been broken up; as the result would have been regarded in certain quarters as a highly meritorious proceeding. The lever here has been the Press. Half a century or so since *The Daily Telegraph* would have been indicted for libel, and its editor or publisher fined and imprisoned; whereas it now carries the world with it, and the owner of Cobham bows before public opinion. It is not for us to say there was any further interference, but in any case Lord Darnley has done all in his power to amend his mistake, and, so far as he is concerned, the matter may be forgiven and forgotten. Mr. Lake preserves his independence, or, we may say, the true dignity of a man

throughout; he hastens to thank Lord Darnley in as handsome terms as those expressed towards himself; but, "particularly after the expressions made use of by all your lordship's agricultural tenants as to myself, my sense of honour and independence will not allow me any longer to remain a tenant of the estate." And then, as to the said tenants, what can reinstate them with Englishmen? Nothing, absolutely nothing. "They entirely disavow any wish to be identified with Mr. Lake;" but would any British yeoman, with a particle of honest pride about him, wish to be identified with them? The only difficulty which Lord Darnley should have in letting Mr. Lake's farm would be the repugnance which any man of proper feeling must have in being in any way classified as one of the Cobham Hall tenantry—a byword and a reproach for generations to come. Were they to eat their words, as they will never have the grace to do, how far could they be trusted? Just so long as a fat farm was not in the balance, or filthy lucre did not intervene between their miserable interests and their independent opinions. If that shameless address, a copy of which should be posted in the market-place, was signed or even agreed to by all the Cobham tenantry, let the names, appended or authorised, be published forthwith, if only as an act of justice to the new-comer on the estate, and so serve to distinguish him from those already established there. If the chairman of the meeting will send us such a list, we shall be happy to make it known far and wide.

"I hope you will not slacken your hand against those Cobham lickspittles," writes an eminent agriculturist, "who, I hope, are now heartily ashamed of themselves. It is such creatures as these who make arbitrary landlords, and render it necessary that there should be legislation between landlord and tenant." And the letter runs on thus: "I am sorry to see that good fellow Lake is not a member of our Central Farmers' Club; but surely the committee should make him an honorary member." The country, we repeat, has forgiven Lord Darnley, who has made all possible atonement; but its indignation now centres with more resolution than ever on a small brotherhood of English farmers—*prophandor!*—who, disowned in their dirty work even by their landlord, may rest assured that they have earned the contempt of every man worthy of the name of a man.

LORD DARNLEY AND MR. LAKE.

Cobham Hall, Oct. 25.

DEAR SIR,—I much regret that the friendly relationship that has existed between us as landlord and tenant for 32 years should be interfered with by this matter of the Yeomanry. I have explained to you now the whole facts of the case, and you know me well enough to be assured that I am the very last man to interfere in any way with the efficiency of any of the Queen's forces, especially the one regiment that I have had the command of for so many years. Whatever my feelings may have been as to your son serving under a particular Yeomanry officer, I must admit that I was scarcely justified in giving you notice to quit your farm on that account. I regret that I gave that notice, and I now beg to withdraw it, and at the same time to express a hope that our friendly relation of landlord and tenant may be re-established on its former footing. Believe me, yours very faithfully, DARNLEY.

W. LAKE, Esq.

Gravesend, Oct. 25.

MY LORD—I have the honour to acknowledge the receipt of your lordship's letter of this date. I accept with great satisfaction the assurance that you now feel you were not justified in giving me notice to quit my farm, and your expression of regret at having done so; but while I sincerely thank your lordship for the just and generous impulse which has prompted you to offer the withdrawal of that notice, I cannot but feel that after what has recently taken place, and particularly after the expressions made use of by all your lordship's agricultural tenants as to myself, my sense of honour and independence will not allow me any longer to remain a tenant of the estate.

I have the honour to be,

Your lordship's most obedient servant,

To the Right Hon. the Earl of Darnley. WILLIAM LAKE.

## FERTILISERS.

No. 2.—BY THE NORTHERN FARMER.

The first question which naturally arises with reference to farmyard manure is its production, a matter of comparatively little difficulty in moderate quantity when the necessary conditions are fulfilled, but almost an utter impossibility, when attempted, as is too often done, with imperfect arrangements, or defective material. A heavy stock of animals for the size of the farm, well provided with food and litter, is the great requisite for the manufacture of this valuable substance, in its purity so indispensable for the recuperation of the soil, and without a regular supply of which it is vain to expect a profitable return for capital and labour. So absolutely necessary is the application of manure of good quality and abundant quantity, that at one time it was thought by many clever and distinguished practical men that to make dung was the principal use of live stock on an arable farm, and that the profit derivable from them could only be obtained in an indirect manner through the corn crops, which could not be otherwise grown to yield a profit. Although this opinion is not altogether obsolete, even amongst men well known to agriculture, it is fallacious, unless under extremely exceptional circumstances, as well-bred quick-feeding cattle are now universally diffused, that there is not the slightest difficulty in obtaining or breeding animals that will leave a profitable margin on their own account, over and above the value of the manure made by them while on the farm. Whatever the variety of stock kept for the purpose of enriching the soil, whether cattle or sheep, they must be abundantly fed, and the food of the richest and most succulent character: otherwise their owner will fail in a great measure of the object he has in view, and the manure made will be very materially deficient, both as to quantity and quality. There is not a better or more familiar proof of the manure-producing power of cattle than that obtained by a comparison between the quantity made during a winter's night by, say, a stall of fifty head of either well-fed dairy cows or fattening stock, and an adjoining stall containing an equal number fed so as to meet the grass in the casing spring in merely store condition. In the former case the groove behind the cattle is filled to overflowing with the richest dung, requiring a considerable portion of straw to be mixed with it before it can be removed; while in the latter the straw used as bedding is hardly soiled, and will serve for several successive days, while the excreta of the animals is so dry as to be easily cleared away without the slightest admixture of the litter, if, from a desire to economise that article, it may be considered necessary to retain it. To clean out the first stall in the morning the services of a horse, cart, and man are required, and, at the same time, is no light task, while the second is quickly cleared by a boy with a wheelbarrow. We thus find, at the outset, that an abundant food supply for a heavy stock of cattle is the only source of home-made dung; mere numbers will not do it, if the food is limited, and to begin on a sound basis the farmer must so feed his land as that it will produce heavy crops, and give a large return to the acre. Here, again, the same rule applies, as extent of surface under a particular forage crop gives no return if the land is only in middling heart, one acre properly prepared and highly manured trebling its produce: and the time at which it may be expected to come in for use may be calculated on almost to a day. The glaring evil of half crops of those plants which are simply grown to supply food for the animals of the farm

is that they can return no element of fertility to the soil, their growth exhausting the fields on which they are raised, and on consumption the bulk is so small as to leave no surplus for the sustenance and production of future crops. As an inevitable consequence the arable farm gets poorer and poorer, and the farmer himself must follow suit. In beginning a lease on a new farm, impoverished land and scarcity of bulky manures are generally the greatest difficulties the tenant-farmer has to encounter, and the way he sets about overcoming them, whether with energy and spirit, or in a half-hearted, free-and-easy manner, looking forward to the remedial influence of time and rest to bring the land into heart, will afford very clear indication of his future career, and the degree of prosperity he is likely to enjoy during his tenancy. As has been already noticed, bulky manure can only be obtained by the liberal application of heavy manures, *assisted* by the phosphatic and ammoniacal fertilisers, which the man of capital has so largely at his command at the present day; and when a man takes possession of a farm which has been worn out and poverty-struck, self-interest compels him, if he is pushing and energetic, to look at once to other sources than the farm itself for enriching substances, so as to lay, although at heavy cost, a firm foundation for an ultimate structure of commercial success. Clearly, then, it is a serious loss of both time and money to attempt to take crops from poor land, destitute of all, or at any rate most of the constituents indispensable to the healthy progress of the plants; of time, because a certain portion of a man's life has gone beyond recall without his having the slightest pecuniary advantage to show for it; and of money, which means his working capital, a considerable part of it having been spent irrecoverably in a profitless investment. Two courses are open to him in making arrangements for his first supply of manure, the first being the purchase, conveyance, and application of large quantities of town dung; and, second, the growth of crops which have for their immediate object the enrichment of the soil, and which, as in the case of roots, shall be eaten either partially or wholly on the ground, according to convenience or necessity. A combination of both is eminently suitable, inasmuch as it effects a considerable saving in the heavy item of carriage at a time when, very possibly, the energies of the entire working staff of both men and horses are taxed to the utmost. The decision as to the use of town manure, in whole or in part, must necessarily be greatly influenced by locality—whether situated so conveniently to a town or city as to be accessible by the carts direct from the farm, or if so remote as to render this impracticable for economic reasons, the near neighbourhood of a railway station or siding, or the possibility of cheap water carriage, the manure being brought to a point both easily and quickly reached from the farm. The man who has been accustomed to the use of this fertilising material, and well knowing its great value in agriculture, has been yearly in the habit of supplementing the home-made article with a considerable quantity, does not, on removal to a new holding, readily allow his old habits to fall into disuse, but immediately enters into arrangements for their continuance, if the difficulties of transit are not actually insuperable. Imputing nothing less than failure and possible objection to its absence, he will, in the effort to bring it to his farm, overcome obstacles of the greatest magnitude to inexperienced eyes, and will, as is often done, bring town manure in enormous quantity to a farm which,

during the previous occupancy, scarcely received a load. If his acreage extends to a couple of hundred, a man of spirit will boldly contract with the corporation of a borough to take the whole of the manure made in their town throughout the year, engaging to remove it daily, an agreement which necessitates a special staff being detailed for the express purpose, and causing them to work early and late. An enterprising man possessing such a contract for three or four years in succession will reclaim his land from a state of poverty and exhaustion, and reconquer himself for a heavy outlay quicker, and with greater certainty, than by any other known means. To ensure economy in the carriage of such an immense bulk of material as is indicated by such a contract, the horses must be of good bone and substantial build, and fed liberally, so as to be able for a net weight of from 30 to 35 cwt. when the roads are ordinarily level and well kept, and the journey not more than five miles. A horse regularly at this work will not be over-fed with a weekly allowance of four bushels of oats, one and a quarter bushel of beans, and half a bushel of barley, the beans and barley being boiled with turnips and chaffed hay, and mixed with a few handfuls of bran and a seasoning of salt, when drawn from the boiler, together with a nightly allowance of hay or bean-straw. One man will follow a pair of horses in single-horse carts, who must also be well fed and well paid, as being out at very early hours, and in every state of the weather, soon sours a man, and disgusts him with the employment that makes such slavery a necessity unless he finds the terms and treatment liberal. To those farmers who are situated beyond carting distance the corporate bodies who manage this department of town business offer special encouragement, so as to enable them to participate in the benefits to be derived from the plentiful application of street manure, generally making a reduction of from 20 to 25 per cent. when fifty trucks or over, of about seven tons each, are ordered together. Railway companies also give great facilities for its transit to extensive and regular customers, carrying at special rates, often marvellously low, a boon for which many men are particularly grateful, and are not slow to take advantage of; while, at the same time, it must be admitted that there are others equally favourably situated, and requiring it quite as urgently, who are very callous in the matter, and never order a single waggon. To clearly elucidate this part of the subject, and place it before the readers of this journal in a thoroughly practical form, I will now faithfully endeavour to mark out the course open to the man who has the spirit to contract for the whole of the manure of a considerable town, and to continue it for a number of consecutive years. To the commissioners or other governing body of a town, of from seven to eight thousand inhabitants, he will have to pay about £365 a year for the privilege of removing the manure to his farm with his own horses and carts, after having been collected and placed in heaps by their servants. For this sum he will probably have something about eight tons of manure every working day, or, say, 2,500 tons for the twelve months, the cost per ton being a trifle under 3s. Excessive competition may raise the average price per ton slightly, while its absence will, on the other hand, tend to lower it; from 2s. 6d. to 3s. a ton, is, however, quite enough to pay for a heavy contract of this kind, and the stuff should be of the best quality of its sort at that price. It will be seen at a glance that the acquisition of such an enormous amount of fertilising matter, altogether outside of what might be made on the farm itself, places the farmer in a remarkably independent position with regard to his cropping arrangements, as, even at the very liberal allowance of fifty tons each, he has bulk at his command to cover fifty acres. Forty

tons, however, being an ample dressing for most crops, it follows that, even if he has fifty acres of white and green crops requiring to be manured in one season, he has a large overplus to be used on pasture and meadow land. To save labour, whenever and wherever possible, this manure, being short and easily distributed, should be spread on the land direct from the cart, without being thrown down in either large or small heaps, this being in general easily managed when it is to be ploughed under furrow, or used as a top-dressing, wet weather proving the most serious obstacle. Ley oats is a crop that is most grateful for, and gives a good return for, a dressing of about thirty tons of town dung to the imperial acre, growing immense straw, while, at the same time, the head is large, and the grain plump and round, and weighing well to the bushel. This crop is too often grown on poor leys without any manurial dressing whatever, and, unless the season is unusually favourable, is generally as poor, as the preparation it received would indicate—soft, flaccid straw, unable to bear a shower, and a wretched half-filled head, with a light grain scarcely fit for any purpose, being about all the grower has for his trouble. Top-dressing oats makes an admirable preparation for the succeeding green crop, as the manure, over and above its fertilising property, operates on the soil in a very marked degree as a mechanical agent, rendering it open and friable, and thus greatly lessening the labour of preparing for the next crop, besides very materially increasing its power of atmospheric absorption. Beans do well on ley, with a dressing of from forty to fifty tons of town dung, growing strong, well-padded straw, bulking well on the barn-floor, and almost invariably turn out an extremely money-making crop. The very large quantity of manure given to the beans will enable the land easily to give a crop of oats the year following, which, without any preparation or expense but the labour of the horses and the seed, will prove a crop that no man need be ashamed of. Farmers who are extensive purchasers of town manure are generally large growers of potatoes, for which purpose it is well suited; and although this is a crop that leaves nothing on the farm, in this case it is of no importance, the manurial element having been procured without taxing the soil. In districts where potatoes, in the majority of seasons, bear well, and escape the disease, they are the mainstay of the pushing farmer who does not grudge the labour and expense of bringing large quantities of manure to his farm, as there is no crop, when successful, that can return him nearly so much money. A 10-ton crop to the acre touches on £40, as they seldom average much less than £4 a ton, and from £25 to £28 an acre is a very useful price to get for them when in ground, the purchaser being at the expense of lifting, storing, and disposal. Such returns offer powerful inducement to farm well, a heavy expenditure being quickly returned with interest, and the land is eminently well prepared for the growth of future crops. As previously noticed, when the cropping has been finished for the season, a portion of the grass and next year's meadowing may be gone over, a mode of using town manure which gives very good results. The first leisure time after harvest this work may be commenced, autumn or early winter application affording shelter to the roots of the grasses, while at the same time nourishing them, a theory abundantly proved by the intensely green colour which the pastures so treated immediately assume, and maintain throughout the winter and spring, however severe the weather. A noticeable feature on land thus top-dressed is the luxuriant crop of white clover which it carries the following summer, forming a most attractive sight even to those not specially interested in farming. With hay at present realising 120s. a ton in the leading markets, and likely to be higher, those who

top dressed for this crop will find themselves very well paid for their trouble. Twenty-five tons to the acre, of the shortest of the dung, carefully spread, and further regulated by a stroke of the chain-harrow lengthways and across, makes a very nice dressing; and, if the land was laid down in good heart, two and a half tons to the acre, cut so early in the year as to give ample time for the growth, cut fine, and saving of the second crop may be easily calculated on. The cost of the manure, including carriage and application, would be nothing less than £6 10s. per acre, at present prices; the crop would realise £15 per acre, leaving the respectable balance of £8 10s. for rent, labour of saving, and personal remuneration, and

this entirely outside of the clover crop, which adds to worth a considerable sum, whether cut for rolling or made into hay. A farmer pursuing the course that has now been described steadily and perseveringly for a number of years finds himself at length standing well with the world; he has no difficulty in raising profitable crops, the soil being full of fertilising matter and has probably become in a great measure self-sufficing, as to the supply of bulky manures; his landlord respects him for his own sake, and the example he has shown to others; he has all the comforts necessary to his station in life which money can procure, and in every way he reaps the most-beneficial fruit of intelligence, energy, and well-directed industry.

## POOR LAW AND LOCAL TAXATION.

At a meeting of the York Chamber of Agriculture, in Middlegate, Mr. T. Dunn, Kildale, in the chair,

The CHAIRMAN said that the question of Poor-law and Local Taxation was assuming great importance in this country, principally, he believed, on account of the advanced rate of wages, which was making thoughtful people consider whether the Poor-law as at present administered was the wisest way in which to relieve those who were destitute, and to question whether it could not be administered in such a way as to inculcate self-reliance and thrift, and to induce those who were now receiving enhanced pay for their labour to make provision for themselves so far as they could. It was the simple duty of every individual to provide for his own interests, both in time of health, sickness, and old age; and as labour was receiving its full remuneration, those who laboured, he thought, ought to have thrown on them the responsibility of providing for themselves more than had been done. That the question was one of importance was evident from the fact that it was brought before the House of Lords in the last session by Lord Lytton; and before the session was closed two notices were placed upon the table, one by Mr. Pell and the other by Mr. Stanhope, proposing to bring before the next session of Parliament the question of the administration of the Poor-law, so that it was very likely it would be dealt with legislatively.

Mr. FOSTER read his paper on "Poor-law and Local Taxation," as follows:—Before accepting an invitation to read a paper at this chamber on the administration of the Poor-laws, the question occurred to me what reason I could adduce for discussing such a topic before a body of gentlemen whose special vocation is the study and practice of agriculture? The result, however, of my consideration was that I arrived at the conclusion that no man were more or so largely interested as the farmers in all questions of local taxation, because no other—be they bankers, merchants, tradesmen, or equires—contribute so largely, in proportion to their income, as do the agriculturists to the poor rates and to the various other imposts known under the definition of local taxation. The annual expenditure for all purposes connected with the relief of the poor approaches close upon eight millions sterling, and in 1872 it exceeded that amount. I am glad, however, to say that the last two years have shown a substantial reduction, although now the outlay stands at 7½ millions. Of this amount the York Union, comprising 83 townships, contribute upwards of £56,000 per annum. Fifty of these townships are in the rural district, and their contributions to the Union-fund form a very large proportion of the whole. But it must not be inferred that this £56,000 is expended by the York Board of Guardians. On the contrary, the statistics show that upwards of £17,000 of the amount is abstracted from the poor rate for payment of the county, borough, and police rates; highway boards receive and expend about £2,800 per annum; registration, vaccination, and parliamentary registration charges entail a charge of about £600 per annum. The maintenance of lunatics in asylums is an increasing item, over which there can be little control, and now exceeds in the York Union £2,000 per annum, although upwards of 100 imbecile and lunatic paupers are received and treated in the special wards of the York workhouse. The salaries of the officers cost about £1,800 a year; but, considering the amount of work performed and the responsibilities which devolve upon them, I do not consider that they are over-paid. The total

amount expended on the relief of the poor is about £12,600 a year, or about one-third the actual amount raised by tax upon the ratepayers. I have given you this figure online, that it may assist you and me in considering the various questions which are constantly springing up when we endeavour to contemplate the ramifications which, from time to time, have sprung up on the subject of local taxation. In determining upon the form this paper should assume, the difficulty was, not to find material, but so to compress my observations as to bring them within a reasonable compass. That I may do so I will confine my remarks to three points:—1st, the rating of property; 2nd, the administration of relief; 3rd, the basis of settlement and removal. 1st, the rating of property. There are two chief classes of property liable to be rated. Of the first class are the properties expressly enumerated in the Act of Elizabeth; of the second are the poor rates which the courts have held to be liable, not by the express words, but by implication from the terms of the Statute. The properties made expressly liable by the statute of Elizabeth were—1, lands; 2, houses; 3, tithes; 4, coal mines; and 5, saleable underwood. Lands are understood to include profits derivable from the use or sale of the body of the soil itself—from the growing produce of the land—and from improvements of the land. But, although it includes quarries, brickyards, gravel-pits, &c., it was ruled not to include mines generally, the express mention of coal-mines raising the inference that it was the intention to rate other mines. And, again, "saleable underwoods" being specially mentioned, all other woods and timber were exempt from taxation. And so it remained until the Act of last year brought into charge mines other than coal-mines, woods generally, and game. That Act, however, hardly realises what was expected from it, in adding to the rateable value of parishes, as the language of the clause only admits of woodland being rated as land in its original state without improvement. But I must not detain you further on this point. As to property which is liable to taxation by implication—the Courts held that property to be liable by implication should be local and visible and productive of a profit. Generally, whatever failed of either of these requisites was not rateable. Thus stock in trade was local, visible, and profitable, and was therefore held liable, but by subsequent statutes was exempted; household furniture and money in hand was local and visible, but not profitable, therefore not rateable; and money out at interest was visible and profitable, but not locally within the parish, and therefore not rateable. Such are the principles on which our taxation for poor-rates was founded, and so they have remained. Unlike the Property and Income-tax, they limit taxation for local purposes in the manner I have defined, and hence it is that the burden falls with special force on the farmer who occupies so largely in this country that which is local and visible and is assumed to be profitable. The extension of Boards of Health to the rural districts must necessarily add further to the increase of local taxation, inasmuch as drainage works and the other means required to improve our sanitary condition entail unavoidably considerable outlay, which can be met in the main by rates, but we all know that loans mean interest and repayment. I have before me a summary of local taxation two years ago, from a Parliamentary paper. The total sum realized was about 2 millions of which 7½ millions was raised by loans and from local taxation,

and the remaining 18 millions from local taxes. Local taxes in their economic aspect are broadly divisible into two classes: 1, non-remunerative taxes, and 2, by remunerative and improvement taxes. The first of these include poor-rates, county and police rates, borough rates, &c. These make an aggregate of nearly 13 millions annually. The remunerative local taxation includes highway rates, town improvement rates, lighting, watching, and drainage rates, harbour and lighthouse rates, Burial Board rates, and other charges, which make in the whole a total of 2½ millions levied annually by remunerative local taxation. These are large figures, and they show the magnitude of the question now under our notice. From various causes these sums are being annually increased—in many of our large towns the newly-formed School Boards are adding greatly to the local burthens by school rates for buildings and other outlays. It is not surprising that the question of local taxation has been forced upon the attention of Parliament and of Her Majesty's Government. Something has already been done by accepting, on the part of the Imperial revenue—to which all classes, including the fundholder, the mortgagee, the bondholder, the proprietor of preference shares in public companies—are required to contribute, although they may escape the pressure of local taxation. The Government has conceded an increased ratio of the police expenses, they pay a moiety of the salaries of union medical officers and of the union school-masters and mistresses, and they now allow 4s. per head per week for each lunatic pauper confined in an asylum. This last item is equal to a grant of £700 per annum in relief of the local taxation in this York Union. These are concessions which are acceptable, but they are only a small instalment of what I conceive to be substantial justice. I would extend the aid from Imperial revenue still further—but always reserving such a check on the local authority entrusted with the administration of public money, that they should not with impunity incur extravagant outlay. If we are to have local government, we must have local taxation; but this may be relieved in the mode I have indicated. For instance, if the Government would contribute towards the cost of in-maintenance one shilling per head per week, this would be a relief to local taxation to the extent of £375,000 per annum, of which sum the proportion payable to the York Union would be equal to £1,250. There are various bodies to whom is entrusted the expenditure of local taxation. We have the Poor-law Guardians, the Highway Boards, the Municipalities, the Boards of Health, and the magistracy, besides many other bodies of minor importance. All these bodies are the creation of popular election except the magistrates, who are appointed by the Crown, and there have been many efforts made from time to time to supersede their control of the county rates, and to place the expenditure in the hands of county boards. As yet these efforts have not been successful, but I apprehend that some of those present to-day who are younger than myself may and will live to see the affairs appertaining to county rate expenditure placed under the control of the elected representatives of the ratepayers. I see no objection on principle to such a change; but in practice I do not anticipate any great reduction of expenditure or saving to the ratepayers to result therefrom. On the contrary. Just turn to our Municipal Corporations. Since 1835, when the close corporation system was broken up, and our city and town councillors were chosen by popular election, the expenditure of our municipalities has gone on rapidly increasing—the borrowed money of some of our larger towns now being represented by millions. In our three Ridings I believe that the magistrates have kept a tight hand upon the expenditure, and that they have felt their responsibility as much as if they had been elected by the ratepayers. I merely add these remarks—not that I object on principle of those who expend the taxes being subject to the control of public opinion—but because I would not have you believe that a transfer of the financial powers to county boards would effect any appreciable alleviation in our local taxation. 2nd. Relief of the Poor: I will now take you to the next head of my paper. The administration of relief under the Poor-laws. My experience extends to the old Poor-laws, before the passing of the Act of the 4th and 5th Wm. IV. cap. 76. At that time each parish, however limited in its area, relieved its own poor, through the hands of the overseers, subject, however, to the revision and orders of the magistrates, before whom overseers were continually summoned by idle and discontented paupers. The new Poor-law introduced many beneficial

changes. The constitution of Boards of Guardians was a great boon. It established corporate bodies through the length and breadth of the land—whose administration of the Poor-laws for the last forty years has done much to break up the hereditary pauperdom which ruled in this country under the old system. The building of workhouses accomplished one great gain: it terminated the oppression of able-bodied paupers. The union buildings are still called workhouses—but they are in reality now hospitals, asylums, and schools. Take the paupers in the York Union House. Last week they numbered 419. Of these only 10 were able-bodied, the most of them being, I understand, pregnant women awaiting their accouchment; 126 were old and decrepit; 140 were persons suffering from bodily or mental affliction; and the remaining 173 were children, who as they become old enough are educated and fitted to become useful members of society. The efficiency of a workhouse is, in my opinion, the best index of whether or not the guardians comprehend and fulfil the duties of their office. Just as the workhouse is maintained and used, so is the proportion of out-door paupers. Take, for instance, the Morpeth Union, in which the number of out-door paupers is highest in the north-eastern district. There the out-door paupers are to in-door 34 to 1, and there is one pauper for every 26 of the population. In the York Union the out-door are only 2 to 1 of the in-door, and there is only 1 pauper to every 51 of the population. I could quote other unions where like causes bring like results, both in our own and in adjacent counties. As out-door relief is administered—lavishly or cautiously—so does pauperism numerically increase or decrease. These are points worthy of the gravest consideration by every Poor-law guardian, for no greater calamity can occur than to have a pauperised community. There is another point in which I believe the York Union adopted a wise policy—that was to abolish relief to persons resident beyond the area of the union. The old practice led to deception and fraud, which no vigilance could check or detect. Mr. Culley, the Poor-law Inspector, in a recent report on this subject, says, "Proper supervision of non-resident relief is almost impossible." By abolishing non-resident relief in the York Union at least £800 per annum was saved, and numbers of persons, who accepted relief when it came from a quarter which was not known to their neighbours, sooner than reside within the area of the union, betook themselves to industrious habits and maintained their families in honest independence. There is one more point on which I will trouble you under this branch of our subject. I am a great advocate for giving the inmates of workhouses as good food as can be procured, making the workhouse a shelter and a refuge welcome to the really destitute, rendering their rooms as cheerful and as comfortable as possible, and providing for them warm and substantial clothing. Those who accept of the shelter of the union house should feel that in doing so they are insuring to themselves comforts of which their own squalid homes are destitute. The sick should have the best medical advice and attendance—the young should be carefully tutored and generously fed—the feeble in mind should be afforded every recreation likely to arouse their dormant faculties—and all should be treated with kindness and consideration. Then no cruelty or injustice can be practised in freely using the workhouse; and I hold it as a false and mistaken charity in many cases to dole out miserable pittance to out-door paupers on which to exist in wretchedness and privation. There is no disgrace in becoming the inmate of a workhouse—the disgrace only exists when by providence, dissipation, and extravagance, a man fails to discharge the first duty he owes to society—to make provisions for his own household. Out-door relief in many cases may be given with prudence and propriety: such has been the practice in our union where circumstances justified that course; but to adopt generally the practice is pernicious to the poor and unjust to the ratepayers. My experience respecting the children of improvident paupers is that they fare far better, both as regards the necessities of life and their moral and intellectual culture, when in the workhouse than they can do where out-door relief is given. True it is that by a recent Act of Parliament the relieving officers are required to insist on the children of paupers receiving out-door relief being sent to school; but from what I have observed I believe that that law is frequently evaded by falsehood or deception on the part of the parents. In the York Union several such cases have come to light, and thereupon the relief has been suspended; but with

all the vigilance which our excellent relieving officers can exercise they are sometimes deceived and misled. The modern idea of farming out pauper children I do not approve of; I believe that if generally adopted it would lead to the most deplorable results. 3rd. Settlement and Removal: The third head to which I would direct your attention is that of settlement and removal. So long ago as in 1864 I read a paper before the Social Science Congress on this subject, which was published in their transactions and afterwards reprinted for circulation among the members of both Houses of Parliament, when the last mitigation of that portion of our laws was under consideration ten years ago. I will not trouble you with an outline of the law of settlement as it originally existed—suffice it to say that birth, apprenticeship, servitude, renting a tenement, serving a parochial office, payment of rates, were among the means by which a settlement could be acquired, and having spent many days in our sessions' courts in this county, reporting the hearing of appeals against orders of removal, I acquired thereby a considerable knowledge of the subject, and comprehended that a system which involved our parishes in constant litigation was profitable to the lawyers, but very costly to the ratepayers. The Act of 1834 abolished settlement by hiring and service; but it was not until 1846 that the first of a series of Acts was passed which made important changes in the laws that regulate settlement and removal. In that year it was enacted that a residence of five years in one parish without receiving relief should confer a status of irremovability. This period of five years was reduced to three years in 1861, and the area of residence was extended from the parish to the union. In 1865 the period was altered to one year, at which it still remains. The Act of 1846 threw the cost of maintaining the irremovable poor upon the parish of residence; but this was found to work so very unequally and unjustly, that in the following year an Act was passed which transferred the charge from the parish to the common fund of the union. At that time the proportion in which each parish contributed to the common fund was calculated according to the average—each parish paid not in proportion to its ability to pay, but in proportion to its existing burthens. In 1861 an Act was passed which placed these charges on a new footing. It provided that after Lady day, 1862, the contributions to the common fund by the several parishes should be calculated according to the rateable value of the hereditaments in each parish. The Act of 1865 made all relief chargeable to the common fund. And so the law now remains; but I have long been of opinion that the retention of the system of settlement and removal, even in its present mitigated form, is a great and fatal mistake, which ought to be remedied. In my remarks before the Social Science Congress in 1864, I said—"The district that has had the benefit of the labour of a man in his days of health and strength ought in equity to maintain him (if requisite) in his old age and infirmity, rather than remit him to a distant place which happens to be his legal settlement, but in which he has no other interest or connection. The great centres of industry which absorb all the labourers who can be obtained have no right, when these labourers become exhausted in physical power, to again consign them to the locality from which they formerly came, as worn-out and useless paupers, and therefore to be maintained at the cost of those who have not gained from their labour." My subsequent experience has not altered, but has materially strengthened, that opinion. Taking the case from an agricultural point of view, what are the facts? Do not our census returns exhibit the unpleasant truth that there is in our purely rural townships a continued diminution of population—not that our population is wearing out, but that the high rate of wages in our great centres of industry tempt away the young and strong to other scenes and other vocations, rather than remain in the home of their fathers and follow the plough. Where these young men and young women—for the lasses will follow the lads—bestow the benefit of their industry, surely when by accident or other calamity, in after years, they or their off-pring become a burthen on the poor rates, that Burthen should remain where it has fallen, and not be remitted to some distant union, whose only relation with the pauper may be that his father or grandfather half a century ago was an occupier of land, or otherwise acquired a settlement, which descended as a derivative heirloom on his posterity. I have carefully watched the recent operation of the law of settlement and removal. In nearly every case the union removing is

some large town or district, or perhaps the metropolis, where the pauper or his parents have been industriously employed, and some breach of his irremovability having afforded the opportunity to remit him to his place of settlement—he and his family are sent from the place which his labours have benefited, to be a burthen on those who perhaps hardly knew such a family ever existed, till diligent inquiry into old parochial records brings out the required evidence. Of nineteen removals recently made to the York Union eight were from Leeds, and the others mostly from London, Nottingham, Rotherham, and other large centres of population. I will not say anything of the legal cruelty which these removals create. In many cases a widow and her children are removed, it may be hundreds of miles, to a place where they are utterly unknown, and where they meet with total strangers. They are separated from the relations and friends with whom they have heretofore lived as neighbours. And this is done because the deceased husband or his father gained a settlement in a union of which they know nothing, destitution and poverty being their only fault. I will add no more to enforce that which I have now for some years, on all fitting occasions, advocated—the total abolition of the law of settlement and removal.

The CHAIRMAN quite agreed with Mr. Foster in his opinion respecting the alteration of the law of settlement and removal. As it at present existed it certainly in very many instances entailed considerable hardship, and was contrary to common sense. When they came to look at cases which were sometimes brought before Boards of Guardians, cases in which a widow and a large family of children were sent, say from Manchester, Leeds, Rotherham, or other large manufacturing place, where the husband had unfortunately died, they found that somehow or other they traced back the settlement to a country district and sent the family back to the rural union, which was charged with the sustentation of people by whose labour a large population had been benefited. That was a system which was evidently wrong; and our statesmen said it was wrong and wanted rectifying. This would be very much assisted by able papers like that which they had just heard and by public discussion. He did not gather from Mr. Foster that that gentleman advocated the total abolition of out-door relief—(Mr. Foster: No.) The question was a very serious one, and he was inclined to think that it was the best question which would have to be fought out. There was a great conflict of opinion upon the subject, and very likely next year in the House of Commons the total or non-total abolition of out-door relief would be the question which would have to be considered. The author of the paper was a gentleman who was constantly engaged in the administration of the Poor-law, and whose opinion was consequently entitled to great weight. Mr. Foster, he understood, advocated strongly the reduction of out-door relief to the lowest possible point compatible with fair dealing to those whose homes it would be really wrong to break up and compel to come into the workhouse, but so far as it was compatible with duties towards themselves it was desirable that out-door relief should be kept at the lowest possible point. In administering relief they should go on true, sound principles. It was not sufficient to consider each case apart from every other, but as a part of this working out of the same sound principle, and the rates should not be administered by the guardians as if they were administering charity, but should be used as public money, not only to relieve present distress but as likely to cure pauperism. He was persuaded that the workhouse test should be more largely adopted than it had hitherto been, and he congratulated the York Union on the high position it held in the estimation of the Local Government Board. It might appear cheaper to allow persons a shilling a week outside rather than bring them into the workhouse at a cost of 3s. or 4s. a head, but the out-door system gave opportunities for fraud and imposition. He was, therefore, glad to see it reported that in the York Union there were only two out-door to one in door case. In reference to the valuing of property he thought this should be levied on other than real property, and that a person having an income of £1,000 a year from the funds should be held as responsible for his proportion as he who paid £1,000 a year for a farm. These were two different descriptions of property, but the principle on which the poor law was based was that real property only should contribute. Commercial wealth should contribute in the same ratio as land was held to do.

Mr. NICHOLSON expressed his entire concurrence in the views contained in the paper, and while he noticed Chambers

of Commerce starting in their own interests he thought Chambers of Agriculture had already been common too long. He was of opinion that the rating should be distributed over the entire wealth of the nation, and he could not imagine why public highways, which were open to the whole of the Queen's subjects, should be kept up by the agriculturists through whose parishes they went. He held strong views in regard to local taxation and treatment of the poor. The poor they knew and were told would always be in the land, and he remembered the time when farmers conferred a favour when they employed a poor man, but now the poor man conferred a favour by his labour. Property was different in the days when the Poor law was established to what it was now, and the law which provided relief at that day could not be right at this time. He very much feared that the present system of administering the Poor-law tended to too great leniency with respect to out-door relief. His desire was that the poor should be well cared for, but this could not be done by giving out-door relief. He believed the day was fast approaching when the Poor-law

would be done away with altogether, but the first step to that was to do away with out-door relief.

Mr. FOSTER gave one or two instances illustrative of gross imposition in the reception of out-door relief by non-resident paupers, in the York Union, but this class of cases the York guardians had succeeded in sweeping away. With regard to local taxation, there was very great difficulty in taking all classes of property into account, but a great deal might be done in the way he had suggested in obtaining contributions from Government in aid of local taxation.

Mr. KILBY (Tadcaster) believed that it would be better both for the paupers themselves and for the country in general if out-door relief was discontinued, although in some cases it might be hard on families who wished to keep themselves respectable.

Mr. SMITH also thought it was an unwise plan to give relief to persons living out of the parish.

A vote of thanks was passed to Mr. Foster.

## THE PAST AND FUTURE OF STEAM CULTIVATION.

At the quarterly meeting of the Nottinghamshire Chamber of Agriculture, held at Retford, Lord Galway, M.P., in the chair.

Mr. D. GAGE, of the firm of Messrs. Fowler and Co., of Leeds, read a paper on the Past and Future of Steam Cultivation as follows: From the title of my paper you might fairly presume that I intend to read you a long lecture. To exhaust the subject of any one of three heads would entail a long paper of itself; therefore my remarks must necessarily be much circumscribed. You naturally might expect me to say something about the mechanical part of the question, but I shall not have time to do this, as my object is to touch upon some of the more vital points bearing on the future of steam cultivation, referring as I proceed to the past as well as the present. I feel less diffident in undertaking to open the subject, knowing that the discussion which is likely to follow will amply make up for any omissions on my part. In speaking of the difficulties surrounding steam cultivation in the past, it is not necessary to go farther back than 1858, when the question, "Can steam plough cheaper than horses?" was first solved in the affirmative by the Royal Society of England awarding the prize of £500 to the late John Fowler. This was followed by the Highland Society of Scotland giving a similar decision and award. If these two great national societies were right then, need we now ask the question, "Can steam plough cheaper than horses?" The first and greatest difficulty in the past was the defective nature of the machinery, and although it might be interesting for you to know how this has been overcome, I have no time to tell you on this occasion. All I shall say is that the wear and tear have been reduced to one-fourth of what they then were per annum, and the amount of work which the machinery was capable of performing is more than doubled, and far more perfect. The breakages which were continually and hourly taking place during the first years of practical working in the field were enough to discourage even enthusiasts, and the country ought to be grateful to those gentlemen who had the pluck and courage to climb the hill and work through a corn. We have heard the manufacturers of steam ploughs spoken of as working through these difficulties, but where, I ask, would they have been but for the many enterprising agriculturists who had the courage to go hand-in-hand with them? The second great difficulty concerned the qualifications of even the best men who could be got to work the machinery in the field. Trained mechanics are no use, as a rule, outside the workshop, and farm labourers with sufficient mechanical knowledge did not then exist. The dirty nature of the work made the better class of working men shy about the job, and the second-rate men had to be educated; an education, the cost of which is only known to those who were early at the work. This drawback, perhaps, as much as any other, hindered the progress of steam cultivation in the past. The great cost (at this period) of a steam plough may be mentioned as another sufficient reason for discouragement, and the practical hard-headed, hard working farmer who would have been a great acquisition in the development of steam cultivation had not the necessary capital. Again, the man who had capital at his

disposal could not give his personal superintendence. Many enthusiasts, men who fancy steam will overcome all difficulties, although deserving great credit for their good intentions, have done much harm by introducing machinery where circumstances were unsuitable, and where nothing had been done to assist its application. But the injudicious use of the steam plough has not been confined to this class of pioneers alone for I believe that nearly all steam cultivators, and even the most practical of them, have erred sadly in the abuse of the unfauling and unlimited power of steam. Their argument was, we cannot increase the area of our fields, but we can add to the depth of the soil; and nearly all those who have adopted steam, began by at once ploughing to a great depth; the result of this was, that new unfertilised land, never before moved, was brought to the surface in a state totally unfit for vegetation. Need we wonder, then, that unfertilised land of this description, turned to the surface, should produce only half a crop for a series of years? Thus, perhaps more than anything else, has deterred practical farmers from embracing steam cultivation. In this speaking of deep ploughing I do not wish to be understood as disapproving of cultivating or deep stirring, which is an entirely different thing. In concerning my remarks on the past of steam cultivation, I must refer to the want of mechanical knowledge on the part of the owners of steam cultivating machinery, who had to direct the men (themselves also uneducated), and to the great prejudices which were brought to bear against it by farmers in the neighbourhood of the operations. These prejudices were greatly increased by failures, breakages, and mistakes. Looking at the present condition of steam cultivation from any point of view it is to my mind highly encouraging. In its relation to horse work it is admitted by all to be more economical and efficient. Where a farmer has a set of tackle of his own and within reach of coals at an average price, I am satisfied that the work can be done at half the price which horses would entail. If evidence is needed that it is a cheaper power, I may mention the lucrative nature of the business of hiring out steam ploughs, especially where it is undertaken by individual enterprise; many joint stock companies also have been to some extent successful, notwithstanding the great disadvantage which companies labour under in their lack of efficient economical management in the field. It is self-evident that if those who hire out steam ploughs, whether individuals or companies, were to charge more for doing the work than horses could do it for, they would not be employed. If, therefore, hired steam ploughs can work cheaper than horses, and make a profit, surely machinery worked on individual farms, where the men are not idle when the tackle is not working must be a still greater economy. I have spoken of the letting-out system. In doing so, I have no intention of questioning the merits of this system which has been more than any other the means of forwarding the general introduction of steam cultivation; but I now wish to point out drawbacks which prevent it from being able to compete economically with tackle owned by an individual farmer. Henceforth this system has only been used by the



farmer as an auxiliary, and the letting-out man has had to undertake the heaviest operations only. His share of the work has been all the stiff fields, and generally unsuitable land, and for this he has probably had to travel with his tackle considerable distances—circumstances tending naturally to his disadvantage as compared with the private owner of machinery. To find the work which the tackle is able to do within a small radius should be the great object of the owner of such a set of machinery, and to get the greatest possible amount of land cultivated by the tackle should be the policy of the farmer. This can only be done satisfactorily by contract entered into beforehand between owner and employer, by which the former will secure continuous employment for his tackle, and the latter understand how many horses he can confidently dispense with. This plan, compared with the present, would lessen travelling on the roads, and, necessarily, the wear and tear—local men with local interest would be got to manage the tackle, and I feel sure that a set of steam cultivating machinery worked under such an arrangement as I suggest would be a great means of lessening the expenditure. Were the cultivation of the farm regularly and generally undertaken as indicated, the work could be done at much less cost, and with much greater satisfaction to the farmer and the owner of the tackle. In speaking on this matter, I might state the experience of several well-known gentlemen in England who have been steam cultivating all their land for a series of years. I have, however, only time to mention Mr. Prout, Sawbridge-worth, whose intelligence and energy have already met with a considerable measure of success, as I have no doubt you are all aware. It is now found that the operations at present being done on their land can be accomplished with double the facility and at half the expenditure or power which was necessary during the earlier years of their steam cultivation. By the plan suggested above, another very important advantage is gained—that of the letting-out man being able to have all the different implements which the farmer requires for his operations, thereby enabling the farmer to reduce his working staff of horses; and until horse-work is reduced to a minimum it is impossible to reduce the expenditure, to the greatest extent, or work the land to the most advantage. The question of the efficiency of steam cultivation compared with horse work is scarcely an open one, as I think most agriculturists now-a-days are convinced of the superiority of the work by steam. It must be quite clear to any practical mind that what can be done with a plough drawn by horses can be done with a plough drawn by steam, but it does not follow that what can be done by a plough drawn by steam can be done by a plough drawn by horses. The speed of horses is limited, the speed of steam is unlimited. The speed of an implement passing through the soil has a great effect on the nature of the cultivation, and in most cases a high speed where admissible at all, is what is required to produce efficient work, and the farmer has at his command in the steam plough any speed which he thinks the nature of the work would require to produce the most efficient tilth. The high speed of a cultivating implement is sometimes of the greatest advantage. The tossing and mixing of the soil, which can only be done by a broad point or share running at high speed, is one of the most essential operations in connection with the activity of the soil. It changes the relation of the particles of the soil towards each other, producing new chemical effects and healthy action. I feel that this principle of renovating the soil by proper mixture and disturbance, and that of increased aëration, are only now beginning to be understood. The increased aëration which has been the result of steam cultivation in the past, has been productive of great good in the case of heavy land, by perfecting the drainage, and raising the temperature. Many years ago the Marquis of Tweeddale carried out a series of experiments in connection with increased temperature, &c., by deep horse cultivation. I have not seen any record of his experiments, but if such does exist, I have little doubt it would throw some light on this question. The Marquis's experiments in steam cultivation did not meet with that success which has characterised nearly all his other efforts in connection with agriculture; and I believe but for his desertion of steam cultivation he would have stood almost unchallenged as the leading pioneer in every branch of agriculture. With regard to the result of steam cultivation on light land, I believe Lord Liester some time since made some careful experiments as to the return from his light land when ploughed by steam and by horses, and the result was very favourable to steam; in fact in almost all cases

where steam has been used with discretion the crops on light land have been greatly improved, and in dry summers have withstood the drought much longer than those growing on similar land not steam ploughed. In Scotland steam is making progress, not only in the cultivation of the arable land but also in the reclamation of its most stubborn hills. It was thought that in consequence of the stony nature of a great part of the land in Scotland steam could not become general, but when the Duke of Sutherland can make steam implements adapt themselves to the stony hills of Sutherlandshire we need not tremble at undertaking to plough the arable lands of our country. Although I have touched on the question of cheapness and efficiency of steam cultivation, I must not omit to mention one of its greatest—I might almost say its greatest advantage—viz., despatch. The work done by steam in the month of August, by exposing the land to the action of the atmosphere, is worth a good many shillings an acre, as by this means in most seasons a summer fallow can be obtained after the crop comes off, equal to the old fallows done up by horses which have lain all the year unproductive. To have a command of labour at any given moment is essential to the proper cultivation of the soil, in fact the whole secret of success in the management of any farm, and especially in that of a stiff clay, one depends on this, and as it is impossible to keep a sufficient number of horses to turn up the land in the requisite time, steam is the sole and only power by which it can be effected. I propose now dealing with the future of steam cultivation, and the best means of reducing its cost to a minimum. In the cultivation of clay land the system hitherto employed has been of comparatively small service, owing to half of the operations being done by horses. I am convinced that if a completely satisfactory result is to be secured, it will be essential to keep horses entirely off the land, particularly in spring, when the land is in a pasty condition, and therefore in the very worst state for treading. I am fully persuaded that stiff clay land can be cultivated at half the cost of light land. This arises from the fact that only one operation is necessary for cleaning it, provided it is worked in a proper manner. It should be worked in autumn, when it is dry, and independently of animal power, and where this is done no operations are necessary in spring, except a little harrowing. The old-fashioned mechanical appliances for reducing it to a tilth are very injurious. Nature itself is an important cultivator of land, and should be allowed free and ample scope, and no mechanical means should be allowed to reduce its beneficial influences. Were these suggestions practically observed, there would be no fear for good crops. To facilitate the drainage of this description of land, I should recommend that it be stirred to a depth of say 2 feet 6 inches, so as to thoroughly shake it and leave open spaces for aëration, and for this operation an implement termed a "knifer" has been constructed. I have seen this implement worked with the greatest success, and to show the healthy condition in which the land was left, you could have ridden over the heaviest land, after the most severe rains, without the horse sinking. This would suit our chairman for hunting. This operation (which I term knifing) has, in many instances, nearly doubled the value of clay soils, and I am totally at a loss to understand why it has not been more extensively adopted. Although in the cultivation of all soils I am strongly in favour of deep stirring, I do not advocate this being done every year. I consider about once every five years is sufficient, and even then it should only be done for green crops. For cereal crops, in my opinion, a mere scratching of the soil, at most two or three inches deep, is an amply sufficient preparation; the seeds being deposited on a solid bed, which has been the result of time. To effect such a preparation, it is essential no treading or uneven pressure of the subsoil should have taken place in previous years. The subsoil will then be in a condition which the cereal crops require, and in a proper state for their healthy development. This also prevents any danger of root-rotten crops. In speaking, however, of the cultivation of *light land*, there is one subject which requires considerable thought—viz., over aëration. Much harm has been done by sowing crops upon light soil when too loose. One of the chief arguments used by light-land farmers is, that the horses consolidate the land. This, I venture to submit, is altogether wrong. The treading of horses can never effect a proper consolidation. Where necessary, I would recommend the use of rollers, as much better adapted to press the land evenly. The proposed legislation in regard

to land tenure, and old laws affecting the improvement of the land of our country, if successfully carried out, will no doubt tend much in the future to the general progress of steam cultivation. The law as to the settlement of land, which permits and encourages the creation and perpetuation of life ownerships in lands must be modified or swept away altogether. There must be no obstacle to the production from the land of the last blade of grass which it can grow. Tenant capital must be made secure, especially that part of it which may be employed through steam cultivation, or otherwise in raising permanently the value of the land. In order that better facilities be given for the movement of steam cultivation and traction engines about the country, the present Road Locomotive Acts will have to be considered. At present many of the roads and bridges are not unsuitable for this new traffic, but they are not fit for the mere ordinary traffic of the country. Local authorities and road Boards must be compelled to have both roads and bridges put in proper and efficient repair. So long as the laws as to the settlement of land, previously referred to, are in existence, as at present, it will be impossible to secure the hearty co-operation of proprietors generally in developing the latent resources of the soil, but were they done away with, there would be nothing to prevent the agricultural resources of our country being more than doubled, by means of increased capital and steam cultivation. If we could dispense with half the horses in the country at the present time, which would be perfectly possible under the hearty co-operation of proprietors and tenants, we should be turning coals into corn, and making ourselves much more independent in regard to foreign supply. But apart altogether from this national advantage, the interest to proprietors of land generally in this country, and more especially to those whose land is of a stiff nature, is one which deserves every consideration. Judging from the experience which I have had during the last eighteen years—experience gathered from every county in England—I feel certain I do not exaggerate the fact when I say that the stiff clays of England can be made to produce twice as much as they are now doing, at half the expenditure of money. In order to accomplish this, there are certain permanent improvements which will have to be made to enable steam tillage operations to be carried out on these lands with that facility which will secure a minimum cost and maximum result. Whether these improvements are to be undertaken by proprietors or tenants is a mere matter of arrangement. Where the proprietor has capital to expend, and the disposition to expend it, it would be the best and simplest way for him to carry out these improvements. There would be no difficulty, however, in finding tenants ready and willing to embark in the undertaking; but before they would do so they would require security for the investment of their capital, which a title to compensation for unexhausted improvements in case of ejection could alone properly give. These improvements would embrace making of roads, taking out fences, and squaring up fields, drainage, fertilisation of the land, and especially steam tillage, by which I mean the improved value of the land, brought about by the use of machinery purchased with the tenants' capital. The tenant should be allowed to farm in any rotation—occupy land with any crops he may think proper—simply he should have entire freedom in connection with the cultivation. Considering that the landlord is at liberty to choose between a good and a bad tenant with capital and without—and that a tenant's capital invested in the land is, or should be, equal to one-third of the landlord's capital, it is only reasonable that a tenant should be put in this position. Foreign competition, even under present circumstances, need cause no alarm. I have travelled over most of the wheat-growing countries of the world, except California, but I have never yet seen a reason why an English farmer is not in a much better position than a foreign one. First and foremost the carriage of the wheat to our country more than compensates for our higher rentals. Secondly, the foreigner is at greater expense in transporting the wheat from nearly all cases he has to cultivate two acres to get the same his farm to any railway or seaport communication. Thirdly, in quantity of wheat, which an English farmer obtains from one. And fourthly, his labour is now much dearer than it was, and I can see that before long it will be quadrupled. The want of capital amongst proprietors and tenant-farmers for undertaking the reclamation and perfecting of the cultivation of the land of this country is a very serious one, but I am sure that when the laws of the settlement of land, and the arbi-

trary restrictions now customary are removed, and when by the use of steam machinery farming becomes more like a commercial enterprise, capital will flow to agriculture. In fact I see no reason why agriculture should not become a business the profits of which would be as secure as those of commerce or manufacture. Under these altered circumstances farms would become large, the best class of machinery would be employed for every operation, labour would be reduced to a minimum, efficiency and despatch increased to a maximum, and the pleasures and profits of farming combined would attract to it men of science and enterprise. In conclusion, I would especially draw your attention to the education required, not only by our young farmers but also by the young labourers who are growing up. A very stupid notion is prevalent that any person is fit for a farmer. Now in my opinion there is no business under the sun which requires so much practical, sound judgment in all its details. Therefore, I would strongly impress upon you that the education of the young farmer ought to be of the most varied description. He should be trained to observe the various conditions of the soil, so as to conduct the operations which are expedient under the varying circumstances; he should be a good mechanic, and able to judge practically of where and why a thing fails, and have a lit le judgment how to alter things to suit; and he should make himself acquainted with the mechanical principles involved in the working of agricultural machinery. With the present difficulty and shortcoming in our labour market, and the prospect of that difficulty becoming greater, it is highly essential that, to obtain the greatest amount of labour from those we employ, we should be thoroughly competent ourselves to guide and instruct them. The farmer will also have to learn in the future the effect of this new system of cultivation on the different classes of soil of which his farm may be composed. The practice of farmers hitherto has been to tread in the beaten track of their forefathers—a track which has been arrived at by experience with the means and appliances at their disposal. But there is no reason why they should remain in this position: altered circumstances and appliances must change the whole course of their future. We have said that one of the drawbacks to the general introduction of steam cultivation has been the difficulty in getting a sufficient number of the various operations of the farm accomplished by steam power, so as to make the farmer independent of horses. While many of the operations cannot be done at present by steam power, I feel sure that these will be lessened every day, and that where a farmer sets his mind thoroughly to utilise his steam cultivating engines, he will find that those difficulties which now present themselves to his view in their application will gradually disappear, and that before long his cart work will be added to the work to be under-aken by steam cultivating engines. The reaping of the crops by steam is a subject which the agricultural engineer must undertake, and when this is accomplished it will remove one of the greatest obstacles at present existing to the displacement of horses on the farm. There can remain no doubt in any thoughtful mind that, as the old spinning-wheel and stage coach were superseded by the infinitely superior agency of steam, so also will the past and present style of cultivation by animal power be triumphantly superseded by steam cultivating machinery.

Mr. WALKER said on many points he could not agree with Mr. Greig. Steam cultivation might be carried on in some places with advantage, but not in all. In some it certainly would not answer—of that he was quite sure—and as instances he would mention the Wolds of Yorkshire, where it would do harm instead of good. With regard to the farmer using steam power and doing away with his horses, he was quite sure it would not answer. If they adopted steam cultivation, they would have to put all the bridges in such a condition of strength as to carry the heavy engines and machinery, and that involved the question whether it was fair that the whole of such expense should be paid by the producer, or whether a share of it should not fall on the consumer. That was a question which ought to have been dealt with by the Prime Ministers of England. He was quite sure the steam drag was successful, but steam ploughs were no good in that district. He thought that deep cultivation was a mistake; for instance, sainfoin, he believed the deeper they cultivated it the worse it would be. If they put flag-stones three inches under the soil, so that the roots could not get through, he believed it would do better than cultivating it two feet deep. There were so many difficulties in the way of a general use of steam power

that he did not think it would be adopted in this generation nor in the generation to come. The wheat root did not grow deep, and did not require deep cultivation, and the better they kept the soil at the top the better it would be. But before they could make improvement in the cultivation of the soil in England they would have to make some alteration in the seasons. This year it was a fact that the best of his land had the worst crops upon it.

Mr. HEMSLEY (Shelton), said however much he might agree with Mr. Walker on local taxation, he must oppose his opinion on the steam plough on strong land—(Mr. Walker: No, no; I think it can do a deal of good on strong land)—and on light soils too. He believed that animal power must be superseded by steam, but Mr. Greig went a little too far. He agreed that a serious obstacle against the general use of steam power was want of capital, for it was not every farmer who could draw £1,000 from the bank to spend on his steam tackle. Farmers did not enter into the subject with any degree of spirit, and there was also a prejudice against it which was greatly increased by failures such as had been alluded to by previous speakers. The rapid movement of the steam plough, he considered, had a most important and beneficial effect on the soil, and such as could not take place under the slow movement of the plough. He had found that draining was by no means perfect until after the land had been subjected to deep cultivation. These were facts, and he agreed with Mr. Greig that the land would produce double the crops and half the expense would be saved by steam cultivation. They knew that it was possible to grow swede turnips on the table, but not to the extent to pay. He was quite certain that the steam plough did not do half the good on wet land as on land which was properly drained. Farmers do not educate themselves, and young farmers would not try to understand the engineering, but it would have to form part of their education in time to come, and if they would pay as much attention to the steam engine as they did to their horses they would be masters of it, and the engineer would not walk about "cock of the walk," as he now did. He could not help alluding to the immense amount of labour and expense incurred in bringing about steam cultivation, and to no man did the country owe more thanks for that than to the late Mr. J. Fowler. Where others had failed he had succeeded. He then proceeded to say that men who were farming 200 or 300 acres of land required some cheaper means of steam cultivation. Mr. Greig had pointed out that hiring was the cheapest and most likely way of meeting the difficulty, but if he had a contract for the steam ploughing of his land he would want it done just in the dry season, and in the succeeding months the man who contracted to do the work would have to go and seek work elsewhere. He agreed that the use of horses could be reduced, but not done away with to the extent Mr. Greig said. Horses must be employed to do the lighter work on a farm, and steam power would not wholly cultivate the land in this country. He could not agree that they must look almost entirely for hiring, but in saying that he knew Mr. Greig would soon ask him, if he found fault with what he had told them, why he did not introduce something else. Well, he thought that what the farmers wanted was an engine of about 10-horse power, and machinery made to work with such an engine, which could also be used by him for other purposes on the farm when the ploughing was done. Farming could be carried on with far less capital than Mr. Greig seemed to believe. Then the law of entail. They knew that Mr. Greig came from beyond the Tweed, where they held strong opinions on that law, but speaking from experience he (the speaker) found there was greater security on entailed estates than on any others, and if he had lived in the Midland counties he would have thought the same, and would have found them the best-farmed. Knowing Mr. Greig so well as he did, he did not mind driving at him. He would congratulate him on his advanced ideas on steam cultivation, and he hoped the time was not far distant when steam cultivation would be the rule and not the exception.

Mr. GEORGE NAYLOR (Billy) was well aware of the prejudice which existed against the system. Mr. Walker had spoken of the steam plough being useless on the Wolds of Yorkshire and Lincolnshire. This was not correct. He had been in three or four counties and tested its results, and on the borders of Yorkshire he had a farm on which some of the land was very poor, and they had been in the habit of cultivating about three inches deep, being afraid that they would bury the

manure and get no crop by deeper cultivation. He ordered them to go much deeper, for he was convinced that they could not go too deep, and the result was that land grew such a crop of barley the next year as they had never seen on it previously, and it had improved ever since. He felt inclined to challenge any scientific man to tell him any one thing opposed to deep cultivation. (The CHAIRMAN: What depth would you go?) Mr. NAYLOR: Fifteen inches; not less. By turning over the soil that depth the action of the sun and the atmosphere did more good than any manure. Some had the idea that by deep cultivation they lost their top soil and their manure; but that was not so. Barley would find it at that depth. He found the same result with turnips. Although at first they did not appear to do so well, yet at the finish they were better than others cultivated at the usual depth, seven inches. Where the sun and the atmosphere could go into it they could not cultivate too deep. Three ideas had always influenced him with deep cultivation. First was how native or natural soil was made. Secondly, that which made the virgin soil at first can make future soil if exposed to the sun and atmosphere, but it will not do so if not exposed, because Providence will not do what Providence designs for man to do. Thirdly, it must be better for man to work in deep soil than to farm on shallow soil, because by so doing he can have in time soil that will produce double that which will grow on shallow. His lordship said he did not believe in twitch. Now if his lordship would gather a quantity of twitch, he (the speaker) would bury it for him in any part of his garden, and would guarantee it did not grow again. It was a mistake to call it a root; it was a plant, and they could bury it as they could wheat or anything else of the kind. He knew there were many who did not understand it, but the time would come when they would do so, and would try to utilize this twitch as manure, and landlords would desire them to do so. He had tried it himself. He had ploughed down the twitch, and had found it benefit the land a pound to thirty shillings per acre.

Mr. GREIG said Mr. Walker's facts were extremely easy to overcome. He did not like anything done except in his own particular way. Steam power simply meant pulling, and Mr. Walker could have his land ploughed one inch, two inches, or two feet deep, as he thought best. If he (the speaker) could give him steam power to do the work at half the cost of animal labour, steam power should do, unless prejudice was against it. With reference to the strengthening of the bridges, he believed that in this county the magistrates had given the necessary order to have the bridges made sufficiently strong. It was now being done. (Mr. Walker: Yes, at my expense.) Mr. Walker had also said he could grow plants with the roots on stones better than in the subsoil. That might be so if the subsoil was bad and wanted curing. It could be cured by turning over, and made as good as the top soil. Mr. Walker had said the wheat roots were only two or three inches deep. In reply to that he would say he had traced the root of wheat seven feet, and he quite believed it would grow as deep as the plant was high if the land was properly worked, and it did not meet with obstruction ("Quite right"). In reply to some remarks which had fallen from Mr. HEMSLEY, he would say that the clay land of England could be materially improved, and could be cultivated very easily indeed at the smallest expense, for by keeping it open and letting the air get to it they would make it very productive for wheat. The law of entail was an obstacle in the way of progress in farming, because a nobleman or gentleman who had twelve children must feel that he was not acting honestly if he spent everything in the development and improvement of his estate, which would go to the eldest son. What was to become of the other eleven? His experience was, that what would do here would not do there. If they had a very stiff subsoil it would require working very differently to a light one. This was one of the many things farmers required to educate themselves to understand.

Mr. WALKER explained that he did not mean to say the wheat root did not grow deep, but that it got its nourishment near the surface.

The CHAIRMAN said Mr. Greig had put the question very fairly to them, and an admirable discussion had been carried on, from which he had certainly learnt something. That they should all agree was not to be expected. He should still sit easy in his saddle with the knowledge that steam cultivation would not become universal. He thought it was best where

steam could be called in to assist where the land was unusually heavy, and not use it exclusively. For himself, he should be sorry to see horses done away with in cultivating the land. It was a grave doubt in his mind whether they had not too few horses already in the country. If war broke out at the present time they would experience considerable difficulty in getting a sufficient supply of horses for the troops. With regard to local taxation, he thought Mr. Walker should not have passed over the fact that the present Chancellor of the Exchequer had done more than any Prime Minister before him to relieve the tax by giving a subsidy to the local rates. The law of entail, he thought, was a very good thing. They were

aware that there were always settlements on the younger members of the family, and he could never see any objection to it, and as a proof he would ask them to look at France, where the land was divided equally among the children, and was broken up into small holdings. There was more hoarding of money there, but France could not stand comparison with England in the cultivation of the soil. He would move that the best thanks of the Chamber of Agriculture be given to Mr. Greig for his valuable paper.

This was carried unanimously, and a vote of thanks to Lord Galway brought the proceedings to a close.

## WARWICKSHIRE CHAMBER OF AGRICULTURE.

At a special meeting in the Shire Hall, Warwick, Mr. T. Horley, jun., in the chair, the subject of the contagious diseases of live stock and the steps which the Chamber should take to secure effectual legislation upon the subject was introduced by the Chairman, who said they could not too strongly insist on the necessity of the uniform and compulsory regulations. In one district orders were stringently enforced while in an adjoining one there was great laxity and carelessness. In one petty sessional division heavy penalties were inflicted, while in another flagrant offenders got off scot free. Whatever measures might be adopted, if their execution was optional with local authorities, the desired effect would not be gained.

Mr. FINLAY DUN said the Government should, for the present at any rate, positively and distinctly forbid the importation of all fat cattle, sheep, and swine; but the importation of store stock, if it were subjected to a quarantine, and to a thorough system of inspection before removal from the British ports at which it was landed, might be permitted. Ireland must for the time be included in any restrictions made with regard to foreign importations, as an immense amount of disease was propagated by droves of Irish cattle sent hither from Bristol and other places. It was necessary that throughout the country there should be greater stringency and uniformity in the movement of our home stock. It was important no cattle should be sold or even brought into a town and slaughtered unless accompanied by a special license. Such a course would involve trouble, but it would be minimised by having in each parish, as there was during the cattle plague, an authorised person for granting such licenses. Pains and penalties of a uniform and tolerable amount should follow proved infractions of orders.

The following resolutions were adopted: That fat cattle, sheep, and swine from abroad should be slaughtered at the ports of debarkation. That cattle, sheep, and swine from the Continent of Europe, as well as from Ireland, unless for im-

mediate slaughter, shall be subjected to six days' quarantine and inspection before they are moved from the British ports at which they are landed. That uniform and stringent measures should be applied throughout Great Britain and Ireland to stamp out foot-and-mouth disease and other foreign diseases. Neither cattle, sheep, nor swine should be moved from landing ports, farm premises, or pastures to markets, fairs, or public sales, without special license, given by duly appointed authorities.

The next business was "to consider the working of the Elementary Education Act of 1870, of the Elementary Education Act of 1873, and of the Agricultural Children Act in Rural Districts." The meeting proceeded disinclined to enter on a discussion of this subject, and contented itself with passing the following resolution, which was proposed by Lord Leigh:—That, in the absence of School Boards, there is at present, no machinery for compelling the school attendance of children under the Elementary Education Amendment Act of 1873; that the police, inspectors of nuisances, or the parochial guardians be empowered to compel the attendance of defaulters; that further encouragement by grant should be given to night schools; and that attendance at such schools should be equivalent to attendance at day schools in the case of children over ten years of age.

The subject of the constitution and area of local authorities was afterwards brought forward; and, on the motion of Mr. Scriven, seconded by Mr. Hicken, it was resolved: That in any reform of local government it will be desirable in every district to bring all poor-law, sanitary, and highway administration under one authority, and to constitute in every county a Representative Provincial Board. That in all elections of local authorities administering rates, the voting qualification shall depend on the payment of rates by the electors, and that the scale of voting shall be that adopted in the Act 7 and 8 Vict., cap. 101.

## DANBURY CHAMBER OF AGRICULTURE.

### SUSPENSION OF THE MEETING.

At a meeting, Mr. E. Scriven in the chair,

Mr. SIMMONS, the secretary, stated that a short time ago a meeting was held to consider the desirability of continuing the meetings of the chamber, as there was so little interest taken in the proceedings. Mr. Westover gave notice that he would propose the following resolution: "That it is expedient that the meetings of this chamber should be suspended until further notice." He (Mr. Simmons) was asked to get the opinion of several of the members on the matter, and the general opinion was that they should give up; but it was thought proper to give the members an opportunity of expressing their opinion, so that that meeting had been called. He read a letter from Mr. D. Gardner, the collector, stating that he had collected £26 4s. 5d., and the commission on that sum was quite inadequate to the work he had performed. Mr. Gardner stated that the most frivolous excuses were given for non-payment of subscriptions. Some of those he called upon said they had no change; others said they would call and pay; and others, again, said they would pay if their neighbours paid. Mr. Simmons said they were in a worse financial

position than last year. It was very evident, from Mr. Gardner's letter, that the bulk of the members took no interest in the chamber.

Mr. WESTOVER, in moving that it was expedient to suspend the meetings of the chamber until further notice, said that he did so with considerable regret. He wished to draw a line between expedient and prudent. Having heard the letter the secretary had read, every one would agree that it was expedient to suspend the meetings; but he could not help feeling that it was not a prudent step to take. He did not think the step they were taking was a wise one; but it might be expedient, because of the little interest that appeared to be taken in the work of the chamber by its members and the ratepayers generally in the district. It certainly could not be a practically wise step, when there was so much good work which the chamber might do, not only for agriculturists but for the ratepayers in general. It almost appeared to him that some of their members had been frightened out of their propriety by the strong language which some persons thought proper to use in taking upon themselves the criticism of the constitution

of chambers of agriculture, and who found certain faults in the constitution of these chambers. They seemed to imply by their remarks that the members were bound to take certain steps which were altogether beyond the jurisdiction of the chamber; but he thought if they did this, that or any other organisation of occupiers of land would finally fail. Now, he never thought that it was contemplated by chambers of agriculture that they should dictate in any possible way in the matter of leases or covenants between occupiers and landlords. It was never meant to come within the scope of chambers of agriculture. The attendance at their chamber had fallen off considerably, and so little interest had been taken in the work, that he proposed the resolution to give the members an opportunity of saying whether the chamber should be entirely dissolved or suspended for a time. If the latter course was adopted, the chamber might be reconstituted at some future time. Many of the members complained of the little good they had effected by their deliberations; but whose fault was that—the fault of those who came there, or those who stayed away? Those who held the opinion that chambers of agriculture had done no good were under a delusion. He must say that it seemed almost incomprehensible that they should cease their work at a time when they were producing some effect on public opinion. The importance and influence of chambers of agriculture had been recognised by Professor Fawcett and by *The Times*. Such a resolution as he had proposed had become a necessity, because their deliberations would not carry weight unless they were backed up

by more in number than those who had attended the last few meetings. He regretted the necessity for this step, because subjects of the highest importance demanded their most serious attention. In the district where he resided a very large tract of turnpike-road was about to fall upon the rate-payers. The road would require £10 a mile to repair it; and he asked whether it was wise to break up the chamber when such burdens as these were cast upon them?

Mr. STILGEE seconded the motion.

The SECRETARY asked how they were to get the subscriptions? There were £50 5s. in arrear.

Mr. HADJAND said he had seen Mr. Thursly, and he hoped they would not break up the chamber, and suggested they should have fewer meetings.

The CHAIRMAN said at Warwick they did not muster more than at Banbury.

The SECRETARY: But the members here will not pay their subscriptions.

Mr. S. BARRIDGEE: The attendance recently has not warranted our meeting.

Mr. Westover's resolution was carried.

The SECRETARY said they had enough money to pay their debts; but they had been in the habit of subscribing to the Central Chamber and the Home Cattle Defence Association, and if they suspended the meetings, how were they to find money to subscribe to those associations?

Colonel NORTH: Pay the Central Chamber this year, and say that the subscription will be stopped for a time.

## THE WORKING OF THE EDUCATION ACTS IN THE RURAL DISTRICTS.

A meeting of the Bucks Chamber of Agriculture was held at Newport Pagnell, for the purpose of discussing "The Working of the Education Acts in the Rural Districts," a subject which Mr. Treadwell undertook to introduce. He was, however, prevented from attending the meeting, but the paper he had prepared was read by Captain Purofoy Fitz-Gerald, the President of the Chamber, as follows:

I did not consent to introduce this subject because of any particular knowledge of my own upon it, but simply to assist in carrying on the business of this chamber. I purpose briefly to give you my own experience and opinions on the subject, simply to promote discussion. I will shortly touch upon the three Acts of Parliament under which we assist the education of the children in the rural districts, and for brevity will term them the School Board Act, the Agricultural Children's Act, and the Paupers' Children Act. I will briefly first consider the School Board Act. There cannot be any doubt but that increased means of education have been given the people, and largely acted upon in the rural districts. Voluntary efforts in almost every parish have quickly brought into action the requirements of the Legislature; but my experience tells me that where School Boards have been formed in my own neighbourhood they are at present almost a blank, and from what I hear they are likely to be very expensive and not very satisfactory. With regard to the working of the Agricultural Children's Act, in my own parish we have strictly adhered to it. In some of the adjoining parishes some boys have been sent to school, whilst others have been kept at work. This should not be. I am of opinion when Acts of Parliament are passed it is our duty to conform to them. If they are not satisfactory to the majority endeavour to get them altered; but we farmers are bad agitators. There is no doubt but that the Agricultural Children's Act is unpopular both with farmers and labourers, but my impression is that this is a well-meant Act, and that if we do not assist in carrying it out we shall get something a good deal worse. No doubt the weak point in it is that there is no power given to any particular person to see that it is fulfilled, and we people in the rural districts are bad informers. My idea is that some person should be empowered to see that it is carried out, whether it be the sanitary inspector, relieving officer, policeman, or factory inspector. After all, I don't think we shall find it greatly inconvenient us when strictly applied, as the boys will be able to go to work with a certificate after eleven years of age. Now I come to the Paupers' Children Act. In some cases this appears to work harshly, and in my mind should be altered to work with the Agricultural Children's

Act, whereas now they are quite at variance; but experience tells me that it tends to work to decrease pauperism, and should be strictly applied to all Boards of Guardians without evasion. As many of you are members of Boards of Guardians, doubtless with me, you have seen in many cases where this Act has been strictly upheld that it has prevented people from becoming or continuing paupers. I think representations should be made from our Boards of Guardians to the Government, pointing out where it does not work harmoniously with the Agricultural Children's Act. In conclusion, let me say that we ought strenuously, by every means in our power, to oppose the compulsory establishment of Board Schools in every parish, and I think we ought to assist our voluntary system in preference, as being more likely to promote happiness in our parishes, and also to give our children a more sound and better religious education, without which, to my mind, no child can be properly taught his duty to God and his neighbour.

The CHAIRMAN had not seen Mr. Treadwell's paper till a little before dinner, but he would just make a few remarks upon one or two little things which had struck him in reading it. He must first say that they were indebted to Mr. Treadwell for having brought the Education Act before them. The questions Mr. Treadwell had laid before them that day were well worthy their consideration. There could be no doubt that the subject of education in these days of machinery was becoming a most important one, but they must not allow themselves to be carried away too far with the idea that every agricultural labourer's child is likely to become a Stephenson, or Peel, or Arkwright, though no doubt in this district, if they had foxes and coverts enough, the latter name would be more popular, if possible, than it was. When they found that not many years ago one half-million of children were shown to be subjected to an excess of physical toil and an amount of premature exertion ruinous to their health, and depriving them of the means of relaxation and of education and mental improvement, the last disclosures of the final report of the Commissioners, when presented to Parliament, were the most painful demonstration that ever occupied the minds of the public, for they proved that the social evils that had long been supposed to exist only in manufacturing districts, existed even in a more aggravated form in connection with the cultivation of the soil. The system he referred to was, and he feared still continued to be, the organisation of rural industries called agricultural gangs, and which prevailed extensively in Lincolnshire, Hants, Cambridge, Norfolk, Suffolk, Notts, and in a more limited degree in the counties of Bedford, Rutland, and

Norhampton. Nothing more shocking had ever been brought to light than the sufferings incidental to the employment of young children in certain kinds of agricultural labour. In the rich districts of Norfolk, Hants, Cambridge, and especially Lincoln, farm-houses, barns, and stables were built for the benefit of cattle, and other agricultural requirements, but no thought was taken of the labouring man. He would simply read a few extracts which would prove that it was the duty of all those connected with labour to do their utmost to assist the Government in carrying out measures of amelioration. After quoting the words of Lord Leicester, who said when he looked round his house he felt like a man shunned by all his neighbours, he read an extract from the *Quarterly Review*, descriptive of the horrors of the agricultural gang system, and the demoralising cruelties which arose out of it.

Mr. CANTRELL and Mr. COALES both said those evils were unknown in this district.

The CHAIRMAN said in Hampshire he feared there was some danger of its revival, for so great were the difficulties in the labour question that more than one or two of the leading farmers of the district were talking of letting their horses and work to contractors, the result of which would, in some measure, be a probable return to the gang system. That employers had to a certain extent lost the confidence of their men, there was not the slightest doubt, but at the same time he did not think they would lose it altogether.

Mr. CANTRELL said he did not think they had lost it.

The CHAIRMAN trusted they had not. With reference to school boards, no doubt in the large towns they might be very useful, but in the country parishes they did not answer at all. It seemed to him that the voluntary system, which had existed for so many years, and under which the schools were managed by the clergyman of the parish, did very well, and was more suited to the English people in the agricultural districts, than the unsectarian system which the Birmingham League was trying to force upon the nation, and the school boards originated by Mr. Forster. He would, however, urge upon the tenant-farmers the duty of supporting the voluntary schools, in which they were well sustained by Government at the present moment.

Mr. SHAKESHAFT said he very much regretted the absence of Mr. Treadwell, as, no doubt, had he been present they would have received a great deal of information from him on the subject referred to in his paper. With regard to the working of the Education Act in the agricultural districts, he contended that these acts ought to be fairly and firmly enforced by some one in the nature of a public prosecutor. The proper man to do that was, however, some one in the shape of an inspector of factories, and certainly not the police. He hoped they would be kept out of police supervision in school and education matters. He would urge too that they, both employers and parents, should look on the education of children with a higher aim, as a matter of duty rather than have it enforced upon them by inspectors, or police, or any other class of officials. They ought to take an interest in the poor, and in their children, and should certainly insist upon the law being carried out, or else let it alone altogether. In some parishes where they got the Act, children were not employed under ten years of age, while in others they were, and he asked why any distinction should be made? Throughout the whole country the children ought to receive elementary education, and why should those of one parish or district receive it any more than those of another? The law should be enforced by inspectors thoroughly throughout the country. He believed in the parish where he lived no child was employed either part time or whole time under ten years of age, and it was the opinion of himself and his neighbours that they should all receive, from ten to eleven, a good sound elementary education as a necessary to enable them to go out into the world and fight the battle of life. While he made that contention, he repeated, he hoped there would be no police interference with children under age or over age, and whether at school or at work, either directly or indirectly. At the same time the law ought to be generally enforced by proper inspectors, other than the police, throughout the kingdom, and if it was not the ratepayers were humbugged. In conclusion he again referred to the general duty of taking interest in the education of the children of the poor.

Mr. CANTRELL said Mr. Treadwell had, in his paper, expressed a good deal in a few words. He (Mr. Cantrell) was a

strong advocate for education to a certain extent. He lived at Ditchet, where a voluntary school was well attended to by the Vicar, who made it a hobby, and a great deal of good was done; while at Langley Green there was a School Board which, he was told, had failed, and, therefore, his advice was, as far as possible, to do without School Boards. To show the working of the latter he had, in the parish of Langley, been employing a boy named William Haynes, who was represented to him as twelve years of age, but who now appeared to be under that age, and had in consequence been dismissed by him at the end of harvest, as he did not wish to infringe the law. At the same time, from what he knew of the boy, he considered he had sufficient education for all he wanted in life. After reading the correspondence which had passed between himself and the education authorities on the subject, Mr. Cantrell expressed his concurrence in the opinion of King George the III., that the three R's were sufficient education for the children of the labouring classes, and until they had attained that amount of education their parents ought to be compelled to send them to school. For his own part, he left school at fourteen, but he had made the best of his time since, and so might the agricultural labourers' children. The fact was, he believed in many cases, the object of the School Board authorities was to keep them longer at school for the sake of the capitation grant. His opinion was that, educationally, they were going too far, and though he agreed with agricultural children being compelled to go to school till twelve, he thought in most cases that the education they would receive after that age would do them more harm than good.

Mr. ROGERS considered education was progressing fast enough without the interference of Parliament, but as the law had been made they must obey it. Children had now every opportunity of going to school, and between voluntary and Board Schools the farmers themselves could not get their children any better educated than those of their labourers had the opportunity of being. One result of that was that now, if there was a situation vacant of £1 a week, there would be three or four hundred applications for it, while at the same time in London, Scotchmen and Germans, who would live upon half what Englishmen would, were filling all the vacancies. As to School Boards, he believed they had better do without them as far as possible. Referring to the advance of agricultural wages, and the increase of rates for educational and other purposes, he remarked that if the farmers could not make money they could not pay it, and they all knew land did not make much. The rule now, however, appeared to be, not for men to do to others as they would others should do to them, so much as to do others, as others did them.

The CHAIRMAN said they had had a very interesting little discussion, and he had listened to the remarks which had been made by Mr. Shakeshaft, Mr. Cantrell, and Mr. Rogers with great pleasure. He quite agreed with Mr. Shakeshaft about the want of a public prosecutor. There could be no doubt about it. The subject would be discussed at the meeting of a diocesan body in Hampshire, which had been originated by the late reverend Bishop of Oxford, Dr. Wilberforce, and had been revived by the new Bishop of Winchester, Dr. Harold Browne, who was a Buckinghamshire man. He had a notice of a discussion upon the subject at the Diocesan Conference at Winchester, and should certainly oppose the principle of policemen going into labourers' houses for the purpose of enforcing the Education Act. It was due to the rights of every Englishman, be he duke or be he labourer, that he should enjoy those privileges of freedom from such visitations, which always had existed and always ought to exist. Mr. Shakeshaft also rightly contended that there should not be one law for one parish and another law for another parish, and that the Act should be administered throughout the country in the same spirit. They should exert themselves while they had the prospect of doing so to get the Elementary Education Act put into a better shape, and the voluntary system incorporated with the school boards. In his own neighbourhood in Hampshire he had a voluntary school on his own property, which was attended by twenty children, and a noble lord who owned the greater part of neighbouring land had insisted on setting up a board school. That board school was two miles from the village, and the children still came to the voluntary one, so that he (Captain Fitz Gerald) had been called upon by Government to maintain the village school, while at the same time he was called upon to pay 1s. 6d. rate to the board school, on

the 160 acres of his own property in the parish. He thought school boards in the rural districts would last for some time, but that they would not ultimately stand the test of the balance sheet, which was not forgotten by the Liberal Govern-

ment. Now they were under a Conservative Government the Education Act's would be modified so as better to meet the actual requirements of those districts.

## THE EDUCATION OF FARMERS' SONS.

At a general meeting of the Cheshire Chamber of Agriculture, in Kunt-ford, to "receive proposals from the trustees of the Sandbach Grammar School of a scheme for promoting the better education of farmers' sons and of youths intended to become farmers, and to resolve thereon," there was but a limited attendance; the Hon. Wilbraham Egerton M.P., in the chair.

The Secretary, Mr. THOMAS RIGBY, read the following as explanatory of the position of the chamber with regard to the scheme mooted at the May general meeting: "The trustees of the Sandbach Grammar School offer to co-operate with the Cheshire Chamber of Agriculture in providing a course of education in the elements of chemistry, botany, animal physiology, land-surveying, &c., such as would prepare youths intending to become farmers to enter into competition for the scholarships of the Royal Agricultural Society, upon the following terms: The head master will engage a properly-qualified teacher to give instruction in these sciences, and to provide board and give all the advantages of education in the school, at £10 per annum, if twenty youths be sent to the institution for five years, at the instance of the chamber; or if the chamber will undertake to pay ten guineas for any less number than twenty in attendance for the same space of time, the advantages named shall be placed at their service. "The council of the chamber accepts the proposition with thanks, and, with the view of ascertaining what support the chamber and the county would give the project, has addressed a circular embracing the proposition of the trustees to the principal landowners and farmers in the county; and, in respect of the guarantee, in the event of twenty youths not being obtained, having promises amounting to nearly £100, now asks the opinion and resolution of the chamber as to the answer to be given to the trustees."

The SECRETARY also read over a list of those who had promised subscriptions to the guarantee fund.

The CHAIRMAN asked what answer had been received to the circulars to the agents of landowners?

Mr. LATHAM replied that nearly every one said that one or two boys might be sent.

The SECRETARY said that no one had guaranteed a lad, except Mr. Carter.

The CHAIRMAN said that that meeting was held specially to consider the proposition made by the head master of the Sandbach Grammar School, and it was hoped they would have been able to ascertain the feeling of the farmers in that neighbourhood and of the chamber upon the subject. The head master had made a proposal which seemed to be a very fair one, that he should take the scholars and prepare them to pass the examination of the Royal Agricultural Society; or, if they did not wish to go so far as that, to teach them the elements of the different branches of education required for high-class farming. He would take scholars at £10 a year, provided that 20 boarders could be guaranteed for four years, or take a less number than that upon payment of 10 guineas for each vacancy. Several gentlemen had put down their names towards a guarantee fund; and what the chamber had to decide was whether they were in a position to accept the offer, and whether it was likely that 20 boarders or any number less than that would be sent to receive the special instruction that would be imparted in the school. When the subject was discussed last year at Northwich there appeared to be a general feeling among farmers that such a school should be established, in order that farmers who had sons 15 or 16 years of age might secure for them a better education than could be obtained at the National schools. He therefore trusted, though the attendance was not large, which he attributed to the fact that it was a fine day, and farmers would rather be at work in the field than attending a discussion on education, that there were those who were willing to avail themselves of the special advantages now offered. He would be glad to hear the remarks of any gentleman, so that they might come to some resolution upon the subject.

Mr. LATHAM, as one of the trustees of the Sandbach Grammar School, Mr. Wilbraham being one also, said he should like to explain the circumstances of the case. They had a school with very good buildings and good accommodation for boarders; and the trust was unlike other trusts, as there was a good deal of money invested, and a good deal more likely to come in, and with the help of the Charity and Endowed Schools Commissioners there would be room for expansion if necessary. For, as time had gone on, the Sandbach School, which 10 or 12 years ago used to educate the sons of Liverpool and Manchester merchants, had now got stranded high and dry, because the modern schools at Cheltenham, Malvern, Leamington, and other places, offered more advantages than the smaller ones, the railways affording great facilities for taking boys out of the manufacturing districts. But here were buildings absolutely doing nothing, and the question arose, Can we not utilise them, and confer a great boon upon Cheshire farmers? There was already a head master, who took a few boarders at £50 a-year; but those few would have to be got rid of and the school reorganised; and if they could get a young Oxford or Cambridge man, well up in vegetable physiology and other subjects that would be useful for farmers, that education which would be the very best for farmers' sons would also be suitable for the children in the parish, and, therefore, were anxious to benefit themselves as much as to benefit Cheshire farmers. Mr. Madlock, the head master, proposed to make the experiment with 20 boys. Supposing they could not get 20 boys, and that they could not expect that, he said, "Pay me so much for the vacancies. I must engage a master to give lessons in special subjects, and the cost of his services to me will be as great as if there were 20 boys, and therefore I should like to be guaranteed 10 guineas for each vacant place." If there were 19 boys, he would receive 10 guineas; if 19, 20 guineas; and if there was only one boy, the 10 guineas would have to be multiplied by 19. He (Mr. Latham) did not suppose the experiment would be anything like that. Some would come, and by the end of four years it would either fail or be a great success; and the trustees were willing, if it succeeded, as he believed it would, to put up additional buildings, and to accommodate quite as many boys as would come from the county of Chester. When he had heard a doubt expressed, he said that he didn't believe that farmers' sons would come at first, but that another class would come—namely, the sons of those who, although farmers, are something else—the son of a miller who is a farmer, the son of a bone-merchant who is a farmer, and the sons of tradesmen meant to be farmers. Mr. Rigby met some one at the Preston show who said he should be glad to send two boys, and there were now three or four boys the sons of Cheshire farmers boarding with the second master at £10 per annum, and would certainly be only too glad to come into the home of the head master at the same sum. He thought he had told them all, except this—that if the subscriptions were not required for the guarantee fund they might want them to establish scholarships and exhibitions, as it would be a great temptation, if a farmer had a clever son, to allow him to remain at school if there was a chance of winning a scholarship worth £20 or £25 a year; and if they could get the number of boys, and they had the money in hand, the chamber might be asked to give an exhibition to be competed for by the boys who had been one year at school. That would be a great attraction, and they would get as much money by asking for subscriptions to that as they would in asking for subscriptions to a guarantee fund. Everybody knows that the course of instructions in elementary schools is too short, and farmers' sons, like those of mechanics, were too often taken away when they were beginning to learn, and too often forgot what they had learnt. If a boy could earn £20 or £25 by his own brains, his father would not so much mind sparing him from looking after the cows and pigs for a time.

Colonel EGERTON LEIGH: What would be the amount of the scholarships?



Mr. LATHAM: That would depend upon the number of boys you have.

Colonel EGERTON LEIGH: Would you have one, two, or three?

Mr. LATHAM: Well, if you had only ten boys, you could not have so many as if you had twenty.

The CHAIRMAN remarked that the guarantee fund was only for four years, and then probably some scheme might be adopted for exhibitions, such as would tempt the farmers to send their sons to school.

Mr. LATHAM said that if the Endowed Schools Commissioners saw that there was likely to be a good middle-class school established, they would do all they could to assist in carrying out any scheme which might be adopted.

Colonel EGERTON LEIGH put another question as to what amount might be further expected from the trust, and

Mr. LATHAM said that there were mines belonging to the charity in respect to which an arbitration was pending, and it would depend upon the arbitrator whether the sum for the land, seven or eight acres, was a large or small one.

Col. EGERTON LEIGH could see that they might not get the 8s of farmers at first, but they would get them afterwards.

Mr. LATHAM said they would be glad to take farmers' sons from anywhere.

Col. EGERTON LEIGH said that £10 a-year was a good deal for a farmer to pay for one member of his family. Of course in a country where large farms were the rule, and not the exception, there would be no difficulty.

Lord EGERTON said there was always a difficulty about making a beginning, but if they would only get a few persons to send their sons, others, seeing the importance of putting scientific principles into practice, might be tempted to do so. If they could secure ten or twelve boys only from farmers it would be a great thing; and he thought if they got ten they would be able to pay the guarantee; and every additional sum to the fund would put it in the power of the council to apply that to the endowment. He advised them, if ten farmers would put down their names to send their sons, to begin at once, and so soon as the number of boys reached fifteen he would give a scholarship to be competed for of £25 a-year. He would venture to propose that so soon as they were sure of ten farmers sending their boys to school for four years, and having now £100 a-year in hand, they should try the experiment. If it failed, they would only have to say they were very sorry that Cheshire farmers did not come up to the mark. But he could not help thinking that it would succeed, as people were beginning to see that to farm properly it was necessary to have a knowledge of the nature of soils and manures, and that it was absolutely necessary that their children should have such information.

Mr. C. SWETENHAM asked if the offer of his lordship was intended to apply to all boys who entered at first or not.

Lord EGERTON: After the boys have been at school a year there will be, I suppose, an examination, and then they would be entitled to compete for the scholarships—three or four, or whatever the council may decide.

Mr. G. F. WILBRAHAM: Is it desirable to confine the school to farmers' sons? Would you extend it?

Lord EGERTON was in favour of extending it.

The CHAIRMAN: We only meet here to look after the interests of farmers, but if tradesmen choose to send their sons with the vowed intention of their becoming farmers so much the better. Otherwise, it is not intended for the benefit of tradesmen.

Mr. G. F. WILBRAHAM: Tradesmen or professional men might send their sons?

The CHAIRMAN: Not unless they intended them to become farmers.

Mr. LATHAM said the school might be carried on at a loss, and then he did not see how anyone not a farmer could send his son at a payment of £60.

Mr. C. SWETENHAM: But anyone intending his son to become a farmer can send him at a payment of £40.

The CHAIRMAN: No doubt; anyone can.

Mr. FAIR said he was sure they were all very thankful for Lord Egerton's kind offer, and he thought that the contents of the circular which had been sent out to the agents had not been generally made known to the farmers.

The CHAIRMAN said a circular was sent to the landowner and agent of every landowner, and he undertook to make it

known to every farmer within his immediate control. Therefore, whether the fault lay with the one or the other, they did not know.

The HIGH SHERIFF seconded Lord Egerton's proposition that if ten farmers would undertake to send their sons, the proposition of the Sundbach Trustees be accepted.

This was put and carried.

Mr. W. FAIR then moved that a copy of the proposal of the Trustees of the Grammar School at Sundbach, together with Lord Egerton's liberal offer, be sent to every member of the Chamber. This, together with publication in the newspapers, would lead to it being generally known, as he believed it had not been before.

Lord EGERTON said he would add to it that a request should be made that each member would let the secretary know whether he could send a boy.

Mr. C. SWETENHAM: How long would you leave that open?

The CHAIRMAN: Till the next meeting.

Mr. LATHAM: The head master should know as soon as he can.

Mr. FAIR said that the annual general meeting would be held in November.

Colonel EGERTON LEIGH asked Lord Egerton whether he would confine his offer to Cheshire boys, and received an answer in the affirmative.

The CHAIRMAN thought there would be plenty of competitors from the county alone.

Colonel EGERTON LEIGH seconded the proposition.

Lord EGERTON remarking that the secretary should know at least six days before the annual meeting how many boys might be expected.

The proposition was put and carried, the CHAIRMAN remarking that it would be useless to go on unless the farmers could make up their minds.

THE HIGH PRICE OF BEEF. — At the dinner of the Ireby Agricultural Society, Mr. T. GIBBONS, formerly of Barntoft, referred to the present high prices of animal food. After tracing the history of agriculture from 1810 up to the present time, he said that all classes of the community had since the repeal of the Corn-laws advanced in the social scale, and the country had increased in wealth. He could recollect when no fat cattle were fed in this county, and in very few counties indeed. What was the reason of that? Why, there was no market for them. Pigs alone were fattened, because we had the Newcastle market at hand. The first thing that gave an impetus to the feeding of cattle in this country was the introduction of steamboats; and since then we had had railroads in all directions. He had found from experience that of those who had the best breed of animals those who gave them the best food were always the best paid. He had seen animals sold for fat, every one of which would have carried ten stone more beef had they got plenty of good food, and been kept to the proper time. That was one of the causes of scarcity. If they looked at the great Ballinasloe Fair they would see the great falling-off, particularly in sheep, of which there was one-third fewer than last year, with a considerable rise in price, and the same applied to cattle. They were not going to get beef and mutton at a low price, it seemed. They had been blessed with a good season—they had abundance of grass; in fact, they had been favoured with an excellent season, and had been more highly favoured than any other parts of the country. They had had a genial summer, and no great rains or floods, such as they had suffered in the midland counties. In wheat and other grain crops they had very formidable rivals to compete with in America; and he believed that if the working classes did not get their bread at a low price, they would not get so high a price for their beef and mutton. He met a gentleman, the other day, who had been all through the old settled States of America, and he said there were thousands and thousands of acres out of cultivation. The land had been cultivated year after year with grain crops until the vegetable matter was taken out of it, and it had turned out unproductive. They had a very fine country in California, but if they went on cultivating wheat and other grain year after year it would tire the land out. If tenants in this country only got proper encouragement from landlords in draining and



laying out capital on the land, much good would ensue; for, as the late Lord Derby once observed at an agricultural meeting in Lancashire, there was no safer bank for a landlord's money than the land. Mr. Gibbons next referred to a letter written by Mr. John Bright, and observed that since the introduction of foreign cattle into this country, what with foot-and-mouth disease, lung disease, and the rinderpest, the consumer had lost more value in British stock than the foreign made up. There were various other causes for the high prices they were getting. One great thing was that, owing to the higher wages that the working classes were obtaining generally throughout the kingdom, they could afford to buy animal food, particu-

larly when other things were at such a low ebb. He could remember when there were heavy duties on tea, sugar, and soap. Now Mr. John Bright urged that the present high prices were caused by not bringing in more foreign cattle. But Mr. John Bright helped himself to raise the price of beef and mutton, for he was a earnest friend for the repeal of the Corn-laws and the advocate of a free breakfast-table, which enabled people to buy more animal food. With regard to the high wages, his opinion was it was no odds what they paid for labour so long as they got value for their money. It was no odds what the price might be, but if they paid more for labour than they got in value it was a mistake.

## PRODUCTS OF SOUTH AUSTRALIA.

The following particulars have been compiled at the suggestion of the Local Commissioners for the Philadelphia Exhibition, with the view of furnishing information respecting the character and position of the colony.

**THE LAND.**—The general character of the land in South Australia, so far as it has been settled, is in a high degree favourable for advantageous settlement. It may be divided into three classes—the plains, which for the most part are at once available for the plough; the hilly country, where more or less clearing is necessary to be done to fit it for cultivation; and scrub lands, which in some cases are of inferior quality, but in others are only kept from being cultivated owing to the expense and labour that would be involved in removing the timber. A fourth class might be added, consisting of comparatively level country, sprinkled with sheoak and other small timber, which can be removed at a comparatively slight cost. The land where the sheoak grows is almost invariably found to produce good wheat crops. This is particularly the case on Yorke's Peninsula, where a large amount of settlement is at the present time taking place. Notwithstanding the comparative dryness of the climate the soil proves very productive. Not only do English fruits and cereals of all kinds grow to perfection, but many semi-tropical fruits and vegetables do equally well, the earth yielding a bountiful return for a very moderate expenditure of labour. At the present time almost 90,000 square miles of land are occupied by settlers engaged in

**PASTORAL PURSUITS.**—The exports of wool during the year 1874-5 amounted to a declared value of £1,994,190. In 1864 the amount was £849,125, showing an increase during the last decade of more than a hundred per cent. The land in pastoral occupation is for the most part held under lease from the Government, the payment required being from 2s. 6d. to £1 per square mile, and an annual assessment on the stock at the rate of 2d. to 6d. per head for sheep, and from 1s. to 3s. for cattle. The pastoral lessees, more commonly called squatters, have been from the earliest days the pioneers of settlement. The enterprising squatters, who are now among our wealthiest colonists, have gone out into the distant bush with one or two men, a year's stock of rations, a few horses for riding, and a few thousand, or perhaps only a few hundred sheep, and selecting some spot where water was obtainable they have had so many square miles surveyed for them, thus constituting what are known in the colony as their "runs." Generally speaking in the course of a few years the owners have found themselves in a position of independence if not of wealth. At times the country, especially the Far North, has been visited by seasons of drought, when considerable loss has occurred, but the general progress has nevertheless been well maintained. In 1864 the number of sheep in the colony was 4,106,230. A very severe drought reduced the number in the following year to 5½ millions, but 10 years afterwards the flocks had again so increased that the former number was more than made up, and at the present time there are in South Australia 6,120,211 sheep and lambs. The increase in cattle has not been so great, and considerable numbers of fat stock are imported every year from the other colonies. Our stock at present is of horses 93,122, of horned cattle 185,342. The sheep and cattle are almost entirely reared upon the native grasses and other herbage. Some of the runs are naturally more fertile than others; but there are few parts of the country where sheep do not get a living. Of late years the productiveness of the runs has been greatly increased by means of fencing. There are now nearly 18,000,000 acres of enclosed land in the colony, the quantity having been aug-

mented to the extent of 2,600,000 acres during the last year. In connection with pastoral pursuits a few words may be said concerning horses and horseracing. Though South Australia may not occupy so prominent a position as some of the other colonies of the group in the matter of racing, she has done her fair share in breeding horses for the turf, some of the most successful animals in numerous intercolonial contests having been reared here. We have a number of studs of considerable extent, containing mares of very high breeding; and amongst our racing stallions are some at least second to none in the colonies in pedigree and appearance. Racing has not been carried on by South Australia for a considerable time with any great amount of energy, and breeding of high-class horses have not therefore had the amount of encouragement that would otherwise have been accorded to them. The national sport, however, seems to be reviving, and we have now a Jockey Club again full of life. We appear to have a better climate than any of the other colonies for horse breeding. The atmosphere is clear, dry, and light, and the horse therefore grows up with better lungs, and freer from unsoundness than in more humid climates. With a greater demand for blood stock which seems likely to spring up, especially in connection with the Indian trade, South Australia may take a very high position as a horse-breeding colony.

**AGRICULTURE.**—The farmer follows in the wake of the squatter, gradually driving him back to the more distant bush. The leases of the runs are always made subject to a proviso that the land may be resumed by the Government for survey and sale to agriculturists. The provisions of the land law are framed with a view of facilitating agricultural settlement, a lengthened period being allowed for payment to the Government of the purchase money. Personal residence on the land is not insisted upon, but as a safeguard against speculative purchasers no one is allowed to take up more than 640 acres; and every person who buys land has either to live on it himself or to place a man-servant upon it, and to cultivate at least one-fifth of the area. The land is submitted for selection, after being surveyed, at the uniform price of £1 per acre, and the person who wants a certain section or sections has, on the day named, to lodge an application in the Crown Lands Office, accompanied by money amounting to one-tenth of the purchase-money. If there is no other applicant for the same land he is declared the purchaser, and may go on it at once. If there are two or more applicants, then they are allowed to bid at auction among themselves to see who will give the highest price, and to the highest bidder the land is granted. The deposit of 10 per cent. is taken as rent for three years, so that the settler has no other payment to make for that period—a very advantageous provision for men of limited means. At the end of three years the settler has to pay another 10 per cent., which is received as interest for the next three years. If at the end of that time he cannot complete the purchase, he can pay half the purchase-money and obtain further credit for the other half at the rate of 4 per cent. per annum interest. Improvements have to be made to the extent of 5s. per acre before the end of the second year of occupation, to the extent of 7s. 6d. before the end of the third year, and to the extent of 10s. before the end of the fourth year. The improvements may consist of erecting a dwelling-house or farm buildings, sinking wells, constructing water-tanks or reservoirs, putting up fencing, draining, and clearing or grubbing the said land.

**WHEAT-GROWING.**—The system of wheat-growing in

South Australia is extremely simple, and it might be well if a little more skill and science were required to render farming remunerative. As it is, the settler has merely to plough the ground to the depth of three, four, or five inches. The seed is usually sown broadcast, and generally, if not put in after the proper season, a crop of from 10 to 20 bushels an acre is obtained, according to the quality of the land. In the older agricultural districts the yield is not so great, as there are difficulties to be coped with in the shape of weeds and exhaustion of the soil, resulting from continual cropping without manure for the past 10, 20, or 30 years. The commonest plan in such cases is to allow the land to lie fallow, and depasture cattle upon it for a year or two, after which it will often again yield a remunerative crop of wheat. Red rust, locusts, a disease known as takeall (from the fact of its entirely destroying patches of the crop), and hot winds, are among the chief ills with which farmers have to cope. Of late years many of the farms in the old districts have gone into pastoral occupation, the small holders having sold out and obtained land from the Government in one or other of the new areas which are more distant from the city. The land now being occupied thus is from 60 to 160 miles from Adelaide, and situate from five to 70 miles from shipping places on the coast. The extent of land under cultivation has increased during the last five years from 959,000 acres to 1,330,184 acres, and next year there will be a considerable addition to that quantity. One in every 4.3 acres of purchased land is at present under tillage, the bulk of it being devoted to wheat growing. The production of wheat at the last harvest gathered in December, 1874, was 9,562,000 bushels. This was obtained from 839,638 acres, being an average yield of 11½ bushels per acre. The increase on the totals of the preceding year was in area 54,000 acres; in quantity 3,683,877 bushels. The land under other cultivation was devoted to—hay 160,931 acres, barley 13,724 acres, potatoes 4,582 acres, permanent grasses 27,076 acres, gardens, vineyards, and orchards 7,334 acres. Some attention has also been paid to the production of flax, which is found to grow freely in many localities. The production of wheat has increased nearly 100 per cent. during the last ten years, while during the same time the population has only increased 31 per cent. The ability to gather in so largely extended an area of corn is explained by the fact that harvesting in South Australia is done by means of Ridley's reaper, or stripper, which at the most requires only two persons to attend to it, and is frequently worked, owing to the dearth of labour, by one man, who drives the horses and steers the machine himself. One of these machines will reap from eight to ten acres of crop per day, after which the produce has merely to be passed once or twice through the winnower to be ready for market. Although the average yield per acre is not so high as in some other countries, the quality of South Australian wheat, probably owing to the climate, is superior to any other. This is demonstrated not only by the prizes obtained at the European exhibitions, but by the fact that Victoria and New Zealand and other colonies, although producing more than enough for their home consumption, annually import South Australian wheat to mix with their own in the manufacture of flour. The skin is much thinner, and the quality of the flour superior to that of other wheat.

WINE-GROWING has from the early days of the colony been regarded as an industry for which our soil and climate are particularly suitable, and although originally carried on with all the drawbacks of inexperience and consequent risk of failures, there is abundant evidence that wine of the finest quality can be produced in South Australia. The rich chocolate loam and the ferruginous clays of our hillsides and plains are admirably adapted for the production of wine-grapes of excellence. Nearly all the best kinds from France, Spain, and elsewhere have been introduced, and our vignerons have during the last few years both discovered those best suited for our climate and learned the proper way of treating the musts so as to bring them to perfection. The wines produced vary from those of the lightest and most delicate character to the full-bodied and generous wines such as are produced in Spain and Portugal. The extent of land planted with vines is 5,051 acres, which produced last season 648,186 gallons of wine. The greater part of this is consumed in the colony, where a taste for the good and pure article is gradually but steadily growing. A moderate trade has been established with the neighbouring colonies and New Caledonia, and one or two growers ship their

produce regularly to England, where a remunerative market is obtained for them. Our wines have also secured prizes at the London, Paris, and Vienna International Exhibitions. The value of the wine exported during the last year was £13,660. Spirit manufacture is also carried on to a considerable extent.

GARDENS AND ORCHARDS abound in the suburbs of Adelaide, and there is no time during the year when several kinds of fruit may not be obtained. The variety of climate, from the warm and at some times arid plains, to the sheltered and well-watered nooks and valleys in the Mount Lofty hills, enable not only vegetables to be placed on every man's table all the year round, but flowers and fruits also. The earliest of the spring fruits is the logan, which ripens before the end of September. In October and November a plentiful supply of strawberries and cherries introduces the summer fruit season, and they are closely followed by currants, raspberries, and other of the small fruits, which carry us on to Christmas time, when apricots and figs, and soon after peaches and grapes, are ready to supply the market. Of grapes there is always great abundance, and these, with melons, apples, pears, and an immense variety of other toothsome fruits, carry the supply on till the orange season, which begins about June and lasts until November. The sultana, muscatel, and currant vines are common in the vineyards, and fruit is dried by some growers to the extent of several tons in a season, the produce being esteemed above the imported currants and raisins. The orangeries of the colony, although they require artificial watering, are productive and profitable, and some hundreds of thousands of oranges, including the esteemed Bahia or Navel orange, are produced every season, although many of the orangeries are still very young. The orange groves at the present time, as the trees are bending with their loads of golden fruit, present a rich and striking spectacle.

OTHER PRODUCTS.—The olive thrives luxuriantly in South Australian soil. Many of the best varieties were introduced soon after the colony was established, and for years small quantities of oil of very excellent quality have been made. It is only during the last three or four years, however, that systematic attempts at its manufacture have been made. These attempts are owing largely to the advocacy of the interest by Mr. Samuel Davenport. There are now several persons engaged in the business, and some thousands of gallons of olive oil will be made during the present season. The oil when made commands a ready sale at 10s. per gallon, being equal to the best ever imported. Sericulture, also owing very much to the advocacy of the same gentleman, appears to have gained a fair footing. The most successful sericulturist is Mr. F. Wurm, of Unley, who last year secured a bonus that had been offered by the Government for the first 200lbs. of cocoons. Some of these, which were sent to Marseilles, have been pronounced by the firm of silk merchants to whom they were consigned, to be equal to any ever wound by them. The climate of South Australia appears to be admirably suited to the silkworm, while the mulberry trees required for its food grow rapidly and luxuriantly. The planting of mulberry trees is encouraged by the Government, who offer a bonus of £1 for every 100 trees. Flax has been grown to the extent of some hundreds of acres, and would have gone on extending in area, but that the authorities, acting under the Public Health Act, have prohibited the operation of steeping at the mills, on account of the offensive and injurious smells occasioned. It is hoped that either an improved process will be discovered, or some other means devised, to enable what promises to be an important industry to be carried on. The colony has also been proved experimentally to be well adapted for the growth of many other products. On the authority of Dr. Schomburgk, the energetic and painstaking director of our Botanic Garden, the following are recommended to agriculturists: Beet-root, for the purpose of sugar, as well as cattle fodder; hops, which are indeed successfully and systematically grown in the South-Eastern District; tobacco, which thrives with very little attention in the Botanic Gardens and in many other places, although it has not been systematically cultivated; the castor oil plant (*Ricinus*), which grows with the greatest freedom; the sunflower, which is equally at home in our warm sunny plains; mustard, rape, canaryseed, grain, lupin, maize, lentils, chicory, osier, broom, millet, esparto grass, opium, cochineal, and many plants used in distilling various perfumes. These have all been grown here, and are therefore recommended not

upon mere speculative grounds but upon actual knowledge of the suitability of the climate for their production. The greatest hindrance, as in most other matters, is the scarcity of labour, which will always be more or less difficult to be encountered. The list we have thus given must not be understood as exhausting the agricultural and horticultural capabilities of the colony, as it only includes those which are or may become important sources of wealth. We may add, therefore, that almost every description of garden plant and forest tree, from the violet and the oak of the cold Northern climes to the ferns, cacti, and gorgeous flowering shrubs of semi-tropical countries, may be seen in the gardens in and around the City of Adelaide.

**THE NORTHERN TERRITORY.**—This extensive region, well watered by the Victoria, Adelaide, and Roper Rivers, Dr. Schoenburgh does not hesitate to pronounce well adapted to the production of sugar and cotton, which he feels confident will in future become staple exports from Port Darwin. In this conviction he is fortified by the result of experiments made in the territory itself. The soil consists to a very large extent of rich decomposed vegetable matter well suited for the purpose, but the want both of manual labour and of practical experience with the kind of cultivation needed has deterred our colonists from any systematic attempt in that direction. The land laws affecting that portion of South Australia are very liberal in their provisions. All the country lands after survey are open to be selected on credit at 7s. 6d. per acre, a lease being granted for ten years at 6l. per acre. The purchase may be completed at any time after the land has been taken up, provided certain reasonable conditions of occupation have been complied with. Country land may also be purchased for cash at 7s. 6d. per acre. There is a provision by which, on application to the Commissioner of Crown Lands, he may order a special survey of 10,000 acres of land in any locality indicated, and the applicant is thereupon entitled to purchase the same for £3,750. The pastoral lands of the Northern Territory are to be obtained on leases of twenty-five years at the rental of 6d. per square mile for the first seven years, and 10s. a square mile for the remainder of the term, with the conditions that the runs are to be stocked within twelve months, or, by permission of the Government, eighteen months. Several extensive runs have been taken up by South Australians under these terms, and if a transcontinental railway should be constructed—a scheme which has many advocates, although it will probably be some years at least before it is carried out—the country would soon be occupied for the whole of the 2,000 miles between Adelaide and Port Darwin. To encourage trade and industry in the territory a bill is now passing through Parliament for turning Port Darwin into a free port.

**MINING.**—This colony is unquestionably rich in mineral deposits. The city of Adelaide had scarcely been marked out when a promising silver-lead vein was discovered on a hillside at Glen Osmond, about four miles from the city. Operations were carried on there for some years, but without any permanent success. Other mines of the same description have been worked in different parts of the colony; but, although the ores have yielded 55 to 75 per cent. of lead, and from 55 to 65 ounces of silver to the ton, they have been found very refractory in the smelting furnace, and the mines are now abandoned. The principal mineral wealth of the colony has hitherto consisted in its copper deposits, which are very extensive in their range. The oldest copper mine is the Kapunda, about fifty miles north of Adelaide, which gave rise to the town now known by that name. The Kapunda mine was discovered in 1853, and although the ore had to be carted a distance of some sixty miles, the yield was profitable from the very first. Machinery and smelting furnaces were speedily erected, and the mine still continues to be worked. The ores produced have included almost all the known varieties, and have averaged about 20 per cent. of copper. About fifty miles north of Kapunda is the Barro Barro Mine, which, for its richness, has obtained a wide celebrity. It was discovered in 1844, and has paid dividends amounting to £782,330. Its best days are now passed, but extensive new machinery has lately been erected for the purpose of quarrying and turning to account a quantity of low-class ores that in former times were thrown aside. The most productive mineral provinces at present are the rich Moonta and Wallaroo Mines, which are situated a few miles apart, on Yorke's Peninsula, in close proximity to a convenient seaport. They are surrounded by

other properties, on which a good deal of capital has been expended, but only in a few instances have they yielded profitable results. The Wallaroo has from 1861 to the present private property of Mr. W. W. Hughes and others, and on account of its earnings has been made public; but in 1871 the proprietors paid to the Government a fine of £10,000 for the renewal of their leases, nor have other indications been wanting of the great value of the property. The Moonta Mine, which, like the Wallaroo Mine, was discovered by Mr. Hughes's sheep run in 1869-61, contains forty or fifty shafts, and yields a great variety of rich ores. The copper sulphides contain from 40 to 60 per cent. of copper, while the pyrites will average from 25 to 30 per cent. Both these mines are connected with Port Wallaroo by a tramway. On the Moonta Mine about 1,400 men and boys are constantly employed, without reckoning wood-cutters and many others who indirectly benefit by it. Indeed, the town of Moonta derives its existence and support almost entirely from the mine and one or two others. The Moonta has not only paid dividends amounting to £912,000, but has also met all the expense of its extensive workings, machinery, and plant, out of a shilling of capital having ever been subscribed by its fortunate shareholders. It still offers every prospect of yielding largely for many years to come. There is a large tract of country lying northward from the head of Spencer Gulf, which is known to be rich in minerals, particularly copper, but hitherto its distance from the seaboard and the expense of carriage have prevented the development of a mineral industry. The Blinman and Yudanamatana Mines, which have ever been worked for some years by English capitalists, although the produce has to be carted to Port Adelaide at a cost of about £10 a ton in the former case, and £12 in the latter, and the workings at the Yudanamatana have not been continued in consequence. The Sliding Rock Mine in the same district is being profitably worked, in spite of its distance—nearly 200 miles—which the produce has to be carted to Adelaide. A scheme which has long been proposed for the construction of a line of railway from Port Augusta into the heart of this mineral country is likely this Session to be sanctioned by the Legislature. When this work is completed there will, without doubt, be a large development of mineral industry throughout the district. Gold-mining in South Australia has not proved a very productive industry. The precious metal is found not only in the bed of the river Torrens, but in almost every part of the colony, but so far it has generally been in such small and hardly payable quantities. The first profitable gold-workings were discovered in 1852, at Echunga, about 25 miles south-east of Adelaide, but although they gave employment to a few diggers for many years, their yield has always been small. More recently some fresh discoveries have been made at Buroost, about 35 miles north-east of Adelaide, and there have been other finds, but none of any permanent character. There are only a few men at present engaged in alluvial gold-mining; but one mine, the Lady Alice, at Buroost, is probably worked for gold, having yielded rich quartz, and has recently paid £2,775 in dividends, while several others in the neighbourhood show a fair prospect of yielding a return for the capital invested. From the Waukarunga District, in the North, some good returns of gold have been obtained, and capital is now being spent for the development of one or two supposed payable reefs in that locality. Iron ores of great richness and purity abound in many parts of the colony, and only need capital to be turned to profitable account. Some experiments in this direction have been made, and recent years a few tons of pig-iron were produced; but want of skill on the part of the workmen caused so much injury to the smelting furnace that the works had to be stopped. In addition to the minerals already mentioned, the following have also been found in more or less abundance in different parts of the colony—viz., silver, cinnabar, bismuth, tellurium, cobalt, manganese, arsenic, zinc, manganese, barites, strontium, and sulphur. The export of metals during the year ended March 31, 1870, was £421,450.

**MANUFACTURES.**—The mechanical industries of Adelaide are necessarily limited, partly owing to the high price of labour, and also because the population offers only a small market for such articles as can be produced. Thus the small demand does not allow of the introduction of coal-burning saving appliances which are advantageously brought into use where manufactures are conducted on a more extensive scale. Nevertheless a very large proportion of the capital and man-

plements are made in the colony, including the whole of the reapers or "strippers" already referred to. Single ploughs are imported, but most of the double-furrowed ploughs, which are now very largely used, are constructed in the colony, as also are all the winnowers and a great many of the harrows, scarifiers, and mowing-machines. There are in all sixty manufactories of agricultural implements. The iron and brass foundries are twenty-nine in number, and produce a considerable quantity of machinery of high quality. One firm, besides turning out an enormous number of tins for jams and meat-preserving, manufactures ovens, boilers, cooking-stoves, iron bedsteads, and a large variety of other conveniences for the household, and has recently added to its processes the production of galvanised iron. Coachmaking is carried on extensively, the number of such establishments at the present time being thirty-two. They produce all kinds of vehicles, from the common dray or waggon to the light and elegant hegy, the commodious baronete, or the railway car. The carriages and trucks for the Government railways are made at the Government workshops, where the locomotives are also reared, but none of these have yet been constructed here. Boat-building is carried on to a certain extent at Port Adelaide, and there are several patent slips, upon which vessels visiting the port are able to get repairs effected. Tanneries and fellmongeries, which have long been among the established industries of the colony, now number thirty-four, some of them employing a large complement of hands. Although there is an abundant supply of excellent building-stone around the metropolis, a large number of bricks are used, there being no less than sixty-six brick manufactories carried on in the suburbs of Hindmarsh and Brompton. Boiling-down and meat-preserving establishments a year or two ago numbered fourteen; but the demand for meat in the colony, together with the high price of wool and the extensive stocking of new country, have tended to reduce the operations at these places to a minimum. Building-stone and marble quarries abound in the hills surrounding the city, and slates of good quality are found at Willunga, about thirty miles distant, whence large quantities are shipped to Melbourne. There are twenty-six breweries, and the greater part of the general demand for beer is supplied by them well and economically. There are also 123 distilleries, most of them in connection with vineyards. There are eighty-three flour-mills, working 277 pairs of stones; in two of these cases water-power and in the rest steam-power is used. A considerable portion of the flour is exported. A woollen factory is in operation at Hahudorf, and additional capital is being raised for the purpose of extending its operations. The refining of salt obtained from lagoons, and the manufacture of plaster of Paris is carried on by a company formed for those purposes. Beside those mentioned, there are various other manufactories; boots and shoes, for instance, and other articles of clothing being largely made up with the aid of machinery in the colony. Considerable attention has also been paid to working in the precious metals. The number of persons engaged in the occupations above referred to may be put down at about 5,000. These do not include the several industrial pursuits, such as fruit-drying, which do not strictly belong to manufactures, and which yearly afford increasing employment to a large number of persons. Very valuable service in encouraging industries of many kinds has been rendered by the Chamber of Manufactures—an institution which fills in regard to them a like position to that which the Chamber of Commerce occupies in respect to commercial matters.

**TRADE AND COMMERCE.**—The trade statistics of the province, to which in this article we wish to call attention, reveal in a marked degree the material progress which has been made since the first settlers occupied near the shores of Holdfast Bay. Population considered, we do not suppose any other part of the world can show greater industrial results than South Australia with her small handful of people has been enabled to produce. With a total of some 200,000 inhabitants, nearly one third of whom reside in the city and suburbs, the area of land alienated from the Crown is over 4,500,000 acres, or at the rate of 22½ acres per head of the population. Of this fully two sevenths are under cultivation. Beyond this, however, 4½ millions of acres, purchased chiefly for agricultural and horticultural settlement, vast tracts of country are leased from the Government for pastoral pursuits. Twenty years ago these tracts represented an area of between 5,000 and 6,000 square miles; at the present time they amount to about 80,000 square miles,

or say 50,000,000 acres of laud. But these figures, although they represent considerable material wealth on the part of those who own and who are settled upon the lands, do not of themselves give any idea of the actual industry of the people. The fact that the yearly exports of the colony have advanced from £5,000 in 1838 to over £1,000,000 sterling, or 20,000,000 dollars, and that the imports approximate nearly to the same value, will enable strangers at a distance to gain some notion of the development which must have taken place in the trade and commerce of the province. An examination of the statistics given hereafter will, however, make the progress which they mark still more apparent. We commenced exporting the produce of the country as early as 1838, within two years after the foundation of the colony. The staple exports for that year consisted of £770 worth of wool and £1,270 worth of whalebone and oil. For the two succeeding years there was no variation except in regard to quantity. In 1841 lead, timber, and slates were added. In 1842, butter, cheese, and tallow formed three fresh items in our staple produce, and in that year these articles were shipped to the value of £3,383. In 1843 there were added wheat and flour and other agricultural produce, horticultural produce, copper ore and other minerals, and a few manufactured articles. The great adaptability of the colony for the growth of wheat and the increasing production of wool, added to the discovery of rich deposits of copper ore, quickly marked these three articles as the leading staples of the province—a position they have ever since occupied, as will be seen more clearly from an appended statistical table. In 1843 the exports of wheat and flour amounted to £10,632, and quinquennially after that they stand as follows: In 1848, £54,815; in 1853, £208,647; in 1858, £474,612; in 1863, £698,994; in 1868, with a bad harvest, £554,555; and in 1873, £1,602,728—a rate of progress which for one product and for such a limited population may be regarded as remarkable. Wool, too, has made almost equally giant strides. In 1843 it was exported to the value of £45,569, and at each recurring fifth year the progression was marked as follows: In 1848, £98,553; in 1853, £236,020; in 1858, £420,833; in 1863, £715,955; in 1868, £1,395,280; and in 1873, £1,617,589. Copper and copper ore, which in 1843 were shipped from the colony to the small amount of £23, have made the following advances: In 1848 the shipments stood at £310,287; in 1853, £176,347; in 1858, £359,182; in 1863, £592,861; in 1868, £608,423; and in 1873, £763,522. In addition to these three leading products, a fair export trade is carried on in wine, bran, pollard, hay, fruit, tallow, bones, hides, wax, honey, preserved meats, gold, bismuth, bark, gum, flax, &c. The gross amount of our staple exports for the 37 years extending from 1838 to 1874 has been £2,593,059 sterling, or 262,965,439 dollars—a creditable testimony to the productiveness of the soil and the industry of the people, who in numbers have ranged from 3,000 in 1838 to 205,000 in 1874. Concurrently with the growth of our exports has been the increase of our import trade, representing in the main the extent of our business relations with other countries. In 1838 the imports stood at £158,582; in 1856 they had increased to £1,365,529; and for 1874 they were returned at the large amount of £3,973,453. The total imports for the whole term embraced within the years 1838-1874 stand at £55,439,834 sterling, or 277,199,170 dols. Our chief import trade is carried on with Great Britain; but more or less frequent shipments are received from the other colonies, from the Baltic, Singapore, China, India, Mauritius, and the United States. In 1844 seventy ships from the markets of the world arrived at Port Adelaide, representing a total tonnage of 9,530 tons; in 1854 no less than 476 arrivals were reported, with a tonnage of 146,666 tons; in 1864 the figures stood at 617 vessels, with a gross tonnage of 160,095 tons; in 1873 the number of ships that visited the port were 709, with a tonnage of 265,457 tons. In 1874 a decrease is registered, owing to the light harvest, which considerably affected our reports. In that year 379 ships arrived here, with a tonnage of 150,604 tons. Direct steam communication has not yet been established between Adelaide and the United Kingdom, other than by the mail packets, but a line of 3,000-ton steamers is now being built, and the first of these will probably be despatched in October next. There are two or three lines of fine clipper ships, ranging from 800 to 1,500 tons register each, regularly trading between London and Adelaide, many of them being

partly owned by merchants and capitalists residing in the colony. Steamers run regularly between Adelaide and Melbourne; in addition to a large number of schooners and barques which also trade with the other intercolonial ports. Statistics showing the operations of the various joint-stock banking institutions, of which there are six established in the colony, some of them having numerous branches, will still further elucidate the trade and financial dealings of the people. The deposits lodged at the banks, including those bearing and not bearing interest, stood at £2,297,524 in 1874, as against £713,738 in 1861, showing an increase of 200 per cent. in the course of fourteen years. The assets of the banks have always exhibited an ample excess over the liabilities. In 1861 the liabilities stood at £1,924,687, against £1,863,068 worth of assets, and in 1874 their relative positions were £2,714,212 and £4,736,675. The Savings Bank, which was founded in 1817, is managed by a board of trustees appointed by the

Governor; and its statistics have always afforded the best evidence of the good feeling of the working classes in the colony. In 1853, with a population of 38,663, the deposits amounted to £5,313, and in 1874 they reached 1,754,693, or an average of £1,000 for every hundred of the population, showing that the habits of savings of the people has been at a much greater rate than the increase in the number of the people. In 1874 the whole province could not muster more than 294,000, 16,952 horned cattle, and 166,779 sheep and lambs; the numbers stand at 93,122 horses, 186,342 pigs, and 6,120,211 sheep and lambs. The advance in the number and the favourable seasons which have prevailed during the past few years have given a wonderful impetus to the improving in the colony, and at the present time it is a most prosperous interest.

## THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

MONTHLY COUNCIL: *Wednesday, Nov. 3, 1875.*—Present: Lord Chesham, President, in the chair; the Duke of Bedford, Earl Cathcart, the Earl of Lichfield, Viscount Bridport, Lord Vernon, the Hon. W. Egerton, M.P.; Sir Massey Lopes, Bart., M.P.; Sir A. K. Macdonald, Bart.; Sir Watkin W. Wynne, Bart., M.P.; Mr. Aveling, Mr. Aylmer, Mr. Barnett, Mr. Booth, Mr. Bosly, Mr. Cutrell, Mr. Dent, Mr. Druse, Mr. Brandreth Gibbs, Mr. Hemsley, Mr. Horley, Mr. Hornsby, Mr. Bowen Jones, Colonel Kingscote, M.P.; Mr. Leeds, Mr. McIntosh, Mr. Martin, Mr. Masfen, Mr. Milward, Mr. Pole Gell, Mr. Randall, Mr. Russell, Mr. Sanday, Mr. Shuttleworth, Mr. Stratton, Major Turbervill, Mr. Jabez Turner, Mr. Wakefield, Mr. Wells, Mr. Jacob Wilson, Professor Simonds, and Dr. Voelcker.

The following were elected members:

Allen, Richard, Ty-to-Maen, St. Mellon's, Cardiff.  
 Amezaga, Canilo, Madrid.  
 Baker, Robert N. G., Heavitree, Exeter.  
 Beadie, Thomas, Southwood, Tiverton, Devon.  
 Benton, Philip, Jun., Waking Hull, Southend, Essex.  
 Blyth, Henry A., 91, Portland Place, W.  
 Blyth James, 2, Park Crescent, Portland Place, W.  
 Boon, James, Uplympe Factory, Axminster, Devon.  
 Brockman, Frederick, Beachborough, Hythe, Kent.  
 Burbary, John, Wootton Grange, Kentworth.  
 Cope, Edward Garraway, 10, Pembroke Road, Clifton, Bristol.  
 Davis, Peter, Dean Park, Tebury.  
 Davys, Richard Campbell, Nonadflawr, Llandoverly.  
 Dixon, Cecil B., The Vinery, Shirley Warren, Southampton.  
 Dwyer, Lord, Dwyer Castle, Llandilo.  
 Hollier, William Griffin, Wick St. Lawrence, Weston-super-Mare.  
 Humphreys, Arthur Charles, Garthmyl, Montgomeryshire.  
 Lilley, William Samuel, Hardmead Manor, Newport Pagnell.  
 Mason, Rush Frisbie, 5, Upper Thames-street, E.C.  
 Owen, Arthur John, Bessington, Wicklow.  
 Owen, Frederick James, Barren Grove, Hungerford.  
 Richardson, John, Lincoln.  
 Richardson, William, Limba Magna, Ulechy.  
 Rowland, William, Royal Oak Hotel, Welshpool.  
 Sandbach, Samuel Henry, Handley, Chester.  
 Slattery, Denis, Coolmagour, Dungarvan, Waterford.  
 Smith, George, Fereday, Grovetrust, Tambridge-Wells.  
 Snow, The Rev. George D'Ozley, Langton Lodge, Blandford.  
 Spencer, Edward Stacey, Staunsted, Essex.  
 Spencer, Richard Stacey, Brocklands, Birchanger, Bishop's Cleeve, Stafford.  
 Standring, William Carlew Lodge, Long Sutton.  
 Taverner, Joseph William, Shelford House, Nuneaton.  
 Thorp, Thomas, Little Gidding, Quindley.  
 Workman, Joseph, Wotton-under-Ledge, Gloucestershire.

FINANCES.—Colonel Kingscote, M.P., presented the report, from which it appeared that the Secretary's receipts during the past three months had been duly

examined by the Committee, and by Messrs. G. Pitt, Ball, and Co., the Society's accountants, and found correct. The balance in the hands of the accountants on October 31 was £592 11s. 9d. The quarterly statement of subscriptions and arrears to September 30, and the quarterly cash account, were laid on the table, and arrears then amounted to £1,604. The Council recommended that the Secretary be instructed to transfer the £1,500 on deposit to the current account.—This report was adopted.

JOURNAL.—Mr. J. D. Dent (chairman) reported that the autumn number of the *Journal* had been issued to the members of the Society. The Committee recommended that the thanks of the Council be given to Mr. Bowen Jones and Mr. Hemsley for the reports furnished by them on the farm-prize competition and the trials of implements respectively; that a copy of the *Journal* be sent to the President of the Board of Trade in acknowledgement to the paper on the Colorado Potato-bug; and that the usual bills connected with the publication of the *Journal* be paid. They also recommended that a list of the members be issued with the next number. A communication had been received from the Italian Minister requesting the Society to present certain back numbers of the *Journal* for the Italian Ministry of Agriculture at Rome; and the Committee recommended that three back numbers, as well as future ones, be supplied to the Italian Minister. Five entries had been made for the prizes offered by the Birmingham Local Committee for farms over 200 acres in extent, and the judges would make their first inspection during the current month. For the prizes offered for smaller farms there was no competition.—This report was adopted.

The following are the names and addresses of the competitors:

Adkin, John C., Milcote, Stratford on Avon.  
 Lane, John, Broom Court, Leicester.  
 Simpson, Samuel M., The Grange, Stoneleigh, Kenilworth.  
 Stilgoe, Henry, Lower Croyton, Stratford on Avon.  
 Wakefield, William Twyross, Fletchamstead Heath, County.

CHEMICAL.—Mr. Wells (chairman) reported that the Committee have had under their consideration the letters which have recently been addressed by Mr. Spencer St. John, her Majesty's minister at Lima, to the Secretary of State for Foreign Affairs, and which have been courteously forwarded by the order of the Earl of Derby, for the information of the Council.

The Committee can only report on the documents that the Peruvian Government have demanded an export duty on nitrate of soda, notwithstanding the representations of her Majesty's minister at Lima to the contrary of that course, which were based upon the previous

communication from the Council of the Society to the Secretary of State for Foreign Affairs. The Committee also notice with regret that no further action appears to have been taken by the Peruvian Government with a view to the official sale of guano by analysis—a course which they had lately been led to hope, from documents received through the English Foreign Office, that the Peruvian Government had seen the desirability of adopting.—This report was adopted.

**VETERINARY.**—1. With reference to the testing of an alleged system of cure for pleuro-pneumonia, to defray the expenses of which a grant, not exceeding £25, was made at the August Council meeting, the Committee have to report that they have received a report from Mr. Priestman, who had been engaged to conduct the inquiry. Mr. Priestman describes the measures adopted to make the trial, in the presence of the Secretary of the Society, on a Dutch cow, which was suffering from pleuro-pneumonia, according to the instructions which had been placed in the hands of the Chairman of the Committee by the discoverer of this alleged system of cure. He also gives a detailed account of the symptoms of the animal, and of its treatment from the commencement of the experiment to the death of the animal, and the results of his *post-mortem* examination.

2. The Committee have considered a letter, dated September 1, from Earl Ducie, the Chairman of the Council of the Royal Agricultural College at Cirencester, in reply to the letter of the Secretary of the Society, dated July 1, asking whether the Council of the College could undertake to carry out the veterinary requirements of the Society, as set forth in the statement of members' veterinary privileges.

3. The Committee have also had under consideration a further letter from the committee of management of the Brown Institution, in reference to the members' veterinary privileges and the scientific investigation of the diseases of cattle, sheep, and pigs; and they yesterday had an interview with the following members of that Committee, which is controlled by the Senate of the University of London: Dr. Quain, F.R.S. (Chairman of the Committee); Dr. Hooker, C.B., F.R.S. (President of the Royal Society); Dr. Sharpey, F.R.S.; Dr. Storrer, F.R.S.; Dr. Sibson, F.R.S.; Dr. Burdon Sanderson, F.R.S.; and Mr. Douse (secretary).

The Committee of the Brown Institution were asked—1st, Whether they were prepared to receive and treat medically animals suffering from disease at their institution; and 2nd, Whether they would send their veterinary professor into the country to inquire and advise in any outbreaks of disease, if required by members of the Society.

The replies upon these points being satisfactory, the Committee of the Brown Institution were further asked whether Dr. Burdon Sanderson would undertake to make scientific inquiries into the nature of diseases of animals—and pleuro-pneumonia and foot-and-mouth disease were suggested as specially needing further research. Subject to the approval of the Senate of the University of London, and to the permission of the Privy Council, Dr. Burdon Sanderson will be ready to undertake such researches. The Veterinary Committee are aware that such investigations cannot be carried out except at considerable expense, and they trust that in a matter of such national importance the Council will readily vote the necessary funds. They are inclined to propose to the Brown Institution to pay for the services of their veterinary inspector by fees, when his services are required in the two first-mentioned contingencies, and from time to time to place at Dr. Burdon Sanderson's disposal such sums as may be required for higher scientific investigation. They beg, therefore, to give notice that at the next Council they will move for a

sum not to exceed £500, to be placed at their disposal for the year 1876 for general purposes, and for special scientific inquiries into pleuro-pneumonia and foot-and-mouth disease to be carried out by Dr. Burdon Sanderson, who will furnish from time to time reports on the results of his researches.

They further recommend that in order to promote veterinary education, the Council should offer annually a scholarship of £50 for the pupil who shall pass the best examination at the Royal College of Veterinary Surgeons, and they give notice that they will move for a grant for that purpose at the February Council.

This report was adopted, after a conversation in reference to the proposed scheme. Mr. Egerton explained that the Committee were anxious that both the scientific and the practical sides of the Society's Veterinary Department should be united in the same institution, as there would necessarily be a loss of power if they were divided. As regarded the scholarship, it was intended to throw it open to the whole profession, and not to restrict it to the pupils of any particular school. Professor Simonds observed that the Royal College of Veterinary Surgeons was merely an examining board, and could exercise no control in reference to the proposed scholarship. Earl Cathcart regarded the co-operation of the eminent men who were connected with the Brown Institution as of the utmost importance. The country was covered with cattle diseases, and it seemed of little use to offer prizes for fine animals if we had not the means to keep them in health. Mr. Deat, Mr. Bowly, and others also remarked upon the importance of the scientific investigation of the diseases of farm stock.

**SHOWYARD CONTRACTS.**—Mr. Radell (chairman) reported that the balance due to Mr. Penny upon the Taunton account is £318 6s. 9d., that the Society's portable buildings and other plant have been removed from Taunton to Birmingham; that the surveyor has made frequent visits to Birmingham to give instructions for the draining, levelling, and other necessary works, which are unusually heavy; and that these works are progressing satisfactorily.

The Committee had approved a plan of the showyard, subject to such modifications as may be found necessary, and they had ordered a copy to be sent to the Local Committee at Birmingham.

The specification for the erection of the showyard works after 1876 was revised by the Committee, ordered to be printed, and a copy sent to each member of the Showyard Contract Committee before the December Council meeting.

The Secretary was instructed to make known by advertisement that the existing contract for showyard works will expire with the Birmingham Show in 1876, that the specification and form of tender for the future erection of these works can be had on application to him on or after December 15th, upon payment of 10s. for each copy, and that tenders must be delivered at 12, Hanover-square, on or before the 23rd day of January next.—This report was adopted.

**IMPLEMENTS.**—Lieutenant-General Viscount Bridport presented the following report: The Committee recommended that all implements entered "for trial" shall be exhibited at Birmingham. They also recommended the following regulations and conditions with reference to the trials of implements in 1876—viz.:

Every implement intended by the exhibitor for competition shall be entered in its respective section and class as for trial, at the time when the specification is sent in to the Secretary; but notwithstanding such entry, the discretion of trial will rest with the judges.

No exhibitor may enter more than one implement of the same construction for competition in any one class.

Although certain implements, belonging to the classes for which prizes are offered, are not entered for trial, the stewards may, on the recommendation of the judges, order any of them to be tried, and their capabilities made public; and the judges may award to the exhibitors of such implements any distinction, according to merit, that may be at their disposal.

All implements belonging to the classes for which prizes are offered by the Society this year must be brought into the showyard in perfect order for working, as they will be liable upon the recommendation of the judges, to have their capabilities proved by actual trial.

The stewards and judges shall, two days before the show, make such preliminary investigation into the weight and construction of the implements entered for trial as they may consider necessary, and such implements competing for prizes as the judges shall select will be tried at such time and place as the stewards may appoint.

The implements will be removed by the Society to the trial-fields, and no person will be permitted to remove any implement from the yard to the trial-field, unless by the express orders of the stewards.

Exhibitors are requested to be in attendance during the exhibition of their machinery, and its removal to the trial-fields as well as during the trials; and they or their servants must give every facility to the stewards by preparing their implements for inspection; and any exhibitor, after having had due notice, will be liable either to have his implement worked at his own risk, in his absence, or to have it removed altogether from the showyard, as the stewards may decide, and without any responsibility attaching to the Society in consequence.

No implement will be allowed to commence work in the trial-yard or field unless by the express orders of the judges or stewards; and no alteration of any implements for trial will be allowed after termination of the show.

The Committee further recommended that Mr. W. Sanday, Col. Grantham, and Mr. Kimber be asked to assist the stewards and engineers in arranging the scale of points for the trials of reaping machines in 1876.—This report was adopted.

**GENERAL BIRMINGHAM.**—Lieut.-General Viscount Bridport (chairman) reported that the Birmingham Local Committee had offered two prizes of £10 and £5 for the best and second best 6 lb. of butter, made up in pounds, in addition to the previous offers of prizes amounting to £1,250. The Committee recommended that this offer be accepted with thanks. It was also recommended that the name of the secretary of the Birmingham Local Committee, Mr. J. B. Lythall, be added to the list of the General Committee; and that the secretary of the Society be instructed to meet the secretary of the Local Committee, to make arrangements with regard to certain matters.—This report was adopted, after Lord Bridport and other members of the Council had expressed their acknowledgments of the handsome additions which the Birmingham Local Committee had made to the Society's prize-sheet.

**STOCK PRIZES.**—Mr. Milward (chairman) reported that the Committee had settled a preliminary prize-sheet, to be printed and submitted to the Council previous to its final settlement in December. They made especially the two following recommendations:

(1) That any exhibitor wishing to remove his horse for the night be allowed to do so, on depositing £10 at the Secretary's office, and receiving an official pass—the time of leaving, and that of returning next morning, to be inserted thereon; and if the animal be not duly brought back, the sum of £10 to be forfeited to the Society for each show day the animal is absent; and that the exhibitor shall also forfeit any prize awarded to him in any class at the Birmingham show, and shall not

exhibit again at the Society's show until the forfeits are paid.

(2) That a printed circular with a copy of the above regulation be sent to all those who have exhibited either in 1874 or 1875 at the Society's shows, or those of the Yorkshire, Lincolnshire, Driffield, Northumberland, and Bath and West of England Societies, the Agricultural Hall, and the Alexandra Palace.

A discussion then arose as to several points in the Taunton Prize-sheet, and questions were asked as to the proposals of the Committee on those points for the Birmingham show. With regard to the ages of pigs in the classes for "three breeding sow-pigs of the same litter," which had hitherto been fixed at "over four and under eight months old," calculated from July 1, Mr. Milward, Mr. Wells, and Mr. Booth bore testimony to the dissatisfaction of exhibitors with this regulation, and they suggested that the maximum age should be increased to 12 months. Mr. Randell preferred to reduce the maximum age to 6 months, as their exhibition would not then interfere with their use as breeding sows afterwards. A question then arose as to whether the Veterinary Inspectors could check the asserted age so well at 6 months as hitherto; and Professor Simonds answered that, although the ages of pigs were most definitely shown by their dentition at 12 and 15 months, there was no practical difficulty in the detection of any false statement of age if the maximum were fixed at 6 months; and he agreed with Mr. Randell in his opinion that the exhibition of sow-pigs not exceeding 6 months old would not interfere with their breeding afterwards, while their exhibition at 12 months old very frequently would. On the general question as to whether the age of pigs could be definitely ascertained by the dentition, Prof. Simonds expressed himself very confidently in the affirmative. A letter which the Secretary had received on the subject from the Society's Inspector of Pigs, Mr. R. L. Hunt, was then read, from which it appeared that the thirty years' experience of that gentleman in this special subject gave him equal confidence in the results at which he and his colleagues on the Society's Veterinary staff had arrived. Mr. Masfen seconded Mr. Randell's proposition, which was carried, with an addition suggested by Mr. Brandreth Gibbs, that the maximum age should be three months.

With reference to the prizes offered for Shorthorns, Herefords, and Devons, Mr. Dent asked whether they were based on the Taunton or the Bedford Prize-sheets, and Mr. Milward explained that they were based on the Taunton Prize-sheet, because last year the Council had cut down the proposals of the Committee. Mr. Booth reminded the Council that this was an economical measure in view of the certainty of the Taunton meeting causing a considerable drain upon the Society's capital, which result was by no means anticipated at Birmingham. Ultimately, on the motion of Mr. Dent, seconded by Mr. Bowly, the prizes offered for these classes of stock were referred back to the Committee for reconsideration, with the Bedford Prize-sheet as a basis.

A discussion then arose upon the proposal of the Committee to restrict the prizes hitherto offered for "Mares in foal or with foal at foot," to mares and their foals, excluding mares in foal, or entered as such. Mr. Masfen urged that the show would not suffer in numbers by this alteration, but it was a financial question whether additional classes should be created for in-foal mares. Mr. Hensley proposed that this should be done, and Mr. Masfen seconded the amendment. It was opposed by Mr. Dent on the ground that it had been tried and abandoned at the Yorkshire Society, and Col. Kingscote upheld this view, while Mr. Jacob Wilson opposed it on the ground of the success of the plan at the shows of the

Highland and Agricultural Society. On a division the amendment was lost by 12 votes against 7.

Subject to the amendment as to the ages of pigs, and the instruction as to cattle prizes, the report of the Committee was received and adopted.

**EDUCATION.**—The Duke of Bedford (chairman) reported that 22 candidates had been entered for the examination for the Society's Junior Scholarships, which would be held at the schools on November 16 and 17—viz., 16 from the Surrey County School; 3 from the Bedford County School; 1 from the Albert College, Glasnevin, Ireland; 1 from the Cowper-street School, City; 1 from the Devon County School. In each district gentlemen had expressed their willingness to undertake the office of local secretary for the examination.

The Committee recommended that the Aspatria Agricultural School and the Newcastle Grammar School be added to the list of schools which are allowed to send up candidates for scholarships. The Committee also gave notice that at the December meeting of the Council they will apply for a renewal of the Education grant for the ensuing year. This report was adopted.

**SPECIAL CHARTER AND BYE-LAWS.**—Mr. Wells (chairman) reported that the Committee had considered the additional amendments proposed by members of the Council, and recommended their adoption, with the exception of one in Bye-law No. 30. They recommended that the bye-laws, as amended, be printed, with the view of their being finally adopted at the Council meeting in December. This report was adopted after two further amendments had been made, at the suggestion of Mr. Martin, in Bye-laws 25 and 31, and the omission of Bye-law No. 27.

The PRESIDENT reported the death of Lieut.-Col. F. M. WILSON, M.P., a member of Council of the Society.

The Secretary was instructed to send letters relative to the country meeting of 1877 to the authorities of Carlisle, Doncaster, Leeds, Liverpool, and Preston.

Mr. MELWARD moved, pursuant to notice, "That in future the country meeting shall commence on Wednesday, instead of Monday." He urged that by this arrangement the animals exhibited need not be away from home more than one Sunday, and that the two last days of the show, Saturday and Monday, which are shilling days, are also holidays in large towns.

Mr. RANDELL having seconded the motion, it was carried unanimously.

A suggestion was then made that the show should be extended to six days, but was negatived.

Mr. MASEN gave notice that he would move at a subsequent Council that the hour of closing the showyard on the last shilling day should be later at Birmingham than hitherto.

Mr. RANDELL then moved the following resolutions, of which he had given notice at the August Council:

That while under any circumstances it would be of the greatest importance to the members of the Society to prove by a series of experiments made under every variety of soil and climate how far the accuracy of "the estimated value of manure obtained by the consumption of different articles of food," as given by Mr. Lawes in his valuable contribution to the last Spring number of the *Journal* of the Society, is confirmed by practical results, it becomes more especially important now that compensation to outgoing tenants for the unexhausted value of purchased food will become subject to arbitration.

That it be referred to the Chemical Committee to consider in what way experiments may be conducted by practical farmers in different districts to demonstrate by this union of "Practice with Science" the actual manure-value of the kinds of food most extensively purchased—say the first four articles in Mr. Lawes's table, with any others the Committee may select—the feeding value of each being also recorded.

That, as these experiments must extend over a period of at least four years, and will involve considerable expenditure, it

will be desirable after 1876 to suspend for that period the trials of standard implements, affording meanwhile every encouragement to the invention of new implements, or the improvement of others, by public trials of such as appear to the engineers of the Society to possess sufficient merit to entitle them thereto.

He felt that it was not necessary to say much in support of his resolutions, as their terms included a statement of the principle on which they were founded. The provisions of the new Agricultural Holdings Act with reference to improvements of the 3rd class seemed to him to render it necessary that the practical manure-value of purchased substances used as food for stock should be ascertained by practical experiments. It might be urged that many landlords and tenants would contract themselves out of the Act, but he believed that in the large majority of those cases agreements would be made in the spirit of the Act, even though its special provisions were not adopted. It was, therefore, very necessary to ascertain the proportion of the outlay for purchased feeding stuffs, which ought to be awarded under different circumstances. He thought that Mr. Lawes's conclusions, as given in his very valuable paper in a recent number of the Society's *Journal*, would not be accepted by landowners, farmers, and valuers throughout the country until they had been put to an adequate series of practical tests. He gave instances of scales of allowances for decorticated cotton cake and linseed cake—viz., those contained in his own agreement, and those sanctioned by the Lincolnshire and Staffordshire customs, all of which differed from Mr. Lawes's tables, and from one another. But his view was not to induce the Council to try to upset existing customs, but to provide a basis to assist valuers where no previous custom existed. Mr. Lawes, in his paper already referred to, had opened out another set of questions—viz., as to the feeding value of certain substances; and, if Mr. Lawes were right in some of these conclusions, then farmers in general were wrong in their daily practice. He held that it was even more important to know whether they were right in what they did day by day, than what amount of compensation they could claim from their successors. But the scientific deductions on both these points required to be confirmed or disproved by practical tests made with great care under different circumstances. He thought that the feeding value of materials should be ascertained the first year, and the manurial value by cropping the land under certain regulations during the three following years. The experiments should be carried out by careful practical farmers, who must be well paid. Mr. Randell then adverted to the means of payment as indicated in his third resolution, and stated that of all the implements that still remain on the list for trial, nothing required special encouragement from the Society except a means whereby farmers holding less than 300 acres might be enabled to cultivate their land by steam power. At the same time, he would give every encouragement to the exhibition of new inventions, and to the trial of all those which the engineers thought of sufficient promise.

Mr. BOOTH, as chairman of the Implement Committee, dissented entirely from the third resolution, and moved that it be omitted.

Mr. WELLS, as chairman of the Chemical Committee, did not object to the spirit of the second resolution, which referred the matter to the Chemical Committee for consideration, but he had very grave doubts whether any satisfactory result would follow. He had communicated with Mr. Lawes on the subject, and that eminent experimenter had given him an account of some of the disappointments and discordant results which had been obtained at Rothamsted, notwithstanding the trained staff



employed there, in the endeavour to make practical tests of the manure-value of feeding stuffs by the crops produced on land fertilised with the manure of animals fed on them. He felt that he could scarcely join in asking the Society to expend large sums of money in practical experiments, for, unless they were conducted with as much care as those at Rothamsted, the result would be valueless. No doubt a second Rothamsted in some other part of the country was very desirable, and this he hoped might some day be established.

The PRESIDENT observed that the difference of seasons in England was so great, that experiments must be continued for some years to justify any conclusions being drawn from them.

Mr. BOWEN JONES regretted that Mr. Randell had mixed up two very important subjects; but as the question involved in the third resolution had been recently decided by the Council, he would at present say nothing more about it. He fully recognised the importance of the other question—viz., that the unexhausted values of manures should be accurately known; but in his opinion, even at the present day, they were tolerably well known for such purposes of arbitration as were likely to arise in this generation. As an instance he would compare Mr. Lawes's figures with the compensation given for cake in most districts. Farmers generally used half cotton and half linseed cake, and the compensation of half the expenditure of the last year would amount pretty nearly to what science says it ought to be—viz., the compensation for such a mixture calculated from Mr. Lawes's tables. He held that experiments for five years would be useless, and that they would be required for thirty or fifty years to enable the value of off-going crops to be ascertained more accurately than at present. Possibly, different conditions of land-tenure will exist in the future, but then he expected that a laboratory would exist on every farm, everything that came in would be debited to it, and everything that went out would be credited. He added that he and many other farmers had made field experiments for Dr. Voelcker, and the result showed him how difficult it was to arrive at any satisfactory conclusion from such experiments as farmers could conduct.

Mr. DENT thought that the Council should not hastily decide upon a matter of such grave importance, particularly as it was surrounded by enormous difficulties, and especially in reference to finding persons competent to conduct the experiments. He did not object to seconding the first two resolutions which had been proposed by Mr. Randell, but he thought that the wording of the second seemed to pledge the Society too much to the making of some such experiments as were indicated in the first. If the matter were referred to the Chemical Committee, he hoped that Mr. Randell and some other practical men would be added to the Committee, and that they should have power to consult Mr. Lawes, Dr. Voelcker, and other scientific men, as well as to ascertain what had been done at the experimental stations in Germany.

Mr. RANDELL, in reply, agreed to modify the wording of his second resolution by making the first line read, "That it be referred to the Chemical Committee to consider whether, and in what way, experiments," &c. He considered that the Council had very much overrated the difficulties of the subject, notwithstanding that Mr. Lawes held the same view. He gave the following sketch of his idea of the manner in which the experiments should be carried out in the several districts of the kingdom upon a given quantity of land in each, care being taken to have each experimental field of uniform quality: The field to be divided into five plots, upon four of which, in the first year, feeding stuffs should be employed, of the different

kinds selected to be eaten with the roots grown on the land, and on the fifth no artificial food should be given. The relative feeding value would thus be ascertained the first year. Second year, on all plots barley to be grown, and weighed at harvest. Third year, on all plots clover to be grown, mown twice, and produce weighed. Fourth year, on all plots wheat to be grown, and weighed at harvest. He regarded it as a reflection upon the farmers of England to say that they could not carry out such a series of experiments, and he felt convinced that the results obtained would be a sufficient guide to valuers in estimating the unexhausted value of purchased feeding stuffs. Mr. Lawes's deductions, although excessively valuable, and a good basis to start from, were not sufficient for the requirements of the agricultural public under the new Agricultural Holdings Act.

The Earl of LICHFIELD thoroughly agreed with every word that had been said as to the importance of the question which Mr. Randell had brought before them, and now that the second resolution had been amended with that gentleman's consent, he hoped that the first two resolutions would be referred to the Chemical Committee.

Lord VERNON added that, in his opinion, it was impossible to overrate the importance of the question, but at the same time it was equally true that to proceed with it would be a matter of great difficulty. Up to the present time England had produced only one Mr. Lawes, and it was probable that a man of similar power would be required to manage the proposed experimental plots in each district. No doubt Mr. Randell was right in saying they could find reliable practical agriculturists in each district; but he feared that, although they would be reliable in every other sense, they would not be so in matters of science or scientific investigation. At the same time, he held that the Royal Agricultural Society, as the leading society of its kind, ought not to shrink from encountering a subject because it was surrounded with difficulties; on the contrary, he was of opinion that the greater the difficulty attending the investigation of so highly important a matter, the more reason that this Society should endeavour to face it, as the only one competent to take that course. He should, therefore, support Mr. Randell.

Mr. G. H. SANDAY urged that, even with the best-managed experiments, different results must be obtained on different soils and in different districts, and that, therefore, the total result would leave them no wiser than they are now.

Mr. MARTIN laid stress upon the enormous expense which such experiments must entail, and when he considered the difference of seasons to be contended against, he felt that the result would be by no means adequate to the outlay. Then, as a practical man, he felt that they first had to ascertain what expenditure in feeding stuffs would pay, and what would not pay. It was useless for the Society to make experiments on manurial value of feeding stuffs unless it was first proved that the quantities and kinds used would pay on the land upon which they were tested.

Earl CARBONATE said that in all the sciences there were men who had a special talent for experiment, while others, possessing equal knowledge, had not that faculty. He greatly feared that Mr. Randell's "reliable farmers" would for the most part find out at the end of three years that they could not conduct experiments. He hoped, however, that the time was coming when they would have experimental stations all over the country. Mr. Randell's two first resolutions were then referred to the Chemical Committee, the third was withdrawn, and Mr. Randell was added to the Chemical Committee on the motion of Mr. Dent, seconded by Lord Vernon.

On the motion of Colonel KINGSFORD, C.B., M.P.,

seconded by Mr. DENT, cordial votes of thanks were passed to Mr. Richard Easton, High Bailiff of Taunton, and Secretary of the Taunton Local Committee, and to Mr. J. S. Bolt, Steward of Forage, for their great and successful efforts to promote the success of the Taunton meetings. Several letters having reference to questions arising out of the Taunton meeting were read, and the Secretary was instructed to return suitable replies.

A letter was read from Lord Kinnaid on the question of judging by points, and suggesting the experiment of a special class of Shorthorns to be judged by points at the Birmingham meeting, his Lordship offering to guarantee a sum in prizes to be offered in the class. On the motion of Colonel KINGSCOTE, seconded by Mr. RANDELL, it was resolved to decline his Lordship's offer with

thanks, as the establishment of such a class was not considered expedient.

A letter was received from the Secretary of State for Foreign Affairs, enclosing a copy of the French law recently promulgated on the subject of Agricultural Education; and a Report of the Chief Inspector of Live Stock for the colony of Queensland for the year 1873, forwarded by the Secretary of State for the Colonies.

A print of the Woburn Sheep-shearing in 1811 was presented by Messrs. Eastons and Anderson, and the Secretary was instructed to convey the thanks of the Council to the donors for their interesting gift.

The next general meeting of members was fixed for Thursday, December 9th, at noon; and the Council adjourned to Wednesday, December 8th, at noon.

## THE SHORTHORN SOCIETY OF GREAT BRITAIN AND IRELAND.

A meeting of the Council of this Society was held at the Society's Rooms, 12, Hanover Square, on Tuesday, November 2nd. Present: Colonel Loyd Lindsay, M.P., in the chair; the Earl of Beattie; Colonel Kingscote, C.B., M.P.; Mr. Hugh Aylmer, Mr. H. W. Beauford, Mr. T. C. Booth, Mr. D. McIntosh, Mr. H. Chandos Pole-Gell, Rev. T. Stanforth, Rev. J. Storer, Mr. R. Stratton, Mr. G. Merton Tracy, and Mr. Jacob Wilson.

The following new members were elected:

Basset, Rev. W. J., Holcombe, Leeston, Canterbury, New Zealand.

Chevalley, R. A., Solterbridge, Cappognin, Waterford.

Clemens, W., Blakesley Hall, Yareley, Birmingham.

Dorby, Alfred, Little Ness, Strewsbury.

Egan, William How, Bleot Park, Hungerford, Berks.

Fothergill, John, Udale Hall, Meadgate, Cumberland.

Gill, Henry, White House, Kirk, Michael, Isle of Man.

Greenhill, William, Hood Lane Farm, Longdon, Rugby.

Hobbes, David, Yardley, Birmingham.

Holland, Robert, Norton-Hill, Runcorn, Chester.

Johnson, Thomas, Wittenham, Abingdon, Berks.

Walker, Rowland, Moss End, Burton, Westmorland.

Walker, William, Carleton Hill, Penrith.

Swage, S. and T. W. H., Leys Farm, Wotton-under-Edge.

Greeter, S. A., East Cleveland, Ohio.

Thompson, Thomas Charles, Milton Hall, Carlisle.

Threlkeld, W., Aylesby Manor, Grimsby.

Wright, John, Elmford, Lechlade, Gloucestershire.

Yorance, George, Sasterpath, Dunse, Berwick.

**READING COMMITTEE.**—Mr. H. Chandos Pole-Gell reported that the Committee had had under their consideration the pedigrees of several imported animals sent for entry in Vol. 21 of the *Herd Book*, the latest crosses of which are by American-bred bulls not entered in the English *Herd Book*, and that the Committee were of opinion that these entries were ineligible until such crosses had been verified and entered; that there were nearly 7,000 entries for the forthcoming volume of the *Herd Book*; that the pedigrees of the bulls were nearly all in type, and that the manuscript of the cows was ready for the printers. On the motion of Mr. H. Chandos Pole-Gell this report was received and adopted.

**GENERAL PURPOSES COMMITTEE.**—Mr. Jacob Wilson reported that the Committee had examined and passed the Secretary's petty cash account for the months of August, September and October, and also his receipts for entries, &c., for the same period. That the Committee had received the Treasurer's Report, and had examined the bank book, and the amount standing to the credit of the Society was £1,018 2s. 7d. That the Committee recommended that cheques be drawn for accounts amounting to £342 14d. That the Committee had had under

their consideration the solicitor's account for legal charges, &c., in connection with the formation of the Society, amounting to £413 16s., and they recommended that the same be paid. That the Committee had approved of an estimate for fitting up shelves and pigeon-holes in the Secretary's office amounting to £17 10s., and they recommended that the same be accepted. That the Committee also recommend the purchase of a clock for the Council-room at a cost not exceeding £5, and of an iron safe at a cost not exceeding £15. The Committee reported that the Society's stock of *Herd Books* and furniture had been insured for £2,200. The Committee also reported that the Secretary had had an interview with the Society's auditors, who had recommended a system similar to that in use by the Royal Agricultural Society of England for keeping the Society's accounts, and that the auditors propose to audit the accounts at the end of the financial year, December 31 next, and, after that date, monthly previous to the meetings of the Council.

This report was received and adopted.

On the motion of the Rev. T. Stanforth, seconded by Mr. H. Chandos Pole-Gell, the agreement with the Secretary for his services to the Society was ordered to be sealed with the common seal of the Society.

Mr. H. W. Beauford having expressed a wish that the resolution he had proposed to move in reference to the Society's acquiring Mr. Thornton's Quarterly Circular should be postponed until the Council meeting in December, the consideration of the subject was adjourned until that meeting.

An application having been received from the President of the American Shorthorn Association in reference to the desirability of a mutual understanding and co-operation between the two Societies, with an interchange of publications, &c., Mr. T. C. Booth stated that as the objects of this Association were identical with those for which the English society was established, he would propose that the future publications of the Society be forwarded to the Association as issued. This having been seconded by Mr. Jacob Wilson, was carried unanimously.

Mr. Stratton having expressed his opinion that the Council should make some representations to the Privy Council as to the devastations of the foot-and-mouth disease throughout the country, gave notice that at the next meeting of the Council he should move a resolution in reference thereto.

The next meeting of the Council was fixed for Tuesday, December 7, and it was resolved that if accommodation could be obtained, it should be held at the Agricultural Hall during the show of the Smithfield Club.

## S M I T H F I E L D C L U B.

A meeting of the Council was held at the Agricultural Hall on November 3rd: present, Viscount Bridport, Vice-President, in the chair; the Earl of Feversham, Vice-President; Messrs. H. Aylmer, T. Brown, of Marham, T. C. Booth, E. Bowly, J. Druce, T. Duckham, H. Fookes, W. Farthing, J. Giblett, W. Heath, C. Howard, J. Howard, T. Horley, jun., R. Leeds, R. J. Newton, C. S. Read, M.P., J. Stratton, J. Thompson, H. Woods, J. Wilson, and B. T. Brandreth Gibbs, Hon. Sec.

The minutes of the last Council meeting were read and confirmed. The hon. secretary was authorised to take the usual steps necessary for holding the Show.

The committee was appointed as heretofore to make the necessary arrangements as to the disinfecting, &c., the conveyances to be used in taking live stock to the Show.

The Council then proceeded to prepare the House-list of sixteen names, from which the members generally will elect eight, to replace those who retire by rotation, and are not eligible for re-election until after the expiration of one year.

Three scrutineers were appointed to examine the voting papers for the new members of Council previous to the general meeting in December.

The Show-yard committee appointed at the Council in February last to confer with the Agricultural Hall Company on the subject of future arrangements for holding the annual Shows, reported the substance of the several conferences held with the authorities of the Hall Company, and obtained leave to sit again and make a further report on the subject.

The hon. secretary reported his correspondence with the secretary of the Agricultural Hall Company on the subject of the admission of ladies to the Show during the judging when accompanied by members of the Club; and it was decided that the member's ticket of admission

shall, up to 2 o'clock, also admit one lady accompanying such member entitled to entrance.

The thanks of the Council were voted to the Agricultural Hall Company for this concession.

The hon. secretary announced the death, since the last Council meeting, of Lord Tredegar, a Vice-President of the Club.

The following new members were elected: Wm. Wood, Ifield Court, Crawley, Sussex; E. L. Morris, Stowmarket; Rev. Thomas Staniforth, Storrs, Windermere; Chas. Ed. Forster, Westgate House, Drillfield; Earl of Egmont, Cowdray Park, Midhurst; W. Rolles Fryer, Lytchett Minster, Poole; C. J. Andrews, Reading Iron Works, Reading; James Braby, Maybanks, Rudgwick, Horsham; Henry Kelsey, Old House, Crowhurst, Surrey; Henry H. Morley, Hall Place, Tonbridge; Benj. Painter, Cow Close Farm, Burley-on-the-Hill, Oakham; Albert Brassey, M.P., Heythrop Park, Chipping Norton; Andrew Mitchell, Walk House, Alloa, N.B.; Henry Denton, Wolverhampton; W. Hesselstine, Beaumont Cote, Barton-on-Umber; Bowen Jones, Eusdon House, Shrewsbury; W. Mitchell, Whitlingham Hall, Trowse, Norwich.

In future an additional list of the members of the Club is to be sent to the members of Council with the notice of the November meeting, in order to facilitate the selection of the sixteen names to be placed on the voting papers.

Several letters were read, and replies ordered to be given.

The North British Agriculturalist newspaper was ordered to be added to the list of journals in which the Club's advertisements are to be inserted.

The thanks of the meeting were voted to Lord Bridport for his conduct in the chair.

The Council then adjourned to the December meeting.

## THE HIGHLAND SOCIETY.

The first monthly meeting of the directors for the season was held on Wednesday, November 3, in No. 3, George IV. Bridge, Edinburgh, Mr. Smail Keir, of Kindroan, in the chair.

CHEMICAL DEPARTMENT.—The following letter was read: Haddington, 28th June, 1875. Sir,—I regretted not getting an opportunity of expressing at the meeting of the society, held on the 16th, my ideas as to the appointing of a chemist. I am satisfied, in order to give entire confidence, and I have the approval of the members of the society, especially farmers, we must have a chemist devoting his whole time to the work of the society. A young man of ability and a master of his profession could be obtained for £400 to £500 per year, with the expectation of an increase. To raise this sum, I would have each parcel of manure and seeds wished to be analysed by members sent to your office, along with the fee fixed by the directors, which ought to be a small one, in order to induce farmers to have all their purchases tested, and the chemist, after recording the result, send a copy thereof to the member who has duly remitted the fees. A certain number of pupils should be taken into the laboratory at a fixed fee, also to be paid into your office. A separate account to be kept for all fees received, out of which fund the salary of the chemist will be paid. I feel certain in a very short time this fund will be able to meet salaries and expense of laboratory without encroaching upon the funds of the society. The pupils would assist (under the direction of the chemist) in preparing the tests, but it must be his duty personally to weigh the different component parts of the samples sent to be analysed. Regarding the experimental farm—before establishing the same I would advise that a small deputation, composed of directors

and practical agriculturists, ought to visit one or two of the like establishments in Germany. I have visited some of these myself, and been much delighted with the arrangements and with the amount of information imparted to the students attending at each of the stations. The station I was most pleased with was that in the neighbourhood of Greifswald, in connection with the university there. The farm is a large one—I think about 1,000 acres, with about 100 acres devoted to experiments in testing different plants and grain with different kinds of manures. I could send you a copy of reports (in German) I brought with me last year. Greifswald is near Stettin, and can be got at in a short time and at little expense. I shall be glad to give you any further information in my power. May I ask the favour of your placing this letter before your directors, and I shall be glad to know what has been done.—I remain, your most obedient servant, DAVID ROUGHHEAD.

The secretary was instructed to inform Mr. Roughhead that his letter would be taken into consideration in the report to be brought up in the general meeting.

LORD CALTHORPE'S SCHEME.—The resolution passed at last general meeting referring it to the directors to consider the propriety of granting a sum of £100 for five years to the fund proposed to be raised by Lord Calthorpe for improving and maintaining a proper supply of horses in Scotland, was brought before the meeting, when, after some discussion, the secretary was instructed to obtain further information on the subject before the next meeting of the board.

AGRICULTURAL EXPERIMENTAL STATIONS.—The motion by Colonel Innes, of Learney, on this subject at the general

meeting in June last was under the consideration of the meeting, and after some discussion the secretary was instructed to obtain information in regard to the agricultural experimental stations formed in Aberdeenshire and other counties in the north.

**AGRICULTURAL EDUCATION.—Bursaries.**—The Secretary stated that the examinations for the society's bursaries had been fixed to be held on Tuesday, the 16th current, but that only one candidate had offered himself for examination.—**Committee.**—The following were named as a standing acting committee of the Council, in terms of the new bye-laws: The Lord Justice-General, the Professor of Agriculture, the Professor of Botany, the Professor of Chemistry, Mr. Hope of Bordlands, Mr. Mylne, Niddrie Mains, and Mr. Hunter, of Thurston; three a quorum, Lord Justice-General convener.

**ORDNANCE SURVEY.**—The Secretary reported that, pursuant to the instructions from the last general meeting, a deputation from the society waited upon Lord Henry Lennox, M.P., the First Commissioner of Works, at the House of Commons, for the purpose of presenting a memorial and asking for a Government grant to complete the unfinished survey of Scotland. After the reading of the memorial, the First Commissioner said the subject of the memorial would have his best attention. The following letter from the secretary to the commissioners of Her Majesty's Works was then read: "H.M. Office of Works, &c., S.W., 2nd July, 1875.—Sir,—I am directed by the First Commissioners of Her Majesty's Works, &c., to acquaint you, on behalf of the Highland and Agricultural Society of Scotland, that his lordship has duly considered the memorial which was presented to him by a deputation from the society on the 22nd ult in regard to the survey of Scotland. I am to state that the First Commissioner fully recognises the advantages which would be derived from the replotting on the 1-2,500 scale of such of the counties of Scotland as have been surveyed on the 6-inch scale only. I am, however, to remind you that the survey of the counties of York and Lancaster is in a precisely similar position, and that, in the face of the pressing demands upon him from all parts of the kingdom which have not yet been surveyed, it seems to the first Commissioner impracticable to comply with the request of the memorialists. The cost of replotting the counties in Scotland referred to, containing an area of 3,330 square miles, is estimated at £57,680; and, for the reasons already stated, the First Commissioner would not feel justified in appropriating to that object at present any portion of the ordinary grant for the surveys of the United Kingdom. The Lord's Commissioners of Her Majesty's Treasury are averse to sanctioning any special addition to the vote for the purpose in question, inasmuch as Yorkshire and Lancashire, containing an area of 7,828 square miles, have an equally strong claim to be replotted; and their Lordships could hardly consent to an addition to the vote in respect of Scotland without making a corresponding, or even still larger, addition in respect of the greater area included in the two English counties. Under these circumstances, the First Commissioner regrets that he is unable to depart from the decision arrived at in the matter by his predecessor. He desires me, however, to invite the attention of the Highland Society to the fact already stated, that the survey of Scotland is conducted in no exceptional manner. It is being carried on under precisely the same orders and regulations as the survey of the other parts of Great Britain, and there has been no interruption to the publication of the plans of Scotland. I am, sir, your obedient servant, A. B. MITCHELL, Secretary.

**VETERINARY DEPARTMENT.**—The Secretary reported that the preliminary examination of students for the society's veterinary certificate took place on the 13th and 14th July, when 32 students entered their names for examination—namely, 13 from the Edinburgh Veterinary College, 16 from the New Veterinary College, Edinburgh, and 3 from the Glasgow Veterinary College, and that 16 had obtained the certificate.

**INVERNESS SHOW, 1874.—Three-Year-Old Greyhound Heifers.**—The first and second premiums, awarded respectively to the Duke of Buccleuch for Nerio, and Mr. Cunningham, Tarbrooch, for Mary II., have been forfeited, the animals having failed to produce calves within the specified time. The first premium has been transferred to Mr. Cunningham, Tarbrooch, for Bridesmaid, which stood third. *Mares in Foal.* The first and second premiums, awarded respectively to Mr. Murdoch, Hallside, for Maggie, and to Mr. Leitch, Inchelshy, for

Queen, has been forfeited, the animals not having proved in foal. The first premium has been transferred to Mr. Montgomery, Boreland, for Nanny, and the second to Mr. Hendrie, Castle Heather, for Dandy.

**GLASGOW SHOW, 1875.—Awards.**—The directors approved of the awards at the late show at Glasgow, and the chairman was authorised to sign orders for the money premiums, which the secretary was instructed to issue along with the medals as early as convenient. *Forage Yard.*—A letter was read from the Forage Committee (Messrs. David Cross and Thomas Scott) reporting that they frequently visited the forage yard during the show, and found an ample supply of the various articles, all of most excellent quality; and that the deliveries were made as fast as applicants appeared, and all going on without the slightest confusion or complaint. A communication was also read from Sir William Forbes, of Craigievar, Bart., stating he thought some special notice should be taken, and made public, of the admirable manner in which the forage yard was supplied by Mr. Buchanan, 391, Parliamentary-road, Glasgow, during the show. Sir William added that having taken special notice of it, and having done so for several years, he never saw better food, and there was not a single instance of complaint as to the arrangements. *Turnip-Thinning Machines.*—The following report of the Local Committee was read:—"In accordance with the resolution of the Local Committee adopted in Glasgow, a trial of the turnip-thinning machines exhibited at Glasgow took place on Friday, the 6th instant, on the Home Farm of Craigmie, near Ayr. Four machines were tried, namely, No. 1,134, exhibited by Messrs. R. Bickerton and Sons, Berwick-on-Tweed; No. 1,214, exhibited by Mr. John Dickie, Girvan; No. 1,572, exhibited by Mr. Thomas Hunter, Maybole; and No. 1,573, also exhibited by Mr. Hunter. Two other implement-makers were unable to have their machines on the ground at the time. The turnips were sown after the removal of a crop of early potatoes, and the soil was like a piece of garden ground. It offered, perhaps, too little resistance to the action of the machines. The machines were tried first on a field where the crop was going past the best stage for singling, and afterwards in a field where the plants were scarcely ready for the loes. In our opinion Mr. Hunter's machine, No. 1,573, made the best work, and his other machine came next to it. We do not think, however, that they should be placed first and second, as they are substantially the same. The one has slower action than the other, and on that account it worked better on the light soil at Craigmie. We would place Mr. Hunter first, and Mr. Dickie second. There was no great difference in the quality of the work done by the two machines; but any difference was in Mr. Hunter's favour, and he has a further advantage in the cheaper machine. We cannot speak very strongly as to the utility of the machines. They may be useful for sending over drills at an early stage of the growth, at times when turnips are coming away rapidly and hands are scarce. The turnips would then be less susceptible of injury from delay in thinning. But the advantage to be gained by using the machines when the crop is ready for singling was not very obvious at the trial.

JAMES DRENNAN.

JOHN YOUNG.

JOHN MURRAY.

*Apr. August 6th, 1875.*  
**Self-Delivery Reapers.**—The following report was read. We beg to report that we tried this day a self-delivery reaper, exhibited at the Glasgow Show by Walter A. Wood, 36, Worship-street, London, stand No. 67, article No. 767. The reaper was tried in a field of wheat belonging to Mr. Gibson, Woolmet. It was a fair crop, and well fitted to test the machine, which, in our opinion, did its work exceedingly well. The principal improvements in this machine are that the rakes are under the control of the driver; it is a very simple arrangement, and not likely to get out of order, being a cord attached to a lever at the driver's foot; it then passes round a small pulley, and the other end of the cord being attached to another lever at the side of the upright shaft of the machine: from the end of this lever a wire passes up in a groove cut in the upright shaft and fixed to another lever on the top of the machine, which acts when required on the rakes as they go round, thereby enabling the driver to make it the sheaves small or large at will. There is another improvement in the fixing of the knife, which is done by the use of a spring rod and keeper, avoiding the use of screw bolts, which are very apt to be overhauled. In other respects the machine is the same as was exhibited and tried at Stirling in 1873. The draught of

this machine as tested by the dynamometer, was 2½ cwt. The reaper exhibited by William Anson Wood, 5, Upper Thames-street, London, stand No. 68, article No. 775, was tried on the 27th and 28th of August, on a field of wheat belonging to Mr. Bryden Monteith, Liberton Tower Mains; but after being in operation a few minutes both days, it broke down. He got the opportunity of another trial at Woolmet on the 31st, but he could not get another machine forward in time.

JOHN GIBSON, Woolmet, Dalkeith.  
JAMES D. PARK, Engineer.

Edinburgh, 31st August, 1875.

The board awarded a silver medal to Mr. Walter A. Wood, MANURE DISTRIBUTOR AND POTATO PLANTERS.—The following report by the Implement Committee was read: On the 12th of October trials of the above implements were, by the kind permission and assistance of Mr. Monteith, made on his farm at Liberton Tower, on a field from which a crop of potatoes had just been lifted, and was in every respect suited for the trials. The members of committee present were—Mr Hunter of Thurston; Mr. Munro, Fairington; Mr. Swinton, Holybank; Mr. David Stevenson, C.E.; and Mr. James D. Park, engineer.

I. *Manure Distributors*.—This machine is the invention of Mr. Robert Parker, Culhorn Parks, Stranraer, by whom it has been patented as a combined driller and manure distributor. The distributing parts of the machine consist simply of a pair of hoppers or feeding-boxes, in the interior of which two sets of teeth are made to revolve in such a way as to admit of the manure escaping in a perpetual stream from an aperture in the bottom, the size of which can be regulated. After passing from the hopper the manure is carried by means of spouts or slides to the drills, which in the meantime have been opened up by two double-mouldboard ploughs attached to the implement beneath and travelling immediately in front of the slides. In the fore part of the machine are the driving-wheels, as well as appliances for steering and for regulating the depth of the furrow. Drawn by a pair of horses, and attended by two men, the hoppers, having been filled with a couple of cwt. of dissolved bones, the machine was carefully tested; and though it cannot be said that the manure was put into the drills with perfect regularity, and while some exception might be taken to the heaviness of the draught, the implement seemed such as is likely to be really serviceable before long. From one of the hoppers the manure flowed freely and regularly enough, but the delivery from the other was intermittent, apparently owing to some flaw in the working of the teeth; but this, of course, could be easily remedied. After careful consideration, the committee are disposed to report favourably of the machine, and to recommend that the directors should mark their approval by awarding the inventor a silver medal.

II. *Potato Planters*.—Of the four machines exhibited at Glasgow and recommended for trial, only those belonging to Mr. William Dewar, Kellas, Dundee, and Mr. Alexander Guthrie, Craigs, Montrose, were brought forward. The machine first tried was that of Mr. Guthrie, which was worked by a revolving wheel about two feet in diameter, furnished with a set of cups, by which the tuber is lifted and deposited alternately in one or other of the two drills covered by the planter. It is intended that by each cup only one potato should be caught, but at the trial on this occasion as many as three tubers were frequently lifted at a time, causing an objectionable waste of seed. The irregularity of the delivery was increased by the unsteady working of the horse, which had to walk along the crown of the drill. In Mr. Dewar's machine seed is taken from the hoppers by a pair of large wheels, round which are arranged, at intervals of eleven inches, a series of catches, worked by spiral springs, and which lift the potato from the hopper. The tubers were thrown out into the furrow by a slide in such a way that they became scattered, and in many cases lay together in threes and fours. After a careful trial of both these machines, the committee are unanimously of opinion that they have not yet reached such perfection as to warrant the directors in expressing a favourable opinion regarding either of them. Much ingenuity is displayed by both the exhibitors, but the delivery of the potatoes is so very irregular that in their present state the committee cannot recommend the machines.

(Signed)

{ JAMES W. HUNTER, Governor.  
DAVID STEPHENSON.  
JOHN MUNRO.  
JAMES D. PARK.

Edinburgh, 12th October, 1875.

In accordance with the report, the board awarded a silver medal to Mr. Robert Parker.

ABERDEEN SHOW, 1876.—It was remitted to the Committee on General Shows to arrange the premiums and adjust the regulations for the show to be held at Aberdeen next year: to consider a letter from the Marquis of Tweeddale on the subject of judging the wool of sheep, as well as their symmetry; and a letter from the Rev. U. H. Allen on adding Houdans as a class of poultry.

PROPOSED SHOW AT EDINBURGH IN 1877.—Requisitions addressed to the Directors to hold the general show at Edinburgh in 1877, from the counties of Edinburgh, Haddington, and Lanthrigow, and the city of Edinburgh, were laid before the meeting, and remitted to the Committee on General Shows to prepare the classes of stock for which premiums should be offered.

PROPOSED SHOW AT CARLISLE IN 1877.—The following letter was read: Carlisle, Oct. 31st, 1875.

Sir,—At a large and influential meeting recently held in Carlisle, attended by gentlemen interested in agriculture from Cumberland, Westmorland, Furness, West Northumberland, and the South of Scotland, it was decided to take the necessary steps preliminary to inviting the Royal Agricultural Society of England to hold its country meeting for 1877 at Carlisle. It has been suggested that the Highland and Agricultural Society should also be invited to Carlisle to unite with the Royal of England on and for that occasion in making one grand show, with an increased number of augmented prizes, to give an additional stimulus to inventive skill, and the intelligent persevering application thereof. Without dwelling upon the superior railway facilities which Carlisle enjoys, it will be obvious that the expense and trouble to exhibitors and the public will be much less, and the advantage to all parties concerned much greater than could possibly result from holding the shows separately, while the special objects of both societies would be promoted in the highest degree. It is understood that, in any case, the Royal will hold its 1877 meeting in the north-western district of England, and the Highland in the southern district of Scotland. As the occasions on which these two great Societies hold their shows in such comparative proximity are exceedingly rare, and in all probability the present generation will never have such another opportunity of witnessing so unique a gathering as that proposed, in which the characteristic stocks of the two countries would be ranged side by side, the present is an opportunity which ought not to pass unimproved. I will be glad to learn whether the suggested meeting of the two Societies at the old Border city of Carlisle commends itself to your approval; and if so, may we look for your support in carrying the movement into effect?—I am, sir, your obedient servant, (Signed) JOHN HARGREAVES, Mayor of Carlisle.

After a prolonged discussion, the directors unanimously resolved that they did not deem it expedient to concur in the proposal.

SOCIETY'S MODELS IN MUSEUM OF SCIENCE AND ART.—A letter was read from Professor Archer, dated 22nd June, intimating that the collection of models of implements and apparatus formed by the Society, supplemented by that collected and presented by the University of Edinburgh, has now been arranged in the upper gallery of the Museum, and is available for public use.

MISCELLANEOUS REMITS.—The following remits were made: To the Committee on Office-Bearers, to report on vacancies and suggest list for 1876; to the Committee on Essays and Reports, to read and report on papers lodged in 1875, and to revise the list for 1876; to the Committees on District Competitions and on Cottages and Gardens, to revise the awards for 1875 and consider the applications for 1876; to the Special Committee on Entomological Specimens, a letter from Admiral Sir James Hope, of Carriden, on the Colorado beetle.

DISTRICT SHOWS.—The mare belonging to Mr. Hunter, Brownhill, which carried the third premium in the Buchan district in 1874, not having proved in foal, the premium has been transferred to Mr. Killoh, Middlethird, whose mare stood fourth.

## CENTRAL CHAMBER OF AGRICULTURE.

The first Council meeting of the Central Chamber of Agriculture during the winter season was held last Tuesday at the Salisbury Hotel, the President for the year, Lord Hampton, in the chair. After the usual routine business had been disposed of,

The CHAIRMAN, referring to two questions which Mr. James Howard had given notice of his intention to put to him, observed that as nothing of that kind had occurred before, it was important for the Council to take care what precedents were established, adding that, in his opinion, it was desirable that questions should be put there, as they were in the House of Commons, after the routine business had been disposed of, and that they should be put and answered categorically, and that no discussion should be allowed, as otherwise the effect might be a serious encroaching on the very limited time allowed for the business of the day (Hear, hear).

This view having been assented to by the meeting,

Mr. HOWARD proceeded to ask the following questions: How it was that after the introduction of the Agricultural Holdings Bill into Parliament no action was taken, either by the Business Committee or by the Unexhausted Improvements Committee, to secure amendments in the Bill, with a view of bringing it into accordance with the resolutions passed by the Central Chamber? Further, why the Parliamentary Committee, appointed while the last Government was in power, had been abandoned?

The CHAIRMAN said his answer to the first question was that he was not aware of any rule or regulation by which it became the duty of the Business Committee, and still less of the Unexhausted Improvements Committee, which was appointed for a special purpose, to take the course suggested by the question. After referring to the minutes of the meeting in May, in support of this view, his lordship observed that he thought the second question should have been addressed, not to him, but to the Chairman for 1872, as it appeared that since 1872 there had been no re-appointment of the Parliamentary Committee.

Mr. PELL, M.P., then presented the Report of the Local Taxation Committee:

While the Local Taxation Committee are able in their Annual Report for 1875 to place on record further successful resistance to threatened new impositions, and further steps of a remedial though minor character undertaken by the Government, they have to express their disappointment at the absence of larger and more energetic reforms. A fuller development of the policy of relief by subvention, to which Her Majesty's present Ministers have adhered, and of which they have already given an earnest, has no doubt been rendered more difficult by a pause in the growth of our Imperial revenue. It cannot, however, be either necessary or just that all further relief to the ratepayers should be deferred until that revenue again exhibits a spontaneous increase. Nor can the continued postponement of the interests of the local to those of the imperial taxpayer well be defended when the ample series of remissions of general taxation is contrasted with the rapid coincident increase of local burdens. While regretting that the removal from the local rates of distinctively Imperial charges has not been proceeded with this session, the Committee rely for future relief in this direction, not merely on the present prospects of a larger revenue, but on the intrinsic justice and increasing urgency of claims, too long unsatisfied, for redress and equitable settlement. Besides those readjustments of taxation which involve direct financial aid from Imperial sources, it should be remembered that various other reforms have now been admitted to be necessary. Without disputing, therefore, the value of many of the questions which have this year received legislative consideration, the Committee share the regret so generally experienced by their supporters, that further and more definite improvements in the incidence of local rates or the organisation of local government should not have been attempted by a Ministry which, on its accession to office, accorded the foremost place to the question of Local Finance. The increased grants toward the cost of police and lunatics formerly announced were realised by the sums voted by Parliament during the present session. Founded, as these subventions were, on the suggestions of Sir Massey Lopes in 1872, they yet failed to effect all that he then proposed, and left the local rates still unfairly burdened with a large portion of the cost of administering justice. In order to call the attention of the Government to this omission, the Committee obtained an

interview with the Home Secretary on the 13th January last. They pointed out not only the local hardships thus suffered, but also the waste and inefficiency arising from our semi-local and disjointed machinery for the detection, prevention, and punishment of crime. Mr. Cross declared the Government to be fully alive to many of the anomalies complained of, and, although no legislative proposals were subsequently made by the Ministers, the Chancellor of the Exchequer, on the 24th May last, formally announced their firm intention to deal with this point, and their acknowledgment that the famous resolution of 1872 still governed their policy in this particular matter. The Committee are glad to observe that the statistics they were able to quote on their interview with the Home Secretary as to the cost of repressing crime, attracted no small amount of public attention. At a later date their Chairman took occasion in the House of Commons to enforce the urgency of the reforms required in our system of police and prison management, and called attention to the fact that but one-sixth of the cost of our prisons (other than the great convict establishments) is now borne by the State, and that no payment whatever is made by the Treasury toward the expense of prisoners before conviction. The glaring anomalies in the cost of imprisonment in different places is shown by the annual cost of a prisoner varying from less than £60 to more than £100. The improper distribution of our local goals is illustrated by the maintenance of eight separate prisons for 231 prisoners within a single county, and by the frequent existence of two goals in a single town. The absence of uniform discipline, the unnecessary and expensive buildings maintained, and the needless multiplication of officials resulting from the retention of locally supported prisons, were exposed during the recent discussions on the Repression of Crime at the Social Science Congress at Brighton. It would seem, therefore, that public opinion inclines towards the adoption of a uniform and consistent method of prison management, which shall invest the State with the whole charge and cost of these institutions, instead of permitting national funds to escape with the petty contribution now made towards the maintenance of convicted prisoners. A settlement of the question respecting the disallowances of the costs of criminal prosecutions was attempted by a Treasury minute issued after the interview with the Home Secretary, to which reference has been made. The proposals made were, however, neither complete nor satisfactory, placing the cost incurred at sessions on a different footing to those at assizes. The Committee accordingly felt bound to support Mr. Gerst in his endeavour in the House of Commons to ensure the insufficient character of the concession. Although this attempt was not successful in reversing the policy embodied in the minute, it gave rise to a discussion which showed that the question must still be regarded as open. It is to be hoped, therefore, that no lengthened period will be allowed to elapse before the entire costs of prosecutions, regulated by a proper uniform scale, are transferred directly to the State, in practice as well as in theory, since no smaller remedy can effectually remove the complaints of localities, or secure the due administration of criminal justice. The only new subvention appearing in the estimates of this year was a very small contribution of £10,000 for the increased remuneration of registrars of births and deaths. This concession results from the opposition the Committee found it necessary to make to the Registration Bill of last year, in so far as it tended in any degree to increase the charge on this account on the local rates. As a tribute to the justice of the principle for which they contended, this grant deserves notice; but the entire transference of the whole cost of registration to central funds must be ultimately aimed at, since the retention of any portion of the charge on localities can be in no way justified in a matter the cost of which is wholly regulated by the central authorities. The Committee are glad to be able to report one improvement of administrative detail which they have long advocated, and which was this year carried out by the Local Government Board. A demand-note, exhibiting clearly to every ratepayer not only the specific claim made upon him on each occasion, but in detail the particular purposes for which the rate is required, is now made imperative in all parishes of any importance. This step is a most useful one, both for administrative convenience, and as a forcible means of showing to each local ratepayer the variety of heterogeneous demands now made under the name of Poor-rate. Apart from the general desirability of the reform, it can hardly fail to prove of use in directing attention at the time of payment to the many peculiarly Imperial purposes to which so much of the local ratepayers' money is now devoted. The diminution in the number of rate-imposing measures brought before Parliament, to which allusion was made by the Committee last year, still continues. They believe they do not err in attributing this state of matters to the

vigilant resistance they have been able to offer to new imposts while the pressure of older burdens remained undressed. Their direct opposition was this session necessitated to two measures, viz.—(1) The Elementary Education (Compulsory Attendance) Bill (defeated); (2) The Public Libraries Acts Amendment Bill (dropped). (1) The first of these measures revived the proposal—successfully resisted on former occasions—to extend to the whole country, without exception, the costly system of School Boards already existing in 1,214 of the 14,394 parishes and boroughs of England. The injustice of imposing on a single description of property the Education rate, which the establishment of a School Board involves, has made it imperative on the Committee to offer a strenuous resistance to any proposal, such as that of the present measure, which would extend to the whole country the heavy and increasing ratable burdens that have in particular districts followed the Education Act of 1870. They may therefore congratulate their supporters on the rejection of this bill by a large majority. (2) The Public Libraries Acts Amendment Bill excited opposition as an endeavour to give increased facilities for the expenditure of ratepayers' moneys upon objects which conferred no special benefit on rateable property, nor any exceptional or exclusive advantage on the ratepaying classes of the community. By the resistance offered to this bill the proposal to authorise the doubling of the existing rates for free public libraries and museums was for the present stopped. Other measures affecting in various ways the interests of the ratepayer demanded close attention and consideration by the Committee. Among these were (1) The Artisans' Dwellings Bill (passed); (2) The Public Health Bill (amended and passed); (3) The Sale of Food and Drugs Bill (amended and passed); (4) The Representation of the People Acts Amendment Bill (objection removed). (1) The Artisans' Dwellings Bill was regarded by the Committee with some apprehension as tending to a possibly lavish use of funds derived from rateable property, and as not improbably helping to facilitate speculative house building for particular classes on the security of the local rates. The restriction of the bill to exceptionally populous cities where the chief sanitary need for such a measure arises, the retention of its optional character, and the discretion left to local authorities, together with the fact of the comparative fairness attending the incidence of the general district rate in urban sanitary districts, led the Committee to refrain from opposing the proposals of the Home Secretary. It became their duty, however, narrowly to watch the progress of the measure, and to strengthen the hands of the Government in resisting the inconsiderate suggestions made to extend the operation of its machinery to localities where its provisions would be unsuitable. The discussion prompted by the bill proved useful in directing attention to the difficulty of providing for the increasing social wants of large communities by means of a tax so unequal in its pressure as the existing local rate. (2) The Public Health Bill of this session accomplished that consolidation of our Sanitary Acts which has frequently been advocated by the Committee. Among the few new provisions contained in this measure, the powers given to form large combined areas for medical sanitary supervision appeared to be of doubtful utility. The disinclination of Parliament to discuss the very numerous details of a measure whose general aim was so acceptable rendered the opposition offered on this point unsuccessful. The Chairman of the Committee was, however, able to procure the exclusion from the bill of a proposed extension of the powers of local authorities to devote sanitary rates to the construction of public halls. (3) The Sale of Food and Drugs Bill gave effect to several of the amendments in our Adulteration laws suggested by the Select Committee of 1874. It retained, however, the system of local analysts remunerated to some extent out of the local rates, and the Committee endeavoured, therefore, with some success, so to amend it as to reduce the outlay thus continued to a minimum, and to obtain, if possible, assistance from general taxation towards the cost of a matter in which the community generally are more directly interested as consumers than the occupiers of lands and houses as ratepayers. They were successful in excluding from the operation of the measure the costly process of water analysis which is already provided for, in case of necessity, under the Sanitary Acts. Their proposal to require returns showing the nature of the work done by each analyst and the mode of his remuneration in each case, was agreed to, and will be a useful means of watching the operation of the Act, so far as it affects ratepayers; while the Government also accepted their amendment establishing a simple and less expensive reference in the case of disputed analyses to Government officers at the Somerset House Laboratory. They were, however, precluded by the forms of the House from submitting their proposition for a grant from Imperial funds towards the cost of each analysis. (4) The Representation of the People Acts Amendment Bill incidentally proposed, among other changes, that the disqualification of a voter, on account of his receiving "parish relief," should be no longer held to apply to any medical relief bestowed on the wife or children of the voter. Viewing this suggestion as

tending to facilitate the acceptance of relief, and to reduce the stigma rightly attaching to a condition of pauperism, the Committee objected to a proposal which might injuriously affect ratepayers, and the promoters of the measure consequently abandoned their intention in this matter. Several measures introduced by the Government this session affected more or less beneficially the details of local finance and administration. Among those which claimed the support of the Committee were: (1) The Local Authorities Loans Bill (passed); (2) The Public Works Loans Acts Amendment Bill (passed); (3) The Police Expenses Bill (passed); (4) The Poor Law Amendment Bill (withdrawn). (1) The first of these measures embodied the Chancellor of the Exchequer's proposals for improving and regulating the modes of borrowing by local authorities. As originally introduced the bill contained valuable reforms in the audit of local accounts. The Committee regret the modification which these ultimately underwent in deference to the objections of municipal authorities. They cannot, however, doubt that considerable advantages will accrue to ratepayers generally from the facilities now provided for placing the creation of local debt on a clear and intelligible footing, from the provision, even optionally, of an official examination and sanction to the regularity of the loans made, as well as from the new modes of borrowing, and the larger market afforded to local borrowers, with the probable consequence of a reduced rate of interest on local debt properly incurred. The bill may, they trust, prove useful also in facilitating a more consistent and accurate system of general returns, and as a step towards that thorough and independent audit so eminently desirable as a guarantee for the due expenditure of the increasingly large amounts of borrowed moneys with which local authorities have now to deal. (2) The consolidation and amendment of the Acts relating to loans for public works, and to the Commissioners appointed to regulate their issue, was effected by two bills introduced by the Government in the present session. These, after attentive consideration by a Select Committee of the House of Commons, were embodied in the measure finally passed by the Public Works Loans Acts Amendment Bill. Various useful financial provisions were effected by this measure, which has made provision for bringing under direct parliamentary review the annual requirements of localities borrowing from public sources. An occasion has thus been afforded, and securities given, for that annual local budget for which the Committee have pressed from the very commencement of the agitation of this question. The passage of these bills through the House of Commons was disputed by Mr. Fawcett, in a resolution condemnatory of the insufficient and disappointing character of the legislative aim of the Government on local finance during the present session. The Committee would have regretted to see measures which, notwithstanding their inadequacy, were yet of themselves useful, rejected on this general ground. They cannot, however, but view as very valuable the discussion to which this opposition gave rise. It afforded an occasion to reveal to the Government the dissatisfaction prevailing on both sides of the House with the small amount of progress made this year with the question of local taxation reform, and the impatience and disappointment with which a suspension of their last year's policy would, if persisted in, be viewed by ratepayers throughout the country. The debate permitted the chairman of the Committee forcibly to call the attention of her Majesty's Ministers to the necessity of more vigorous action, while it was remarkable for the very general adhesion given to the mode of relief by Imperial subsidies, and to the acceptance by former opponents of the very arguments against the present unfair incidence of local rates so often used by local taxation reformers. (3) The Police Expenses Bill simply continued the measure of last session until the 1st September, 1876. The Treasury were thus enabled to contribute one-half instead of one-quarter of the cost of the pay and clothing of the police for the present year—a proportion which still leaves three-fifths of the entire expenditure on local resources. This bill fixes no definite limit to the grant, and makes no change in the relations subsisting between the Government and the Police generally. The Committee cannot but hope, however, that the growing sense of the loss of efficiency and waste of money involved in maintaining 225 separate forces of Police will, ere long, lead to a general consideration of Police organisation, and to the ultimate transfer to the State of the whole force. The gain thus to be secured extends not only to the largely increased protection that a consolidated Police would afford, but to the vast advantages to be derived in point of discipline and efficiency by a proper and homogeneous system of recruiting and promotion, and a fitting basis for superannuation funds, the difficulty of establishing which, in our present subdivided forces, has this session engaged the attention of a Select Committee of the House of Commons. (4) The Poor Law Amendment Bill was introduced too late to admit of its passing into law during the Session. Dealing with a variety of points of administrative detail, the chief interest of the Committee attached to the



provisions it contained for that rectification of local boundaries and consolidation of local areas, which had already been considered by a Select Committee in 1873. It proposed the consolidation with adjoining districts, by provisional order, of parishes manifestly too minute in value and population for purposes of local government. It provided also for the re-arrangement of scattered fragments of parishes in the surrounding areas—a matter of some importance, as there are some 1,204 cases of such divided parishes in England. This bill would have bestowed also on the Local Government Board a power of dissolving Poor Law Unions, which could not fail to prove useful in facilitating the creation of future county authorities, since, as Mr. Slater-Booth showed, it would help to harmonise union with county boundaries. Proposals for abolishing the exemption from rating enjoyed by corporate property under the 3 and 4 Vic. c. 48, and exceptionally in the Metropolis by the Inns of Court and Charterhouse, were embodied in this measure, which contained many useful provisions that the Committee trust it will be re-introduced and proceeded with early in the forthcoming session. The Report of the Select Committee on Turnpike Acts Continuance once more forcibly calls the attention of Parliament to the hardships and anomalies involved in the present system of turnpike extinction. The Committee hope that early general legislation on highway questions may therefore be expected. The attention of the Committee has been directed, as heretofore, to the improvement and extension of the returns now available respecting local finance. The Annual Abstract of Local Taxation Returns issued by the Government, and compiled partly from returns under the general Act of 1840, and partly from separate official statements, appeared soon after the Committee's last annual report. Coming down to no later date than 1872-3, this abstract shows a steady increase both in local rates, which are returned at £18,500,000, and in local debt, which it placed at £72,000,000. This official return is still capable of amendment in various directions, both in its arrangement and in its details; while the total of Government subventions is improperly swollen by including payments to the voluntary managers of industrial and reformatory schools, and to ordinary civil servants of the Government such as Poor-law auditors. The defective information given respecting local indebtedness was remedied by a later special series of returns, which illustrate its rapid growth. The aggregate now returned (including £3,000,000 of School Board Loans), places the liabilities of local authorities at over £83,000,000, while the Chancellor of the Exchequer, in his Budget speech, estimated them at a still higher figure. Returns for 1872-73 have also been obtained by the Chairman of the Committee. These more carefully analyse the sources of local revenues and the distribution of local expenditure; and the committee have thought it well to append to this report a short abstract of the data thus obtained. Similar tabular statements for the succeeding year have been ordered, but have not yet appeared. Special returns also exhibiting the anomalies and extravagance of our prison system, and the unfairly rate-borne cost of criminal prosecutions, coroners, &c., have also been moved for and ordered, as well as statistics showing the irregular and uneconomic distribution of our isolated and scattered forces of Police. Further statements with reference to the number and character of our varied local governments and the salaries of their separate officials have been applied for, but not as yet sanctioned by the Government. The Committee cannot quit the subject of official returns without expressing their regret that the publication of so important a document as the Report of the Local Government Board has this year been so long delayed. They observe, however, that it contains, among much valuable information, an official attempt to distinguish, for the first time, the various purposes of local expenditure in a summary which would have been still more useful had it accounted for the whole, instead of only a portion, of School Board outlay, and had not the contribution out of metropolitan local management rates on this account been altogether overlooked. A similar omission occurs in the table given of remunerative and non-remunerative local taxation, a classification which the Committee cannot admit to be properly made when rates for vaccination, registration, and education are included in the former class along with those levied for mere local convenience, while poor and police rates, as well as municipal tolls, rents, and dues, are placed in the latter category. The Committee cannot overlook the increased attention which has recently been excited in the local administration of the English Poor-law. Apart from the wide social importance of restricting the growth of pauperism and securing individual independence, local ratepayers must view with concern the very large sums levied upon them and distributed in the shape of out-door relief. The efforts now being made by conspicuous examples of good administration, by inciting on boards of guardians a closer adherence to the principles laid down by the Poor-law Commission of 1833-34, and by applications to the Parliament for increased regard against a lavish expenditure of relief, all deserve the attention and support of local-taxation reformers. The Chairman of the Committee has, therefore, moved for further

returns illustrating the errors and excesses of the present system. Whether the proposal—noticed in their last Annual Report, and urged in many independent quarters—of obtaining a subsidy in aid of the cost of the in-door poor, and thus utilising an Imperial grant as a stimulus to good administration, ultimately commands public favour or not, the Committee cannot doubt that very much is to be gained in every point of view by a stricter administration of the Poor-law. In laying before their supporters a record of the work done during the past year, the Committee feel sure that ratepayers will await with some impatience a development of the policy already adopted by her Majesty's Government with reference both to relief and to reform. Bearing in mind the promises for next session of Government action with respect to the cost of the administration of justice, and to legislation on assessment, valuation, and boundaries, and being convinced of the desirability of keeping prominently in view the comprehensive issues involved, they have come to the conclusion that the time has come when an attempt should be made to recall the attention of Parliament to the general question of local, financial, and administrative reforms. With this view their Chairman has given notice of his intention to move, early next session, in the House of Commons: "That, in the opinion of this House, the income of local authorities is raised in a manner to do injustice to a large portion of her Majesty's subjects, and that the system prescribed for expenditure and control fails to secure economic administration." An occasion will thus be presented for discussing the permanent and satisfactory settlement of the many questions involved—a settlement which may undoubtedly take long to be fully realised, but of which the urgency is every day becoming more and more apparent. Really, therefore, on their part, to continue the work in which they have been not unsuccessfully engaged during several years past, the Committee have to renew their appeal for personal and pecuniary support. Without such proofs of the wide and united interest of the ratepaying classes of the community as have, on former occasions, strengthened their hands and advanced the cause of reform, they cannot look for ultimate success. Very material help can, however, be rendered them by all ratepayers, by active individual assistance, by contribution to their funds, by stimulating discussion throughout the country, by noting the steady growth of unfairly borne local burdens, and by exciting the interest and zeal of Parliamentary representatives. The repeated and emphatic acknowledgments of the justice of their cause by her Majesty's present advisers cannot but encourage local taxation reformers to persevere, and the Committee confidently to renew their resistance to new charges, their claims for national aid for purely national duties, and their attempts to secure a wiser and more consistent arrangement of local administration, striving at the same time, as they have ever done, to keep this great question as free as possible from purely political considerations, or from becoming merely an element of party strife.

On the motion of Mr. PELL, M.P., seconded by Mr. CORRANCE, this Report was received, discussion upon its contents being deferred.

The next business on the agenda was to consider "Whether any, and what steps shall be taken by the Council towards obtaining effectual legislation on the contagious diseases of live stock."

The CHAIRMAN said he had been requested by the Business Committee to move the following series of resolutions: That the Council of the Central and Associated Chambers of Agriculture memorialise her Majesty's Government to amend the Contagious Diseases (Animals) Act, 1859, in such manner as to secure at least the following objects:—First, Prevention of fresh importation of disease by slaughtering or placing under quarantine all imported foreign animals at the ports of debarkation.—Second: Establishment throughout Great Britain and Ireland of a more complete organisation for repressing outbreaks of contagion.—Third: Enforcement of better regulations with respect to the health and comfort of animals in transit by ship or railway. He was sure they must all feel that in making that motion his principal object was to bring that painful subject distinctly before them, so that the matter might be duly deliberated upon, and the resolutions receive any alterations which might appear desirable. The Business Committee felt that the matter should be introduced in a shape which would admit of a distinct expression of opinion. Foot-and-mouth disease prevailed throughout the country during the whole of the last summer and autumn; and although in the early part of the year it was, in most districts, of a mild type, as the season advanced the disease assumed a more and more serious character, until at last they heard not merely of injury, but of actual deaths, among the animals affected. The



attention of the local Chambers had naturally been drawn to that great evil. Twelve communications had been received from Chambers on that subject, and, as would naturally be expected, they contained various suggestions in the way of remedy, the leading ones being that of the slaughter of all foreign animals at the port of debarkation, and the enforcement of quarantine. Some of the suggestions made were embodied in the resolutions which he had proposed, and he had no doubt that the whole subject would receive due consideration from the Council. Supposing that the resolutions should be adopted, either as they stood or with amendments, the Business Committee thought it desirable that there should afterwards be a deputation to the Prime Minister on the subject to which they related.

Mr. J. HOWARD said he had great pleasure in seconding the motion. He had paid great attention to the diseases in question ever since they were first introduced, and was sorry to say that he had been a very considerable sufferer by foot-and-mouth disease and pleuro-pneumonia; and he was convinced that the public mind had been gradually prepared for legislation on that subject. It was now perceived by many that it was vain to expect that the meat-supply of this country would ever keep pace with the increasing population so long as their flocks and herds were allowed to be devastated by recurring outbreaks of disease. No lengthy observations on that subject were necessary, or it would be easy to dwell on the reasons for legislation. He would, therefore, simply reiterate his belief that the public mind had been gradually prepared for legislation, and he thought now was the time to act.

Professor BUND said he wished to move an addition to the resolutions, asking the Government to appoint a Royal Commission to inquire into the meat-supply of the country, and, pending the Report of such Commission, to pass such a temporary measure as was suggested by the resolutions. He did not think the public were quite prepared yet for legislation. Many persons in Parliament and elsewhere said that the agriculturists were asking for protective and restrictive measures solely for their own profit and advantage. He felt sure that that was not the case, and that after full consideration of the subject far stronger measures than those now suggested would be adopted with general approval, in order to get rid of that terrible scourge (Hear, hear).

Mr. H. NELL said he should have great pleasure in seconding Professor Bund's proposal, the object being to satisfy the public mind and promote the interest of all.

Mr. D. LOUG thought it would be injudicious to enumber the resolutions proposed from the chair with such an addition.

Mr. T. DUCKHAM thought that the proposed addition was calculated to retard any action on the part of the Government. Something must be done quickly. They had been blessed with one of the most bountiful seasons for grass ever known, and yet the food of the people was driven up to a famine price; and until something was done to prevent the importation of disease, the evil would continue.

Mr. LIPSCOMBE said, representing as he did the West Riding of Yorkshire, where there were more large towns near each other than in any other part of the kingdom, he was in favour of the proposed addition to the resolutions of the Chairman. He could testify that in those towns there was an almost universal opinion that even the measures already in force were too restrictive. That opinion was founded on a mistake, which inquiry would remove.

Mr. WILBRAHAM EGERTON, M.P., referring to the words of the third resolution, "enforcement of better regulations with respect to the health and comfort of animals in transit by ship or railway," said they appeared to him nothing more nor less than a sham. He had not heard anything in support of the assertion that the contagious diseases of animals arose from the importation of animals from foreign ports. He had very often heard it stated that they were caused by animals coming from Irish ports, and it would be far more effectual to apply restrictions in that case than in the other; but that was impossible—the country would not stand it. Having sat, not long ago, on a Parliamentary Committee on that subject, he maintained that it would be impossible to carry out quarantine on a large scale. It was, in fact, no use speaking of quarantine: what they meant, if they meant anything, was that all animals should be slaughtered at the port of landing.

Mr. ODAMS observed that nearly all the foreign animals that were brought to London were consumed in the neighbour-

hood, and, therefore, he could not conceive why they should not all be slaughtered where they were landed. The importation of foreign animals did not amount to more than 8 per cent. of the whole consumption, and was it right or polite to have disease introduced among their animals for the sake of such a small proportion? With regard to Irish cattle, Irishmen would tell them that England sent the disease, and, perhaps, we did in the first instance. There should be a thorough revision of the cattle trade. They had been going too fast, and, to use a hunting expression, should "have back." It was absolutely necessary that there should be greater care in the transit of animals by railway. Let him give an illustration of the necessity for it. Within the last week a large annual fair had been held at Falkirk. At that fair a gentleman bought on Tuesday 50 Highland calves. After that they were taken three miles from their lairs, and placed in a train at Falkirk station, it being then 11 o'clock in the morning. They reached Tring, in Hertfordshire, at 3 o'clock on Thursday morning, and during the journey they had neither food nor water. There was a Royal Society for the Prevention of Cruelty to Animals, but it had taken no notice of that.

The CHAIRMAN then stated that Professor Bund had intimated his willingness to postpone his proposal with regard to the appointment of a Royal Commission until after the resolutions proposed from the chair had been disposed of.

Mr. J. HOWARD said he was afraid it might be inferred by the public, from some of the remarks of Mr. Lipscombe, that the agriculturists of this country, and particularly the chambers of agriculture, desired that the Legislature should interfere with the great accepted principles of free trade. But in reality they asked for nothing of the kind; they asked only for necessary restrictions upon importation. The first resolution said "Prevention of fresh importation of disease." They did not wish for any interference with the importation of sound animals.

It having then been formally decided that Professor Bund's proposal should be deferred,

Mr. CORRIAGE said he was a member of the Parliamentary Committee referred to by Mr. Wilbraham Egerton, which went into the whole question, and he agreed with the gentleman as to the impracticability of quarantine. The members of that Committee were almost unanimously of opinion that foreign animals should all be slaughtered at the port of landing. He was afraid, however, that even if they could convince the Government of the necessity for that they would not be able to convince Parliament.

Mr. MASEN thought that if the two gentlemen present, who served on the Committee just referred to, could tell them what was the number of store stock annually imported, the information would narrow the question, not only for that Chamber, but for the community at large. He believed that there was growing enlightenment on that subject among the commercial classes and consumers; and in the previous week there was an article in *The Times* dealing with the question in a very different manner from that which had been customary in the "leading journal." The week before a great number of animals were sent to Harwich, with a view to their being scattered throughout the country; but disease having appeared amongst them, they were found to be in the wrong place, and it was a serious question for consumers whether such disappointments should be risked in future. He hoped the public would be led to see that the agriculturists were not advancing their own interests alone, but those of consumers also, in seeking to have the foreign trade put on such a footing that the value of animals would not be seriously diminished immediately after they had reached their shores. It should not be forgotten that fully 90 per cent. of the animals imported were in a fit state for the butcher.

Mr. GARDNER (Essex) said it seemed an absurd thing to slaughter an animal which had no flesh on its bones. In the eastern counties, and particularly in Essex, farmers were dependent for their supply of stock for feeding purposes on persons outside the district. He did not believe any county in the kingdom had suffered more than Essex from imported disease; but how on earth were they to be protected against it unless some kind of quarantine were established? If that were done, those who sent store animals to this country would make a better selection. Irishmen, as well as foreigners, would then be careful to send only store animals that would bear the test of transit. He had himself suffered greatly in

consequence of the non-establishment of quarantine, and through trucks not being properly cleansed. He bought seventy Irish bullocks, and within seven days after they reached his farm they had foot-and-mouth disease. A quarantine of seven days' duration would have prevented that.

Mr. HERBERT LITTLE said it seemed to him that they were putting the cart before the horse in placing the second resolution where it was. The Government, when urged to propose legislation, might fairly reply that they were not taking all the steps that they ought to do for the repression of disease in their own country; and until they showed themselves more anxious to clear themselves from the pest of foot-and-mouth disease, which was now spread over England, Scotland, and Ireland, it seemed absurd to talk about the slaughtering of foreign animals at the port of landing. He concluded by proposing to leave out the words in the first resolution, "or placing under quarantine."

Mr. TREADWELL could not admit that it would be impossible to establish quarantine for foreign stock. He had thought that the word "impossible" was banished from the English dictionary. It was of no use to adopt any other measures until they had stopped the importation of fresh disease from abroad.

Mr. ACKERS said, as a representative of the West of England, he felt that the first resolution would be of very little use unless the word "foreign" were left out before "imported." In that part of the country the view taken—and he believed it was correct—was that disease was, he would not say imported from Ireland, that being an open question, but generated in trucks and ships connected with that country; and they thought they could trace the spread of foot-and-mouth disease in that way throughout the West, and thence through the greater parts of the rest of England. He would propose, as an amendment, that the word "foreign" should be omitted from the first resolution.

Mr. D. LONG said he would second the amendment.

The CHAIRMAN said he must first take the sense of the meeting with regard to the question of quarantine.

Mr. HICKS (Cambridgeshire), in seconding Mr. Little's amendment, said that when he was at the meeting of the Business Committee on the previous evening he was in favour of quarantine, but what he had since heard had convinced him that it would be useless.

On the amendment being put to the meeting, the numbers were, for the amendment 15, against it 22.

Mr. ACKERS then moved the omission of the word "foreign," and this was seconded by Mr. D. LONG.

Mr. C. S. READ, M.P., opposed the amendment. Ireland could not, he said, be treated, with reference to that matter, separately from the rest of the United Kingdom. It was all very well for gentlemen from the West of England to say that they suffered especially from importation; but farmers in the east suffered more, because the amount of importation was greater. They had in Norfolk 50,000 head of Irish stock. They should endeavour to get rid of the system which now prevailed of having one law for Ireland and another for England and Scotland. He must protest against the doctrine of the gentleman from the West of England, that foot-and-mouth disease might be generated by the hardships of transit. If they once adopted that doctrine, there would be an end of all restrictions whatever; but it was against all evidence and all experience. When cattle used to walk all the way from the Highlands of Scotland to Norfolk, there was no disease. He would undertake to carry a mouthful of hay from a beast that was infected for a distance of 200 miles, and convey the disease with it. They might subject animals to any sort of privation and hardship they pleased, and if disease were not otherwise imported it would not be introduced in that way.

Mr. T. DUCKHAM said he believed it was utterly impossible for disease to be generated during the transit of animals if the seeds of it did not exist previously.

Mr. ACKERS disclaimed any wish to stop the importation of animals from Ireland. He admitted that he might have been wrong in using the word "generated," but all who were conversant with sanitary matters generally knew that a tendency to disease might be developed by the want of proper arrangements.

The CHAIRMAN said he could not consistently with his sense of duty submit the amendment without first expressing an earnest hope that it would not be carried. He agreed entirely with what fell from Mr. Read on that subject. It

would be useless to ask for legislation in the sense of excluding the importation of cattle from Ireland. They might as well ask the Government to bring in a measure at the beginning of the next session for the establishment of Home Rule in Ireland (Laughter).

On a show of hands, there were 4 for the omission of "foreign," and 28 against it.

The first resolution was then adopted unanimously without any alteration.

On the second resolution, "Establishment throughout Great Britain and Ireland of a more complete organisation for repressing outbreaks of contagion,"

Mr. C. S. READ, M.P., moved to insert "and uniform" before "organisation."

Mr. T. DUCKHAM seconded the amendment, and with this insertion the resolution was passed unanimously.

Mr. CALDECOTT proposed to add to the resolution the words "and an effectual penalty for offences," adding that the present maximum penalty of £20 for an infringement of the law was utterly insufficient, conviction not following in one case in a hundred, and that he would like to see a power of imprisonment without the option of a fine.

This proposal fell to the ground for want of a seconder.

The third resolution was adopted without any amendment, after which the whole of the resolutions were agreed to unanimously in the form in which they were originally proposed from the chair, with the exception of the insertion intended to secure uniformity, adopted on the motion of Mr. Read.

The CHAIRMAN expressed his satisfaction at the calm and temperate manner in which the subject had been discussed, and his earnest hope that the resolutions would receive the careful consideration of her Majesty's Government.

It was then determined that a deputation should be appointed to wait upon the Premier on the subject, and the deputation was afterwards nominated, with power to make additions. Tuesday, the 7th of December, was fixed upon as the day on which Mr. Disraeli should be asked to receive the deputation.

Professor BUND moved "That it be an instruction to the deputation to ask the Government to issue a Royal Commission to inquire into the meat supply of the country, and the best measures to be taken for its increase." He said Mr. Howard had objected that, practically, that would be asking the Government to solve the question. He denied that that was the case. It was clear from the discussion which had taken place that day that the Council were by no means agreed as to the best means of dealing with the disease. Two hon. gentlemen who had served on a Parliamentary Committee differed altogether from practical agriculturists, and some gentlemen had gone so far as to advocate the exclusion of Irish stock from the English market. ("No, no.") At all events, the object in view being the increase of the meat supply, it was clear that there could be no legislation for that purpose without a full knowledge of the facts.

Mr. H. NEILD, in seconding the motion, observed that the discussion which had just taken place showed that there was great diversity of opinion among practical men.

Mr. PELL, M.P., thought that the addition which Professor Bund had proposed would embarrass the Council and be likely to delay any solution of the question. It would be a "fence" behind which any Government would be too ready to run. Nor was it at all clear to him that what was proposed was at all pertinent to the question at issue. He did not exactly see the connection between the importation of diseases and the cost of meat. The cost of meat was due as much to waste as to any other cause, and the Commission would have to examine a number of witnesses from the kitchens and the areas and a number of *bon vivants* among the citizens of London (laughter). He did not think a Commission could give farmers any better inducements to produce meat than was afforded by the present prices (Hear). They all knew very well that the more meat they could produce with a small outlay the better it would pay them; and to talk to them on the subject was like preaching a sermon to men who did not want it. Persons who were satisfied with the great truths of the Bill did not wish to hear them amplified in an imperfect manner from the pulpit (laughter). It was perfectly clear to him that the time of a Commission would be wasted in the consideration of that question, and the proposed inquiry would only afford an opportunity for delay to a Government which was not alto-

gether unconscious of the advantage of having subterfuges (laughter). As an honest Tory who sat below the gangway, he would recommend Professor Bund not to press his proposal.

Mr. LIPSCOMB said, as one who expressed his readiness to second Professor Bund's proposal when it was first made, he begged now to state that he had been converted by the arguments of Mr. Pell. Believing that that proposal would lead to delay he could no longer support it.

Mr. C. S. READ, M.P., said, having had the honour to serve on the Cattle Plague Committee, and also on two or three Parliamentary Committees on that subject, he would venture to say that if the recommendations of those bodies had been acted upon, the evils which they had had so much cause to deplore would not have arisen. If Parliament had adopted the recommendation of the Joint Committee of the House of Commons that whatever was done in England and Scotland should also be done in Ireland, they would, he felt confident, not have had such a continued outbreak of pleuro-pneumonia.

The CHAIRMAN, alluding to the remarks of Mr. Lipscombe, said he must congratulate Mr. Pell on having achieved a triumph which some of the most distinguished speakers seldom obtained that of an open acknowledgment of conversion (laughter).

The question was then put, and the result was the rejection of the motion by 30 to 4.

The next business on the agenda being to consider "the working of the Elementary Education Act of 1870, of the Elementary Education Act of 1873, and of the Agricultural Children's Act in Rural Districts."

The CHAIRMAN observed that it was impossible for the Council to discuss such an important question on that occasion. [The meeting had already sat between two and three hours.]

Mr. PELL, M.P., said he wished to make a few remarks on the working of the Agricultural Children's Act. He admitted that that Act had failed to bring children in the rural districts to school in the manner that it was hoped it would do; but that had now been discovered in several counties, and the evil was now being remedied. In the county of Leicester, where he believed the magistrates moved first on the question, an instruction had been given to the county police to caution offenders against the Act, and if they continued offending to prosecute them. In the county of Surrey it was found by the police some time ago that 190 children were employed in contravention of the Act. The magistrates assembled in Quarter Sessions having taken up the matter, it was thought necessary to give thirteen cautions, but in no case had a summons to be taken out. A similar course had been pursued in Northamptonshire, Huntingdonshire, and Cambridgeshire. In Northamptonshire it was determined the other day, on his own motion, that the police should caution any offender against the Act, and that if no notice were taken of the caution the name of the offender should be sent to the chief constable, that he might prosecute if he thought fit. He believed that there would be very few prosecutions under the Act, but that on the other hand the opinions which had been expressed about the insufficiency of the Act and the difficulty of enforcing it, were not justified by facts. He must take credit for its not having been disobeyed in the parish where he lived, while he was aware that in some surrounding districts it had been violated. His object in rising was not to raise a discussion on the subject, but to inform the Council what had been done in four or five important counties in order that others might follow the example which had been thus set. They should, on the one hand, do all they possibly could to prevent anything like direct compulsion by means of School Boards, and on the other should do everything in their power to give effect to the intentions of the Legislature.

The CHAIRMAN expressed a hope that the remarks of Mr. Pell would stimulate the magistrates of other counties to imitate the example of the counties which he had mentioned.

Mr. HICKS (Cambridgeshire) said the chief constable of that county, Admiral Davis, informed the magistrates there a little while ago that he was opposed to having anything to do with the Act, but that after full consideration he proposed to take upon himself the duty of carrying out its objects, and that he did not anticipate any difficulty in the matter.

The further consideration of the subject was then postponed.

The next business on the agenda being the consideration of "the Constitution and Acts of Local Authorities."

The CHAIRMAN observed that at that hour it was impossible to enter usefully into a discussion on such an important subject, but that Capt. Craigie would, in accordance with notice, introduce it, and the foundation would thus be laid for future consideration.

Capt. CRAIGIE commenced by reading the resolution of which he had given notice, which was as follows: "That, in any reform of local government, it will be desirable in every district to bring all Poor-law, sanitary, and highway administration under one authority, and to constitute in every county a representative provincial board." After observing that that resolution broached a very large subject, namely, local government, he said he felt that, in dealing with such a subject, they must proceed tentatively. A reform of local government had been advocated there from the first, and the question of county financial boards had been a prominent one before chambers of agriculture generally. He did not think the establishment of such boards would tend much to diminish the county rates, about 50 per cent. of which was expended by the magistrates under obligations resting upon Acts of Parliament; but he considered such boards essential to secure the representation of all who were concerned. England, he went on to say, had been subdivided for four main purposes. These purposes he described at considerable length, referring successively to municipalities, the Poor-law system, the highway system, and sanitary districts, and pointing out the complications, conflicts, and other evils arising from the existing state of things. Speaking generally, he thought the great object should be to concentrate the development of principles and to localise the management of details, and he believed that there would be found the solution of the question of the reform of local government. If they were to have any kind of concentration, it should not be one that would place everything in the hands of one administrative office in the Metropolis. With a system of subdivided centralisation, they might have all the advantages without any of the disadvantages of arbitrary rule.

Mr. PELL, M.P., deprecated any dealing with such a subject in a perfunctory manner, and suggested that Capt. Craigie's elaborate address should be submitted, with his own revisions, to the Local Taxation Committee, with a view to arrangements being made for a full consideration of the subject at a future meeting of the Council.

After a few remarks from the CHAIRMAN, in which he expressed his satisfaction that Captain Craigie had not advocated the transfer of the local functions of the magistrates to county financial boards, the suggestion of Mr. Pell was understood to be assented to; and the proceedings then terminated with a vote of thanks to Lord Hampton for presiding.

GRINDING ROCKS AT THE GUANO BED, AND SELLING THE SAND FOR A FERTILISER.—Mr. A. D. Phillips, one of the officers of the Richborough Grange, in Newport, Bucks county, was commissioned by his grange, a few weeks ago, to purchase twenty tons of Peruvian guano for the use of its members. Mr. Phillips came to Philadelphia, and ordered the guano through a commission house, who bought it direct from Robson, Hornado, and Co., the agents of the Peruvian Government in New York. The guano reached Mr. Phillips in the original packages, not having been opened or handled by the commission house. In Newport it was bought by the grangers, Mr. Phillips keeping only a few bags for his own use. When he opened the bags, and began to spread it over his land, he noticed that it was lumpy, and apparently contained sand and gravel. So he measured out a half-pound, and washed it carefully. The guano dissolves in water, but in the bottom of the pan was a heavy sediment, which, when separated and dried, proved to be coarse brown sand and fine gravel. This sediment was sent to the agency of the New Jersey State Grange, at 103 Arch-street, and on a druggist's scales it weighed one and a-half ounces, or 15 per cent. of the guano, for which the grange paid 55 dollars a ton. The sediment is, of course, useless as a manure, being just such sand as any farmer can find on his land; and in the same ratio, purchasers of a ton of guano at 55 dollars pay 26 dollars for brown sand and gravel. The captain of a schooner returning from this port to the Peruvian islands for guano wrote to a

friend a short time ago, that when he reached the islands he was afraid to load his vessel, the adulteration being so great that he feared he could not get enough for the guano to pay for transportation. "A stone-breaker had been put up near the guano beds, he said, and it was evident for what purpose the sand was used. He sailed to another island, fifty miles away, and there he found the adulteration even worse; so he came home without any load. "A few years ago," said an old farmer to our reporter, "we could not sow more than 200 pounds of guano to the acre, for it would make the grain so heavy and thick that it would break and tangle. But now a man can sow half a ton to the acre, and he don't get a much better

crop than if he didn't sow any at all. It's all owing to the adulteration. I bought a hundred and fifteen dollars' worth of guano last year, and it didn't do me a hundred and fifteen cents worth of good. This year it seems to be worse than ever, and I think it's getting poorer every year. Last year they charged eighty dollars a ton in gold for it. This spring they made a great fuss about reducing the price, and now we buy it for fifty-five dollars a ton in currency. But it has been reduced in quality ten times as much as in price. We farmers lose not only what we pay for the worthless sand, but we lose the value of the crops that we would raise if we used good fertilisers."—*The Philadelphia Times*.

## THE SCOTTISH CHAMBER OF AGRICULTURE.

### THE AGRICULTURAL HOLDINGS BILL FOR SCOTLAND.

The annual meeting of the Scottish Chamber of Agriculture was held on Nov. 10, in the Waterloo Hotel, Edinburgh—the retiring president, Mr. Cunningham, Chapeltown, Ardrossan, in the chair.

Mr. Joseph Harper, Sauchiehall, was elected president of the Chamber in room of Mr. Cunningham, and Messrs. Robert Riddell, Dundee, and Melvin, Bonnington, were appointed vice-presidents. The new directors appointed were: Messrs. David Dun, Kilmaculter; James Cochran, Little Haddo; A. E. MacKnight, advocate; W. Goodlet, Bolshan; W. Smith, West Druces. Mr. Currier was re-elected.

The President, before leaving the chair, said: The business during the past year, though it may not bulk very largely before the public, has been very important to the farmers of the ground, and consequently to the community, for the two interests cannot be dissociated. Early in the year a deputation waited on the Government, and pressed upon it our views on the English Agricultural bill, and the views so urged by the deputation were endorsed at our Perth meeting. These were pressed again on the Government by members whom the common sense and common honesty of our views enlisted in our ranks; and though the bill passed does not contain so many of the amendments we urged as we should have liked, some admission of sounder principles than it started with has been made even on it. The Scotch bill comes up for consideration at this meeting, and I am sure it will meet with that careful and sensible consideration which its importance to our trade demands. I will not anticipate the discussion further than to say that the bill will not meet the approval of the farmer, nor the requirements of the country, if the principles of the Perth resolutions are not substantially admitted into the measure. Other matters have been under our consideration, also seriously affecting our trade. We have been agitating for the abolition of the Law of Entail—a law which is both thoroughly unsonant in principle and injurious in operation in this country, alike to the entailed proprietors themselves, to their tenants, and to the community at large. Commerce is the common interest of mankind, but commerce in land under the fetters of strict entail is impossible. It is a natural obligation laid on every parent to provide for his children—but the law of entail in this country fetters the exercise of that natural obligation. A life interest in land necessarily leads the life-tenant to extract the last shilling he can out of it during his time, so that he may discharge his natural obligation to his widow and children to the utmost of his ability; but this fetters all permanent improvement of the land, discourages all outlays of money by tenants, and deprives the community of the return which the land would give if improved, and in this way on many of the smaller entailed estates, you have poor crops, poor cattle, dilapidation, decay, poverty-stricken homesteads, as the natural outcome of the system. The liberty of the subject is one of the glories of this country, but where is it when land left free has been tied up in the fetters of strict entail on unborn generations scourging all—land occupants and the community at large? The system is essentially irrational and wrong, and not capable of real improvement or amelioration, and so far as this country is concerned ought to be abolished, both root and branch. In the abolition many heirs of entail now in possession will be found, from their own experience, the keenest supporters. The agricultural bills have distracted to some extent our attention from this question; but we have not overlooked it, and I commend it to the vigorous mind of my

successor as one calling for instant action. During the past year the efforts of the abolitionists of the law of hypothec have not met with that success which might have been expected. The subject seems not to be sufficiently known on the other side of the border; but I venture to predict that a knowledge of it will reach our friends in the south, and when it does, the country will throw off that burden which has been too long borne by the land of this country. Efforts should also be made to exclude important cattle diseases. In my humble opinion little can be expected from the present system; and hence that effort should be made in the direction of getting a special department of Government formed to be specially charged with agriculture and agricultural imports and exports into this country. The importance of the business of such a department demands that, and that the members of it should be men of broad views, acquainted with our trade. I will not advert further to other matters that we have before us. I thank you cordially for the honour you conferred on me in appointing me to this chair, for the support invariably given me by the directors, for the kind intercourse I have enjoyed among our members; and with an expression of a hearty desire for the success of this Chamber, I make way for my successor, with a hope that his term of office will be more profitable to our trade, and his enjoyments in office not less than have fallen to me. One word more. I confess I have been a little disappointed at the want of interest in some counties in this organisation. The good it has done in spreading sound information on all subjects bearing on agriculture has been great, and while we may not reap the full crop of benefits the Chamber has grown, we will leave a good inheritance of permanent improvements to those who come after us. I would, in parting with you as your chairman, urge upon the farmers in all parts of our country to join us in this Chamber, and aid us in promoting the weal of the trade which they are engaged in.

The chair was then taken by Mr. HARPER.

Reports of counties committees:

AYR.—Agricultural Holdings Bill: Unanimously of opinion that no Agricultural Holdings Bill for Scotland will be either beneficial to the public or satisfactory to the farmers which does not enable the latter to have a legal claim against his proprietor for all unexhausted improvements and manures which will add to the value of the land. And, on the other hand, when a tenant through his bad farming deteriorates the value of the land, his landlord to have a legal claim against him for all such deterioration. Further, that the bill passed for England will be found in practice to be of little or no use, as neither landlord nor tenant can claim a single penny from each other, unless they choose to give it, either party by giving notice being entitled to contract himself out of the bill.

AYRESHIRE.—Pigeon Case: The meeting agrees to bring the case of the Queen v. Bryson before the Chamber, in the hope of getting assistance towards the defender's expenses.

GLAUGOW.—Animal Contagious Diseases: Having considered the Contagious Diseases (Animals) Act, 1869, and the Orders of Council from time to time issued and entered for preventing the spread of these diseases, and seeing that hitherto the means employed have proved ineffectual for the purpose, recommended the Chamber to memorialise the Government to take steps to prevent the introduction to Great Britain and Ireland of foreign contagious diseases, by prohibiting the importation of foreign store cattle altogether,

and making provision for the slaughtering of all foreign fat cattle at ports of debarkation.

**EDINBURGH.—Agricultural Holdings Bill:** All improvements made by tenant capital, increasing the letting value of the subject, should be valued, and their true value at the end of the lease to the holding paid for. The measure should be compulsory, and enforce leases current when it passes into law. Adoption of agricultural hypothec of the law of entail the House of Commons.

**EDINBURGH.—Agricultural Holdings Bill:** Recommend that the action of the Chamber be carefully directed at ensuing meeting to bill as now introduced, the meeting being of opinion that in its present shape it would not be an acceptable measure. Law of Hypothec: The meeting recommend the Chamber to petition Parliament for abolition of the law.

**EDINBURGH.—Agricultural Holdings Bill:** Approve generally of the principle of the bill, but press the amendments pointed out at the meeting at Perth on 23d July last on the bill for England.

**KINGARINE.—Agricultural Holdings Bill:** Unanimously of opinion that bill should be compulsory, and should include all permanent improvements which add to the letting value of an agricultural holding. That the value of necessary new buildings should be declared at the termination of a lease; instead of being reckoned exhausted at the termination of a specific number of years. That well executed drains should be held inexhausted for twenty years: lime, 12 years; drill bones, 10 years; dissolved bones, 5 years; guano, 3 years. The provisions to apply to all existing leases directly the bill is passed into law.

**ROXBURGH.—Agricultural Holdings Bill:** The committee are unanimously of opinion that the present Agricultural Holdings (Scotland) Bill is ineffective and unsatisfactory on account of its permissive nature, and is not calculated to meet the requirements of tenant-farmers, or give them sufficient security for large capital invested in land; that improvements of the first-class ought to be held to last thirty years, one thirtieth of the outlay to be deducted every year; that improvements of second-class ought to be held as lasting twelve years, one-twelfth to be deducted each year; that improvements of the third-class ought to be held as lasting four years, one-fourth being deducted every year; that the bill be altered in accordance with the compulsory principle; and that in every instance the decision of the arbiters be held as final.

**SLEIKIRK.—Foot-and-Mouth Disease:** In reference to this disease it was agreed to recommend that foreign cattle be slaughtered at the port of debarkation; that Irish cattle be carefully inspected and reported healthy before leaving their grazing homesteads, and that it is necessary to enforce better regulations with regard to the comfort of animals in transit by ship or railway.

The SECRETARY read the following letter, which he had received from Sir Robert Anstouther, M.P.: Baleskie, Nov. 5th, 1875.—My dear sir, I think it very desirable that some action should be taken during this recess to make the Government aware that those who are interested in the development of agriculture in Scotland will not be satisfied with a bill framed upon the lines of the English Act, such as that printed and circulated by the Government at the close of last session. I have already intimated my intention of moving the addition of compulsory clauses to any bill introduced by the Government that may not contain them, but a private member is so little able to make head against a Government that it is most desirable that steps should be taken to make the opinion of the country distinctly known upon the subject. A meeting of the Scottish Chamber of Agriculture might do much in this respect, but lest this should savour too much of a professional agitation, I think it would be well if a public meeting were organised, under the auspices and with the assistance of the Chamber, at which resolutions could be passed of a character likely to influence the Government, and by means of which it might be made apparent that landlords are equally interested with their tenants in procuring a measure from Government which shall be of real practical value. Should it be thought desirable to arrange for such a meeting, I think that all the Scotch members of Parliament should be invited to attend, irrespective of politics, as well as other leading gentlemen who have recently held seats, or who have shown themselves interested in the development of the Land Question.

I shall be glad to hear from you, with any of your valuable practical suggestions upon this matter.—Yours truly,

D. GIBSON, Esq.

Mr. HARRISON, opening the discussion on the subject which you are now asked to discuss in the Agricultural Holdings Bill for Scotland, was now directed, and which many of you I dare say, have not forgotten, when we last met at Perth the Agricultural Holdings Bill for England occupied our attention. I am glad to say that only one of the several amendments we proposed in agreement to that measure was adopted by Parliament. I think when a tenant erected any buildings on his farm at any time, and the landlord, on the tenant's leaving, should be obliged to take them over at a fair valuation by arbiters, or on his declining, to allow the tenant to remove the materials, making good all surface acreage. This, I think, is the most easily understood, and the most equitable clause in the whole bill. It is generally affirmed that Mr. Disraeli was chiefly instrumental in forcing this measure upon the Cabinet, as he had during his peregrinations delivered many sarcastic and bitter invectives against the Ministry then in power about their blundering and plundering. He had also pledged himself to the English farmer to bring in a measure securing him Tenant-Right. If the bill as passed by the landowners of the House of Commons be so, in the just and ordinary meaning, the farmer of England will soon find out. In his gratitude I hope he will not forget his so-called special friends, but the particular circumstances in which so many of the English farmers are placed by being merely yearly tenants, or tenants-at-will, do not wonder at their oft and strongly-expressed desire to have secured to them, by Act of Parliament, a Tenant-Right Bill. According to our Scotch notions, I do not well see how they can keep up their farm-buildings or maintain their land in a high state of cultivation without this. It is true they have a firm belief in the good faith and liberality of their landlords, in allowing them to remain in their farms at reasonable rents, and I must admit that experience fully justifies many of them in so believing. But still experience also proves this can only be done by subordinating their own will and opinions on those social and political questions on which good men in this country do differ, and on which all other classes do assert their right to think and act for themselves. And instances do creep out frequently to prove this, and however painful and humiliating these cases are to the farmers of England, it is well they should do so, as they show to them by how slender a tenure they hold their farms. Only very recently a notable case has occurred. In corroboration of this I may here have no hesitation in alluding to it, as it has got into the public prints. Lord Darnley, who owns considerable estates in Kent, in consequence of some quarrel with the other officers of a volunteer cavalry regiment, of which he was colonel, resigned. All the farmers on his estate who were connected with the regiment, in sympathy with their landlord, resigned too, being the son of one of them. Lord Darnley applied to the father by letter to use his influence with his son to induce him to do so; but he, fortunately, being of independent means, and having a mind and will of his own, declined to do so, and simply in consequence of this, he peremptorily got notice to quit his farm at a period of the year particularly inconvenient, and attendant with extra pecuniary loss. After some further correspondence, the tenant remaining firm, Lord Darnley, whether on cooler reflection, or moved by the influence of personal friends, or by the public indignation, withdrew his letter of eviction, and to his honour and credit, expressed regret for what had occurred. But what had his tenants in the meantime done, and I beg you mark this? They met, and inspired by whom it is not known, passed resolutions expressive of approval and sympathy with their landlord in this matter, and condemnatory of their friend and neighbour. It must occur to you and me, gentlemen, that if they had acted as sensible men, whose own opinions were on the matter, they might have allowed their landlord and tenant to fight out their own battle, and at the last remain passive, instead of giving their influence to the strong against the weak. What a painful position these tenants must now feel themselves in! Will they now follow in the wake of their noble landlord, and pass countervailing resolutions expressive of regret for what they have done? No, I think, though some of our Scottish landlords may be, I am proud to say for them that not one of them would have done this shabby piece of tyranny; and had any of them tried to do so, it is the very humblest of their tenants, I am still proud to say, who saying

that at the very least the other tenants on the estate would have kept out of the fray. Now, as illustrative of the comparative independence and position which the Scotch tenantry hold in reference to the ailings of their landlords, I shall give you another case. A tenant-farmer in East Lothian, who was pre-eminently not only as a practical agriculturist, but also as an able writer and expounder on agricultural subjects, known not only in Scotland and England, but to many agriculturists in many other countries, by whom he was often visited, got notice at the end of his lease that he would not get a renewal in consequence of his views on these very land and tenancy laws which we are now considering, and also of his opinions on many social and political questions being different from those of his landlord. He submitted to the inevitable with calmness and dignity. But what did the numerous tenantry on the same estate? What did tenantry on the other estates of East Lothian? What did the trading and other manufacturing classes? Ay, what did several landlords' factors? Why, they all felt that a great blunder had been committed, that a great wrong had been done to a highly estimable and intelligent man, who had been born on the farm, and whose forefathers had lived on it, by a territorial magnate, who had only at a comparatively recent period come into possession through his wife, and whose predecessors held the same political opinions as the ejected tenant. What did all these parties do? Forgetting for a time some of the points from which they differed from their neighbour and friends, they subscribed a sum large enough to present him with his portrait from a high-class artist, and a handsome piece of silver plate to his excellent wife, with substantial gifts to his eldest son and daughters, as proofs of the respect and esteem they held the husband and father. Nay, more, they entertained him to a farewell dinner in the largest room in the largest hotel in Haddington, at which the eldest son of a large proprietor presided, and, to the credit of Lord Elcho's manliness and independence be it said, he attended. Now, I have brought under your notice these two cases for a special object—the marked difference between the tenant-farmers of England, yearly tenants, and tenants-at-will, and those of Scotland under nineteen years' leases. I wish you to mark the subservience of the one to the independence of the other to their landlords, when both, in the opinion, at least, of other classes, had committed a blunder and wrong. Why is this? Englishmen, as a class, are warm and generous in their feelings, and love fair play. I am firmly persuaded that their living so long under the system of yearly tenancy has driven all independence out of too many of them, and has caused them to bow their minds and their wills on all social and political questions, be they Whig or Tory, to those held by their landlords. And it is a great misfortune that many measures affecting the true interest of Scotland have been marred and hindered in Parliament by the influences and votes of English county members, whose prejudices or ignorance has caused them to look at these purely Scottish questions as ultimately bearing on England, and not on Scotland. And now, gentlemen, I shall briefly draw your attention to two or three salient clauses in the Agricultural Holdings Bill for Scotland, leaving it to others to deal with it more minutely if they so please. And the first point is this, that the bill, like the English one, is permissive, and not compulsory. If it be not made compulsory, if there be any good in it it will be useless, for its object is ostensibly to deal with an interested class, and all similar legislation has incontestably proved to be inoperative, and for the simple reason that these interested classes have, as a rule, refused to adopt it. Another point to which I would draw your attention is, that whatever compensation is to be given to farmers for unexhausted manures must be given by arbiters under very distinct arbitrary and cumbrous regulations, so that the duties of an arbiter will be truly difficult and not easily carried, even by educated and intelligent agriculturists, even if these arbiters should by a hair's breadth go beyond the limits of the bill. An appeal is allowed to the Sheriff, and, if need be, to the Court of Session. The first point to be debated and decided by these courts will be—Have the arbiters kept within the limits assigned them? And another question I presume may arise is this, Are the various sums allowed not excessive in one or more of the items? If this be decided, so then the whole proceedings may be quashed, and sent back to the arbiters to begin anew. Another point, too, for arbitration is, that the landlord has the power to make a claim for depreciation of the farm. It is possible that the

sum demanded may equal or exceed the sum claimed by the tenant. Here is another point for arbitration, and for litigation before the law courts, and I put it to the farmers of Scotland to consider well—Whether the expense, irritation, annoyance, and delay, probably attending all this process, is worthy the sum which is likely to be got, when all is settled. There are other objections to this bill. But, gentlemen, I tell you frankly I have no favour for nor faith in it. It is contrary to the whole instincts, habits, and wishes of the Scottish farmer. The Government are here introducing a new and untried law of questionable good. And leaving untouched those old tenancy laws which have been tried and found unquestionably bad, and which have been protested against by tenant-farmers and condemned by other classes in this country, why not abolish and amend these first, if they be statesmen or men of common-sense, or actuated by a real desire for the tenant's good? That a wrong is being done him now, and a remedy is needed, the introduction of this bill presupposes. But why not begin at the root and cause of the tenant farmer's wrongs and complaints? Why, I ask, not first legislate on these, and give us this measure, which we have never asked for, and the ultimate efforts of which we do not foresee? It occurs to me that the question as to its due settlement between landlord and tenant resembles much what happened many years ago about the anti-slavery question. Many well meaning statesmen and philanthropists of that day, dreading the bad effects of immediate emancipation on the owner and slave, wished to maintain slavery, but to frame rules and regulations by Act of Parliament for its mitigation, so as to protect the poor negro from undue wrong and suffering. But a wiser and bolder and more honest class said—No. Free the negro. *Fiat justitia, cælum ruat.* No man is entitled to traffic in the sale of his fellow-man, be he white or black. Free him, and then assist him to rise in his moral and intellectual state. But if in this world's history, and under the rubbing of an all-wise but at times inscrutable Providence, he is to succumb before the intelligence and energy of the white man, then let him become his hewer of wood and drawer of water—his servant if you like, but not his slave. In like manner free the Scottish farmer first from the burden of those old tenancy laws under which he has long been weighed down, and which have not only been great hindrances to him in the prosecution of his honest calling, but have compelled him too often to pay rents and to sign conditions of lease ruinous to himself and to his family, and injurious to others having business transactions with him; and if in the course of time it should be found necessary to enter into arrangements for the purpose of aiding landlord or tenant in the erection or upholding of farm buildings, or of maintaining the fertility of the farm until the close of the lease, let it be done by voluntary agreement, and not by Act of Parliament. In the meantime let us hold fast by our nineteen years' lease, and view with suspicion and distrust any such proposals as are contained in what is called the Agricultural Holdings Bill for Scotland, more especially if, by the passing of this bill, it is understood no farther appeals are to be made in reference to the obnoxious laws I have referred to.

Mr. GOODLET (Bolton) said: I rise to move a resolution with reference to this bill which I trust will meet the approval of the Chamber, but before doing so I wish to say a few words to commend them to your acceptance. When the English bill was first introduced into the House of Lords by the Government it contained as its leading principle the following clause: "When a tenant executes on his holding an improvement adding to the letting value thereof, he shall be entitled to obtain on the determination of the tenancy compensation in respect of the improvement." This clause was strongly opposed by the Duke of Argyll and other peers; but the Duke of Richmond, who had charge of the bill in its progress through the House, insisted on its being retained, and so satisfied was he of its importance that he described it as the "key-note" of his measure. No doubt the bill itself contained not a few jarring notes miserably out of tune with his key note; but the key note itself was all that could be wished, and it was hoped by not a few of us that the jarring notes might in its passage through the House of Commons be eliminated from the bill or at least brought into greater harmony with it. Imperfectly as the principle of his Grace's bill was given effect to, it yet remained as the key note of his measure when it passed the Lords and was sent down to the Lower House; but the Commons, whom we have been taught to look upon as the representatives of the people and the guardians of their rights

(less liberal it would appear than the Peers themselves) allowed the Government (without even a discussion on the second reading of the principle of the bill as sent down to them) to substitute for it what Mr. Disraeli was pleased to call a "principle giving compensation for unexhausted improvements with machinery." What sort of a principle that may be it is not easy to say. Nor did I very clearly explain, but if we may judge from the bill itself, it seems to mean securing to the occupier what is his by machinery, which, in its working, contrives to give the lion's share of it to the landlord, and at the same time enabling the latter to lay hold of as much of the remainder as possible, by allowing claims for waste and breach of contract, which, but for the bill suggesting them, would hardly enter into the mind of the most exacting landlord to enforce, and then, perhaps securing to the unhappy occupiers by legal "machinery" which few of us, I believe, would care to employ in order to recover the few dribbles that might a timelier be found due to him. Gentlemen, this is no exaggerated statement, viewed practically, of the provision of the English bill which our brethren in England were assured by Mr. Disraeli, from his own point of view, "would remove many causes of discontent and misunderstanding, which would improve and increase those relations of confidence and amity which had so long and so greatly to the advantage of the country existed between the owner and occupier of the soil." A glowing picture, gentlemen, reminding one of the happy times when "the wolf shall dwell with the lamb, and the leopard shall lie down with the kid;" but a picture, I may venture to say, which this bill with its machinery will do less than nothing to realise. The Scotch Bill, as you all know, has been framed on the lines of the English one, and is almost identical in its provisions with that bill which is now law in England, and I trust, gentlemen, there is not a farmer amongst us who would not rather dispense with the bill altogether than accept of it as a measure of relief from those grievances under which the agriculture of the country now languishes. When the Duke of Richmond's bill for England first made its appearance, not a few farmers were so pleased with its leading principle, in which the tenant's right to compensation for unexhausted improvements, according to clause 5, were so fully recognised, that they were willing, on that ground alone, to give it a favourable reception; but this bill, with its machinery giving a right to compensation so limited in its endurance and circumscribed in its range, as to render it extremely doubtful whether under it the occupier would pocket more than a mere moiety of the compensation it professes to secure, has nothing whatever to recommend it to our acceptance, but much to dissuade us from it; and I trust this Chamber, by our vote to-day, will reject the bill as altogether unsatisfactory, unless in its passage through Parliament it is so altered, that—like another famous bill of the same eminent statesman—it can be said of it, as was said of that bill by the Duke of Rutland, one of his own supporters, that the only part of the original bill that remained was the word "whereas;" but as we have no reason to expect that this bill will undergo such a radical change as the one referred to, or even such a change as will render it acceptable to the farmers of Scotland, I trust this Chamber will petition against it as a measure that will not afford that relief to the occupiers of land in Scotland which they so much need, and to which in justice they are entitled. For my own part, gentlemen, rather than have this bill, I would prefer a simple enactment declaring that wherever erections or improvements made by an occupier at his own cost and for his own convenience, for which no provision has been made in the contract or lease, shall be removable at the expiry of the lease, and the condition, of course, that he made good any damage the leased premises may have sustained by his doing so. No doubt there are certain improvements, such as draining, deep cultivation, liming, and unexhausted manures, so incorporated with the soil as to be incapable of removal, but there would be no practicable difficulty in ascertaining their value by a reference to arbiters in the same way as the valuations between outgoing and incoming tenants are determined at present. A simple measure of this kind would, I am convinced, work far more effectually, and give the outgoing tenant all that in equity he has a right to demand, with far less interference with contract than is done by this clumsy and inequitable bill of the Government. Much has been said against our claims for unexhausted improvements being an interference with contract, and many of our landlords are

nervously afraid that, if allowed, it would deprive them of the free control of their own estates. On this point I believe they are needlessly alarmed; at the same time it has been so much insisted on by those in the management of their estates and other interested parties, that they are not to be blamed if their fears should be unduly aroused on this point. This Chamber, at all events, have no wish to interfere with the freedom of contract. On the contrary, we have frequently expressed our wish to avoid all such interference; and it stands on record in our Perth resolutions on the English bill that little good was to be expected from such interference. Let the Legislature abolish the law of hypothec, correct all those false presumptions in law, and do away with other class privileges which operate to the disadvantage of the occupiers of the soil, and there would be no necessity for such legislation in their favour as is now called for. As was well said by Mr. McN. Curd, in proposing the Perth resolutions: "The first step towards free contract was to put an end to all laws of privilege. A landlord who clings to these while he cries out for free contract does not come before the public with clean hands;" nor, I may add, with any right to be listened to. I have now to move the following resolutions: "That this bill is not only equitable but objectionable, inasmuch as it is based on no sound principle, but gives compensation for certain improvements and manures named in schedules to the exclusion of others not so named; arbitrarily limits their endurance to periods within which, though not exhausted, compensation for the same shall cease, while the landlord's claims for waste, as well as for any breach of contract by the tenant, are unlimited; and that it otherwise injuriously restricts and restrains the tenant in the exercise of those limited rights which the bill confers on him; that any measure which fails, as this bill does, to give effect to the principle of the Duke of Richmond's bill as originally introduced, and by a compulsory measure to secure to the tenant in a fair and equitable manner compensation for his unexhausted improvements and manures, will not be acceptable to the farmers of Scotland; that this Chamber, therefore, resolves a petition Parliament against the bill, remits to the directors to watch its progress through Parliament, and to take such steps as they see fit for opposing the bill in all its stages, unless it is altered in accordance with these resolutions, and to call another meeting of the Chamber if necessary to consider any modification or amendment the Government or Parliament may make upon it."

Mr. RIDDELL (Hundalee), said: The question has frequently been asked, (What could induce the Government to launch an Agricultural Holdings Bill for Scotland? Could it be with a view to further the interests of agriculturists generally; or could it be with a view to redeem some indistinct pledges, or a reward to the Scottish tenantry for having given a better support to the Conservative party than formerly at last election? If the bill was meant to encourage and further the interests of agriculturists, I do not hesitate to say that it will fall far short in fulfilling the object the promoters of it had in view. As it stands at present it must be quite operative. Those landlords who need it most will insert covenants evading every obligation which the Act would seem to cast upon them. In any Agricultural Holdings Bill that will be of real benefit to those individuals who cultivate other people's land compensation must be compulsory. The present bill being simply a permissive measure, those landlords who need it most would be the last to saddle themselves with any obligations of a permissive character. Examples are neither few nor far between, all tending to warrant the conclusion I have arrived at. For instance, take the Fenton-barns case, take the Darley case, take the case of Haymount and Manorhill, which occurred the other day, where the increase of rent is somewhere between £1,300 and £1,500 a year, and by far the largest proportion of that rise was in consequence of the late Mr. Wilson having at his own expense brought up the fertility of these farms to an almost unprecedented state. Of course, as things go at present, this was all at his own risk, and no legal claim for any compensation for unexhausted improvements. But all these cases, and many others that I could point out, show the necessity of having the compulsory compensation principle introduced into any Agricultural Holdings Bill before it could possibly be of any benefit to agriculture in general and tenants in particular. Therefore, I beg to second Mr. Goodlet's resolution.

Mr. SMITH (Balzardie), said he rose to move as an amendment



that they do not petition against this bill, but petition Parliament in such terms as shall improve it. Mr. Goodlet had mentioned that in the bill the claims of the landlord were unlimited. That was quite true, but it was also true that when the English bill was introduced first the claim for waste was unlimited, but it was altered, and the landlord's title to compensation related to four years' counter claim. He might fairly anticipate that the Government would alter the Scotch bill in that direction as it had altered the English. He would propose that they should go into the bill, and if they came to a section that they disapproved of they could propose an amendment. He would recommend that the section in regard to waste be the same as in the English bill. He objected, first of all, to Mr. C. C. Let's motion, because it means to say that unless they could get a really good bill, such a bill as would thoroughly settle this question: indeed, a bill which was compulsory, they should have no bill. He objected to the motion, because this was a question of building up and not of knocking down. It was very different from hypothesis. A stroke of the Parliamentary pen would abolish it, but that was not what they had to do in this case. They had much to overcome on the part of the tenant as well as landlord, and they had people's habits to change. He submitted the sooner they got begun to that the better. If they had no bill unless it be compulsory, it was simply throwing themselves out of court, and they would not be heard. He was as strong for a compulsory bill as Mr. Goodlet, but better a permissive bill than no bill at all. That being his opinion, he would go into the bill and propose such amendments as would, in his opinion, improve it. He would propose that improvements, such as buildings and fences, should be valued at the end of the lease, and not put under a schedule to last for 20 years or any number of years. He held it was the proper way to settle a practical question to value things at what they were worth. This was done all over the country as far as fences were concerned. These improvements were quite different from other improvements such as liming or boning. They could be seen and handled, and it was quite simple to determine the value of them there as they were. In the 8th section manure was confounded with feeding stuffs. He never heard of a proposal being made to any farmer that the incoming tenant or landlord should pay for the whole amount expended upon feeding stuffs. It was only the proportion, which was of value as manure—say one-third or a half. He would propose that that section be made the same as the 9th section of the English Act. The next section to which he would call their attention was with regard to the landlord's compensation. Undoubtedly, as it stood, it was far better to have no bill than one with this section in it. It would be dangerous to the farmers. He would restrict the compensation to a counter claim against the tenant's claim, and the waste must have occurred within four years of the determination of the tenancy. With respect to the 10th section in regard to validity of award, he submitted that it should remain as it was, and the next section (20th) giving power to appeal to the sheriff should be withdrawn out of the bill altogether. He did not think landlords should be in any way frightened at the appeal being withdrawn. The amount of compensation which this bill can give to a tenant was certainly considerable, but the amount would come to less than if settled by the arbiters all over the country. What happened when a tenant went into the farm? There was a corn and a green crop for valuation, and generally a thrashing-mill and often a steam-engine. If they took the average of these valuations all over the country they would come to £4 or £5 an acre on the whole farm. These valuations at the present time, by consent alike of landlord and tenant, were handed over to be determined by valuers without any appeal to the Sheriff. If a question of so much as £5 an acre was given into the hands of valuers to determine as they saw fit, without any appeal to the law courts, why should the moderate compensation that was given in this bill be subjected to an appeal to the Sheriff, which was an appeal from practical men to a man who knew nothing at all about the matter? This appeal was no practical valuation at all. It was a palpable benefit of landlords or tenants, but for the benefit of the lawyers. The latter part of the 33rd section says: "But where the landlord is not absolute owner for his own benefit, no payment or interest shall be payable after the time when the improvement in respect whereof compensation is paid will, under this Act, be deemed

to be exhausted." He would propose that part of the section should be withdrawn, in so far as it applied to fences and buildings. They should have the same power as school boards to borrow money for fifty years for this, and for cattle-sheds for thirty-five years. In regard to the 39th section, about the removing of buildings, he would propose that wherever a tenant put up a building upon the land he should have power to remove it if the landlord did not propose to take it at a valuation. Certainly the tenant ought to be bound to make good any damage to the landlord's ground, so far as the foundations were concerned. The very idea of this bill was to give a tenant security for his property; and in what did a tenant injure the landlord by taking down his own? It was nothing extreme to make a proposal of this kind. He thought they should confine the criticisms on the bill to moderate things, because if they took an extreme position, such as that which Mr. Goodlet had proposed, it was simply putting themselves out of court altogether. This bill, or whatever bill might take its place, concerned their trade, and they were deeply interested in it. They should, therefore, meet it in detail and not by any general resolution such as Mr. Goodlet's. He moved that they do not petition against this bill, but that they petition Parliament to make such alterations as might make it a useful bill.

Mr. BETHUNE, of Blebo, said he supported Mr. Smith's motion. The introduction of this question was much earlier than some seemed to think. It was a man of Arthur Young's line of thought that saw we were in an extremely unsafe position in this country in regard to the rights of the cultivator of the soil. The origin of this bill must not be given to any one man or body of men, or any Government existing at the present time. He noticed that the Speaker of the House of Commons stated at an agricultural meeting in his neighbourhood that he believed the landlords of England would go in for their bill, and that long leases and liberal covenants would be the rule and not the exception in England. He only trusted the Speaker was right in his statement. He had come to be of the opinion of the late John Stuart Mill, who was glad if he got a little of his own in this world. He could not conceive that any gentleman who had ever agitated for any reforms in this country, could expect to have the thing made right to his mind in a day, and he hoped the Chamber would support Mr. Smith's motion. He believed that neither the landlords nor the tenants were educated to that point to receive any compulsory measure at present. If they went in the face of this bill, it would seem as if they wanted nothing. There was no need for hurry. His impression was it would five years before the question was worked into a proper and fair plan between landlords and tenants in this country. If the English bill had not been optional it would not have had the ghost of a chance. The landlord had very strong interests in the matter. In his experience he had renewed perhaps a dozen leases, and in four or five cases the leases were not renewed, and in the latter cases it was nothing but grief and sorrow. There was no man desired more of the kind of reform the chairman pointed out than he did.

Mr. SMITH (West Drum-) said he had ventured before now to put his views as explicitly and as intelligently before them as he could. He, however, with much deference, would ask them to consider, for a few moments, the result of the resolutions which had been moved by Mr. Goodlet and Mr. Smith. He was glad that the bill did not meet with unqualified condemnation, and had he thought that Mr. Goodlet condemned the bill without any qualification, he should have in the earlier part of the day taken objection to the resolution. Mr. Goodlet, at the suggestion of others, had put in a word to which he took exception. He should be glad indeed to have a bill recognising the great principle to which Mr. Bethune had referred, but he thought this bill contained the root of the matter. It contained the great truth which they sought, but he was bound also to confess that it was followed by a fiction. The great truth was that they were to be entitled to compensation for improvements, but after that the fiction was that they were only entitled to compensation subject to the schedules of the bill. In short, the truth was announced, but it was not carried out. It was not true that lime and bones were exhausted in seven years. During a whole lease a farmer perhaps had laboured and expended money to improve the condition of his land, and on coming to the end of his lease he was to be scheduled down to two years. They knew very



well in regard to the question of manures that these were generally laid up in the green crop ground. Now according to that schedule they would have no title to the application of the manures if they took a corn crop off the land. Was there anything so absurd? He thought Mr. Smith had made a mistake in asking them to do certain things about the bill, for that would involve a vote upon the different clauses. It would be impossible for the Chamber to enter into it. For that reason he thought it would be better that they put their ideas into a general shape in terms of Mr. Goodlet's resolution, provided that they kept out the word compulsory. He would deprecate voting upon the question. He thought the whole matter should be remitted to the directors.

Mr. SPURRARD (Cleghorn) remarked that objections had been taken to the word compulsory. All the reports from the counties committees that day almost unanimously looked upon its voluntary or permissive nature as rendering the bill useless. Sir Robert Anstruther's letter takes up the same ground that a mere permissive measure of this kind was, in fact, no better than nothing. What was a permissive bill? Why it was something that the landlord, if he chose to agree to, may adopt, and they might improve it by clauses, and he might adopt those clauses or not. Unless the landlord inclined, what signified the bill? It was no law; it was merely a bundle of suggestions which they could suggest privately without a bill. It was no use petitioning for this bill in its present shape unless the clauses which Mr. Goodlet had insisted be adopted. The fact was, by their feeble way of talking upon many of these questions, he thought they were losing hold upon the country. At the commencement of the Chamber they began with those questions which they thought most urgent, and it was wonderful to see the unanimity of the country upon them. Our members were increased in numbers very fast. They were not increasing so fast now. They went earlier into two or three questions, and they influenced Parliament to take them up. They did not carry them, but when Parliament gave them something like a go-by they left them off for several years. They had lopped about and secured nothing, and this proposal before them now absolutely secured nothing suppose they had the bill to-morrow. Therefore he would support Mr. Goodlet's motion.

Mr. HOPK said he would be sorry if they should come to a division upon the subject. He quite agreed with what had been said as to the value of the bill. It was a good bill, but before that he had been anxious to have hypothesis and other things put right. But this bill had been offered, and contained a very good statement as to the privileges the tenants should have upon farms, that they should be paid for the improvements they made; but the misfortune was that they were not carried out. He would not reject the measure because it was not compulsory, but would take it and try to get it made compulsory afterwards. He thought it better in place of both parties in the Chamber dividing upon the subject, just to refer it to the directors to try and get the alterations and improvements made upon it. He thought it would be a pity to vote upon the matter.

Mr. SMITH, Balgonie, said that he would agree to the matter being remitted to the directors, on the understanding that they do not oppose the bill, simply because it was a moderate bill.

Mr. DURIE said, if it was remitted they should let the directors understand that they would prefer a compulsory to a permissive measure.

Mr. MACKNIGHT said he would agree to a remit to the directors on the understanding that the subject was put before them with the view simply of making up a report and then submitting it to a general meeting of the Chamber. Upon this subject there had been great agitation for years, and whilst they had had a discussion in Perth upon the English bill, and they so thoroughly condemned it, he did not think it would be suitable or even consistent for this Chamber at once to adopt this Scotch measure, which was in reality founded upon the lines of the English measure. He was exceedingly dissatisfied with the bill. The mode of limiting the compensation in the bill was exceedingly wrong in principle, and whilst he did not enter into the question of compulsory or permissive legislation, he would say that if he were to take a permissive bill he would like a much better permissive bill than the one before them. He thought they should remember that their position as a Chamber of Agriculture was to endeavour to enlighten the country, the Parliament, and the Government. He

did not think they should take up the position of League, and be content with the smallest count. They should be the centre of light upon agricultural matters to the whole country. The tenant-farmers ought to make their wants and wishes known to the Parliament, and if this Parliament would not listen to them, let them elect another Parliament that would listen. The country was labouring and groaning under a grievance, and he was not the least satisfied with the infinitesimal, wretched dose which had been administered by the Government. They had Sir William Stirling-Maxwell saying that if they would only agree amongst themselves upon what they took their stand, it would be a serious loss. That was a very important declaration from him and one which they should carefully consider. Let them take a high and firm standing upon the subject with the view of saying what they would take, and what they would not take.

Mr. RIBBLE did not approve of Mr. Goodlet withdrawing the word "compulsory," as he would be leaving contrary to the views of his county committee.

Mr. SHEPHERD did not see that would be the result if there was a remit to the directors.

Mr. GOODLET thought it desirable that they should come to an understanding, and let the matter be laid before the directors, with the expression of opinion given by Mr. Smith and others, to receive their consideration and to bring up a report. He added the word "compulsory" to satisfy his seconder and his friend Mr. Shepherd, and did so because his resolution, even without that word, and he says, if correctly read, that he wanted it to be compulsory. He did not think it right to go in the approving way Mr. Smith did, and profess thankfulness when, on his going over the bill, there was not a clause of importance but what he had objection to. He thought the principle of the schedule was sound, and they should frankly tell the Government that a bill which was introduced on the original principle of the Duke of Richmond's bill in clause 5 would be a serious loss to them.

It was then agreed that the matter should be remitted to the directors to consider and report.

**CATTLE DISEASE.**—Mr. SMITH, Westonsay, said there were two of the county committees' reports which might be considered exceptional—namely, those referring to the spread of cattle disease, and without referring that matter to the directors, he thought it might be satisfactory to the members in Caithness and Selkirk to have the voice of the Chamber in regard to the subject. He would suggest that they approve of the recommendation of the committee of Caithness, and resolve to memorialise Government accordingly. There was, however, an objection to the report, and which he wished to direct their attention to—namely, that the introduction of foreign stock should be stopped. He thought the committee should be informed that the country had gone a long way past stopping to stop free-trade. They might have got business done, but to approach the Council with such a recommendation was a thing, he thought, had not been properly considered. He would simply approve of a memorial being presented to the Privy Council recommending that the introduction of foreign stock directed to the ever-increasing number of sheep, and the flocks and herds, and that such a measure would be necessary to stop the present plague, and that they might deem necessary to stop the present plague which was being made amongst our sheep.

Mr. HOPE, Borlunds, thought they might add that the present rules were of no use.

Mr. CLAY, Kanchesters, said the Chamber was much indebted to Mr. Smith, and especially to Caithness and Selkirk members, for sending up a recommendation to stop the spread of this disease, which had in one way or another done a great deal of damage to the farmer to an extent unknown. It had been reported to the general public by diminishing the produce of food and mutton and raising their prices. They should press upon the Government to take this matter into their most serious consideration. With regard to those foreign cattle, he believed they had been first the means of bringing that disease into the country, and with our railway system, of spreading it to the extent it had now reached. He would certainly second Mr. Smith's motion to press upon the Government to do something to stop the disease.

Mr. DURIE (Barniemains) remarked a great deal had been spoken on this subject of murrain, but a certain thing had been assumed which had not been clearly proven. It was assumed that the murrain came from abroad. Now, when it was first noticed in this country there was no foreign cattle, an

what was the use of people assuming that this disease was brought by foreign cattle, and roaring for protection for foreign cattle. Instead of making restrictions, they should bring as many over as possible. Look at the prices they had to pay for lean cattle! Why should farmers try to keep back a supply of the very thing they wanted? He maintained there was more murrain in Great Britain than on the Continent.

Mr. HOPE (Bordlands) said Mr. Durie was quite right in saying that murrain was in Scotland before a single foreign beast was known to be in the country. He thought it was in the year 1811.

Mr. DURIE: It was before 1811.

Mr. HOPE: He recollected, at any rate, of being astonished at finding his cattle, sheep, and pigs suffering from the disease, the pigs giving him more trouble than all the rest. He found the best plan was to let the disease alone. He was sorry to see the country presently in such a state with it. He found that when a beast was affected, and it put by itself, it did not spread.

Mr. SMITH (Balsordie) said he did not rise to enter into the general question, but to refer to a remark which would be appreciated in high quarters—by Mr. John Bright—namely, that foreign cattle were not the cause of the spread of the disease. If foreign cattle could be introduced into this country safely, farmers had a direct interest in its being done. It was certainly not their interest to keep out foreign cattle.

Mr. MACKINTOSH (Eliaburgh) said he thought the question of the utmost importance, not only to the farmers, but to the whole public of this country. Butcher meat had now reached famine prices, and our supplies were extremely limited. They knew what deplorable changes had been going on in the country. Many sheep farms had been converted into deer forests. The sheep were driven away, and consequently our home supplies were seriously lessened in that respect. Now the question came to be, What was the remedy for this deplorable state of things? The Chamber of Agriculture, as he understood the motion was, to go to the Privy Council to ask them to do what they thought was right. It appeared to him that they ought first as a Chamber of Agriculture to give their opinion as to what was right, and ask them to follow, because they ought to know better than these members of Council. He therefore differed entirely from the motion before the Chamber. He was delighted to hear Mr. Durie and Mr. Hope say, what he believed was perfectly true, that these Acts of Parliament called the Contagious Acts, had been founded upon a simple falsehood—that murrain was brought into this country by foreign cattle. They had the evidence of the most experienced agriculturists before them that day that that was not true. What could they expect from that falsehood? He took the liberty of giving his opinion, because he had thought on the subject. These Acts were productive of nothing but evil. They did not attain the object for which they were formed. The country was deprived of the necessary number of animals, which was a great injustice to the public as well as to the farmers. He did not wish to carry his view to an extreme point. If there were cattle proved to have arrived in a state of murrain or disease, they should not be allowed to enter the country, but be slaughtered at the port of debarkation.

Mr. ALEXANDER, Bant of Belkerston, said he could bear out Mr. Hope and Mr. Durie had said with regard to the disease not being of foreign origin. He, in 1813, which he thought was long before foreign cattle were imported, had a number of cattle and sheep affected with it.

Mr. BURN, West Drums, said that foreign cattle were introduced into this country in 1812, a year before the disease broke out on Mr. Alexander's farm.

Mr. HOPE said he did not approve of doing away with those laws because they had the cattle plague and pleuro-pneumonia stamped out by them, and these were as contagious as foot-and-mouth.

Mr. SHEPHERD, Cleghorny, Bolshon, said they never heard of pleuro-pneumonia or murrain until the time of the importations, and he believed they had all come from abroad.

Mr. GOODLET said the late Professor Dick would not allow it to be said that they had originated in this country, and Professor Gamgee and other eminent veterinarians declared before a Committee of Parliament that those diseases were all imported. Now they had a difference of opinion upon a point on which these gentlemen were all agreed. The first thing to

do was to ascertain exactly how it had been brought to this country. Speaking of Forfarshire, he believed at the present moment it was carried by infection to the cattle which they got from Ireland, and in that country they would be ill off for want of lean cattle. He was told by a dealer yesterday, coming from the North, who attended the Forfar market regularly, that he saw a veterinarian inspecting the cattle, pick out the diseased ones, and refuse to forward them, and allowed the remainder to go on to other markets. Now, it was quite obvious that if two or three are affected with the disease that it went through the whole, and the idea of taking two or three and sending on the rest was simply to increase the evil. Irish cattle were generally pretty sound, but they were put into boats, and then put into the cattle market of Glasgow, where disease was rampant. They fed upon the hay left by the fat cattle, which was sprinkled with their saliva. How was it, then, possible for these cattle not to carry infection? The disease never was in this country until it came by foreign cattle, and it was now going back from our own country. If they were to have free trade—and it would be absurd to go against that principle—they must take care that they did not introduce this ruinous business—the disease. He bought a lot of elson cattle, and one or two took the disease in a short time after, and the disease continued more or less severe until it went over the whole of the cattle in the courts. He believed it reduced the cattle nearly £1 a head, so that it was a very serious evil in a country—raising the price of butcher-meat. It was a very absurd thing to introduce cattle from abroad when they only amounted to 9 per cent. of the whole cattle consumed, and while all the rest of our cattle—91 per cent.—were so hurt by this imported disease.

Mr. CLAY said it would be bad policy to interfere with free trade, and he thought it would be sufficient if cattle, both home and foreign, were under much more severe regulations than hitherto. But he knew it was a difficult matter to deal with. No later than a fortnight ago, in the Berwick market, he bought fifty cattle, and on Sunday they were all down with the murrain. If there had been strict regulations, he thought he nor the country might have lost anything in the shape of beef.

Mr. SMITH (West Drums) said he was quite certain, so far as Forfarshire was concerned, they had no such disease before foreign cattle were introduced. They heard from Mr. Alexander, Bant, that he had no disease up to 1818. Now foreign cattle were introduced in 1812, and the disease became prevalent both in Forfarshire and Kincardineshire. Mr. Hope and Mr. Durie might be right in regard to East Lothian, but a friend from that quarter says they were scarcely quite correct. He would suggest an extension of the motion, namely, that the regulations which they ask should not only be applicable to foreign stock but to Irish stock. So far as they in the North were concerned, he believed the spread of the disease was mainly attributable to Irish stock. It was scarcely possible for Irish cattle to come into Forfarshire without carrying infection. It was not interference with free trade they wanted. Their object was to memorialise the Privy Council, showing them the necessity of most stringent measures.

Mr. DURIE said there was one thing they might rely upon. It was long before the year 1840 that this disease was noticed in this country. He moved that foreign cattle should be examined at the ports, and if found suffering from foot-and-mouth disease, they should be detained until they recovered, unless the owners preferred them to be killed, and home cattle affected should not be allowed to travel. If these rules were adopted and carried out, it was as much as any Government could do. He had a lot of sheep affected with the disease. They were never taken out of the field, and there were no cattle or sheep within half-a-mile of them. None of the cattle took the disease, and how could the Government prevent his sheep from being affected. The only thing the Government could do was to prevent removal. The number of beasts that was killed in the time of theinderpest was something enormous. There was no doubt some were bad, but he had beasts killed before his own eyes which were as good beef as ever he ate. He had no sympathy with those excessive regulations.

Mr. POTTS (Lewinshope, S-Birk) said in the time of the cattle plague in 1866 very stringent measures were enforced, and after these regulations there was no word of disease. He thought it would be desirable to return those regulations which were enforced at that time.

The CHAIRMAN said the subject was attended with very great difficulty, and he had great sympathy with not only the present but the former Government in doing what they could to check the disease. He had no hesitation in saying that the disease was both infectious and contagious. How that was nobody knew. Perhaps it might be better to refer the matter to the directors.

Mr. SMITH said he was willing to withdraw his motion, and refer the matter to the directors.

Mr. RIDDELL (Hundalee) said a great deal depended upon

the transit of cattle, and the deterioration they suffered during their transit. There was another view they as practical farmers might perhaps be able to turn to account, and that was breeding their own cattle. He noticed that in Belgium and in other countries the breeding of cattle was much better conducted than in this country, and the disease was less frequent there than here. He believed, from his own experience and observation, that there was less disease amongst home-bred than purchased cattle.

The subject was referred to the directors.

## THE AGRICULTURAL HOLDINGS ACT.

At a meeting of the Kincardineshire Farmers' Association, held at Stonehaven, the Chairman, Mr. JOHN RAE (Haddo), read a paper on the Agricultural Holdings Bill.

Additional interest had arisen on the subject, since the Association last met—first, because the Act had actually become law in England; and, secondly, from its probable extension to Scotland in the ensuing session of Parliament. There could be no two opinions regarding the necessity for such a measure. Very many landed proprietors either could not or would not execute the necessary permanent improvements, or erect the necessary buildings to enable the tenant to farm the land in such a manner as to bring it up to a high state of productiveness. It was surely the barest justice in such circumstances that the tenant executing these improvements should be recompensed for them at the end of his lease. For want of such a measure the land was subjected alternately to a course of feeding and starving, according to the length of lease. Were a good bill passed into law, giving the improving tenant compensation, that state of matters, not only so detrimental to proprietors and the farming community, but to the interests of the whole population, would soon come to an end. The English bill just passed into law he regarded as good in many of its details, and specially valuable as a recognition of the principle of the improving tenant being entitled to compensation, as well as the responsibility of the deteriorating tenant to pay to his proprietor just compensation for such deterioration. The damning part of the Act was its permissive character. In fact, he could not characterise permissive legislation on such a subject in any other way than as a delusion and a sham. Landlords, knowing their responsibilities, would do their tenants every justice, and afford them every encouragement without legislation at all. Proprietors who cared nothing for the interests of their tenantry or the nation at large, so that their own selfish ends were subserved, had merely to contract themselves out of the provisions of the bill. He hoped that before Parliament met the farmers of Scotland would give no uncertain sound regarding that part of the bill. It was surely much better, and more dignified, to anticipate than to have to give way to popular clamour; and if the Legislature would avoid the latter alternative, they would do well to consider the interests of the people generally, and not allow mere individual aggrandisement to come in competition with such interests. A great deal had been said about the sacred right of contract between landlord and tenant, and an immense deal of nonsense had been spoken about it. With a numerous section of legislators, the labourer had of late years become a sort of pet subject. No attention had been paid to the sacredness of contract between employers and employed, in regard to the hours of labour; but the Legislature had stepped in and peremptorily said what the hours of labour should be. Specially had that been the case with the manufacturing interests of the country, and it had been carried to such an extent, that Britain was in danger of being driven out of the markets of the world. Where, then, was the necessity of all the talk about the interference with the sacredness of contract? Land was a limited commodity in that country, vested in few hands, and he could not see why the Legislature should not interfere in a measure with the way a proprietor managed his property, with even more reason than they had interfered with the great manufacturing industry of the country. A valuable land bill had been conceded to Ireland; and should Scotland have a less measure of justice, because her sons wrought harder, and paid a much higher sum per head into the hands of the Exchequer? He would be far from advocating anything extreme, such as

fixity of tenure, or the forcible dividing of the large estates of our land; and it was because such a state of things should be avoided that it was extremely desirable that the attention of the Legislature should be called to what was just and necessary to satisfy the proper expectations of the people, allay popular discontent, and help to increase and develop the resources of the country.

Mr. LARGIE Mains (of Maulkerton) had great pleasure in being the first to rise after the remarkably unique and excellent address they had listened to from the chair. His impression was that the whole subject had been there discussed in a candid and straightforward manner. They were all prepared, he thought, to regard the acknowledgment by the Government of the right of the tenant to compensation as a great triumph in itself. (Hear, hear, from Sir George Balfour.) They were not pleased with the permissive character of the bill; but he was very much pleased to notice in the newspapers the other day that Mr. Read—who was understood to be inspired by the Government on agricultural matters, or rather to be the inspirer of the Government on these matters—had said that if the landlords chose to contract themselves out of the obligations imposed upon them by the bill the Government would make it compulsory. In reference to the bill for Scotland, he (Mr. Largie) would desiderate this, that if the measure were right and righteous—and he was prepared to argue the matter with anybody that chose to take the opposite views—the sooner they had it the better. It was probably a personal matter with him. Under such a bill he would claim a little benefit when his lease expired; but if it were only to affect leases entered into after the passing of it his claim would amount to very little. Therefore, if the thing were just and right it could not be a day too early applied, and it should likewise affect leases at present in existence. Landlords themselves, Mr. Largie imagined, would be benefited by such a measure. They seemed to fear that it would entail a very considerable outlay on their part when a lease expired. He thought there was no fear of that, as, if the measure were passed and acted upon, the land would be kept up to its utmost fertility. There were, of course, farmers whom it would be impossible to spur into activity; but these were the exceptions, not the rule. He believed the rule would be that every farmer would endeavour to keep up his land to the end of his lease, and the landlords would get the benefit of that from the new tenant. The matter, in fact, would be very much one between the outgoing and incoming tenant.

Mr. ALEXANDER BENT considered that the gist of the whole matter lay in the existence of some antiquated laws. They had, for instance, the Law of Entail and Primogeniture—which, he was glad to think, was bit by bit being got rid of, and which he hoped would ultimately be swept away. There were the absurd Game-laws, and, worst of all, the Law of Hypothec. If these were abolished, and free trade in land established, he had no fear of the relations between landlord and tenant without an Agricultural Holdings Bill at all. He knew of cases where, under the present laws, the cruellest hardships had been inflicted on tenants for trifling infractions of the most stringent leases, and the sooner they had free trade in the land the better for all parties.

Mr. TAYLOR (Cushnie) said the measure that had been passed was deficient in two points. He himself made an addition to his house twenty-five years ago, and he was looking at it the other day, and it was as good now as when first built. Had he held his farm under a nineteen years' lease he would have had to give over the house to the landlord without a farthing of compensation; but, fortunately, he held his farm under an improving lease begun ninety years ago, and was re-

paid whatever he spent on permanent improvements. The other point he objected to was that as to the time when bones became exhausted. He mentioned that forty years ago his father had put about a ton of bones mixed with ashes on a small piece of ground near the steading; and some time ago he examined it and could have filled a bushel measure with the bones that were laid down forty years ago, while the bill proposed that after seven years no compensation should be given. If the measure was not made imperative it was just a bit of advice, which the landlords might take or not as they pleased—it was not law, it was mere advice.

Mr. LARGIE thought that a very fair provision in the bill would be that at the end of a lease buildings should be valued, and that that valuation should be declared to be the price that was to be paid for them. They could not fix a period when buildings could be considered exhausted. He had erected buildings twelve years ago that were now as good as when built. He had never seen his way very clear about the value of unexhausted manures, and was very much afraid that unless a simpler mode of fixing compensation than that in the English bill were adopted they would continually be getting into disputes. Now, he appealed to the brother-farmers whether they liked disputes? They did not like disputes with anybody.

They did not like a dispute with the Lord very specially and, speaking for the generality of his brethren, he might say that they would do everything which did not imply want of self-respect rather than do anything offensive to the Lord. He thought there were too many particulars in the English bill; and if it were left to half-a-dozen competent men—say members of the Chambers of Agriculture—they might be able to draw out a measure that would be satisfactory, and that would do far more than all the lawyers of the kingdom, and, with all due respect to their guest, than all the Acts of Parliament would do. They would do justice to all parties, and reduce the matter to such compass that there would be no fear of collusion or collision between tenants and proprietors.

Mr. FORREST did not think the chairman's analogy between farmers and women and children was very complimentary to the former. Farmers ought to be able to protect themselves without violating freedom of contract, and he agreed with Mr. Alexander that what was required was to get rid of the bad laws that presently existed.

It was ultimately agreed that the subject should be further considered by the Committee, and, if necessary, a special meeting called before the assembling of Parliament to discuss it.

## COUNTRY-SIDE POLITICS AT QUARTER SESSIONS.

At the Michaelmas Quarter Sessions for the county of Cardigan, the chairman, Mr. C. M. GRIFITHS, said a matter on the agenda was a notice that "it will be moved that the question of the future maintenance of the turnpike roads in this county be taken into consideration at these sessions, and that a memorial or resolution, embodying the views of the Bench, be communicated to the Local Government Board." This motion stood in the name of Mr. Lewis Pugh Pugh. It would be in the recollection of the court that instructions were given to the Clerk of the Peace to apply to the different clerks of unions and the different highway boards in the county, in order to ascertain the feelings of the members respecting the question of the future maintenance of the turnpike roads and highways. Several communications had been received, which he proceeded to read. In the first place, he read a letter from Mr. Barret Price Jordan, of Aberayron, representing the Aberayron District Roads Board, which met at Newcastle-Emlyn, stating as the opinion of that Board that the present system of toll-gates should be continued. The next communication was from the Aberystwith Union, enclosing the following resolutions adopted at a special meeting held on the 3rd October last, to consider the question: "(1) That the present system involving the separate management under separate boards and officers of the turnpike roads and highways should be abolished. (2) That the union is the best area of management as regards both turnpike roads and highways. (3) That the highway boards for each union should consist of a certain proportion of *ex officio* and elected guardians. (4) That it be at the option of every union to continue the maintenance of turnpike gates as now. (5) That a sum equal or a charge bearing a certain proportion to the carriage tax in each union should be made over by Parliament for the repair of the roads in that union. (6) That the services of the Government inspector under the South Wales Turnpike Act should be retained." Recommendations had been received from a public meeting held at Lampeter on the Saturday previous, to the effect that turnpike gates should be abolished. The Llandysil District Highway Board were of opinion that the management of both the turnpike roads and highways should be under one central control. The Cardigan Board of Guardians expressed themselves as in favour of the retention of the existing system of maintenance, and the Cardigan District Highway Board held a precisely similar view (ten members voting in favour, and four *ex-officio* guardians remaining neutral). The guardians of the Aberayron Union stated that in their opinion it was not desirable at present to abolish the turnpike-gates, and that if an Act was passed dealing with the question the Board suggested that no alteration would be satisfactory which did not guarantee the provision of a certain sum of money for the maintenance of the roads. They were also in favour of placing the turnpike and parish highways under one

central management. The Chairman added that, having placed the Court in possession of the views of the bodies who had expressed their opinions on the subject, he would call upon Mr. L. P. Pugh to introduce his motion.

Mr. PUGH said he might say in commencing that he was very sorry, as he had stated at the last sessions, that it had not fallen to somebody who had more experience in the management of the roads of this county than he had, to make this motion. He should not have put the motion upon the paper at all had it not appeared to him that this question was of great interest to the ratepayers generally, and that it was desirable that this court and other courts of quarter session should lay their views upon it before the Government. With reference to the resolutions and statements of opinion which had been read by the Chairman from different boards of guardians and district highway boards, the first thing that must strike everybody was that unfortunately they had been led away to consider that the only question was whether turnpike-gates should be continued and how turnpike-roads should be managed. But that was not at all the way in which he brought the question before the Court, and that did not seem to be even the principal matter they had to consider. He might be pardoned for stating briefly why the question ought to be brought before the Court at the present time. The South Wales Turnpike Act was passed for the purpose of taking up the old turnpike trusts, the provisions of which were chiefly concerned with the repayment of money which was borrowed for that purpose; and afterwards it went on to make provision for the maintenance of the roads in the meantime. But anyone reading that Act would perceive that it was made for a special purpose, and when that purpose was served, and it could be fairly considered that that Act was come to an end, there arose the question how the roads should be maintained in future. Looking upon the Act in this way he thought that the best thing he could do at present was to state his views in that Court, so as to elicit the opinion of the Bench. If they could arrive at two or three unanimous resolutions so much the better; and then let them put aside those matters, upon which any great differences of opinion existed. For the purpose of eliciting the feelings of this Court, the best way would be for him to take the resolutions passed by the Aberystwith Board of Guardians *seriatim*; and then they would be able to ascertain what members of that Bench were in favour of those resolutions. If any number of the Bench could suggest any more convenient course he should be happy to adopt such. He would make one remark with regard to the papers which had been read. The Llandysil Board appeared to have considered the question very fairly; and they would observe that in this case it was not merely an expression of opinion on the part of the guardians of the union, but of the members of the district highway board, who were more immediately concerned in the

maintenance of turnpike roads. They gave no opinion as to what change should be made in the management of the roads, but thought it would be desirable to have the county and district roads under one and the same board; and that was also the opinion of the Aberystwith and Aberystwith unions. The Cardigan union did not appear to have considered the question deeply, but merely the matter of the turnpike roads. The first resolution that he brought before them was, "That the present system involving separate management under separate boards and officers of the turnpike roads and highways, should be abolished." He thought they would be able to arrive at a unanimous conclusion on that point. They had now three different kinds of roads—the turnpike roads, the highways, and the approaches to the bridges, which latter, although small in extent separately, amounted to a very considerable total in the gross area. He did not think anybody starting afresh with regard to the management of the roads would question that the management would be better and more economical if they had one set of officers and one surveyor to supervise the whole of these roads. As at present there were, as he had pointed out before, the county roads boards, the district roads boards, the highway boards, and also the finance committees of the courts of quarter sessions who overlooked the expenditure upon the county bridges. All these different systems caused a very great expense. They had different surveyors, and different clerks, and they paid a number of men at small salaries. He did not think any one would doubt that if they paid one man a big salary, to do the work of a number of men at small salaries, they would get the work better done. Considering the communications received from the Aberystwith and Aberystwith authorities, it was evident there was some feeling in favour of that resolution; and he did not anticipate much opposition to it that day. Passing to the question as to what was the best area of management, although they had a very excellent surveyor, who, he believed, did his duty, and though they had a County Roads Board which had also given them very good roads during the whole time in which the Board had been formed; still he thought that it was apparent to everybody that if they placed all the roads in the county under the County Surveyor, he would not be able to properly overlook them. And he thought he was also right in saying that it would be impossible for them to have a Board at Aberystwith or any other part of the county, where the different members who represented the parishes and unions could be expected, or would meet. If so, then it would be necessary to have a smaller district than the county. A great deal might be said against having the unions for separate districts, for a great many unions ran into other counties. He did not anticipate that these unions would be re-arranged; and he had therefore taken the union as the area upon these two grounds. He did not wish, if possible, to recommend for creation any new district, as there were too many districts and divisions already. There were counties, parishes, unions, highway districts, district roads, districts, and school board districts; and a person living in any one of these disputable districts hardly knew where he was; and therefore he did not think it right to create new districts if this could be possibly helped. He did not think the union district he proposed was too small. No one, he thought, would adopt the parish as a district; and if they left it out as too small and the county as too large, they could not do better than adopt the union area, though that was certainly not faultless. By adopting this area, they had the advantage of being able to get elected guardians, who were generally the picked men of the different parishes, meeting every fortnight, or at all events regularly, whatever the time might be; and if they chose some out of that number in proportion to the number of properly elected guardians, it seemed to him that they would get the best board they could. It might be readily thought—though he did not express an opinion personally—that they might get better men with more time to devote to the work than guardians; but, as he said before, it was undesirable to multiply districts; and it was also undesirable if guardians could do the work to have more elections in their parishes. Were the guardians to take the management of the roads, he had no doubt the turnpike roads would be as well maintained as at present, and the highways far better. In the Aberystwith Union at present there were four surveyors of highways, who received £50 salary each per annum. He was satisfied if they had one man to do the work now done by four, it would be

very much better and cheaper done; and if the same man had to take care of the turnpike roads and highways in that union he had no doubt he would do it well. He had now dealt with the resolutions, relating to the area and constitution of the Board respectively. The fourth resolution raised the question to which most of the Bench had directed their attention—as to whether the turnpike gates should be maintained. That opened considerable discussion, and at the Aberystwith Board of Guardians they did not arrive at a unanimous conclusion, as to whether they should be maintained or not; but there was a general feeling that something must be paid by the towns, the arrangements as to which it was agreed should be left open for consideration by the unions or whatever boards were afterwards appointed for the management of the roads. The difficulty with regard to the turnpike gates was to find something equivalent for them. He did not see his way, as he stated at the last sessions, to the abolition of the gates unless an equivalent was found. It was proposed by his 5th resolution that Government should be asked to grant a sum equal to or bearing a certain proportion to the carriage tax. He thought a good deal might be said for this proposition. It did not go nearly so far as the resolution of the Aberystwith Union—that if Government proposed to do away with turnpike-gates, no Act would be satisfactory that did not guarantee a liberal annual grant of money towards maintaining the roads. In concluding, Mr. Pugh said he was sure he would be consulting the wishes of the Bench by not detaining them longer on the subject, and he would content himself with stating that he strongly advocated the last resolution—that the services of the Government Inspector should be retained so that for the future not only turnpike-roads but also highways should be under his supervision. He moved that the resolutions adopted by the Aberystwith Board of Guardians, as previously read by the Chairman, be embodied in a memorial to the Local Government Board.

Mr. FRYER seconded the motion.

Sir D. T. LLOYD said, as chairman of the Newcastle-Eulyn Union, he thought it his duty to bring the matter before the guardians. In a Board attended almost solely by elected guardians, the members were very unwilling to attend to any business except such as particularly related to their union. The discussion therefore was very short and a decided opinion was expressed that turnpike gates should be maintained, as they thought the discontinuance of the turnpike gates would add materially to the rates. They were very much indebted to Mr. Pugh and Mr. Fryer for the trouble they had taken in obtaining information upon this question. The abolition of the turnpike gates was a very serious question; and he did not see how they could do without the tolls. They now annually received a revenue from tolls amounting to £4,400. What was to be substituted for this? he asked. Mr. Fryer had alluded in a recent speech to the carriage-tax. They were at present in the dark as to the amount derived from the carriage-tax; but a return might be moved for. He did not believe the carriage-tax in Cardiganshire would amount to more than £1,500 a year. Still, he thought the present system of maintaining the roads unnecessarily expensive, as they required different staffs, different clerks, and different surveyors. If they obtained a new Act of Parliament he thought they might fairly impress upon the Government the necessity of placing the union highways and turnpike roads under one highway board. There were some disadvantages attending the union area, in regard to the outlying parishes; but there were advantages, and he thought they might very well have a highway board for each union, having a fair proportion of *ex-officio* guardians, with a competent surveyor. As they were making legislation not only affecting Cardiganshire but the whole of South Wales, he suggested that a consultation of the magistrates of the six counties should take place.

Mr. T. E. LLOYD, M.P. said: It appears to be the general impression on the part of the Bench that the existing system of turnpike and highway roads management has worked well in this county, as it seems to have done in South Wales at large. The Act of 1844 under which the turnpikes exist is a good Act, and has done good service in South Wales; and I think the feeling of the Bench generally is that what has worked well had better be left alone. When I say that the Act of 1844 has worked well, I do not say that the present system is not capable of improvement. I was much struck with the proceedings of the Aberystwith Board of Guardians, and I think that the

suggestion that was made there by Mr. Pugh and others for the amalgamation of the two systems of turnpikes and highways is certainly a very good one. But the area proposed, in my opinion, is objectionable, for the reason that the area of the unions runs into other counties. We have instances that it does so in Cardiganshire and other counties. We know very well that the debt upon our county roads is, or is about to be paid off, while in other counties a debt remains; therefore there would be great difficulty in any union area. But you may ask me, if you object to the union area have you not some proposition of your own to make? Well, I should take the area of the county and subdivide it into three parts—say, the northern, or Aberystwith district; the central, or Aberayron district; and the southern, or Cardigan and Newcastle district. I would also propose that three good surveyors be appointed, with proper staffs under them. I believe that at present there are 11 districts in the county and probably the amount paid to the surveyors in each of those districts would cover the amount of the salaries of three good men to be appointed for the districts I have suggested. As regards the abolition of the turnpike gates, my own opinion is decidedly that we ought to leave the question as it is. I think the money obtained from the gates is a very great relief to the rate-payers. If the amount of tolls for this county—I take the figures from the report of the Aberystwith meeting—was £2,428, £600 of which arises from what I may call pleasure-traffic or commercial-traffic, that £600 would be entirely thrown upon the rates if the gates were abolished. I therefore move the following amendment to the proposition—“That in the opinion of the Bench the system of management of the turnpike roads should be left as at present.”

Mr. L. P. PUGH suggested that his resolutions should be dealt with *seriatim*. Mr. Lloyd, he understood, did not oppose the first resolution.

Mr. JORDAN objected to the discussion proceeding, as Mr. Pugh suggested, on a point of order. He considered that it was necessary for the Bench to decide whether the question should be taken into consideration, before they entered fully upon the discussion of it.

Mr. T. H. BRENCHEY moved a simple amendment to Mr. Pugh's resolutions, “That matters remain as they are.”

Mr. JORDAN seconded the amendment.

Mr. LLOYD, M.P., immediately withdrew his amendment in favour of Mr. Brenchey's amendment.

Mr. FRYER said, if Mr. Brenchey's amendment was adopted, the only purpose served would be to defer the consideration of the question, as it would have to be discussed at some time. Referring to the question itself, he said the whole condition of things had been altered by the introduction of railways. A great many highways were now more used than the turnpike roads. They must re-arrange the turnpike roads and put up more gates if they maintained the present system.

Mr. L. P. PUGH remarked that the Court had so far taken the matter in hand, that he thought it ought to be fully discussed. He hoped the Bench would not listen to the proposal, especially seeing that they had obtained expressions of opinion from boards of guardians, highway boards, and others on the question.

Mr. JORDAN considered that the persons who ought to pay for the roads were those who used them; and if they levied a general roads' rate for the county, they made people contribute who not using them, ought not to be called on to do so.

Captain VAUGHAN asked Mr. Brenchey to withdraw his amendment. He did not think the amendment respectful to the boards of guardians and others who had discussed and given opinions on the question.

Mr. BRENCHEY: I am very sorry not to be able to listen to the request of my friend. I think that the expression of feeling on the part of the guardians is principally in favour of the present conditions of things.

The CHAIRMAN, before putting the amendment, said, being responsible for having first opened the discussion on turnpike roads, he wished to say a word or two. Some two or three sessions ago he pointed out that some legislation was required on the subject, and that the opinion of the whole county should be ascertained. They were assembled here to discuss the matter, and he hoped that the discussion would be allowed to proceed, and the opinion of the Court taken. He appealed to the mover and seconder of the amendment to withdraw it; but in vain.

The CHAIRMAN then put the amendment, which was lost by

a majority of four, there being eleven in its favour, and fifteen against.

Col. LEWES said he had an amendment to Mr. Pugh's resolutions to submit to the Court. It merely embraced his own views, for he had consulted no one on the subject, and he should be very glad if some gentleman present would afterwards second it. His amendment was: “That the Court of Quarter Sessions for the county of Cardigan has found during a period of 40 years that the present system of maintaining the various roads in the county under the provisions of the Acts of Parliament has worked satisfactorily.—That in a technical point of view the provisions of the Act meet the requirement of the time, and that at present no debt is owing, and the turnpike gates maintain the roads.—That the Court deprecated strongly any alteration that will add to the rates.—That as regards highways, a larger area for districts might be desirable, it having been found that a surveyor can superintend at less cost and the machinery be less expensive in large districts than in small ones, as at present constituted.—That in the event of any alteration, the Court strongly recommends—first, that a central road as now constituted be combined on the district roads; second, an extension of area in the districts and a contribution from the state of one-half the amount required for the maintenance of the roads.” He had been for 16 years a member of the County Roads Board, and he could bear testimony, as far as his knowledge went, to the admirable manner in which the roads had been conducted. It had been stated that this Act was passed at a time of great difficulty for a special purpose; but he pointed out that under it a very heavy debt had been paid off. He might also say that as the result of the Act they had now admirable turnpike roads, and although he could not say so much of the bye-roads, these were as good as were to be seen in England. He denied the charge of extravagance which had been made against the boards. Undoubtedly the turnpike roads had cost more money than the highways, but there were many reasons for that. The roads were in a perfect state of preservation at the present time, and of course would require less in the future to keep in repair. The composition of the County Roads Boards prevented any extravagance, its members, who were large ratepayers, being interested in keeping the expenditure down. Under the circumstances, he could not conceive a better system of maintaining the roads than the present. The produce of the turnpike gates were sufficient for the maintenance of the turnpike roads. He believed Mr. Pugh did not deny that.

Mr. L. P. PUGH: I am told by members of the County Roads Board that our tolls are yearly diminishing.

Mr. JORDAN: They increased last year.

The TREASURER: There was £300 increase last year.

Colonel LEWES proceeded to point out certain objections to the resolutions moved by Mr. Pugh. First, with regard to the union area, he referred to the same objections which had been urged by Mr. Lloyd, M.P.—namely, the extension of unions from one county into another. He should be willing to agree with Mr. Pugh's third resolution relating to the constitution of the highway boards, provided the central board as now constituted should be continued. With regard to Mr. Pugh's fourth resolution, he reminded the Court that an optional act was always a failure; and he was in favour of asking for a specified sum from Government, in preference to having the carriage-tax handed over. They all agreed on the utility of a Government inspector in his place; but he for one should be directly opposed to having a Government inspector to overlook the expenditure of their private money. He was opposed to the abolition of the turnpike-gates and the remedy proposed by Mr. Pugh, and to any addition being made to the rates. It had been said that that addition would be very slight, if anything; but he objected to throwing away the large sum of money they now obtained from the gates towards maintaining the roads. A calculation he had made of the number of persons in his union who used the turnpike-roads would show the injustice of the proposition. Taking it for granted that a man paying 5 guineas rental had not got a cart or horse, he found that in his union out of 3,481 householders, those under five guineas rental numbered 2,585, showing the number of carts and horses to be only 896. That showed the large proportion of the population who never wore the roads out with carts, &c. It was the wealthier classes who possessed vehicles, therefore wore out the roads, and should be made to pay. Mr. Pugh's proposal would simply take the burden from the shoulders of the rich and put it on those of the poor.

He agreed with the letter recently published upon the question by Mr. J. H. Scourfield, M.P., and did not see how they could very well improve upon their present system. If alterations were made, they lost a very large sum annually. It had been stated in another place that the gates at Aberystwith annually made a total of £1,110, and the other gates in the county £1,247; and that part of the receipts of the Aberystwith gates went towards the maintenance of the roads in other parts of the county. That was a mistake, and he pointed out that, there being 68 miles of well-travelled roads to keep in repair in the upper district (out of a total county mileage of 138), the balance was more likely to be on the other side. Referring to the state of the roads, he said that in the lower part of the county roads which were formerly impassable and dangerous to travel over were now in excellent order. If bad roads were to be found, the remedy lay with the highway board of the district, who could order the necessary measures to be taken to be put them in order. With those remarks, he left his amendment in their hands.

REV. RHYS JONES LLOYD seconded the amendment.

Sir T. D. LLOYD observed that he agreed with some of Col. Lewis's recommendations, although opposed to others. He was quite as much opposed as Col. Lewis to the abolition of turnpike-gates.

Mr. L. P. PUGH then briefly replied to the objections raised against his resolutions. He said it had been agreed a memorial should be presented; the only question was, what form it should take. The resolutions he had proposed had been well before the public; but Col. Lewis's series of resolutions had never been communicated to any one before.

After some further remarks, the amendment and original motion were put to the vote, when seven voted for the former and twenty for the latter, which was accordingly carried.

Mr. L. P. PUGH then rose to move "That it is desirable that the Metropolitan Poor Acts of 1867 and 1870 with reference to indoor relief be extended to county unions, so as to make the maintenance of indoor paupers to the extent of 5d. per day a charge upon the county instead of upon the union." If any means could be devised to alter the present system without doing injustice to the paupers or the ratepayers, or to the different portions of the counties as between themselves, he thought that it would be exceedingly desirable that such scheme should be adopted. Since the passing of the Union Chargeability Act, the whole union indoor and outdoor relief had been charged on the unions, instead of being charged on separate parishes as before. In the Metropolis an experiment had been made, which he thought could be very advantageously extended to the country. By the Metropolitan Poor Act passed in 1867, a common poor fund for the Metropolis was established, it being enacted that this was to be raised by contributions from the different unions for the support of paupers in proportion to the rateable valuation. That fund was to be applied for certain purposes—the maintenance of lunatics, fever patients, medicines, salaries of certain officers, compensation to ditto, fees for registration of births and deaths, fees for vaccination, maintenance of children in certain schools, and relief expenses under certain Metropolitan Acts. In 1870 the same question of outdoor relief became pressing in the Metropolis. A short Act was passed, which enacted that the expense of maintaining the outdoor paupers should be paid out of the common union fund up to the rate of 5d. a day, being the minimum rate of maintenance. The Act provides that the Poor-law board shall certify the maximum number to be maintained in workhouses or asylums, that no repayment shall be made in respect of a larger number, to prevent any over-crowding in the workhouses, that the amount to be repaid shall not exceed 5d. a day, and also that guardians in default of the Poor-law Board may omit these amounts from their precepts. It had been of great benefit to the Metropolis, and he could not see how they could doubt that it would confer an equal amount of benefit in the counties. The machinery would be very simple, because the rate, in the nature of a county rate, to be called the common poor fund, would thus be made upon the different unions. The indoor maintenance of those paupers, up to 5d. a day, would be paid out of that union fund; and thus the unions would be able to give any amount they thought proper for the maintenance of the outdoor paupers. He concluded by observing that the indoor test was the only test in reality.

Mr. FRYER seconded the motion.

Sir D. T. LLOYD said that, having heard opinions expressed that the indoor test was applied too severely, he had written a letter upon the subject of relief generally to the practical member for Norfolk, Mr. Clare Reed, who enjoyed the confidence of both sides of the House, and who had forwarded him the following reply, with which he (the speaker) generally agreed: "11th October, 1875. Dear Sir Thomas.—No doubt the Metropolitan scheme has had a tendency to stop outdoor relief; but as most of the workhouses are full of aged and infirm inmates, the scheme has not had full play, owing to the state of workhouse accommodation. Until we have some elected county authority I don't see how we could adopt such a system in the rural districts, for I suppose we should not embrace a less area than a county to consolidate for the purpose. The only other way of applying the scheme would be to re-entrust to parish responsibility for outdoor relief, and continue the common fund of the union for all indoor maintenance and workhouse charges. I am not prepared to advocate either of those plans, but they strike me as the only ones available for the rural districts. I enclose a few figures, which will show you much better than I can state, the past and present proportions of out and in-relief in London. (Signed) CLARE REED."

Major LLOYD PHILLIPS remarked that there were two unions in the county without workhouses; and therefore he thought it premature to raise the question.

The CHAIRMAN: The workhouses are in course of erection.

Mr. PUGH: And will be finished long before an Act is passed, I am afraid.

The CHAIRMAN said the Metropolitan Poor Act, briefly, was passed for the purpose of equidising the burdens upon the different parishes, so that wealthier parishes having a small number of paupers should bear part of the burdens of the poorer parishes with a large number of paupers. Indirectly it had worked well, by encouraging guardians to give indoor rather than outdoor relief. The difficulty of the extension of the scheme to the country was this: Supposing it should be adopted in a rural county, if all the parishes were equal in number of paupers and in point of means, there would cease to be any encouragement to guardians to give indoor instead of outdoor relief.

Mr. LLOYD, M.P., did not see the applicability of these London Acts to a country district. In some cases, no doubt, where the indoor test was closely applied, the workhouse would be full; and in other cases, where it was lax, the house might be empty.

Mr. FRYER said it seemed clear that the operation of the Metropolitan Act had had the effect of increasing the indoor and diminishing outdoor paupers in London; which was apparently ever the chief object of administrators of relief. This was the object of Mr. Pugh's proposal, which would exercise a pressure upon the elected guardians, who were the persons most difficult to deal with. The question of relief was one of the most difficult and pressing of the day. Looking at the heavy rates in this and other counties, he thought they would agree with him that any means calculated to lighten that burden would be of benefit to the community at large. The census of 1871 showed the rateable value of the county, that year, to be £191,422; and the amount of poor-rates levied £45,667, representing a rate of 4s. 9d. in the pound. He gave those figures to show the importance of this question to ratepayers. When discussing the turnpike-roads, they looked at a 2d. or 3d. rate as very large to saddle the ratepayers with, but, in regard to the relief question, thought little of a 4s. 6d. rate. Wherever there were comparatively many indoor poor, poor-rates were light, and wherever there were few they were heavy. In Wales the number of indoor poor was much below England, being 1-17 and 1-5 of the outdoor paupers respectively. This state of affairs in Wales was mainly due to the mistaken feeling of humanity of many guardians in not properly enforcing the indoor test. This must be overcome by pressure being brought to bear upon them, as proposed by Mr. Pugh.

Mr. T. E. LLOYD, M.P., did not think the Act would be applicable here.

Captain FARRY was sorry to have to oppose Mr. Pugh on this question, but he did not think the Metropolitan Act at all applicable here.

Mr. BREXCHLEY also spoke against the motion.

Mr. PUGH said he was satisfied his views were well grounded. Almost every speaker had agreed that they would

discountenance or discriminate outdoor relief. With reference to Mr. C. Read, M.P.'s letter, its principle was similar to the principle of his proposal, to put the burden of the indoor relief in one class and the outdoor relief in the other. After referring to the objection raised by the Chairman, which, he

thought, with all deference, involved a most helplessly fallacy, he concluded by saying that, a discussion having taken place, which would doubtless do a great deal of good, he would beg leave to withdraw his resolutions.

### NORFOLK CENTRAL COMMITTEE.—CATTLE DISEASE.

The Norfolk Central Committee appointed by the Court of Quarter Sessions to transact the business arising out of the Contagious Diseases (Animals) Act and the Orders of the Privy Council, held a meeting at the Shire-hall, Norwich, Major Pentre presiding, for the purpose more particularly of considering a series of resolutions on the foot-and-mouth disease, printed and circulated among the members by Mr. Broom, of Moulton, who said the proposal of his resolutions on the foot-and-mouth disease had been kindly undertaken by Mr. Gillett.

Mr. R. GILLETT moved, accordingly: "That, in order to check the spread of foot-and-mouth disease, which is now unhappily of universal existence, it is desirable for all markets, fairs, cattle-trucks, steamboats, and infected premises to be cleansed and disinfected, and with the view of affording time to enable this to be done, this committee is of opinion that it is necessary to close for a period of six weeks all fairs and markets throughout the United Kingdom, *with the exception of those for the sale of fat stock to be immediately slaughtered.* [The words in italics were added in the course of the meeting on the suggestion of Mr. C. S. Read, M.P.] That throughout the United Kingdom there should be in operation one uniform and compulsory law regulating the movement of cattle affected with disease, or of animals in contact with diseased cattle, and that such law, after due publicity, should be rigorously enforced. That all imported foreign cattle should be either slaughtered at the water-side, or subjected to an efficient quarantine. That this committee believes by the adoption of the above measures the foot-and-mouth disease, which is now causing such an immense loss of meat and dairy produce, might be suppressed."

Mr. R. K. KIDMAN seconded the adoption of the resolutions.

Mr. R. ENGLAND said that he was strongly of opinion that it would be useless to further restrict farmers in the movement of their cattle from field to field and farm to farm, unless stringent measures were taken to prevent the constant flow of disease into the country through every market and fair in the kingdom. If the Privy Council would give their sanction to the principles adopted in this county, and were to apply them generally, no doubt it would have considerable effect in reducing disease. Unless the Privy Council would sanction these stringent measures, unless the country was prepared to adopt them, in reference to the importation of disease, he was against any further restrictions being put on the farmer, because it was beginning at the wrong end—it was subjecting the farmer to a great deal of vexation without doing comparatively any good.

Mr. C. S. READ, M.P., said the resolutions were very strong—stronger, he believed, than any passed during the cattle plague—and he would suggest that they should insert a clause providing for keeping open of markets for the sale and immediate slaughter of fat stock, because it was impossible to suppose that London could be fed if the supply of fat cattle into it was stopped. If he remembered rightly, even during the time of the cattle plague, a great number of markets were kept open for the sale of fat stock, which were immediately slaughtered, or at any rate never left that town or market alive. He entirely agreed with Mr. England that if they were going to have these harsh restrictions upon themselves they must insist upon having the disease kept out of the country. There was a large and growing feeling among a certain class of people, who wished to think so, that this was no contagious disease at all. They fancied that if cattle were exposed to a certain amount of hardship, that if they were overdriven or stowed up in the hold of a vessel, they would be subjected to disease, although no contagious virus lurked in the vessel or on the road at all. They fancied cattle could take this disease as easily as men caught a cold from standing in a draught, or corns from wearing tight shoes, or gout from drinking port wine. These ideas should not be allowed to get abroad without farmers entering a strong protest against them. He saw

around him a number of practical farmers who must have had sad experience of this disease, the breaking out of which could not be accounted for, but he never knew of a case that occurred spontaneously; disease had always been in the neighbourhood, and after the time of the cattle plague they knew it was brought on to Norwich-hill, and from there spread all round.

Mr. GILLETT said Mr. Read's suggestion about fat stock had been inadvertently overlooked, and, therefore, he inserted it in the first resolution in the clause as above given.

Mr. READ inquired whether the Central Committee had power to memorialise the Privy Council, and it was suggested that it would be better to bring the subject under the notice of the Prime Minister.

The CHAIRMAN said he had asked the Clerk of the Peace, and that gentleman was of opinion that, as the members of this Council were merely delegates of the local authority, the better course would be to send a memorial to the Quarter Sessions to be adopted by them, and signed by the Chairman.

Mr. READ said when this Committee was appointed, the Court of Quarter Sessions gave into its hands all rights and privileges, with the exception of the right to levy rates, and one of those rights and powers would surely be to memorialise the higher authorities. This brought him to another point. If they were going to memorialise the Privy Council again, he hoped they would not be subjected to the kind of treatment they had received from Ireland. The Central Chamber of Agriculture seemed tired of Privy Councils, and he heard that the Central Committee of Norfolk were so too. The Central Chamber, therefore, resolved the other day to have a deputation wait upon the Prime Minister, and it might save time and trouble if these resolutions were not sent to the Privy Council, but forwarded to Mr. Isaacs. The farmers of Norfolk had been subjected to gross insults from the Privy Council authorities in Dublin. On two separate occasions the Court of Quarter Sessions of Norfolk had protested against the Orders now in force by which they in Great Britain slaughtered cattle for pleuro-pneumonia, but which Orders were not extended to Ireland. The Privy Council in London, upon receiving the resolutions passed here, very properly sent them over to Dublin, and the Veterinary Department in Dublin sent to Norfolk a very clever veterinary surgeon, Mr. Wm. Chambers, who came to him (Mr. Read), but was informed that he did not wish to say a word to him, but that Mr. Gilman had been instructed to give him every information, and that the inspectors would show him their books. Mr. Chambers went round to the major part of the inspectors, and having inspected their books made a temperate and fair report. He said there could be no doubt that outbreaks of pleuro-pneumonia occurred among cattle recently imported from Ireland (that the disease was generated spontaneously no one believed but Professor Ferguson), and that there were more affected herds in Ireland than were reported to the Veterinary Department. Was not that probable? If cattle were seized and slaughtered and buried here without a single shilling of compensation, as in Ireland, was it likely they would go and tell the whole world that they had pleuro-pneumonia among their stock? Of course not. Therefore, until they gave compensation in Ireland they would never know half the pleuro-pneumonia there was in that country. The report of Mr. Chambers was asked for in the House of Commons by Mr. Barclay. The Veterinary Department of Dublin refused to give it unless it was supplemented by Professor Ferguson's report founded on the report of Mr. Chambers. Having no answer to make to the complaint from Norfolk, Professor Ferguson sat down to abuse them, not for receiving importations of diseased cattle, which was one way of spreading the disease, but for the manner in which they kept their stock. Professor Ferguson said they put them into boxes and into yards in the winter, that they stood there upon littered manure, and that treatment



give them the disease. How did they winter the stock in Ireland? Why, many were in the open all through the blessed winter exposed to the rain and wind and cold, and they rested on the wet ground. Was not that more likely to give them disease than being placed in a well-strawed and sheltered yard where they were warm and dry? Yet Professor Ferguson said: "As well might human beings, imprisoned for months together in cesspits or cess-pools, or in reservoirs for the accumulation of their fecal, urinal, and other secretions, standing or lying continuously on such accumulation of their own excrements, constantly inhaling the pestilential emanations from their own ordure, fresh as well as stale, or in a state of fermentation, or decomposition, be expected to continue or be in such a vigorous state of health as not alone to resist disease, but also to increase in healthiness and flesh, as that it could reasonably be expected that cattle, treated as they are in Norfolk, no matter from whence they come, could invariably remain in a sound or healthy state; not even the proverbial hardiness of Irish cattle can always successfully resist such disease-engendering or exciting influences." It required an Irishman to read that sentence—it was so long. The report continued—"It is much to be regretted that legislation based upon the recognised principles of sanitary science has not, as yet, in the interest of public welfare, extended to food-producing domesticated animals the same degree of sanitary protection as is already enjoyed by the human population of Great Britain; and I have the honour to most respectfully submit first, and such is the case, it would be unreasonable to hope or trust that the occurrence of pleuro-pneumonia in Great Britain, particularly in the county of Norfolk, will be diminished to an extreme minimum. Was that a fair description of the loose boxes and yards of the county of Norfolk? Did they not well know that when they were thoroughly littered they might take the most sensitive chemical paper, and it would not show the slightest trace of any noxious gas, and the only smell on entering the box in the morning was from the breath and sweat of the oxen. He hoped the county of Norfolk was not going to be treated in that way again. He protested against that report as being ignorant and insolent, and nothing more nor less than a libel upon the farmers of Norfolk as to the way in which they kept their stock. Why, in the report there was a cock-and-bull story that the manure made in these boxes was called "bullock pudding." Did they ever hear such a name? How did these people come by it? Why, Mr. Warnes, of Trimmingham, said the only way to fat bullocks when in boxes was to give them "linseed pudding." That was how they came by it. He really was tired and ashamed of exposing this remarkable correspondence, but he said they had better now go to the fountain-head rather than again run the risk of having these innocents cast at them upon the way in which stock was managed in Norfolk. Then, with regard to the outbreaks in Norfolk, it was not when the bullocks were in the boxes that disease broke out, but rather in the autumn when farmers bought their stock, or in the summer when the cattle were on the marshes and had the chance of communicating the disease one to another. Finally, before he sat down, he thought a great many gentlemen must have seen Professor Ferguson's last minute, in which he said that when the foot-and-mouth disease broke out among cattle in Ireland nearly fit for the butcher, the best way was to send those not diseased into the nearest market. Where did those cattle come to? Why, here! If that was the doctrine held in Ireland, was it not time that they, as the greatest winter grazing county in England, should protest against it, and say that the same rules and regulations, be they strict or be they lenient, should be applied to Ireland as were in force in Great Britain?

Mr. R. T. GURDON observed that if the Clerk of the Peace was right, as he probably was, in the statement that any recommendation that might be made should not come from this Committee direct, but from the Quarter Sessions, he presumed the matter would be brought before the adjourned sessions on Thursday week. He had no doubt the Quarter Sessions would very willingly pass and strongly support any recommendations which this Committee might make; but he for one did not like their going down on their knees again to the Privy Council, and after sending in a civil request to be snubbed. If there was any chance of their getting, he would not say more courteous, but more satisfactory treatment from the Prime Minister, let them go to him by all means.

Mr. REEVE (Shetterton) said that, although he never bought any stock at markets or fairs, yet his animals had suffered from pleuro-pneumonia. This he attributed to the "putting fellows" who drove cattle along the road.

The CHAIRMAN threw out for consideration whether they would not be strengthened in any course they took, whether they memorialised the Privy Council or communicated with Mr. Disraeli, if they could obtain the co-operation of other local authorities.

Mr. GURDON and Mr. HYAR said that five or six Courts of Quarter Sessions had already taken cognizance of the matter.

Mr. W. L. JEX-BLAKE said that by closing markets and fairs they would sacrifice a great deal of the capital of those persons who were making their bread by the buying of stock; and what good, after all, would they do? They tried it for six weeks when they had the cattle plague, but they failed, for they were only free from disease for about six weeks or two months. [Several MEMBERS: "Eighteen months."] It would be just the same now. If they stopped the fairs and markets for six weeks, the disease would be just as bad again in six months' time (dissent). Well, he could not help thinking so. He never allowed a head of stock to come on to his premises except what he bought as calves, and yet he had not a single animal but what had the disease. How did they get it? He could not help thinking it was in the air and nothing else. It was useless stopping the markets, and the only thing gained by giving notice to the police was a knowledge of the extent of the disease. He should certainly vote against any further restrictions.

Mr. READ challenged the statement of Mr. Jex-Blake that they had tried the stoppage of the markets and had failed. They had tried it, and it had wonderfully succeeded. Although it was not tried as an experiment, but was a mere accident, the result was that for eighteen months they were free from disease.

The CHAIRMAN said that in one respect Mr. Jex-Blake was right. The stoppage of the markets would be of only temporary avail unless they stopped the re-introduction of the disease.

Mr. JEX-BLAKE: I shall move a direct negative.

Mr. READ: If it comes in the air, you ought to move a direct negative to all restrictions.

The resolutions, on being put, were carried by nineteen votes to three, the dissentients being Mr. Jex-Blake, Col. FitzRoy, and Mr. Robert Ives.

It was then resolved to send the resolutions to the Court of Quarter Sessions as the local authority, and, if confirmed there, to forward them to the Prime Minister, a suggestion by Mr. READ being at the same time adopted, that they should be printed and sent to other local authorities throughout Great Britain, with a request to them to aid in the endeavour to get a settlement of this very vexed question.

THE CHANGE IN THE SHOW-DAYS OF THE ROYAL AGRICULTURAL SOCIETY.—The Council of this Society last week unanimously resolved to make what we think a rather doubtful experiment. They agreed to change the days of the show from Monday and four following days to Wednesday, Thursday, Friday, Saturday, and Monday. The alteration, it appears, has been made on two grounds, neither of which, we think, holds water. Mr. Milward urged that by the new arrangement the animals need not be away from home more than one Sunday. If that is such an important consideration, the great bulk of the animals need not have been more than one Sunday out hitherto. They get out of the yard on Friday afternoon, and if they have so far to go home that they cannot reach it before Sunday, they would not be in time for Wednesday's judging, to leave home on the Monday morning. That argument we hold to be groundless. Moreover, every exhibitor knows that the cattle require at least twenty-four hours rest in the yard or in the vicinity, after undergoing a long railway journey, ere they can appear before judges at other than a disadvantage. Our preference of Monday as the opening day is due to the fact that Sunday immediately supervening, almost invariably ensured a full day's rest to the animals before their merits are determined upon. In many cases, if the animals do not start till Monday morning, they will not reach the yard until Tuesday afternoon, thus allowing only one night to rest, which is not sufficient. The

other argument in favour of the change is that on Saturdays and Mondays the working classes in large towns are likely to turn out to the show more numerous than on Thursday and Friday. On Saturday there is all but certain to be a larger influx of working people than on any other day of the week, but we are much mistaken if Monday's gate nettings will amount to much. Besides in the summer months there are half-holidays in the middle of the week, and generally special half-holidays for the Royal show either on the Wednesday, Thursday, or Friday, after twelve o'clock. In short, we do not think the change will be a beneficial or popular one.—*The North British Agriculturist*.—[We protested against the change when Mr. Milward gave notice of motion in August, as we then said, "It may be well to refer to the shilling days in some of the large towns which the Society has already visited, such as Leeds and Manchester. At Leeds the crush on the shilling days was so great that Mr. Brandreth Gibbs and the stewards were in some alarm as to whether their arrangements would equal the demand; and there was another bumper take at Manchester. On the other hand, a week's holiday would have failed to disturb the serenity of Bedford, and the rain had much to answer for at Taunton; although here possibly centres the head and front of Mr. Milward's movement. Had the show in the West commenced in the middle of the week previous to that in which it was held, taking the four days of one week and the Monday in the other, the Council would have very cleverly avoided the downfall which swept over the shilling days. But, unfortunately, in so capricious a climate as ours we cannot, as a rule, reckon even in July on the Saturdays and Mondays being invariably fine, and the bad weather falling to those who pay the higher fees. Moreover, we are inclined to think that all the large towns, as they certainly will in Birmingham, would make special holiday for the occasion; nor do we see that the change would be of any proportionate advantage to the exhibitors, a class whose interests should be carefully considered. The stock would still have to submit to a Sunday out, at the wrong end of the week, as they would have less time to travel on to the next show due, and people would not easily fall in with an alteration, which, as we have said, would be an experiment the advantage of which has yet to be proved."—EDITOR *M.L.E.*

### K O H L - R A B I .

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—I am sorry that the merits of kohl-rabi were not touched upon by Dr. Voelcker in the practical paper read before a meeting of the London Farmers' Club last week. Although not belonging to the same order and genera as a root proper according to the scientific acceptation of the term, practically it fulfils a similar purpose in the economy of the farm. Throughout a large area in the midland counties its cultivation is gradually extending, and it is held in high estimation for its superior feeding properties. Besides other qualities, one great advantage its cultivation affords is the division of the labour of the farm at a busy season. Kohl-rabi should be sown much earlier than the general swede crop. On all large farms the labour-bill is now an important consideration. Once fairly rooted in the soil, it withstands the effects of continued drought much better than swedes, and when eaten on the land by sheep the expenses of pulling up the crop or picking out the hulls, as in the case of swedes or turnips, is saved, as the bulbs grow clear of the soil.

I observe Dr. Voelcker mentions the injurious effects of common turnips when fed off whilst the tops and bulbs are in a green, succulent state. Practical farmers are fully aware of this, and obviate the evil by pulling up the turnips and leaving them exposed to the weather for ten days or a fortnight before folding the sheep upon them. I have never known any ill effects follow this practice, and the sheep invariably make better progress.

GILBERT MURRAY.

*Eleasstone Estate Office, Dorset.*

### JUDGING BY POINTS.

12, Hanover-square, London, W.C., Nov. 6.

[We give the following correspondence at the request of Lord Kinnaird.]

MY LORD,—I have the honour to inform your lordship that your letter, dated Oct. 4, on the subject of judging by points, and suggesting the experiment of a special class of Shorthorns to be judged in that manner at the Birmingham meeting of the Society next year, was submitted to the Council of the Society, at their meeting on Wednesday last.

In reply, I was instructed on the motion of Colonel Kingscote, C.B., M.P., seconded by Mr. Randell, to thank your lordship for your communication, and for your offer to guarantee the amount of the prizes which you suggested should be offered in the proposed class; but at the same time to inform you that the Council did not consider it expedient to make the experiment which you propose.

I have the honour to be, my Lord,  
Your most obedient servant.

H. M. JENKINS, Secretary.

The Lord Kinnaird, Rossie Priory, Inchtuthie.

Rossie Priory, Inchtuthie, Nov. 13.

DEAR SIR,—I have to acknowledge the receipt of your letter containing the decision of the Council of the Royal Agricultural Society of England. I can quite understand the difficulty they would labour under had they agreed to accept my £40 prize, to be competed for by a class to be judged by points, as judges would not have liked to see their decisions upset, which, in all probability, would have been the case. The present antiquated, unsatisfactory, and unfair mode of judging, by which we so often see animals change places at different shows, according to the views of the judges appointed, must therefore continue until those employed as judges see the error of their ways, and learn how dissatisfied competitors frequently are with their decisions.

Yours faithfully,

KINNAIRD.

H. M. Jenkins, Esq., 12, Hanover-square, London, W.

WHEAT FROM OATS.—Mr. Everett writes to say that oat wheat is a stock of wheat transmuted from oats as follows: Friesland oats were planted in the spring of 1862, cut down three times in the course of the year to prevent their flowering, and harvested in August of the following year, producing a fine sample of red wheat, which stock I have grown ever since. It is a Nursery wheat, large ears, very stout in the straw, especially adapted for strong lands. It requires thin sowing and to be drilled wide. When growing it looks more like winter oats than wheat, the blade being different.

THE FOOT-AND-MOUTH DISEASE.—The Premier has declined to receive a deputation from the Central Chamber of Agriculture, which he refers to the Duke of Richmond, as Lord President of the Council; and within the last month the Lords of the Council have intimated that they do intend to legislate more stringently on foot-and-mouth disease.

THE EXPORTATION OF ENGLISH STOCK TO AMERICA.—Veterinary Department, Privy Council Office.—The Lords of the Council have received from the Secretary of State for Foreign Affairs a copy of a note from the United States Minister in this country, announcing that the importation of neat cattle and of the hides of neat cattle from the United Kingdom into the United States of America is prohibited until further order.—November 6, 1875.

HEREFORDSHIRE AGRICULTURAL SOCIETY.—It was resolved, on Wednesday, not to hold any meeting in 1876, in consequence of the visit of the Bath and West of England and Southern Counties' Association.

## FERTILISERS

No. III.—BY THE NORTHERN FARMER.

To those farmers who, through remoteness of situation or difficulty of access, are completely debarred from participating in the beneficial results accruing from the bountiful application of town manure, there is, as already noticed, another course open, by which, with a considerable expenditure of capital, and enlightened and vigorous management, they may in a few years bring their land into a high state of fertility, fully capable of bearing heavy and profitable crops, however poverty-stricken it may have been when they took possession. Modern science has placed within their reach a great variety of fertilising substances, commonly known by the general title of artificial manures, extremely portable, easy of application with the smallest amount of labour, and which not only serve to nourish the plant from the moment of evolution, but, when specially prepared, continue to sustain it throughout every stage of its growth, until the period of final maturity. By the use of these manures, wherever there is a possibility of the soil being so improved as to be able to repay the cost of reclamation, whether on the hitherto apparently barren moorland or almost inaccessible slope, previously considered utterly incapable of cultivation, it may and has been brought under the dominion of the plough, and principally by turnip culture and sheep-farming: the original and indigenous growth, consisting of heath, broom, furze, and coarse grasses, has been extirpated, and its place successfully and profitably occupied by waving and often luxuriant crops of oats, barley, and the cultivated grasses. The farmer who has the opportunity of using large quantities of town manure has the advantage of being able to raise paying crops by the first application, besides having it left in an advanced stage of amelioration for the growth of future crops or for pasture, and thus, although the labour of carriage and first cost of the manure has been considerable, his money is very quickly returned with interest. The process in the case of artificial manure is quite different, and more roundabout, as, when used by itself, it is chiefly in the growth of those crops which, on consumption by the animals of the farm, become a fruitful source of fertility, a supply of genuine manure being by this means provided, which, with care and attention, may year after year be perceptibly increased, until the farm becomes self-supporting in the matter of bulky manure, as far as it is possible to make it. Although, when beginning with a farm lowered in stamina and destitute of manurial resources, it is absolutely necessary to use artificial manure solely in growing turnips and other roots, yet it is as an auxiliary manure that it is most efficacious and gives the best results, about half the ordinary allowance of dung and a moderate quantity of artificial manure being vastly better for the land, and quite as good for the present crop, as the largest amount of the latter which could reasonably be given. In general practice this is the best course to follow, a much greater breadth both of roots and cereals being annually grown than can be successfully managed under any other system, and the land is always kept fresh and in good heart. On its first introduction, and for a considerable number of years afterwards, Peruvian guano gave excellent, and sometimes even extraordinary results, whether used as a top-dressing on corn and grass, or for the growth of potatoes, turnips, and mangolds, either alone or in conjunction with farmyard or other dung. This was principally due to the large percentage of nitroge which it contained at that time acting as a stimulant, and setting free the latent and hitherto undeveloped resources of the

soil, the united action rendering available a large amount of plant-food, and thereby inducing a vigorous and well-sustained growth. That the salutary resources of the soil assisted largely in bringing about these successful results obtained by the application of guano has been abundantly, and often too surely proved by the sterility which invariably follows when used continuously, unaided by bulky manure. However liberally applied, it utterly fails to grow a serviceable crop on an exhausted soil; all attempts to do so tending only to poverty, as many farmers, who thought to keep up the fertility of their fields by the mere dusting of a few cwt. per acre, have found to their cost. Of late years the quality of Peruvian guano has been very uncertain, and the price, considering the great falling-off even in the best samples of its most valuable constituents, simply exorbitant. As a source of ammonia it cannot well be done without, and to some extent both large and small consumers are forced to use it, although latterly nitrate of soda is coming largely into consumption, and is much appreciated by many farmers as a substitute, as its action is very gradually decided. Guano is seldom used by itself on any crop, most men preferring to mix with, or to combine it with, a certain proportion of phosphate, to counteract its evanescent action, and assist the economical application. Thus there is phospho-guano and manure-dust superphosphate, manufactured with the express intention of answering the wishes of farmers in this matter, which will give about a half more bulk for the money, and yet be equally so thoroughly on correct chemical principles, being generally beat the pure article on many soils, weight for weight, on any kind of crop. Applied to potatoes, for instance, ammoniated superphosphate gives surprising results, the haulm showing its effect a few days after it is laid on, and continuing throughout the growing season to exhibit a most decided superiority in strength and vigour over any portion of the field which may have been left undressed, the tubers on lifting being fully equal, both in size and quantity, to the increase indicated by the extra luxuriance of the foliage.

A mixture of guano, superphosphate, and ground bones, is about as good a preparation as can be used, as it is good for every purpose and every crop, the guano giving the start, which is most important in every case, inasmuch as it imparts vigour and succulence to the plants at a very early period of their existence, and thereby enables them, by strengthening the absorbents, to take up very quickly the soluble matter contained in the phosphates. With the turnip crop it is imperative to supply a certain amount of volatile manure, however heavy the dressing may otherwise be, as it is a great safeguard in preventing injury from the fly, in pushing the growth of the young plant rapidly forward, and getting it into the rough leaf before it has had time to accomplish its destruction by eating out the heart. The chemically-prepared bones, containing a large proportion of soluble phosphate, are utilised in a great measure by the root crop to which it is applied in the first instance: yet, when a first-class article is used, a residuum remains, which sensibly benefits the succeeding corn crop. The presence of a considerable quantity of mechanically-prepared bones gives body to the land, while their decaying action, extending over several years, adds fertility to the soil, and perceptibly benefits each crop, by gradually restoring a portion of one of its most indispensable constituents. Great differences of opinion exist as to the quantities

of artificials to be given to the acre, either with or without dung, many men giving as much weight and money value with a heavy dressing of dung as others give when the artificial alone is used. A pushing and intelligent farmer is never tired of feeding his land, well knowing that as he puts in, so will he take out, and will give guano, bones, and superphosphate to the extent of 105s. worth to the imperial acre, along with a full allowance of bulky manure, while others with the same quantity of dung would look upon 42s. worth of the same mixture as extremely liberal farming. It is easy to imagine the good corn crops, magnificent roots, and splendid pastures which will be found on the farm where such liberality is kept up for a dozen years, and the ease with which a heavy live-stock can be held over at all seasons, nothing requiring to be sold until fully ripened for the butcher. However poor a farm may be, 63s. worth of well chosen artificial manures is a very fine dressing to the acre, when dung is also given; and where the latter is altogether withheld, the money value need not exceed 105s., that quantity giving as much food of the kind as the plants can assimilate, and something for future crops also. The addition of mechanically-reduced bones to all mixtures for the growth of roots is of immense importance to the pastures afterwards, as the grass is greatly sweetened, and a thick growth of white clover is induced; and should it happen that a portion only of a field has been boned, it will be found that the cattle prefer it to other parts of the field, eating it quite bare. Pure dissolved bones is one of the best fertilisers available to the modern farmer, and although but of comparatively recent introduction, has, purely by its genuine character and excellent results in the field on both roots and corn, established itself as a universal favourite. Bones and acid only is a preparation that may be looked on as a kind of hybrid of, and taking middle place between, superphosphate and ground bones, its action not being quite so quick as the former, nor so extended as the latter. Its beneficial effect on the corn which immediately succeeds the root crop is remarkable, as may be easily proved by using it and superphosphate on every alternate twenty drills, more or less, according to fancy, either throughout the whole or part of a field under roots. From the very first start, the corn on the squares dressed

with dissolved bones will take the lead, showing an intensity of greenness which renders them plainly distinguishable from the other portions until the close of the growing season. When ready for the reaper, the straw will be found strong, erect, and healthy, quite overtopping the other, and clear and bright in colour—all qualities which betoken a sound and productive head, and a good outcome on the barn-floor. As a rule, farmers when purchasing phosphatic manures, prefer those which have an organic base, seeing no possibility of a mineral or inorganic substance of any kind possessing valuable manurial constituents however strongly the exactly opposite opinion may be impressed on them by the merchant, manufacturer, or practical chemist. Notwithstanding all objections to its use, it must be admitted that few working men can distinguish a mineral from a bone phosphate, the cellular or honeycomb appearance of a first-class mineral manure, when a lump is broken across, being so nearly identical with that of the most genuine organic origin as to mislead or puzzle the most experienced. When a man is determined to purchase a bone phosphate, and that only, he must depend in a great measure on the respectability of the vendor, dealing only with men of character and position—a rule of conduct in this trade, above most others, of the greatest consequence to the man who is laying out hard-earned money. The most objectionable feature in connection with a mineral phosphate pure and simple is the absence of ammonia, or at best the presence of the merest trace, as, if depended on as the principal fertiliser to a crop grown on a soil itself deficient in quickening or stimulating power, the plants by starting slowly may lose the season, and the crop become either a partial or total failure. With all artificial manures, the analysis of which shows an almost imperceptible per-centage of ammonia, it is a very safe thing for the farmer to manufacture an ammoniated phosphate for himself, if he does not wish to purchase it ready-made, which he can easily do by mixing with it a portion of Peruvian guano, thereby assisting the plant in its embryo state, the phosphates coming on as they gain strength and require more and stronger nourishment. Experiments with mineral manure of good quality, and containing a large amount of soluble phosphate, show undeniably that the corn and grass are largely benefited by its application.

## LAW OF SETTLEMENT AND REMOVAL.

At the Conference of Poor-law Guardians at Basingstoke, Mr. MORRISON read the following paper:

In thinking out a subject of this nature, which I now have the honour to submit for your consideration, it is curious to note how the mind is brought to contrast the practice of by-gone periods with those of modern days. It is not many years since when (as I have heard it often mentioned by professional men) at every quarter sessions appeal after appeal was fought between neighboring parishes (then not in unions as now) arising frequently upon questions such as hiring, and service, and residence. Jealously watched, indeed, was every pauper then, there being no common fund, but the entire cost being defrayed by the respective parishes. The inhabitants in agricultural districts used to meet in solemn conclave at the old poor-house or vestry meeting, and every effort and device was resorted to (when relief was required) to pass the pauper home, as it was then designated. If there were the least chance of an appeal instructions were given to the parish lawyer, and the consequent proceedings and costs followed. So many such cases were in those days fought that I have heard from my immediate predecessors in the practice which I now carry on that in a comparatively small parish like Reigate (as it was then) appeals used to be entered at every quarter sessions or "entered and respited" by the "score," and I can readily put my hand upon huge old bundles of half-guinea motion papers on which the name of an eminent ex-Lord Chancellor (now living) is

"endorsed"—to move and respite "half a guinea." And it is upon record that in a decision upon the knotty point whether an agricultural indoor servant, hired by the year, resided in one parish or the other (where the boundary line dividing the respective parishes happened to go through the bed-room of the pauper) cost the losing parish, on the appeal, something approaching the sum of £200! the court ultimately coming to the decision that the pauper resided and slept for forty days in the parish in which his head rested and not in the parish where his body lay. I think those who complain at the expenses connected with appeals had formerly some real ground. But all this is very much narrowed and altered now: appeals are, comparatively speaking, few, especially in country unions; and before I conclude I shall have a suggestion or two to make upon the question of how these expenses may be reduced. Prior, however, to doing this, let us take a retrospective glance (and it shall be merely a glance) at the Law of Settlement and Removal, that being the subject set down for discussion. Up to the 39th year of Elizabeth, the Poor-law was a vagrant law, but in the 39th year of that reign there was an Act for the Relief of the Poor, another for vagrants, and a third for erecting hospitals and abiding houses for the poor, as they were called, and that distinction has been kept up ever since. The 43rd of Elizabeth recognised the right of the poor in a state of destitution to relief, and all the laws that refer to settlements assume that a destitute person has a right to relief,

but that the State has the right to control the mode of giving it. A though this Statute, 13 Elizabeth, cap. 2, created the system of parochial relief, yet the Statute 13 and 14 Charles 2, c. 12, was the first statute that fully recognised the existence of settlements by birth, parentage, marriage, and renting a tenement, and authorised the warrant of removal, and subsequent Acts (especially 3rd William and Mary, cap. 11) created other heads of settlement, such as payment of rates, serving a parochial office, &c. (which latter head was abolished, however, in 1834), and the common law of the land gave another head—viz., "Estate." "For this reason," says Mr. Lumley, "that as an owner of an estate could not be removed from it without a violation of the rights of property, he consequently became 'settled' in the parish where it was situated." I need not here further refer to the settlement obtained by women on marriage, nor assert that children follow the settlement of the parents where it can be ascertained, but content myself with observing that the following are the heads of settlement as at present existing—viz.: 1, Birth; 2, Parentage; 3, Marriage (as before observed); 4, Apprenticeship (except as relates to sea service); 5, Renting a tenement with payment of parochial rates, &c.; 6, Estate. Thus it will be seen that the whole of these settlements are connected with a parochial residence for a term (except the settlement by birth), and my suggestions hereafter will be based somewhat upon this "status." I must now notice the statutes creating irremovability—viz., 9 and 10 Vic., cap. 66; 24 and 25 Vic., cap. 55; 28 and 29 Vic., cap. 79, which enacted first, the five years residence, then three years, and, ultimately, one year, as a bar to removal subject to three provisos therein respectively contained. The poor are very apt to render this irremovability as conferring upon them a *settlement*; but it must be observed that it does not have such effect. It only prevents a warrant being issued for their removal unless they break their residence; but, as I shall presently submit, why should not this notion become the absolute law, and thus get rid of complications arising from the questions in connection with derivative settlements? The hardship of the Act of Removal is, therefore, now pretty much limited; but I do not mean to imply that cases of hardship do not ever arise, like the Birmingham tailor's case; but, as Mr. Justice Lush therein observed, "Cases of hardship will arise, however Acts of Parliament may be framed." The instance recorded by Mr. Lumley in his evidence taken by the select committee of the House of Commons in 1847, of a man and his wife being removed five or six times before they found a settlement, is not now likely to occur. The present position of the law may, therefore, be summed up as follows: The place of birth is *primâ facie* the place of settlement of a pauper; but, as is well known, this does not take effect where a subsequent settlement has arisen under any of the heads I have enumerated, as he must, in fact, be removed to his last-acquired place of settlement; but if the pauper had not acquired a settlement in his own right, and the settlement of his paternal ancestors, then either of these will supersede the pauper's "birth" settlement. Failing these, recourse must be had to the mother's settlement; but, notwithstanding, where by the statutes quoted there has been a residence in the parish of one year continuously without relief, a warrant cannot be issued for the removal of such pauper at all. With this slight reference to the Law of Settlement and Removal I will be content, and, as conciseness upon these occasions is much desired, will go at once to the real question to be discussed, and which, I apprehend, is—1, Whether the Law of Settlement and Removal should remain as it is; or, 2, Whether it should be repealed; or, 3, Whether it is capable of alteration, and, if so, to what extent it should be amended. 1. With regard to the first, as to letting matters remain "as they were," I think I may safely say that in this age of progress this is not desirable, and, therefore, I proceed to apply myself to the questions—Should the law in this respect be (1) repealed or (2) amended? 2. No doubt there would be but little trouble in abolishing the Law of Settlement and consequent Removal altogether, but I must at the same time ask those advocates of the repeal whether they are prepared for the inevitable consequences which must follow—viz., a national settlement, which means a common fund throughout the country, with a central board or some such organisation, and thus the power of the guardians to

control the expenditure be virtually extinguished? I think this would be a retrograde movement, or step in the wrong direction. Self-government is now the order of the day. Look at our municipal institutions, highway boards, and new sanitary boards, and I think the ratepayers would resent the injustice of any interference with their self-government and control of the expenditure of their poor-rates. I at once say (although, perhaps, I may be considered rather Conservative in my notions) that I am *not* prepared for such a sweeping measure. It may seem an anomaly, but it is clear that the abolition of the Law of Settlement and Removal would not virtually do away with the "settlement," but would have a contrary effect—viz., to give to every pauper a *settlement in the parish in which he resided*, as was pointed out by Mr. Lumley in his evidence before the select committee, who then said, "Whether a man remain in a parish because he is settled in it, or remain in a parish *because there is no law* by which he can be removed from it, his position would be the same." In my humble opinion it is better to turn one's attention to repair the fabric than to demolishing it entirely, and, therefore—3. I should propose to *amend and modify* the laws of settlement, rather than abolish them altogether. I think it only fair to acknowledge that I am partly won over to this conclusion by having had the advantage of reading the court arguments adduced by, and excellent reasoning of Mr. Vallance, both in his paper on the laws of "settlement and removal," read at the annual conference of the London Guardians on the 12th July of the present year, and by his letter on the same subject on the 3rd May of this year, read by Mr. Baker at the "West Midland" conference, and I agree with Mr. Vallance in thinking that large urban districts would be very seriously affected if the laws of settlement and removal were abolished. Now, as to amending the law, it would be pre-emption on my part to prescribe how this should be done; but may I be permitted to submit the following suggestions for your consideration?—viz., to put an end to such derivative settlements as I have mentioned, and the only heads that should be allowed to remain should be (1) Birth settlements; (2) Settlements by payment of poor-rates; or (3) Industrial residences. By the latter I mean giving an absolute immunity from removal to any other place than that in which the pauper had last lived for an uninterrupted term of *one year* without being in receipt of parochial relief. This is, in effect, as is often the case, only allowing history to repeat itself and returning to the mild law of 1 Edw. vi, cap. 3, which enacted that the parish officers should convey the impotent poor from constable to constable until they (the paupers) arrived at the last place in which they had resided three years, and, failing that, to the place with which they were most conversant, where they were to be "succeeded of alms." If these suggestions were adopted, the expense of obtaining the evidence upon which to ground orders for removal need be but trifling, and the provisions of 28 and 29 Vic., cap. 79, sec. 6, enabling boards of guardians to correspond with other boards and agree upon the facts, and accept a pauper, instead of going through the formalities of orders of removal, would then be much more resorted to, or, indeed, the Legislature might adopt the principle of the Assessment Act, and make it compulsory upon appellant unions to show that the board had failed in obtaining redress from the respondent unions before an appeal could be entered, and, in lieu of professional charges consequent on such appeal, I would suggest that they should not embrace any fees in connection with such removals beyond payments out of pocket actually incurred, and as a compensation in lieu thereof, the salaries of the respective clerks to boards of guardians should be augmented. If the derivative grounds of removal be done away with, and the grounds limited to the birth-settlement and subsequent acts, as I have suggested, the impropriety would be much lessened, would not extend over such large areas, and would materially reduce the mass of facts which have to be inquired into and sifted. I wish it to be understood that the remarks I have made as to the settlement and removability of paupers are intended to apply solely to those of England and Wales, as I am not here prepared to discuss the large question of Scotch and Irish removals. I would now beg permission to take this opportunity of alluding to a paragraph in Lord Heniker's speech in the House of Lords on the 21st June of the present year, on the returns of boards of guardians in answer to a circular issued by his lordship as to the abolition of the Law of Settlement; and after enumerating those boards in favour of the law being abolished

His lordship says: "Then, again, Liverpool is alarmed. Why, no one can tell, for I left Ireland out of my bill last year to a great extent, if not entirely, to avoid any possible hardship, which might arise in seaport towns." Then, as a sample of opposing unions, I may quote a letter from Reigate. Amongst other things, it says: "During the last year 67 persons have been removed to their various places of settlement (effecting thereby a saving of nearly £1,000 per annum) from the parish of Reigate alone." "Such are the reasons (his lordship continues) given against an abrogation of these laws, and I venture to say they are hardly worthy of the great communities who give them." His lordship will, I am sure, pardon me for saying that they are, in my humble opinion, cogent and proper reasons. We in the Reigate Union have a comparatively new district of, say, 16,000 to 18,000 inhabitants arisen in the last thirty years, and, consequently, scarcely a soul *properly* belongs to the parish. Persons migrate from other parts of the country, and bring a heavy burden upon the rates. Why should Reigate or similar places so circumstanced be burdened with a permanent charge of £1,000 a year, when, possibly, the paupers have resided but a short period in the parish, and, therefore, but with very little benefit, if any, derived from their residence or labour. True, they should not be removed, nor are they if the relief be required temporarily or on account of sickness; but when a man with his family is *permanently* a charge (and only after a short residence) on ratepayers who know but little of him or his antecedents, how in the nature of things can it be expected that such a hardship should remain unredressed? A considerable number of those removed by the Reigate Union were not of the hard-working, sober, and industrious poor, whose efforts to obtain the means of subsistence had been shattered by unforeseen circumstances, but of that class of persons against whom the penal statutes of Philip and Mary, Elizabeth, and James were directed, and for the dispersion (the putting down) of whom in the county of Essex Lord Henniker pays a high tribute—I mean, vagrants. Now, assuming that the laws were repealed, and these people, therefore, chargeable to some one union, would not the ratepayers soon discover the unfairness of being saddled with these expenses, and demand of Parliament a "national rate," which in a measure has hitherto attended any alteration having the effect of throwing the cost of *irremovable* poor upon a particular parish. Let me instance what I mean by referring you to the Act 9 and 10 Vic., cap. 65, which had the effect of casting the burden of maintaining the irremovable poor upon the parish of residence. This was soon felt to be a great hardship, no provision being made for payment in any other respect, and so great an injustice that in the following year an Act (11 and 12 Vic., cap. 110) was passed transferring the maintenance of the irremovable poor from the parish of residence to the *common fund of the union* in which such parish was situate, so long as such poor should continue to be exempt from removal. Thus, you see, the particular parish soon merged its liability into communion with a common fund. As I have been warned that my paper must not exceed undue limits I shall conclude by quoting a passage from Mr. Lumley's introduction to the second edition of his work on "The Poor Removal and Union Chargeability Acts." He there says: "So long as the power of removal remains in regard to the poor who do not reside in the same parish or in the same union for the short term of a year, there will remain a cheek upon vagrancy and upon the reckless impertinence of the idle and thriftless poor, who prefer the scanty dole of pauper relief to the earnings of honest labour. If that power be *wholly removed* the administration of relief with judgment and economy will become a task of overwhelming difficulty."

Mr. CHALONER CHURCH, barrister at law, read the next paper. He recommended the abrogation of the laws of settlement and removal on the ground that they caused hardships to the poor, expensive litigation to the ratepayer, and injury to the nation by checking the free circulation of labour. Speaking of the numerous law-suits which used to be caused by different parishes trying to get rid of their paupers by sending them to other parishes as their homes or places of settlement, he alluded to the guinea and half-guinea motions which Mr. Morrison had read about, and which had made his professional mouth water, though, as a ratepayer, he was glad to be rid of them. He adverted to possible dangers which might arise if the power for a parish to remove its casual paupers home were taken away, so that every union would have to support all who became chargeable within its boundaries, for he did not wish

to see a national rate. Such dangers were: 1. That different unions would enter into a rivalry of severity in order to prevent paupers coming to them, and he instanced the manner in which a good workhouse dietary attracted vagrants, by quoting, amidst much laughter, some lines written on the walls of the casual ward at Whitechurch:

The governor's name is Sutton;  
The pauper's fare is mutton;  
But you must be a glutton  
    Long here to lodge;  
Better go on to Andover,  
Where you can live in clover—  
    A far better dodge.

He was of opinion, however, that any danger of rivalry between unions would pass away as the system of relief became more uniform, a result to which these conferences tended; and though the poor did flock to the towns especially, and the abolition of the power of removal might cause the town unions additional expense, they ought to accept the burden with the advantage they got from the influx of labour, and not to grumble if, with the bees who flocked into their hive, a percentage of drones were mingled; and it would be a good thing if the towns were thus stimulated to take a lead in establishing penny banks, dispensaries, and other encouragements for the thirly poor, for which experiments they, with their concentrated population, had greater facilities than people had in the country. He referred to what is called the Irish difficulty in connection with this question, namely, the flocking of Irish into England, and especially to seaport towns, and, though it would be hard on the towns not to be able to remove them to their Irish homes, still he thought it was but right that England should bear the Irish difficulty in all its forms until it could attract the Irishman to stay at home by increasing the prosperity of that country. The Irish were not aliens as the Danes and Normans had been, but fellow-subjects, and we could not drive them away and wash our hands of them. He concluded by pointing out the disadvantage of sending paupers to the place of their birth, which might often not be their real home; showed the difficulties in the way of substituting an industrial settlement; and concluded by suggesting that the Law of Settlement had better be abrogated, which would carry with it the abrogation of the power of removal, and leave men free to go where they would for labour, in accordance with the laws of supply and demand.

The Right Hon. G. SELATER-BOOTH said: I desire to make what remarks I have to offer thus early because, assuming that a variety of arguments will be offered, I should not wish to pledge myself or the Government as to any course we may think proper to take. The question of removal, which has been so ably brought forward from two points of view, mixes itself up much with the question of out-door relief. Of all the arguments which have been brought before me for the abolition of the Law of Removal none commends itself more to my mind than that if it were abolished you would get rid of a most objectionable anomaly—the administration of non-resident relief—and you would have throughout the country a mere uniform system of sound principles in the administration of out-door relief. This subject was brought forward by Mr. Lowndes at a conference which I attended last week at Shrewsbury, and I made there one or two remarks which, as they have been misreported, I will venture to repeat. This is a very favourable opportunity for gentlemen interested in these questions to come forward and discuss them—first, because the labour market is in a peculiarly satisfactory state; and, secondly, because the mind of the Legislature and of the local government bodies is directed very much to matters of this kind. At the present moment there are fewer paupers in the kingdom than there have been for the last eighteen years, and this reduction in the number of paupers is tolerably uniform throughout the country. In only one county is there an increase as compared with last year, and that is in Monmouthshire, arising from obvious reasons which will occur to you all. The average amount now raised for the relief of the poor may be taken at 1s. 4d. in the pound. Now, I think that this satisfactory state of things is owing in a great degree to the fact that there is an active demand for labour, and that wages are high; but it is also attributable in no small degree to the reaction which has happily set in against the lax administration of out-door relief, which came to its culminating point seven

or eight years ago. The conscience of statesmen was shocked by seeing the extent to which that evil had gone; the feelings of the ratepayers, aroused in consequence of the losses they sustained, were directed to the same subject; and about the same period committees of Poor-law guardians were established from which, I believe, those who attended them departed feeling themselves more or less pledged to set to work to try and improve the condition of things. I remember, with satisfaction, that it was my good fortune to preside at the first meeting of this particular association in 1871. Simultaneously with those efforts of the public the department over which I have now the honour to preside issued an admirable circular to the inspectors of the different districts, stating the alarm and anxiety with which they viewed the excessive amount to which out-door relief had risen, and desiring the inspectors to bring to the notice of the various boards of guardians within their districts any suggestions which would have the effect of remedying that state of things. All those causes combined have, I believe, produced in the country not only a greater knowledge of right principles in reference to this matter, but also a determination to act upon those principles. Now, the question which has been brought before us to-day—and I am glad it has been treated from the two opposite points of view—Mr. C. Harrison having indicated the views of those who do not desire the total abolition of the Law of Settlement, whilst Mr. Chute has advocated the abrogation of the law entirely—is a very important one, and I can assure the meeting it has been under my careful consideration for many months past. I took the opportunity in the early part of last year to direct the attention of all the local government inspectors to the question, and I have received excellent reports from them, setting forth their own opinions, and, in many instances, the collected opinions of the guardians and their clerks. I will not conceal from you the fact that there is a vast amount of opinion tending towards the abolition of the Law of Settlement. At the same time, let us remember that it is very easy to say that that law should be abolished, but that it is the duty of statesmen to consider to what extent the abolition of such a law would go, what kind of a change it would make in the condition of the people, and what other lateral results are to be anticipated. My friend, Lord Henniker, who made an exhaustive speech on this question in the House of Lords not long ago, plumed himself on the fact that he did not touch the Irish and Scotch difficulty; but any gentleman who has considered the subject at all must know that the Irish and Scotch difficulty makes all the difference in the state of things. I do not say it is an insuperable difficulty, but I do say that simple abolition without regard to that difficulty is impossible, and if regard be had to that difficulty it will lead you into very long and very complicated considerations. You would have to consider the peculiarities of the law both in Scotland and Ireland, and it will be impossible to abolish the Laws of Settlement in England without entirely reconstituting that of those two countries. From that point of view alone the question is a large and difficult one for a statesman to take in hand. It is generally considered that the practice of removal is observed to only a very small extent at the present time. That is so in many unions, but I find, from a return which is in course of preparation—having been moved for by Lord Henniker—so far as that return at present goes (excluding twelve unions from which there are no returns, and some of which, as St. Pancras, Great Yarmouth, and Stoke-upon-Trent are exceedingly important), that in the year ending March, 1875, there were 4,605 paupers removed by order of justices, and 1,713 removed by consent. Therefore we may fairly assume, taking into account the unions which I have not yet sent in their returns, that not less than 8,000 persons have been affected by the law of removal during the year ending the 25th March last. That, I venture to say, is a much greater number than most persons would have expected. It is exceedingly probable, indeed most likely, that out of that number there have been some hard cases. On the other hand, it must not be assumed that the whole 8,000 were hard cases, because if they had been we should have heard of them through the machinery of the local government office, through Parliament, or through the press. As far as these returns go they show in the first place that the whole question is larger and more serious than gentlemen are apt to suppose; that the number of hard cases is very small, thanks to the ameliorations in the law to which allusion has been made; and although there are great advantages to be

anticipated from the simplification of the law in this particular, it is not quite clearly demonstrated to my mind to what extent some plan of protection against the overpowering inroad of pauperism in particular districts may not have to be devised in order to improve the law without doing more mischief than can be helped. I should mention the case of one union very much interested in this question—the Clifton Union. It is a place not only where the Irish difficulty would arise, but where, from its great population, the question even of English removals presses very directly. I have been informed that in the Clifton Union they estimate that they save on an average £2,500 or £2,600 by effecting removals. That is a very large interest for the Clifton Union to assume in this matter, but of course it requires to be ascertained, in all these cases where large sums of money might be made by removals, whether large sums might not also be saved on the other hand by the emigrants from those places not being returned upon their hands. The one would in many cases almost balance the other. I have seen a calculation in reference to some union in the North of England, showing the cost of maintaining the paupers returned on their hands, and the amount saved on those removed, and the two accounts are not so far from a balance as you would suppose. Mr. Chute says the abolition of the law of settlement would be resisted with great rigour by the large towns. I can assure him I know of many large and important towns which, so far at least as they are represented by their guardians, are in favour of the abolition of the existing law, more particularly in the North of England and the manufacturing districts. Manchester is one such town, and Sheffield another. I think it is obvious, and you will easily understand that gentlemen, looking at the thing from their own point of view, are not obliged, and it is not their business, to take it to consideration those larger questions of statesmanship which Government must attend to. Remember that the question of domicile is one of universal interest and importance, and I suppose there is no civilised country in which some law of domicile does not exist. Therefore, to do away at once sweep with what is really the whole law of domicile in this country is an enterprise not likely to be undertaken. I do not wish to deprecate proposals for legislation on this question, nor do I now say what *my* proposals would do, still less what would be the opinion of the Government. In conclusion, I can only say I have attended this conference with great pleasure, being interested in it, not only as a ratepayer and a guardian of the county, but from the position which I hold in the public service.

THE RELATIONS BETWEEN PROVIDENT SOCIETIES AND THE POOR-LAW.—Mr. CLIFFORD contributed the following paper: In considering the relations between Provident Societies and the Poor-law, I fear we must be, inly admitting that a most serious hindrance to the success of provident societies arises from the existence of the Poor Law itself—certainly from a lax administration of the Poor-law. Destitution with us gives a claim to relief, and so it must, and should. But destitution, we know, comes from want of reasonable thrift, from the absence of ordinary prudence and self-restraint, from illness and dissipation, as well as from unavoidable misfortune. Poor-law guardians know that this disregard of the future among many of the poorer classes in England is largely owing to their reliance upon the asylum, which at the worst will be afforded to them by the workhouse, and still more to their hopes of out-door relief in money or in kind during sickness or old age. Nor is the English labouring man in any special sense open to this charge. Sir Henry Barron, our Secretary of Legation at Brussels, says that though provident societies are making progress there, "it is found very difficult to induce the Belgian workman to lay by a sum for the future, so long as the *bureau de bienfaisance* offers a certain provision for old age." Elsewhere, he adds, it is found "that in every instance pauperism increases in proportion to the funds provided for its relief, and that the richest provinces are those which have the largest number of paupers." And he mentions the province of Luxembourg, which has "next to no revenue for the poor, yet no complaints of death and distress ever come from that quarter." In other valuable reports upon poor relief in foreign countries, collected for the information of the Local Government Board by our representatives abroad, the story told is always the same. The effect of a lax system of poor relief in Denmark is thus described by Count Holstein (I quote from Mr. Dalrymple's admirable introduction to the report on Poor-law in that country): "The



dread of poverty," says the Count, "is diminished; and he who is half poor works less instead of more. Those who are young and capable of labour are less economical, always having the poor-rates in view as a resource against want. Likewise marriages are contracted with much less forethought or consideration as to consequences." In England the evil of early improvident marriages is one which has been largely fostered by a faulty administration of the Poor-law, and it is still a serious obstacle to the success of provident societies. Mr. Doye, in another paper, quotes Dr. Ulrik, one of the medical officers of Copenhagen, who says, "The indiscriminate grant of medical help has had the notorious effect of discouraging the development of sick clubs, and *pro tanto* of repressing the growth of provident habits, independence, and self-respect among the labouring classes." If time permitted much similar evidence might be quoted to show that the experience of other countries in the administration of poor relief is much the same as in England. Human nature, in fact, is pretty much the same everywhere. The easier the relief, the greater the improvidence, and the harder the task of establishing provident societies. It is a social law operating in every class, and not, therefore, to be deemed in any special sense the opprobrium of any class. If people are sure of being helped they will often be kept from helping themselves, and this remark holds good whether poor-relief comes, as in England, from public sources, or, as in France or Belgium, mainly from private sources. One remark, in passing, may be made upon the relief of the poor across the Channel. We are accustomed to hear much about the extreme thriftiness of the French poor. French peasants in the country and labourers in towns live and save upon what most Englishmen would think a miserable pittance. Sometimes this extreme thriftiness is explained by the land system of France and by the prevalence of peasant holdings. But may it not be owing in still larger measure to the fact that in France there is no Poor-law? Out of 37,000 communes in France only 13,000 possess *bureaux de bienfaisance*. Naturally, the 13,000 comprise the large centres of population; but one-half of the population, scattered over two-thirds of the area of France, are without any regulated system of outdoor relief, and are thrown upon their own resources or upon casual informal relief, administered through *bureaux de charité*. About 5,000 communes appear to be without any charitable organisation whatever. Another point noticed by Mr. Doyle in his introduction is "the very small amount of relief distributed in individual cases" through the means of these institutions. It is, he says, "a system of doles, just enough to pauperise without being enough to relieve," and he quotes from a French writer who says boldly that the poor would be no worse off without this most illusory relief. Mr. Hamilton estimates that the average of outdoor relief to each person (not each head of family) in France is about 10s., and a similar estimate made by a French gentleman in Boulogne gives a fraction more than 10s. as the average of relief per head given there. Thus, though there will always be plenty of applicants for the smallest modicum of relief, the French poor can hardly trust to charity for substantial relief. I mention these facts because they seem to have a material bearing upon the question we are now considering. We have lately been told, on high authority, that the absence of a Poor-law has probably made revolution easy in France. Without discussing here the policy or impolicy of a Poor-law, it may, I think, be more easily shown that if the mass of the French labouring classes are thrifty and helpful, it is not so much because they are naturally more thrifty and helpful than the same class elsewhere, but because they are made so by the knowledge, transmitted from one generation to another, that charity is precarious, and that, whatever their destitution, they must rely mainly upon themselves. On the other hand, what wonder if, among the English labouring class, improvidence has been encouraged and the progress of benefit societies is even in our own time checked by the certainty of relief, and by the tradition, handed down for centuries, that the parish, after all, is the best benefit club of the poor? Is there, then, among us any considerable amount of preventable improvidence in the sense of which we speak of preventable sickness and preventable mortality? Can we, in other words, directly or indirectly, through the administration of the Poor-law, or otherwise, lay stress upon the labouring class in this country to provide for sickness, death, and old age more generally than they now do, and to look less to the parish? Dealing first with certain suggested indirect

inducements to greater providence, I confess at once that I am unable to see any safe ground upon which the Local Government Board can be asked to ignore, wholly or partially, the sick pay of members of provident societies, and authorise boards of guardians to distinguish between such members and other persons applying for relief. The gentlemen before me must be so familiar with the minutes issued by the Poor-law Board on this subject in 1840, and with the official letter written on the same subject in 1870, that it is unnecessary to repeat the lengthened arguments there adduced in support of this view. The Royal Commissioners upon Provident Societies, as you are aware, after examining Mr. Stansfeld, Mr. Sotherton Estcourt, and many other gentlemen of experience upon the official side of the question, and hearing much evidence on the other side, adopted substantially the official view. It is, no doubt, to many persons, a disappointment that the varying practice of Poor-law guardians in the case of members of friendly societies cannot be reduced to one set rule of special favour to these members. But after carefully reading the evidence, I cannot help coming to the conclusion that such favour, given by high official authority, would be impolitic, and in the long run would not really tend to providence. The general practice, as you know, is for the guardians, in considering the resources of applicants who belong to friendly societies, to take into account one-half of the sick-pay. I think there is force in the objection that, under such a practice, as guardians cannot distinguish between the members of good and bad societies, they might thus be encouraging the worst kind of clubs—the dividing clubs, for example, which, almost avowedly, look to the rates for superannuation allowances to the older men. Disguise it as you may, favour shown to the members of provident societies in the administration of the Poor-law, is really, as the Royal Commissioners put it, "a system of State aid" to these members, and it is given "in a form which is open to the gravest objection, as it directly leads to the conclusion that poor relief is the right of every one, and that destitution is not a necessary element in the claim to relief." "It should be remembered," the Commissioners add, "that the guardians have to deal simply with destitution, and have not to expend a charitable fund; and the tendency of holding out such favours to members of friendly societies is to encourage men to insure for less than their real needs with a friendly society, and to count on poor relief to make up the sum required for their support." There is a curious statement in the evidence on this point showing that—in the Erixworth Union, I think—the firmness of the guardians in refusing to draw distinctions in favour of the members of provident societies soon led to an increased rate on contribution to their respective societies by those members, so as to ensure themselves increased rates of sick and superannuation pay. "It cannot but be a mistake," the Commissioners continue, "to deceive people into supposing that they are not receiving relief, when they are, in point of fact, receiving it; and to hold out as an inducement to them to join clubs a promise that they may thus become paupers on more favourable terms." On this point it is well to remember the evidence of Mr. Tidd Pratt before the Poor-law Commissioners of 1840—that provident societies were quite sensible of the frauds which would be committed if partial relief were allowed, and had frequently adopted the rule, not only providing that no member should belong to any other society at the same time, but also refusing any grant to members in receipt of parochial relief. Another suggested mode of indirect compulsion is that Poor-law guardians should advance relief in sickness to non-members of friendly societies only by way of loan. Among agricultural labourers I fear that the loan system is impracticable, and would make life hopeless by the load of debt imposed upon persons thus relieved. In the towns, where higher wages are paid, and often improvidently spent, the same system might, perhaps, be tried with advantage, and the guardians seem to possess ample legal powers for the recovery of any money thus advanced. Then comes the suggestion that out-door relief should be given to members of a friendly society, and absolutely refused to non-members. It may be sometimes possible in this and other ways for guardians to show their appreciation of provident efforts and punish improvidence. But there is always the danger, already mentioned, of being tempted gradually to draw distinctions at variance with the principle of poor relief, which ought not in strict justice to ignore sick-pay any more than other kinds of realised property. There is also the further question whether



you can all at once rigidly apply the workhouse test in the cases here indicated. No doubt the present lavish administration of out-door relief injures all provident societies. It is now common enough in some districts to find the union workhouse mainly an asylum for the aged and infirm, and for children, while out-relief is given upon the Elberfeld principle, without any of the Elberfeld guarantees for thorough examination into such application. Yet though this suggests a rigid workhouse test, we cannot break at all at once with old traditions, even though they may be bad ones. If we did so the labourers in rural districts would regard it as an act of retaliation for strikes or union agitation; but, what is of greater importance, public opinion would not sanction the adoption of any such hard-and-fast rule. I pass now, in this necessarily hasty summary, from methods of indirect to methods of direct compulsion. Here we may look with advantage to the practice of some foreign nations. The Bavarian Poor-law of 1869 empowers the communal authorities to require workmen and labourers to pay a regular contribution towards a sick fund, in return for which the contributors acquire a right to hospital assistance. By the same law large employers of labour may be called upon by the Poor Relief Council to provide for assistance to their work-people in case of sickness, and such employers may then establish in their manufactories a special sick fund, and require their work-people to contribute towards it. In Austria large employers are also required to create an assistance fund, or provident society, to which the workmen must contribute, and it appears that in authorising joint-stock associations of an industrial character one of the conditions is the establishment of provident societies in connection with them. Throughout the whole of North Germany the artisans and a large proportion of the labouring classes in towns are required, both by local and general laws, to subscribe to sick and death funds, and breaches of the law are enforced by fine, or, if need be, by imprisonment. In considering the working of the Elberfeld system, which, as you know, is one of out-door relief, administered by a small army of well-drilled amateur visitors, we must not forget that poor relief is simplified and the duty of self-help is to this extent enforced by law upon the working classes there. In some parts of Germany even domestic servants are forced to subscribe to provident clubs, though agricultural labourers do not appear to be under this obligation. The masters are bound by law to deduct the fortnightly subscriptions from the workmen's wages, and in some parts of Germany—Saxony and Prussia, for instance—are forced by law to subscribe to the workmen's clubs, to the amounts sometimes of one-half the workmen's subscriptions. I am quoting now from the evidence of Mr. Crowe, the District Consul General in Saxony, who is of opinion that these compulsory payments by masters and men do not affect wages. In England the system of compulsory insurance is not entirely strange to us—for example, in the Indian Civil Service; and, though workmen are not forced into provident societies by either general or local law, there are, as you know, certain companies and large employers who, as a condition of their service, require that their work-people should subscribe to special sick and benefit clubs in connection with the works. Thus the South-Western Railway Company have a friendly society for sickness, deaths, and superannuation, with over 3,000 members, membership being compulsory upon all the company's work-people in the traffic department. The railway company deduct subscriptions fortnightly from the wages of all weekly servants, and assist the funds by an annual contribution of £600, which more than covers management expenses. In this and in other cases you have the German system practically carried out without State intervention, the obvious result being that the work-people are taught, and are, indeed, made, to help themselves without relying on the rates. I think that other employers, whether large or small, in town or in country, might do something in this way to develop self-respect among their servants and keep them off the parish in sickness and old age. We must not look for State intervention in this matter. But here, in this county, where you have a most successful county club, why should not employers, farmers, or others, say, especially when taking on a young hand—"I make it a condition of my service that you should subscribe to the County Provident Society, or some other sound club, and that you should authorise me to deduct your subscription from your wages." One difficulty in the way of provident societies is the necessity

of employing agents to collect members' subscriptions. The system of deduction from wages would render collectors unnecessary. No doubt it is open to objection. The masters would not want to be troubled; the men would object to any form of compulsion; but here it would be compulsion voluntarily submitted to, imposed in the men's own interest, and leading to the discharge of an obvious duty. It is true that providence is equally the duty of other classes upon whom it cannot be enforced; but we are now speaking of a class large numbers of whom, through the want of forethought and providence, fall to be supported under the Poor-law by the public contributions of their neighbours. Of course in this or any measures taken to keep men from the demoralisation of poor relief by means of benefit societies, we must trust chiefly to the growth of self-respect and a feeling of honourable independence among the labouring class themselves; and for the development of such a feeling we must look to education. Education is a gradual and not an heroic remedy for pauperism and improvidence, but, though slow, I cannot help thinking it the surest and safest remedy. The Royal Commissioners upon Friendly Societies, in their elaborate and most valuable report, speak of "the increasing disposition of the labouring class to throw themselves upon the rates," and they add that a feeling of independence exists north of the Trent, but to a very slight extent among the labouring classes in the southern counties. I am aware that this statement is based upon answers to questions sent to boards of guardians, who speak with authority upon such a question. But I cannot help thinking that in the face of the diminishing pauperism mentioned to-day by Mr. Selater-Booth, and in the face of the vast and praiseworthy efforts made by the working classes in their provident societies, the statement just quoted is too sweeping. Poor-law guardians must not speak lightly of the self-sacrifice shown in the establishment of friendly societies, which number five millions of members, and are said to save to the ratepayers £2,500,000 a year. Probably this "increasing disposition" to come upon the rates applies to a limited class, and a class already partially pauperised. For these persons there must, as your chairman has already said, be greater stringency in administering Poor-law relief. At present such persons take deliberate advantage of the principle of our Poor-law—that every necessitous person is entitled to relief, whatever his improvidence, and however recklessly he may have neglected all opportunities of saving. If it be the duty of the State, as it is, even to relieve destitution so caused, the State, on the other hand, has an undoubted right to protect society by imposing strict tests of destitution. The growth of friendly societies as a secure basis and the rise in wages now render improvidence all the less excusable. A young labouring man just beginning life in the receipt of weekly wages must be exceptionally placed if he cannot, by moderate sacrifice and self-restraint, assure himself against sickness and provide a small superannuation allowance in old age. Such a man, at all events, should be warned by employers and by his own class-leaders that he must not look forward to out-door relief. He must learn, too, that, as providence is a virtue, so virtue in this, as in other cases, must be its own reward, and that when he claims independence, and often properly claims it, in other social relations he must also show the honourable independence which regards State relief as a degradation. Now, is this a hard saying? State relief to the poor is a somewhat loose term. Poor relief is, in fact (as our chairman has said), contributed by ratepayers, a large proportion of whom have, perhaps, worked harder, have been more frugal, temperate, and self-denying, and yet now are hardly less poor than the very paupers whom they help to support. The fact cannot be too strongly kept before the working classes themselves, and from this point of view severe scrutiny by the guardians, and care lest, in relieving destitution, they should encourage pauperism, becomes an imperative duty. The future of provident societies is certain if ratepayers, rate receivers, and rate administrators can be impressed with this view of the Poor-law, which, often as it has been urged, can hardly be urged too frequently.

**MEDICAL CLUBS.**—Mr. HEMSTED, medical officer (Whitchurch), read the last paper, as follows: The subject I am about to introduce to your notice to-day is one so closely connected with pauperism, or rather its decline, that it cannot fail to be worthy of a short discussion at this meeting. It is entitled "Medical Clubs," and, in order to be discussed, it requires to be considered in its relation to the administration

of Poor-law relief. It will be generally granted, I infer, that in the majority of instances the first step towards pauperism has been, and is, the obtaining of medical relief; or, in other words, applying to the parish doctor, which leads to the fact of getting the name upon the parish book or medical relief list of the doctor. It is a popular idea that the parish is bound to find a doctor for the poor; and hence the doctor is claimed as a right by nearly all the labouring classes, without respect to wages or family. It may be worth inquiring how this state of things has been brought into existence? and we may look at it under two heads—the Poor-law, and the Poor-law medical officers. 1. The Poor-law provides for the medical attendance of the paupers or persons in receipt of parochial relief, and any destitute person, or person in urgent necessity, to whom an order may be given by the Board of Guardians or other authority. The medical officer is paid in some instances, I believe, at a fixed rate per case, but more generally by a fixed salary with certain extra fees. This latter plan, though desirable on many grounds, has, no doubt, led to the indiscriminate giving of orders for the doctor when no other relief is applied for, and the parties cannot be considered to be destitute. In many instances the order has been given by an officer between the board days, and no confirmation or refusal of the same has been made by the board. There is no doubt that every application for medical relief should be brought before the guardians for their consideration. The order having been obtained the name is placed on the medical relief book of the doctor, and the person becomes, to all intents and purposes, a pauper, applies to the doctor for every member of his family in all trivial ailments, and thus the thin end of the wedge is got in for the obtaining of further relief. Again, we see another familiar case in which a person applies for relief, and the question is asked, "Is he on the doctor's list?" This tends to the perpetual application to the doctor by a certain class of persons, who believe that it is necessary always to be on the doctor's book to facilitate their obtaining other relief. 2. The medical officers themselves have played a part in the creation of paupers—not intentionally, but from their almost universal kindly feeling to a class of the community whom they have felt were not in a position to pay for their services, and they have accepted them as a part of their charge without requiring the production of an order till their services have been claimed as a right, and the recipients have abandoned all idea of making provision for themselves. With this state of things in existence what is the remedy? I would say decidedly the encouragement of medical clubs, through which poor persons and labourers shall be able by the payment of a small sum to obtain for themselves and families that attendance which they need, without losing the spirit of independence and self-maintenance which ought to exist; and under the term medical clubs I would include all these societies which provide a doctor for their members. Not many years back only men were considered eligible to these benefits, but I am glad to say that an improvement has taken place in many districts by the admission of women and children, and thus

provident parents are able to make a provision for their whole family without encouraging them to be dependent on the ratepayers, and so perpetuate a spirit of pauperism. I hold in my hand a scheme of a specially medical club, which I may add, has been brought to its present state of efficiency by the kind co-operation of Mr. W. S. Portal, and, though still in its infancy, I feel sure, if more generally adopted, it would lead to great results. I can testify to the increasing number of persons making provision for themselves in this way, and a growing disinclination to become paupers, but I think those thus desirous of helping themselves should receive encouragement by aid in the more pressing emergencies to which they are liable; and in these emergencies a ground for help should be that they have provided for themselves for the more trivial ailments. It cannot be a right axiom that the ratepayers should provide in any way for a number of able-bodied persons earning good wages in a given locality, when, by a little more forethought and recourse to these provident societies, they would be often as well able to supply the wants of their respective families as many of the smaller ratepayers who have more pressing expenses to meet. I have frequently been told by persons they have not the money in hand to join a club, which means, in plain words, that they have not half-a-crown, or, perhaps, less; and such will ever be the case while it is the custom for labourers to live a week in advance of their earnings. This is one of the crying evils, and a family is overtaken with sickness without apparently a sixpence to provide any necessary. This is a state of things the employers might discourage, and if the custom were once overcome the labourers would be in a position to pay ready-money for their supplies and obtain the advantage. Again, the Local Government Board and boards of guardians might make more use of the workhouse and infirmaries for treatment of sickness. If an order for medical attendance be given, surely the recipient should be placed under the most advantageous circumstances to derive the benefit; and the daily visit of the doctor at dwellings where sanitary requirements, nursing, and nourishment are nil cannot be of the service that they would be in a warm and well-ventilated ward, where nursing and nourishment can be supplied for treatment as required. In this way the Local Government Board and boards of guardians may assist indirectly. Hence we see there can be five kinds of help—viz., the labourers themselves and their employers, the Local Government Board, boards of guardians, and the doctors who aid by giving their services for a nominal payment. To these might be supplemented private charity in contributing to the small clubs' payment in special deserving cases. In this way all may help to encourage a state of existence less dependent upon the pockets of the ratepayers. For, though the individual payment is small, if the doctor be willing to help them by giving his services for it, I fancy the recipients must feel much more satisfaction in being acknowledged to make this provision for themselves than in producing an order from the relieving officer and being registered as paupers.

## THE MANCHESTER AND SALFORD FAT STOCK SHOW.

### IN THE POMONA PALACE.

The entry was not numerous. In the first class of Shorthorn oxen or steers of all ages there were seven entries; the first prize being awarded to Lord Ellesmere for a four-year-old bred by Mr. Robeson; and with this the fifty-guinea cup, for the best Shorthorn in the show. The second prize went to Mr. Statter, of Stand Hall, Manchester; and the third to Colonel Reece, of Lubenham, Grantham. For the best steer not exceeding three years and three months there were five entries; Mr. Crosby, Tymparon Hall, Penrith, taking the first place; the second going to Mr. R. Johnson, Scawby, Brigg; and the third to Mr. F. Cartwright, The Grove, Drakelowe, near Burton-on-Trent. For Shorthorn steers not exceeding four years old there were only three entries, with Mr. E. Wortley, Ridlington, first. The Shorthorn cows were one of the best classes; the

winner, shown by Mr. James Reid, Greystone, Aberdeen, was said to be next best to Lord Ellesmere's ox for the championship in the Shorthorn classes. This cow, Bella II., now eight years old, took first at the Smithfield and other shows last year; while the second here was awarded to Dairy Girl, another prize cow, shown by Mr. T. H. Hutclinson, Manor House, Catterick; and third to Mr. Statter. Of Shorthorn heifers there was but a small entry, and the prize went to Nectarine Bad, the Cup cow in London last year, for Mr. Stratton, of Duffryn; the second prize fell to Mr. Reid, Greystone; and the third to Sir John Swinburne, Capheaton, Newcastle-on-Tyne.

There is again not a numerous show in the Scotch breeds. One of the principal competitors, a Galloway, sent by Mr. John S. Postle, of Statham, Norfolk, met with an accident in transmission to the show yard, and this dis-

abled him from appearing in the ring. The first and second prizes for polled oxen or steers were awarded to Messrs. J. and W. Martin, New Market, Aberdeen, while Mr. W. McCombie, M.P., obtained a high commendation and a commendation. The class of West Highland oxen or steers was in its degree one of the best; the first prize going to Mr. G. Stirling Home Drummond, of Blair Drummond, for a yellow ox, aged four years and ten months, which also took the fifty-guinea cup in the Scotch classes. The second place was taken by a dun ox a year younger, the property of Sir W. G. Gordon Cumming, and the third went to Mr. T. Statter. In the class of cows or heifers Mr. James Reid, Greystone, was first, and Messrs. G. and J. Gordon Smith, Glenlivet Distillery, Ballindalloch, second—the first with an Aberdeen polled, aged six years four months, and the second with a polled, seven years and six months old. In the class of West Highland cows or heifers the two prizes went to Mr. J. Keatal, Park House, Clitheroe. Mr. Alexander Mathieson, M.P. of Ardross, Ross-shire, carried off first honours with a Polled-Shorthorn cross, Mr. T. Statter, Stand Hall, with a Hereford, second; and Mr. W. Brown, Linkwood, Elgin, with a crossbred ox, third in the open class for other pure breeds and cross-bred animals. The best steer was shown by Mr. H. D. Adamson, Balquharn, Alford, and the second by Mr. Strachan. In the class of fat cows or heifers Messrs. J. and W. Martin, were first, with a cross-bred heifer; Mr. Geo. Strachan, Mains of Inverbric, second; with Mr. James Reid and Mr. Thomas Bland highly commended. In the class for the best fat ox, cow, or heifer, fed within twenty miles of Manchester, of any breed, the first prize was awarded to Mr. Thomas Statter; and the second to Mr. George Fox, Harefield, Wilmslow.

The entries of sheep were not very large, and the following is the prize list: Three-year-old Cheviot wethers: 1st, James McGill, Rotchell, Dumfries; three fat Cheviot wethers, not exceeding twenty-three months: 1st and 2nd, R. H. Durie, Barney Maws, Haddington. Three Southdown wethers: 1st and 2nd, Lord Walsingham; 3rd, Mr. J. J. Colman, M.P. Three Shropshire wethers: 1st, W. Nock, Sutton Maddock, Shifnal, Salop; 2nd, Lord Chesham, Latimer, Chesham, Bucks; 3rd, W. Yates, Grindle House, Shifnal, Salop; Shropshire wether: Lord Chesham. Three Oxfordshire: G. Street, Maulden, Amptill, Bedfordshire. Sheep not qualified to compete in any other class: 1st and 2nd, Mr. J. Brown, Kirby Green, Sleaford, Lincoln. Three cross-bred wethers: 1st and 2nd, Duke of Portland. Southdown ewe: Lord Walsingham. Shropshire ewe: Lord Chesham.

In the pigs there were some especially good entries. Pen of three fat pigs of one litter: 1st, the Earl of Ellesmere; 2nd, Mr. Peter Eden. Three fat pigs of one litter: 1st, the Earl of Ellesmere; 2nd, Executors of the late John Wheeler and Sons, Long Compton, Shipston-on-Stour; highly commended, Mr. P. Eden. Fat pig, not exceeding 15 months old: 1st, Earl of Ellesmere; 2nd, Executors of the late John Wheeler and Sons. Pigs of large breeds—pen of one litter: 1st, 2nd, and highly commended, Mr. Peter Eden; commended, the Earl of Ellesmere. Pen of five pigs of one litter: 1st, 2nd, and highly commended, Mr. Peter Eden; commended, the Earl of Ellesmere; with the winners in this class Mr. Eden also carried off the ten-guinea cup. Pen of five pigs of one litter, small breed: 1st and highly commended, Mr. Peter Eden; and 2nd, Earl of Ellesmere.

Prizes were also offered for cheese and butter. The silver cup for the best assortment of cheese went to Mrs. Elizabeth Perceval, Todd-street, Corporation-street, Manchester. For collection of tub butter, first and second prizes were awarded to Mr. W. Foden, Regent-road, Salford; and for collection of fresh butter Mr. Foden was

first; Mr. Henry Nield, Worsley, second; and Mr. T. Morgan, Baholin Farm, Montgomeryshire, third.

On Friday evening, Professor Arthur GAMGEE delivered a lecture on the methods of physiological inquiry with special reference to the question of vivisection, in which he said his object was to bring before the meeting a few of the results of modern physiological inquiry, so that some insight might be gained into the methods which had served as a basis, and which were now more and more serving to extend physiological science. He should discuss somewhat briefly a question which had agitated the public mind—the expediency and rightfulness of one of the most important means of physiological research. There were different methods by which physiologists carried on their investigations, and he proceeded to dwell especially upon the method of actual experiments upon the living animal. It was sometimes asked by sceptics what experiments upon living animals had done to advance physiological knowledge. The answer which the truthful man must give to such a question was that there was no department of physiology, however limited, in which by far the most important evidence which had been obtained had not been furnished by experiments performed upon living animals. That did not by any means mean experiments on animal suffering. There were many experiments which might be performed upon the living tissues of an animal when that animal had died; for, strange though it might appear to those present, the death of the various tissues of the body did not necessarily coincide with the death of the body. In many animals the phenomena of the action of the muscles as in life was found for a long time after the death of the body in the various tissues, and many of the most interesting physiological observations had been made and were still made upon the tissues of an animal recently killed. Having illustrated by a number of interesting experiments the action of muscles and tissues of animals after death, and exhibited a number of other physiological phenomena, Professor Gamgee, in conclusion, said he would take it for granted, after his exposition of a few of the discoveries which had been made by modern physiologists, that his hearers would willingly admit that they were possessed of great interest. Some no doubt would feel inclined to ask at what cost of animal life and suffering those results had been obtained, and some would urge that the discovery of a scientific fact at the expense of animal suffering was not to be justified because inconsistent with the highest morality; and not a few, taking up a more moderate position, would assert that the performance of those experiments only was justifiable of which the immediate results were to alleviate pain or prolong the life of man. As a scientific man, and not merely a physiologist, he naturally affirmed that the discovery of the truth and the secrets of animal organization was a very high object, worthy of pursuit, and absolutely needful to man in connection with those philosophical studies which had always been considered to afford the greatest play for the human faculties. If increased energy and the store of health laid up, as it were, for future use, and afterwards to be employed by hard-worked men for the public good, justified the fear, pain, and it might be lingering death agony of the hunted fox or wounded bird, surely we should be inconsistent if we denied the right of man to employ with thoughtfulness and consciousness the bodies of animals for the purpose of acquiring new truths which the experiments of the past had abundantly shown were certain sooner or later to prove of actual service to suffering humanity. In point of fact, the pursuit of physiology was not necessarily associated with the infliction of pain. Actually there were few experiments which could not be performed under circumstances of insensibility to pain, and these few were in the sight of most men at any rate, justified by the knowledge which they imparted to man. He believed that as yet we could form but the most imperfect estimate of the services which medicine was destined to render. National medicine must be not only interwoven with, but actually based upon a perfectly accurate knowledge of physiology, and for that reason he would argue very strongly in favour of a continuance of that method of investigation by competent scientific men which had already yielded such good fruit. Those who had tried to influence the popular mind by the recitation of the horrors of vivisection had led to the impres-

sion that experiments were frequently performed by large numbers of persons on living animals; but as one convinced of its utility he regretted to say that unfortunately very few persons had within recent times devoted themselves to the study of experimental physiology in England. A reaction had, however, fortunately set in. Neither he nor any other physiologist would perform a painful experiment from any but the most conscientious motives, and he would have the law step in to prevent many of the cruelties, or, at any rate, hardships, which dumb creatures destined for our service were made to undergo; and he would also place restrictions upon experiments upon animals which should prevent their being made by any but

competent persons, and for other than the highest motives. At the same time he would make an appeal that, for the sake of suffering humanity, no hindrance should be placed in the way of those who devoted themselves to the discovery of scientific truth. He was convinced that the report of the Commission on Vivisection, before which he was examined a few days ago, would be of a nature to thoroughly abolish all those fears and apprehensions which had arisen in the public mind, and the Commissioners would show that the statements which had been made could not be borne out by fact. He believed that his continental brethren had been greatly maligned with regard to their investigations in experimental physiology.

## R O O T S H O W S.

The roots were of course grown from seed supplied by the firm holding the show. Notwithstanding the recent attack on prize roots by Dr. Voelcker at the Farmers' Club, the entries were very strong at most of these meetings, where it is to be hoped mere size will for the future be put aside, and the judges' awards depend altogether upon quality and properties really of value to the farmer. These gatherings afford an agreeable opening for an interchange of compliments between the great seed merchants and their customers; but to give point to such displays, there should be a Champion Root Show, held say in London, under the direction of the Smithfield Club, when the different firms should in each class be confined to a couple of their previous prize entries, and the judges not have acted at any other show during the season.

### SUTTON'S ROYAL,

AT READING, ON NOVEMBER 20.

There were 820 entries. The exhibitors include Her Majesty the Queen, the Duke of Portland, the Duke of Sutherland, the Marquis of Ailesbury, the Marquis of Bristol, the Earl of Warwick, the Earl of Harrington, Lord Calthorpe, Lord Camoys, Lord A. Hill, the Hon. R. Cavendish, the Hon. and Rev. R. Meade, the Hon. Mrs. Hay, Admiral Sir G. N. Brooke Middleton, Bart., M.P., Sir D. Gooch, Bart., M.P., Sir H. W. Dashwood, Bart., Sir Paul Hunter, Bart., Sir John Rose, Bart., General Butler, Colonel Kingscote, V.C., M.P., Colonel Peel, Colonel Lane, Colonel Jones, Major Porter, Major Clifton, Major Allfrey, Professor Buckman, Messrs. H. Allsopp, M.P., E. Hermon, M.P., John Walter, M.P., W. Bolckow, M.P., and others.

#### PRIZE LIST.

JUDGES.—W. Briginshaw, her Majesty's Royal Bagshot Park Farm; H. Scott Hayward, Frocester Court, Stonehouse; J. Wrightson, Royal Agricultural College, Cirencester; H. Simons, Bearwood; — Daniels, Swyncombe; — Lees, Wilderness, Whiteknights.

#### ROOTS GROWN WITHOUT SEWAGE CULTIVATION.

Eighteen swedes.—First prize, 10 gs., H. Allsopp, M.P., Hindlip Court; second, 5 gs., the Duke of Portland, Clipstone Park; third, 3 gs., W. D. Strange, Aldermaston; fourth, 2 gs., T. C. Garth, Haines Hill; fifth, 1 g., E. M. Major Lucas, Rowsham.

Three heaviest Champion swedes.—First prize, 2 gs., H. Allsopp, M.P.; second, 1 g., A. H. Johnson, Gannessbury; third, 10s. 6d., J. Moore.

Twelve Mammoth Long Red mangel.—First prize, 5 gs., G. Bishop, Baughurst; second, 3 gs., Admiral Sir G. N. B. Middleton, Bart.; third, 2 gs., Easthampstead Union, Bracknell; fourth, £1 10s., J. Fall, Barbage; fifth, £1, A. M. Robinson, Shirley Lodge, Milton.

Three heaviest Mammoth Long Red mangels.—First prize, 3 gs., Admiral Sir G. N. B. Middleton, Bart.; second, 2 gs., Hon. Mrs. Hay, Clyde Hall; third, 1 g., A. Pocock, Stanford Park.

Twelve Yellow Globe mangels.—First prize, 5 gs., Admiral Sir G. N. B. Middleton, Bart.; second, 3 gs., G. Jenner; third, 2 gs., R. W. Hall Dare, Rainham; fourth, £1 10s., Sir J. Michel, Dewlish House, Dorchester; fifth, £1, G. Butler.

Three heaviest Yellow Globe mangels.—First prize, 3 gs., Hon. Mrs. Hay; second, 2 gs., Sir P. Hunter, Bart., Mortimer; third, 1 g., J. Fall.

Twelve Yellow Intermediate mangels.—First prize, 5 gs., Hon. Mrs. Hay; second, 3 gs., J. Fall; third, 2 gs., R. W. Hall Dare; fourth, £1 10s., Easthampstead Union; fifth, £1, R. B. Blyth.

Twelve New Golden Tankard mangels.—First prize, 5 gs., G. Jenner; second, 3 gs., J. Messenger; third, 2 gs., W. L. Beale; fourth, £1 10s., J. Fall; fifth, £1, J. Tagg.

Three heaviest New Golden Tankard mangels.—First prize, 3 gs., Hon. Mrs. Hay; second, 2 gs., W. L. Beale; third, 1 g., J. Messenger.

Twelve New Oxheart Yellow Globe mangel.—First prize, 5 gs., Hon. Mrs. Hay; second, 3 gs., Sir H. Dashwood, Bart.; third, 2 gs., G. Jenner; fourth, £1 10s., J. Messenger; fifth, £1, E. Boltho, Penzance.

Twelve mangels, any variety, not including those mentioned in previous classes.—First prize, 3 gs., J. Fall (Long Yellow); second, 2 gs., G. W. Hillyard; third, 1 g., W. L. Beale.

Twelve Imperial Green Globe turnips.—First prize, £1 10s., J. Bulford, Hordley; second, £1, J. Fall; third, 15s., R. Webb, Beenham; 4th, 10s., W. Bollen, Weyford.

Twelve White Globe turnips.—First prize, £1 10s., W. L. Beale; second, £1, Mrs. Colclough, Tintern Abbey; third, 15s., J. Sampson, Yeovil; fourth, 10s., R. Webb.

Twelve Purple-top Mammoth turnips.—First prize, £1 10s., J. Bulford; second, £1, J. Guy, Bowden; third, 15s., W. Sainsbury, Hunt's House, Lavington; fourth, 10s., T. C. Garth.

Twelve Greystone turnips.—First prize, £1 10s., Major Allfrey; second, £1, J. Barrett, Salford; third, 15s., J. Sampson; fourth, 10s., G. H. Hillyard, Hawell.

Twelve red Paragon turnips.—First prize, £1 10s., R. H. Betteridge, Milton; second, £1, J. Sampson; third, 15s., R. Webb; fourth, 10s., the Duke of Portland.

Twelve Yellow-fleshed turnips, any round variety.—First prize, £1, T. L. M. Cartwright; second, 15s., W. Harvey, Frogmore Farm, Ashington, Totnes; third, 10s., W. L. Beale; fourth, 5s., R. Webb.

Twelve Tankard turnips, any variety.—First prize, £1, Sir P. Hunter; second, 10s., J. Sampson; third, 10s., Major Allfrey; fourth, 5s., J. Barrett.

Twelve Improved Green kohlrabi.—First prize, £1 10s., G. W. Hillyard; second, £1, J. L. Ensor, Seme; third, 15s., E. J. Tatham, Holbeach; fourth, 10s., T. C. Garth.

Six Improved Purple kohlrabi.—First prize, £1 1s., G. W. Hillyard; second, 10s. 6d., G. Jenner.

Three heaviest Drumhead cabbages.—First prize, 3 gs., Earl of Harrington, Elvaston Castle; second, 2 gs., G. W. Hillyard; third, 1 g., Sir P. Hunter; fourth, 10s. 6d., Mr. Overton, Binfield.

Twelve white carrots, any variety.—First prize, 1 g., Marquis of Ailesbury; second, 10s. 6d., Hon. Mrs. Hay; third, 5s., M. Tagg.

Twelve red carrots, any variety.—First prize, 1 g., The Duke of Portland; second, 10s. 6d., Hon. Mrs. Hay; third, 5s., G. Rayment.

## PRIZES FOR ROOTS GROWN WITH SEWAGE CULTIVATION ONLY.

Twelve specimens Mammoth Long Red mangel.—First prize, 5 gs., Warwick Sewage Farm; second, 3 gs., Banbury Sewage Farm.

Twelve specimens New Oxheart Yellow Globe mangel.—First prize, 5 gs., Eton Sewage Farm; second, 3 gs., Banbury Sewage Farm. Extra prize, twelve green Kohl-rabi, Eton Sewage Farm.

Twelve Golden Tankard or Yellow Intermediate mangels.—First prize, 5 gs., Banbury Sewage Farm; second, 3 gs., Central London District School.

There were commendations in several classes.

## VEGETABLES AND POTATOES.

Collection of potatoes, twelve dishes of distinct kinds, twelve tubers to comprise a dish.—First prize, 5 gs., J. Walter, M.P., Bearwood; second, 1 g., J. Baker.

Redskin Flourball potatoes.—First prize, £1, the Duke of Sutherland; second, 10s., E. G. Ashwell.

Twenty-four hundredfold Fluke potatoes.—First prize, £1, J. Brown; second, 10s., Mr. Hawley; third, 5s., J. Workman.

Collection of vegetables (twelve distinct kinds).—First prize, 5 gs., J. Walter, M.P.; second, 1 g., Major Thoys. Extra Prize, 10s. 6d., F. Baker.

Twelve Improved Reading onions.—First prize, £1, J. Baker; second, 15s., Reading Union; third, 10s., G. W. Hillyard; fourth, 5s., Hon. Mrs. Hay.

Offered by Morris and Griffin, for twelve Purple-top swede (any variety), and twelve Globe or Intermediate mangels, grown with their manure.—Prize, 5 gs., J. Field.

Offered by Messrs. Ohlendorff and Co., for twelve specimens of mangel wurzel and twelve Champion swedes.—Prize, 5 gs., R. Webb.

Offered by J. Gibbs and Co., for a collection of roots, consisting of nine Mammoth Long Red mangels, nine Berkshire Prize Globe or Yellow Intermediate mangels, and nine Champion swedes, grown with their manures.—Prize, 5 gs. Geo. Jenner.

Offered by Burnard, Lack, and Algar, for collection of roots, consisting of six Champion swedes, six Mammoth Long Red mangels, and six Yellow Globe mangels, grown with their manure.—Prize, 5 gs., R. H. Farrer, Abinger Hall.

## CARTER'S ROYAL,

AT AGRICULTURAL HALL, ISLINGTON, NOV. 18 AND 19.

There were about 600 entries; and amongst the exhibitors, beyond others mentioned in the prize list, H. M. the Queen, H. R. H. the Prince of Wales, H. R. H. Prince Christian, Lady Carbery, Captain Walters, Sir C. Lampson; as well as the following sewage farms: Romford, Warwick, Eton, Paris, Banbury, Wrexham, Crewe, West Derby, and Sutton.

## PRIZE LIST.

JUDGES.—SWEDES AND TURNIPS: J. Brebner, her Majesty's Norfolk Farm; A. Blake, Ileythrop Park Farm. MANGEL, KOHL-RABI, CARROTS, POTATOES, AND ONIONS: W. Briginshaw, her Majesty's Bagshot Park Farm; E. W. Booth, Trent Park Farm.

Eighteen Roots of Hardy Swede.—First prize, £10 10s., W. Weevil; second, £5 5s., Mrs. Morten; third, £3 3s., Lord Warwick; fourth, £2 2s., Sir C. Lampson; fifth, £1 1s., J. E. Corkell.

Six Roots of largest and heaviest Hardy Swede.—First prize, £2 2s., Lord Warwick; second, £1 10s., G. Sharman; third, £1 1s., T. C. Garth.

Eight Roots of Globe Mangel.—First prize, £5 5s., Mrs. Morten; second, £3 3s., Mr. Fereman; third, £2 2s., T. Stevenson; fourth, £1 10s., Mr. Whitbourn; fifth, £1, R. Cholmondeley.

Three Roots of largest and heaviest Globe Mangel.—First prize, £4 4s., Mrs. Morten; second, £2 2s., Lord Warwick; third, £1 1s., J. Taylor.

Eight Roots of Mammoth Long Red Mangel.—First prize, £5 5s., J. L. Ensor; second, £3 3s., Mrs. Morten; third, £2 2s., Mr. Kent; fourth, £1 10s., Lord Warwick; fifth, £1, Lally Carbery.

Three Roots of largest and heaviest Long Red Mangel.—First prize, £4 4s., Mrs. Morten; second, £2 2s., J. L. Ensor; third, £1 1s., F. Fryer.

Eight Roots of Champion Intermediate Mangel.—First prize, £5 5s., R. Cholmondeley; second, £3 3s., W. Kent; third, £2 2s., Lord Warwick; fourth, £1 10s., J. Taylor; fifth, £1, G. Kemp.

Three Roots, largest and heaviest.—First prize, £3 3s., Mrs. Morten; second, £2 2s., J. Taylor; third, £1 1s., F. Fryer.

Eight Roots of Yellow Tankard-shaped Mangel.—First prize, £3 3s., P. McKinlay; second, £2 2s., Mrs. Morten; third, £1 10s., J. L. Ensor.

Eight Roots of Sandringham Globe Mangel.—First prize, £3 3s., G. Kemp; second, £2 2s., Mr. Barrett; third, £1 10s., Lord Warwick.

Eight Roots of Mangel, any variety.—First prize, £4 4s., Mrs. Morten; second, £3 3s., W. Kent; third, £2 2s., Lord Warwick.

Twelve Roots of White Globe Turnips.—First prize, £2 2s., Mrs. Morten; second, £1 10s., F. Hutt; third, £1, Sir C. Lampson, Bart.

Twelve Roots of Greystone Turnips.—First prize, £2 2s., Mr. Daintree; second, £1 10s., T. E. Elgar.

Twelve Roots of Red Lincolnshire or Paragon Turnips.—First prize, £2 2s., Mrs. Morten; second, £1 10s., Mr. Barrett; third, £1, Mr. Dean; fourth, 10s., Mr. Jackman.

Twelve Roots of Imperial Green Globe Turnips.—First prize, £2 2s., Mrs. Morten; second, £1 10s., Mr. Barrett; third, £1, R. R. Clayton; fourth, 10s., W. Medcalf.

Twelve Roots of Improved Purple-top Mammoth Turnips.—First prize, £2 2s., Mrs. Morten; second, £1 10s., J. Hutt; third, £1, T. E. Elgar; fourth, 10s., Mr. Davis.

Twelve Roots of Yellow-fleshed or Hybrid Turnip, any variety.—First and second prizes, £1 10s. and £1, Lord Warwick.

Twelve Roots of Imperial Green Kohl Rabi.—First prize, £2 2s., Mrs. Morten; second, £1 10s., J. L. Ensor; third, 15s., Mr. How; fourth, 7s. 6d., Mr. Saunders.

Eight Roots of Mammoth Purple Kohl Rabi.—First prize, £1 10s., Mrs. Morten; second, £1, E. Wilson.

Eighteen Roots of White or Yellow Belgian Carrots.—First prize, £1 10s., H. P. Truell; second, 15s., Mr. Harcourt; third, 7s. 6d., Lord Warwick.

Eighteen Roots of Red Carrots, any variety.—First prize, £1 10s., H. P. Truell; second, 15s., Lord Warwick; third, 7s. 6d., Mr. Curtis.

Collection of Potatoes, eighteen varieties.—First prize, £3 3s., P. McKinlay; second, £2 2s., R. Cholmondeley; third, £1 1s., Right Hon. C. Nisbet-Hamilton.

Twenty Tubers of Improved Red Skin Flour Ball Potatoes.—First prize, £1 1s., J. F. Leith; second, 10s. 6d., Mrs. Morten; third, 5s., Mr. Osman.

Twenty Tubers of American Breadfruit Potato.—First prize, £1 1s., Mrs. Morten; second, 10s. 6d., F. Fryer.

Twelve Roots of Onions, Spring-sown, any variety.—First prize, £1 1s., Mrs. Morten; second, 10s. 6d., R. Collins; third, 5s., J. F. Leith.

Collection of Roots.—First prize, £5 5s., Lord Warwick; second, £3 3s., Banbury Sewage Farm; third, £2 2s., Eton Sewage Farm.

Collection of Roots, open to the United Kingdom.—First prize, £5 5s., Mrs. Morten; second, £3 3s., J. Baker; third, £2 2s., Lord Warwick.

Twelve Roots of Hardy Swede and Mangel.—Prize, £5 5s., Mrs. Morten.

## WEBB'S,

AT WORDSLEY, ON NOVEMBER 19TH.

## PRIZE LIST.

JUDGES.—J. Brebner, Norfolk Farm, Windsor; J. Checketts Besford, Pershore; J. Coxon, Freeford, Lichfield; R. T. Heatley, Eaton Grange, Market Drayton; J. E. Stanier Uppington, Salop.

## ROOTS.

Twelve swedes.—First prize, 10 gs., J. Pritchard, Endon. Twelve heaviest swedes.—First prize, 5 gs., G. and J. Perry, Acton Tiggott.

Twelve Colonel North mangolds.—First prize, 5 gs., Major Chelmondeley, Condoover.

Twelve heaviest ditto.—First prize, 2 gs., T. M. Hopkins, Wick.

Twelve Champion Yellow Globe mangolds.—First prize, 5 gs., G. and J. Perry.

Twelve heaviest ditto.—First prize, 2 gs., C. Tough, Etouwick.

Twelve Mammoth Long Red mangolds.—First prize, 5 gs., A. J. Ford, Madeley.

Twelve heaviest ditto.—First prize, 2 gs., F. Lythall, Offchurch.

Twelve Yellow Intermediate mangolds.—First prize, 3 gs., Earl of Warwick.

Twelve Yellow-fleshed Tankard mangolds.—First prize, 3 gs., Earl of Warwick.

Twelve Imperial Green kohlrabi.—First prize, 2 gs., G. and J. Perry.

Twelve Selected Green Globe turnips.—First prize, 3 gs., J. Barrows, Kiangcombe.

Twelve Improved Beef Heart turnips.—First prize, 3 gs., W. Choules, Badbury.

Twelve Improved Grey Stone turnips.—Prize, 2 gs., E. Parsons, Wheatthil.

Twelve Yellow Tankard turnips.—Prize, 2 gs., D. Eardley, Broad Farm.

Twelve selected White Globe turnips.—Prize, 2 gs., W. Yates, Grindle.

Twelve Purple-top Mammoth turnips.—Prize, 2 gs., G. German, Crossal Grange.

Twelve carrots, white or yellow.—Prize, 1 g., Duke of Portland, Chipstone Park.

Twelve carrots, scarlet.—Prize, 1 g., Duke of Portland.

Four Champion cow cabbages.—Prize, 1 g., A. Parkes, The Heath.

Twenty-four Red-skin Flour-ball potatoes.—Prize, 1 g., J. G. Bullock, Gurlford Court.

Twenty-four Hundredfold Fluke potatoes.—Prize, 1 g., T. Moxon, Easenhall.

Twenty-four Paterson's Victoria potatoes.—Prize, 1 g., J. Bradley and Co., Shut End.

Twenty-four potatoes of any other variety.—Prize, 1 g., Lord Windsor, Huxell Grange.

Collection of potatoes.—Extra prize, 1 g., Major Cholmondeley, Condoover.

#### CEREALS.

White wheat.—First prize, 1 g., J. Day, Pinvin.

Sample bushel Kinver Chevalier barley.—First prize, 1 g., A. J. Ford, Madeley.

Sample bushel Prolific Black Tartar oats.—First prize, 1 g., Marquis of Anglesey, Beau Desert.

Sample bushel Challenge White oats.—First prize, 1 g., E. Davies, Roughton.

#### ROOT CROPS.

Five acres of swedes.—A silver cup or other plate, 10 gs., the Madeley Wood Colliery Company (Manager, Mr. I. J. Fletcher), weight per acre, 31 tons 11 cwt. 1 qr. 20 lbs.; second ditto, 5 gs., G. and J. Perry, Acton Pigott, weight per acre, 28 tons 14 cwt. 1 qr. 4 lbs. Special prize, 5 gs., Dr. Eardley, Broad Farm; weight per acre, 26 tons 12 cwt. 3 qrs. 2 lbs.

Three acres of yellow Globe mangold.—Prize, 5 gs., R. Tanner, Fiodesley; weight per acre, 36 tons 1 cwt. 1 qr. 20 lbs.

Two acres of Long Red mangold.—Prize, 5 gs., G. and J. Perry; weight per acre, 41 tons 5 cwt. 2 qrs. 24 lbs.

## K I N G ' S,

AT COGGESHALL, NOVEMBER 16.

### PRIZE LIST.

JUDGES.—E. Catchpool, Peering Bury; J. Moss Messing, and J. Baker, Stisted.

Champion Orange Globe wurzel.—First prize, silver cup value £5 5s., R. W. Hall Dare, Wennington; second, £2 2s., J. Taylor, Soham, Cambridgeshire; third, £1 1s., Rev. Canon Tarver, Stisted.

Yellow Globe wurzel.—First prize, £2 2s., E. Walford, Layer; second, £1 10s., Mr. Holton, Mount Bures; third, £1, Mr. Richardson, Terling.

Long Red wurzel.—First prize, £1, B. and R. W. Dixon, Wickham; second, 15s., E. Walford; third, 10s., Mr. Harvey, Langenhoe.

Long Yellow wurzel.—First prize, £1, S. Wood, Layer; second, £2 10s., Messrs. Dixon, Wickham.

Red Globe wurzel.—First prize, 15s., W. S. Goodechild, Glemsford; second, 7s. 6d., Mr. Richardson.

Intermediate wurzel.—First prize, £1, R. W. Hall Dare; second, 10s., T. Yellham, Stambourne.

Heaviest wurzel.—Prize, £1 10s., E. Walford.

Unrivalled swede.—First prize, £2 2s., O. S. Oaley, Stisted; second, £1 10s., Mrs. Honeywood, Marks Hall; third, 15s., S. Courtland, Go field.

Skirving swede.—First prize, £2, T. Speakman, Faulkbourne; second, £1, Mrs. Honeywood; third, 10s., G. Steward, Hitcham, Suffolk.

Heaviest swede.—Prize, £1 1s., O. S. Oaley, weight 136 lbs.

White Globe turnip.—First prize, 15s., A. Fairhead, Notley; second, 7s. 6d., Sir J. T. Tyrrell, Boreham.

Green Globe turnip.—First prize, 15s., G. Pettit, Mount Bures; second, 7s. 6d., T. Speakman.

Green kohlrabi.—First prize, 10s., J. Smith, Pattiswick and Colue; second, 7s. 6d., G. Steward.

## STOCK SALES.

### SALE OF MR. CRUIKSHANK'S YOUNG SHORTHORNS,

AT SITTITON, ABERDEEN, ON OCTOBER 28TH.

#### BULLS.

Golden Treasure, red, calved September 19, 1874, by Royal Duke of Gloucester.—Mr. Henderson, of Steinster, Caithness, 41 gs.

Sugar Cane, red, calved October 10, 1874, by Ben Wyvis.—Mr. Cruikshank, Ohtown, Kintail, 35 gs.

Sir Alexander, roan, calved October 21, 1874, by Ben Wyvis. Mr. Mitchell, Drumderfit, Inverness, 41 gs.

Invincible, roan, calved January 10, 1875, by Ben Nevis.—Mr. Ross, Wester Coull, Tarland, 36 gs.

Sir Thomas, roan, calved January 10, by Master of Arts.—Mr. Low, Stratford-on-Avon, 54 gs.

Royal Star, roan, calved January 28, by Bridesman.—Sir Archibald Grant, Bart., of Monymusk, 34 gs.

The Arab, roan, calved February 23, by Royal Duke of Gloucester.—Mr. Trotter, Garguston, Inverness, 40 gs.

Patriarch, red and white, calved March 13, by Royal Duke of Gloucester.—Col. Maedonell, Calcotts, Elgin, 33 gs.

Patriot, white, calved March 4, by Master of Arts.—Mr. Skinner, Chapel of Elrick, New Machar, 21 gs.

Censor, roan, calved February 1, by Bridesman.—Right Hon. T. F. Kennedy, Dunure, Ayrshire, 35 gs.

Valiant, roan, calved March 10, by Ben Wyvis.—Mr. Largue, Ittaw, Alvah, 29 gs.

Counterfoil, roan, calved March 14, by Bridesman.—Mr. Shand, Ordens, Banff, 46 gs.

Confederate, roan, calved March 19, by Lord Lancaster.—Mr. Wilson, Balduiz, Chapel of Garioch, 23 gs.

Graphic, roan, calved March 26, by Viceroy.—Mr. Fiddes, Minnes, Foveran, 26 gs.

Barrington, red, calved March 18, by Viceroy.—Mr. Patterson, Cairnhill, Keith, 18 gs.

Musulman, red, calved Feb. 13, by Royal Duke of Gloucester.—Mr. Pirie, Whitestones, Macduff, 16 gs.

Reward, roan, calved March 23, by Viceroy.—Mr. Gray, Darradhul, Belhelvie, 30 gs.

British Prince, red, calved March 11, by Royal Duke of Gloster.—Mr. Thomson, Newcast of Dumbreck, Uduy, 35 gs.  
 Perfection, roan, calved March 9, by Bridesman.—Mr. Begg, Lechnagar Distillery, 90 gs.  
 Recorder, roan, calved March 26, by Viceroy.—Mr. Warrack, Newmill, Fintray, 26 gs.  
 Lord Mayor, red and white, calved March 28, by Viceroy.—Mr. Simpson, Hill of Crimond, 22 gs.  
 Magazine, red, calved April 5, by St. Vincent.—Mr. Alex. Jackson, Hillbrae, Bourtie, 21 gs.  
 British Banner, roan, calved April 22, by Royal Duke of Gloster.—Mr. Garden, Ythie, 25 gs.  
 Levity, roan, calved April 9, by Bridesman.—Mr. Ross, Tulloch, Meldrum, 31 gs.  
 Red Cloak, red, calved May 22, by Red Gaugetlet.—Mr. Brand, Auchinteen, Cruden, 19 gs.  
 Chorister, white, calved May 11, by Lord Lancaster.—Mr. Mitchell, Fifeshire, 23 gs.  
 The total sum realised for the 26 bulls sold was £895 13s.; at an average of £31 9s.

## SALE OF MR. WOOLLEY'S HEREFORDS

AT WESTON COURT.

By EDWARDS AND WEAVER.

The herd was founded by the late Mr. Woolley's father upwards of fifty years ago. The cows and heifers were principally by Paragon, and the bulls used in the herd were Wellington, Treasurer, Monkland, Cholstrey, Earl Derby 2nd, Wanderer, Horace, Paragon, and Theobald 2nd.

**COWS AND HEIFERS.**—Cow, Mr. J. Lake, Mansell, 18 gs. her heifer calf, Mr. Jones, Downton, 7 gs. Cow, Mr. Edwards, Eardisley, 14½ gs.; her heifer calf, Mr. Wylde, Church House, 5½ gs. Cow, Mr. Wall, Baschurch, 31½ gs.; her heifer calf, Mr. Wall, Baschurch, 19½ gs. Cow, Mr. J. Price, Court House, 15 gs. Cow, Mr. T. Lewis, Woodhouse, 13 gs.; her heifer calf, Mr. J. Norton, Lucton, 6 gs. Cow, Mr. T. Lewis, Woodhouse, 13½ gs.; her bull calf, Mr. J. Jones, 6½ gs. Cow, Mr. Wall, Baschurch, 32 gs.; her bull calf, Mr. Wall, Baschurch, 17½ gs. Cow, Mr. Wall, Baschurch, 17 gs.; her bull calf, Mr. J. Jones, 7 gs. Cow, Mr. Matty, Grove, 15 gs.; her bull calf, Mr. Price, Coomb, 7 gs. Cow, Captain Pike, The Green, 18½ gs.; her bull calf, Mr. Wylde, Church House, 7½ gs. Cow, Mr. Lloyd, 12½ gs. Cow, 28½ gs.; her bull calf, 8½ gs. Mr. Manwaring, Upcot, 17 gs. Cow, Mr. Matty, Grove, 17 gs.; her bull calf, Mr. Wylde, Church House, 7 gs. Cow, Mr. Parker, Stoke Lacey, 17 gs.; her bull calf, Mr. Shewell, New Radnor, 19 gs. Cow, Captain Pike, The Green, 18 gs.; her bull calf, Mr. W. G. Preece, Shrewsbury, 6½ gs. Cow, 13 gs.; her bull calf, 8½ gs. Mr. T. Wall, Sherrington, 15 gs.; her bull calf, Mr. J. Coates, Eardisland, 19 gs. Cow, Mr. J. Price, Court House, 28 gs.; her bull calf, Mr. W. G. Preece, 6 gs. Cow, Mr. Manwaring, Upcot, 13 gs.; her bull calf, Mr. Manwaring, Upcot, 7 gs. Cow, Mr. Moore, 15 gs.; her heifer calf, Mr. Wylde, Church House, 8 gs. Cow, Mr. J. Gwilliam, Lyons-hall, 13 gs.; her heifer calf, Mr. J. Jones, Downton, 7½ gs. Cow, Mr. Colebatch, 21 gs.; her heifer calf, Mr. W. G. Preece, 5½ gs. Cow, Mr. R. Bayless, Monnington, 23 gs.; her heifer calf, Mr. Manwaring, Upcot, 6 gs. Cow, Mr. Colebatch, 17 gs.; her heifer calf, Mr. Preece, Coombe, 5 gs. Cow, Mr. Colebatch, 21 gs.; her heifer calf, Mr. T. Rogers, Monme, 7½ gs. Cow, Mr. R. Bayless, Monnington, 19½ gs.; her heifer calf, Mr. E. Jones, Downton, 7½ gs. Cow, Mr. T. Wall, Sherrington, 15 gs.; her heifer calf, Mr. J. Price, Court House, 10½ gs. Cow, Mr. R. Bayless, Monnington, 19½ gs.; her heifer calf, Mr. Manwaring, Upcot, 9 gs. Cow, Mr. Colebatch, 20 gs.; her heifer calf, Mr. J. Jones, 7 gs. Cow, Mr. James Smith, Bidney, 20½ gs.; her heifer calf, Mr. Hope, Stockey, 5 gs. Cow in calf, Mr. H. Ball, Weobley, 11½ gs. Cow with heifer calf, Mr. Parkes, Holm Lacey, 16½ gs. Milch cow in full milk, Mr. Davies, 9½ gs.

**TWO YEARS-OLD HEIFERS.**—Two-years-old heifer, in calf to a son of Paragon (2665), Mr. Davis, 14 gs. Ditto, Mr. Davis, 17½ gs. Ditto, Mr. W. G. Preece, 12 gs. Ditto, Mr. Davis,

20 gs. Ditto, Mr. Parker, Stoke Lacey, 16½ gs. Ditto, Mr. Parker, Stoke Lacey, 14½ gs. Ditto, Mr. Hughes, 13½ gs. Ditto, Mr. Hyde, Rillin's Mill, 13½ gs. Ditto, Mr. Hyde, Rillin's Mill, 15 gs. Ditto, Mr. W. G. Preece, 11 gs. Ditto, Mr. J. Preece, Court House, 15½ gs. Ditto, Mr. Shewell, New Radnor, 18½ gs. Ditto, Mr. Watkins, 13 gs. Ditto, Mr. J. Preece, 20 gs. Cross-bred ditto, Mr. J. Abell, Pamberidge, 13½ gs.

**YEARLING HEIFERS.**—Pair of yearling heifers, Mr. Norton, Lucton, 25 gs. Ditto, Mr. J. Price, 22 gs. Ditto, Mr. Watkins, 26 gs. Ditto, Mr. Lewis, Wood House, 24 gs. Ditto, Mr. W. G. Preece, 17 gs.

**YEARLING STEERS.**—Pair of yearling steers, Mr. J. Holloway, Day House, 24 gs. Ditto, Mr. G. Bedford, Milton, 28 gs. Ditto, Mr. G. Child, Court of Noke, 24½ gs. Ditto, Mr. R. Farr, Hereford, 25½ gs. Ditto, Mr. Farr, 25½ gs. Ditto, Mr. G. Child, Court of Noke, 22 gs. Ditto, Mr. Morris, Byton, 24 gs. Ditto, Mr. W. G. Preece, 17½ gs.

**TWO YEARS-OLD STEERS.**—Pair of two-years-old steers, Mr. J. Carwardine, Cock Croft, £43. Ditto, Mr. Bright, Leominster, £39 10s. Ditto, Mr. J. Carwardine, Cock Croft, £33 10s. Ditto, Mr. C. Hundley, Eardisland, £34 10s. Ditto, Mr. J. Carwardine, Cock Croft, £42. Ditto, Mr. J. Carwardine, £42. Ditto, Mr. J. Carwardine, £38. One ditto, T. Wall, Shrewsbury, £12.

**HEREFORD STOCK BULL.**—Mr. J. Price, Court House, 32 gs.

## SALE OF THE SHORTHORN HERDS, THE PROPERTY OF MR. THOS. ROBINSON, MR. H. J. MEAKIN, AND THE LATE MR. WILLOUGHBY WOOD,

AT BURTON-ON-TRENT, ON FRIDAY, NOVEMBER 5TH.

By MR THORNTON.

**COWS AND HEIFERS.**

Lady 3rd (Mr. Robinson's).—Mr. H. Wardle, 34 gs.  
 Cleopatra (Mr. Meakin's).—Mr. P. Foster, 350 gs.; her cow-calf, Mr. J. A. Mumford, 50 gs.  
 Charming Maiden (Mr. Meakin's).—Mr. W. German, 20 gs.  
 Baroness 2nd (Mr. Meakin's).—Mr. C. Arnold, 46 gs.  
 Rosabella (Mr. Meakin's).—Mr. C. Arnold, 28 gs.  
 Playmate 3rd (Mr. Robinson's).—Mr. M. Walker, 30 gs.  
 Duchess of Cumberland (Mr. Robinson's).—Mr. E. Holden, 70 gs.  
 Consolation (Mr. Robinson's).—Mr. H. Wardle, 33 gs.  
 Purity (Mr. Meakin's).—Mr. E. Holden, 68 gs.  
 Emily (the late Mr. W. Wood's).—Mr. C. C. Garner, 46 gs.  
 Cowslip (Mr. Robinson's).—Mr. J. Sowerby, 30 gs.  
 Daisy 3rd (Mr. Robinson's).—Mr. R. Blackwell, 26 gs.  
 Duchess of Lancaster 7th (Mr. Robinson's).—Mr. W. German, 56 gs.  
 Reine Marguerite 2nd (the late Mr. W. Wood's).—Mr. W. German, 43 gs.  
 Lady Bates 11th (Mr. Robinson's).—Mr. F. Cartwright, 51 gs.  
 Fifth Duchess of York (Mr. Robinson's).—Mr. E. Holden, 45 gs.  
 Rose of Pekington (Mr. Meakin's).—Mr. W. H. Brown, 80 gs.; her bull-calf, Mr. W. Thorpe, 10 gs.  
 Bloom (Mr. Robinson's).—Mr. R. Blackwell, 38 gs.  
 Rose of Darlington (Mr. Robinson's).—Mr. J. Sowerby, 43 gs.  
 Duchess of Cumberland 2nd (Mr. Robinson's).—Mr. J. Sowerby, 35 gs.  
 Beauty of Battersea (Mr. Robinson's).—Mr. J. Sowerby, 50 gs.  
 Cleopatra 2nd (Mr. Meakin's).—Mr. R. Blearzard, 360 gs.  
 Problem (Mr. Meakin's).—Mr. J. J. Canning, 48 gs.  
 Eliza (the late Mr. W. Wood's).—Mr. R. Bates, 37 gs.  
 Bella (Mr. Meakin's).—Mr. W. German, 51 gs.  
 Ruth 5th (Mr. Robinson's).—Mr. F. Clutton, 32 gs.  
 Spangle (Mr. Robinson's).—Mr. J. Hardy, 36 gs.  
 Bull-calf.—Mr. B. Swaffield, 13 gs.  
 Duchess of Oxford 9th (Mr. Robinson's).—Mr. F. N. Smith, 45 gs.  
 Bull-calf.—Mr. W. German, 4 gs.  
 Lady Bampton Rose 2nd (Mr. Robinson's).—Mr. J. Dickenson, 60 gs.  
 Enigma (Mr. Meakin's).—Mr. F. Cartwright, 110 gs.  
 Bellalouza (Mr. Meakin's).—Mr. S. Cumber, 42 gs.  
 Comely (Mr. Meakin's).—Mr. T. Whit side, 23 gs.

Bull calf.—Mr. T. Whiteside, 3 gs.  
 Buttercup 4th (Mr. Robinson's).—Miss Crawford, 36 gs.  
 Playmate 7th (Mr. Robinson's).—Mr. R. H. Creswell, 26 gs.;  
 Her cow-calf.—Mr. J. M. Grundy, 6 gs.  
 Daisy 5th (Mr. Robinson's).—Mr. J. Sowerby, 19 gs.  
 Lady Lincoln 2nd (Mr. Robinson's).—Mr. J. Hardy, 35 gs.  
 Lady Violet (Mr. Meakin's).—Mr. E. N. Smith, 61 gs.  
 Beauty (Mr. Robinson's).—Mr. J. Sowerby, 36 gs.  
 Charlotte (Mr. Cartwright).—Mr. E. Holden, 42 gs.  
 Daisy 6th (Mr. Robinson's).—Mr. M. Walker, 33 gs.  
 Baroness 3rd (Mr. Meakin's).—Mr. C. Arnold, 21 gs.  
 Merrymaid (Mr. Robinson's).—Rev. H. O. Wilson, 35 gs.  
 Lady Lincoln 3rd (Mr. Robinson's).—Mr. M. Walker, 30 gs.  
 Duchess of Oxford 10th (Mr. Robinson's).—Mr. F. Cartwright,  
 50 gs.  
 Lady Viola (Mr. Meakin's).—Mr. N. Thorpe, 21 gs.  
 Carry (Mr. Robinson's).—Mr. J. Sowerby, 14 gs.  
 Duchess of Cumberland 4th (Mr. Robinson's).—Mr. M.  
 Walker 28 gs.  
 Lady 5th (Mr. Robinson's).—Rev. H. O. Wilson, 21 gs.  
 Lady Elsie (the late Mr. W. Wood's).—Mr. R. Ratcliffe, 47 gs.  
 Baroness 4th (Mr. Meakin's).—Mr. C. Arnold, 36 gs.  
 Buttercup 5th (Mr. Robinson's).—Mr. H. Wardle, 12 gs.

BULLS.

Lord Oxford Surmise (Mr. Cartwright's).—Mr. R. H.  
 Wrightson, 85 gs.  
 Cherry King (Mr. Robinson's).—Mr. M. Reynolds, 28 gs.  
 Bampton Duke (Mr. Robinson's).—Mr. R. H. Creswell,  
 18 gs.  
 Cumberland (Mr. Meakin's).—F. Row, for New Zealand,  
 13 gs.  
 Charmer (Mr. Meakin's).—Mr. W. German, 12 gs.  
 Viceroy (Mr. Meakin's).—Mr. E. Timms, 11 gs.  
 Senator (Mr. Meakin's).—Mr. J. Darling, 14 gs.  
 Weathercock (Mr. Meakin's).—Mr. C. Stubbs, 20 gs.  
 Knight of Needwood (Mr. Robinson's).—Mr. W. German,  
 10 gs.  
 Baronet (Mr. Robinson's).—Mr. W. German, 20 gs.  
 Captain Waverley (Mr. Robinson's).—Mr. S. Walker, 17 gs.  
 Cumberland Lad (Mr. Robinson's).—Mr. J. Adams, 20 gs.  
 David Livingstone (Mr. Robinson's).—Mr. S. Archer, 11 gs.

SUMMARY.

	£	s.	d.	£	s.	d.
51 Cows averaged	56	14	0	2,891	14	0
13 Bulls „	22	10	8	292	19	0
64 head „	49	15	2	£3,184	13	0

	£	s.	d.
37 of Mr. T. Robinson's	35	1	0
21 of Mr. H. J. Meakin's	74	18	0
4 of Mrs. W. Wood's	45	8	3

REVIEW OF THE CATTLE TRADE DURING THE PAST MONTH.

There has been no feature of importance in the cattle trade during the past month. The demand has not been brisk, but the colder weather has introduced an element of strength to quotations, which in consequence have ruled very firm. Home deliveries of beasts have been about an average as regards number, but, as usual, the condition has been very various, and taken as a whole has been second rate. Thus far the Scotch arrivals have been short, but their appearance has afforded a marked contrast with the receipts from other quarters. Irish beasts have been received in fair numbers, but of indifferent quality. As regards foreign, Tonning has contributed a good supply, but the arrivals from Spain and other quarters have been of less importance. There has throughout been a firm inquiry for the choicest breeds, which from their scarcity have reached full prices, the best Scots and crosses making 6s. 4d. 8 lbs. Other qualities have been rather irregular in value, but have been steadier at the close than at the commencement of the month.

With reference to sheep, the supplies offering have been again very short. Notwithstanding a liberal foreign import—45,000 head—English breeds have come sparingly to hand. The trade has been very firm throughout the month, although at times business has been far from brisk. The top price for the best Downs and half-breeds has been 7s. 2d. to 7s. 4d. per 8 lbs., and other descriptions have realised proportionately remunerative rates.

Calves have been in short supply and fair request, at full prices.

Pigs have been steady.

The total imports of foreign stock into London last month have been as under:

Beasts	11,920
Sheep	45,132
Calves	1,343
Pigs	760

COMPARISON OF IMPORTS.

Nov.	Beasts.	Sheep.	Calves.	Pigs.
1874	14,155	44,843	1,247	1,324
1873	9,472	34,733	1,924	2,563
1872	4,226	35,112	2,289	204
1871	12,846	56,299	1,857	2,812
1870	14,906	43,830	2,177	2,463
1869	9,964	32,091	1,713	2,298
1868	9,391	18,162	598	353
1867	10,761	33,202	613	2,069
1866	13,278	38,589	1,290	1,187
1865	16,254	52,517	2,526	7,770
1864	17,137	34,792	2,970	3,947
1863	11,020	30,447	1,770	2,202
1862	6,859	28,577	1,659	633
1861	5,295	27,833	946	1,241
1860	6,961	22,723	1,604	823
1859	5,927	21,907	997	159
1858	4,786	18,253	1,174	156

The arrivals of beasts from our own grazing districts, as well as from Scotland and Ireland, thus compare with the three previous years:

	Nov. 1872.	Nov. 1873.	Nov. 1874.	Nov. 1875.
From Lincolnshire, Leicestershire, and Northamptonshire	8,750	8,965	7,820	10,050
Other parts of England, including Norfolk, and Suffolk...	3,430	2,580	2,050	3,040
Scotland	240	125	858	247
Ireland	3,730	2,000	1,543	2,750

The following figures show the total supplies of stock exhibited and disposed of at the Metropolitan Cattle Market during the month:

Beasts	27,040
Sheep	73,150
Calves	1,465
Pigs	430

COMPARISON OF SUPPLIES.

Nov.	Beasts.	Sheep.	Calves.	Pigs.
1874	24,700	94,870	2,040	250
1873	22,970	85,300	2,105	560
1872	18,620	77,590	1,995	856
1871	25,100	108,930	2,017	720
1870	15,570	96,920	2,232	1,670
1869	21,390	77,990	1,604	615
1868	19,294	98,390	1,048	1,404
1867	24,080	109,960	1,016	2,350
1866	24,660	95,800	1,190	3,090
1865	26,820	167,230	2,858	2,811
1864	32,600	114,300	2,587	2,900
1863	27,704	99,130	2,156	3,170
1862	30,129	110,020	2,313	3,172
1861	26,590	109,370	1,370	3,430
1860	25,400	103,600	2,112	2,920
1859	26,492	120,840	1,299	2,800
1858	24,856	114,643	1,437	2,970

Beasts have sold at from 4s. to 6s. 4d., sheep 4s. 6d. to 7s. 4d., calves 4s. 6d. to 6s. 8d., and pigs 4s. 6d. to 5s. 8d. per 8 lbs. to sink the oil.

COMPARISON OF PRICES.

	Nov., 1871.			Nov., 1872.		
	s.	d.	s.	s.	d.	s.
Beasts from	3	10	5	10	5	10
Mutton	4	4	6	8	4	2
Veal	3	8	5	8	5	0
Pork	3	6	4	8	3	5
	Nov., 1873.			Nov., 1874.		
	s.	d.	s.	s.	d.	s.
Beef, from	4	4	6	6	4	6
Mutton	4	4	7	0	4	4
Veal	4	4	5	8	4	8
Pigs	4	4	5	8	4	0



## REVIEW OF THE CORN TRADE DURING THE PAST MONTH.

In October we were anticipating a favourable seed-time, the work then having partially commenced; but the month of November we are sure to remember as the period of great variations in the temperature, and truly disastrous in its storms and floods, both at sea and on the land. In Somersetshire they estimate the recent fall at one thousand tons of water per acre; and while the ground has thereby become woefully sodden, the surface-water has played havoc in the rising of neighbouring rivers, which have overflowed their banks, not only to the detriment of field-labour, but with serious damage to the lives of both human beings and of cattle. We must, therefore, give up the hope of much being done before Christmas; and spring wheat and barley seem destined to be the principal crops in the new year. Had our granaries been empty, such events would have had a marked influence on prices, and a ten shilling rise would have been pretty certain. But importers here or exporters in foreign ports have injudiciously sent unusual quantities to our coasts, till we have become positively short of room for the increased stores, and so bit their own fingers by their haste. Yet Mr. Scott, as well as ourselves, quite believes in heavy necessities for the present season, he laying them at 12 million quarters, and we at 11½ millions, and we think it quite possible he may be nearest the mark. As yet these premature arrivals have kept pouring in at such a rate that our small markets of English corn have not been able to prevent a further retrograde movement of 1s. to 2s. per qr.; but as the weather has recently changed to cold, the Baltic may soon be permanently closed, and give a breathing time to the trade. Will the 11½ or 12 millions be forthcoming? is the prominent question. We think they will; but not unless better prices entice them, for we now are told that the two principal sources of our supply, Russia and America, are at fault, by reason of the last deficiency, and it will be a great thing if the gap they leave is filled up. Besides we are not alone in the backwardness of our sowings, but it is so in France, Belgium, and some other places, and the influence of this fact is shown in hardening values there. The potato crop, too, has been an unsound one, and should severe weather come, very much of it is likely to rot away. Well-to-do farmers are not likely to overlook these things, or press their best samples for sale; but the landlord's claim for rent will, no doubt, keep up moderate supplies as long as possible. The following were the rates recently quoted at the several places named: White wheat at Paris 51s., at Bordeaux 47s.; Berdianski at Marseilles 47s. 10d.; Polish wheat at Antwerp 47s. 6d., winter American 49s.; old wheat at Liege 52s., new 48s.; new wheat at Maestricht 46s.; red at Hambro, 44s., at Stettin 43s. 6d., at Berlin 43s. 6d., at Cologne 45s., at Vienna 43s.; old wheat at Strasburgh, 52s., new 50s.; at Breslau, 39s., at Petersburgh 42s. 2d.; fine heavy wheat at Pesth 43s.; fine old at Dantzic, 57s. cost, freight, and insurance, new 53s. 6d. cost, freight, and insurance; No. 1 spring at New York, 40s. per 450lbs.

The first Monday in Mark Lane opened on a small supply of English wheat, but the foreign arrivals amounted to nearly 92,000 qrs., of which 60,000 qrs. were from Russia, and 12,000 from America, with fair contributions from other places. During the morning there was but a limited show of fresh samples from the near counties, a large proportion of which was in very poor order. Fine

lots and such as were dry went off slowly, at about the previous currency, but such as were damp were difficult to place, even at reduced rates. The enormous arrival of foreign almost paralysed the trade; and Saxonska quality being most abundant, its value gave way 1s. per qr., while in other sorts sales were quite checked. Cargoes off the coast, however, were unaltered in value. The heavy arrivals in London and its dull reports, did not make much change in the country, where trade was certainly quiet, though prices of dry samples scarcely underwent any change. Liverpool declined 1d., each market making the week's reduction 2d. per cental. Leith and Edinburgh were 1s. dearer, but the other Scotch market noted no change. Dublin was dull for wheat, with prices barely maintained.

The second Monday opened on slightly improved supplies of English wheat, but the foreign, though ample, were not equal to half the previous week's arrival, Russia and America again taking the lead as to quantity. The morning's show of fresh samples was moderate in quantity, without any improvement as respects condition; yet the scarcity of fine enabled factors to place such at the previous prices, while the rest were of uncertain value, and scarcely saleable. The foreign trade remained very slow, but holders were indisposed to lower rates on such a heavy market, and very little business was done. With moderate arrivals off the coast, floating cargoes were not offered at less money. The weather continuing rough, though the country markets were not heavily supplied, prices were barely maintained, and several gave way 1s. per qr., Among these were Louth, Market Rasen, Spalding, &c. Liverpool again gave way 2d. per cental during the week. Glasgow noted a decline of 1s., but Edinburgh and Aberdeen were unaltered, though dull native wheat at Dublin was much the same, and foreign rather cheaper to sell.

On the third Monday the English supplies were reduced, but the foreign again amounted to 75,000 qrs.; a large portion still from Russia and America, with a generally good supply from very different countries. The fresh samples exhibited this morning from Essex and Kent were still moderate, though this time there was a greater proportion in fair order; but even these, from the great abundance of foreign, were only placed, at the close of the market, at 1s. decline, and it was impossible to make sales of foreign without a like reduction. There was very little demand for floating cargoes, but they were not offered lower. With the weather still wet, bad condition was the ruling feature of the country markets, many giving way 1s. per qr., and in a few cases the reduction was 1s. to 2s.; but no decline this week was noted in Liverpool. Leith and Edinburgh gave way 1s.; but Glasgow and Aberdeen remained as in the previous week. The Irish wheat trade at Dublin was again dull, foreign sorts more especially showing a tendency to decline.

On the fourth Monday the supply of English wheat was scanty, but the foreign arrivals were heavy, Russian supplies being one-half, India and America figuring next, with Australia and the Baltic in fair quantities. The show of fresh samples from Essex and Kent was short, and but little improved in condition; still even the best samples with difficulty made the previous rates, while lower qualities were neglected. There being no pressure to sell foreign, with fine frosty weather, red sorts were rather

firmer, but to sell white some concession was necessary. The floating trade was also inactive.

The arrivals into London for four weeks were 23,349 qrs. English and 276,659 qrs. foreign, against 21,892 qrs. English and 102,479 qrs. foreign for the same time last year. The exports in the month were only 547 qrs. The imports into the kingdom for the four weeks ending 13th Nov. were 4,814,860 cwt. wheat and 472,054 cwt. flour, against 3,721,931 cwt. wheat and 492,363 cwt. flour last year. The London averages commenced at 49s. 4d., and closed at 47s. 6d. The general averages opened at 46s. 8d., and closed at 47s. 8d.

The flour trade, in sympathy with wheat, has been exceedingly dull, and prices have receded 1s. to 2s. for Norfolks made of old wheat, while those made of new have given so little satisfaction that nothing but low prices would sell them: old, with difficulty, have realised 34s., but new have been selling at 31s., and even less. The foreign imports, too, have rather increased, and the same difference obtains between barrels made of new and old wheat as ruled in the sales: fair extra state of old wheat has brought 25s. to 26s., but new were not worth over 24s., unless something extra. The price of the best flour in Paris has fallen to 38s. 7d., and this has also been the value in Belgium, but our town millers have not altered their rates, which all along have stood at 47s. per sack. The imports for four weeks were 81,569 sacks country make, 19,733 sacks, 31,863 barrels foreign, against 84,624 sacks country, 5,669 sacks, 18,603 barrels foreign in 1874.

The receipts of British barley have been gradually increasing, but the quality of the new has not been so fine as expected. Even the best sorts of English and Scotch have yielded in value 1s. to 2s., but secondary and inferior have been still more depressed, and quite irregular as to prices. The French, like our own crop, has very much lost colour; but grinding sorts, not being over abundant, and really cheaper than oats, have not given way, and still readily bring 26s. to 27s. per qr. Without better quality in making descriptions, prices may yet rather decline; but there seems little reason for any reduction in good foreign grinding. The imports into London for four weeks were 22,962 qrs. British, 49,005 qrs. foreign, against 16,458 qrs. British, 41,667 qrs. foreign for the same period in 1874.

The malt trade has been dull through the month, and given way in price 1s. to 2s. per qr., more especially for secondary sorts, the new samples being serviceable though not handsome. There are yet fair stocks of old on hand, and this has made holders more anxious to sell.

Of Indian corn the arrivals have been good, but the previous reduction in values has prevented a further fall, and the market closed with much the same rates as those with which the month commenced—say 32s. for flat American, and 33s. for round. The imports in four weeks were 47,805 qrs., against 3,891 qrs. last year.

The oat trade has continued to fluctuate according to the arrivals: the first two markets gained 1s., sixpence of which was lost on the third market and recovered on the fourth, making a gain for the month of 1s. per qr. The Russian supplies have nearly ceased, and but little more old corn can now be expected, as the ports of Archangel and Petersburg are closed; but from Sweden there have recently been good supplies of new, which have met a ready sale at full rates—say 24s. to 26s. 6d., old Russian being worth 23s. to 27s. We think this grain will keep its price all through the winter, excepting in occasional glut. The arrivals in London were 4,845 qrs. English, 376 qrs. Scotch, 640 qrs. Irish, 150,145 qrs. foreign, against 2,907 qrs. English, 277 qrs. Scotch, 222 qrs. Irish, 159,849 qrs. foreign in 1874.

Of English beans the supply has been moderate, of

foreign plentiful. Yet the buyers of the crop this year and a continual country demand have kept up values, and no change can be noted from our last report. Egyptian are still worth 42s., and Mazagans and Italian 45s. The imports into London for four weeks were 3,424 qrs. English, 19,270 qrs. foreign, against 3,427 qrs. English, 8,713 qrs. foreign in 1874.

The English supply of peas has been better than that of beans, though these are also reported a bad crop; the foreign arrivals, mostly white, have been moderate. Prices have been steady through the month; dusks worth 43s. to 44s., and white foreign old 43s. The imports into London for four weeks were 4,292 qrs. English, 8,253 qrs. foreign, against 3,442 qrs. English, 11,900 qrs. foreign in 1874.

Of linseed the supplies have been good, and chiefly from India, and values have improved 1s. to 2s. Arrivals this month 47,689 qrs., against 10,523 qrs. last year.

The cloverseed trade has hardly commenced yet, buyers not being inclined to operate freely till they know how America has fared in respect of the crop: but prices of French have rather improved, and trefoil has been firm.

Spring tares have been improving in value, and are now worth 50s. to 52s. per qr.

IMPERIAL AVERAGES

For the week ending Nov. 29, 1875.

Wheat .....	49,283½ qrs.	47s. 0d.
Barley .....	78,366½ "	38s. 3d.
Oats .....	1,978½ "	25s. 8d.

LONDON AVERAGES.

Wheat .....	2,154 qrs.	47s. 9d.
Barley .....	331 "	37s. 4d.
Oats .....	— "	—s. —d.

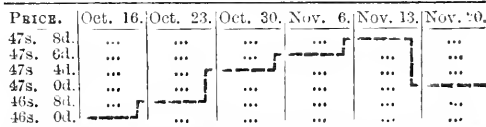
COMPARATIVE AVERAGES.

Years.	WHEAT.			BARLEY.			OATS.		
	Qrs.	s.	d.	Qrs.	s.	d.	Qrs.	s.	d.
1871	68,652½	55	10	95,624½	36	8	4,747½	23	8
1872	46,984½	56	9	72,676½	42	1	3,894½	22	1
1873	51,191½	61	1	82,274½	44	5	5,623½	25	9
1874	58,655	43	5	98,117½	42	6	3,601½	27	11
1875	49,283½	47	0	78,366½	38	3	1,978½	25	8

AVERAGES

FOR THE SIX WEEKS ENDING		Wheat.		Barley.		Oats.	
Oct. 16, 1875	Oct. 23, 1875	s.	d.	s.	d.	s.	d.
46 0	46 8	36	10	37	7	24	0
47 4	47 4	38	1	38	3	24	4
47 6	47 6	38	3	38	3	24	5
47 8	47 8	38	7	38	3	25	9
47 0	47 0	38	3	38	3	25	8
Aggregate Avg. of above.	47 0	37	11	37	11	24	9
The same period in 1874....	43 11	42	8	42	8	27	9

FLUCTUATIONS IN THE AVERAGE PRICE OF WHEAT.



FOREIGN GRAIN ENTERED FOR HOME CONSUMPTION DURING THE WEEK ENDING NOV. 27.

Wheat.....cwt.	261,092	Peas .....	cwt.	4817
Barley.....	47,023	Maize .....	"	18269
Oats.....	152,993	Flour .....	"	17939
Beans.....	307			

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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
60 lb. 250 " " " " " " " " " " " "	1 3 6
80 lb. 300 " " " " " " " " " " " "	1 7 6
100 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. HARBOROUGH, 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 HARBOROUGH, Senr., 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 violence 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 sweet and best remedy now in use.

"I remain, dear Sir,

"For JOHN TINGEY, Esq.,

"R. RENNEY.

"To Mr. Thomas Bigg."

“Beware” 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. 1, Vol. XLVIII.]

JANUARY, 1876.

[THIRD SERIES.]

THE  
FARMER'S MAGAZINE,

AND

MONTHLY JOURNAL

OF

THE AGRICULTURAL INTEREST.

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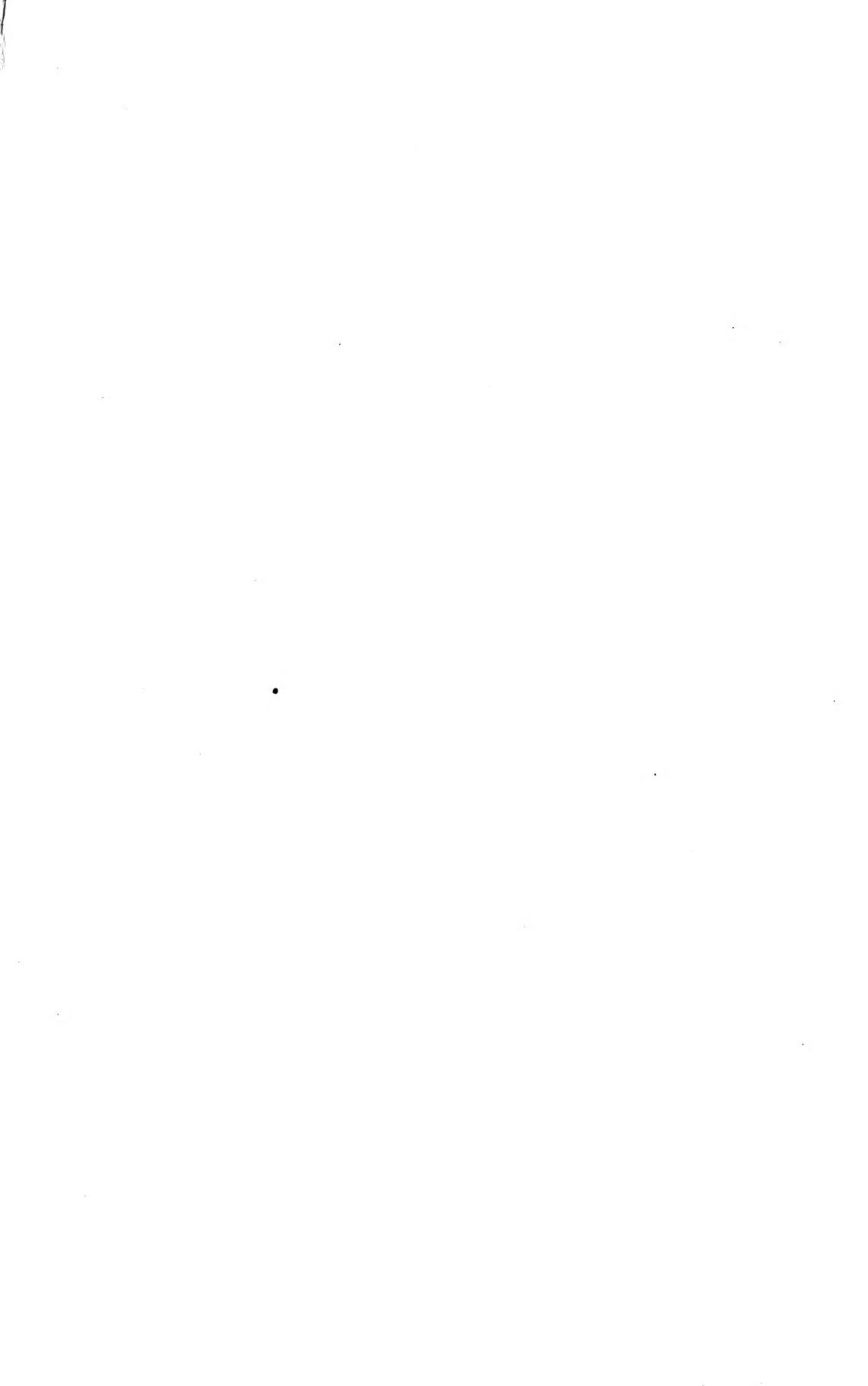
# THE FARMER'S MAGAZINE.

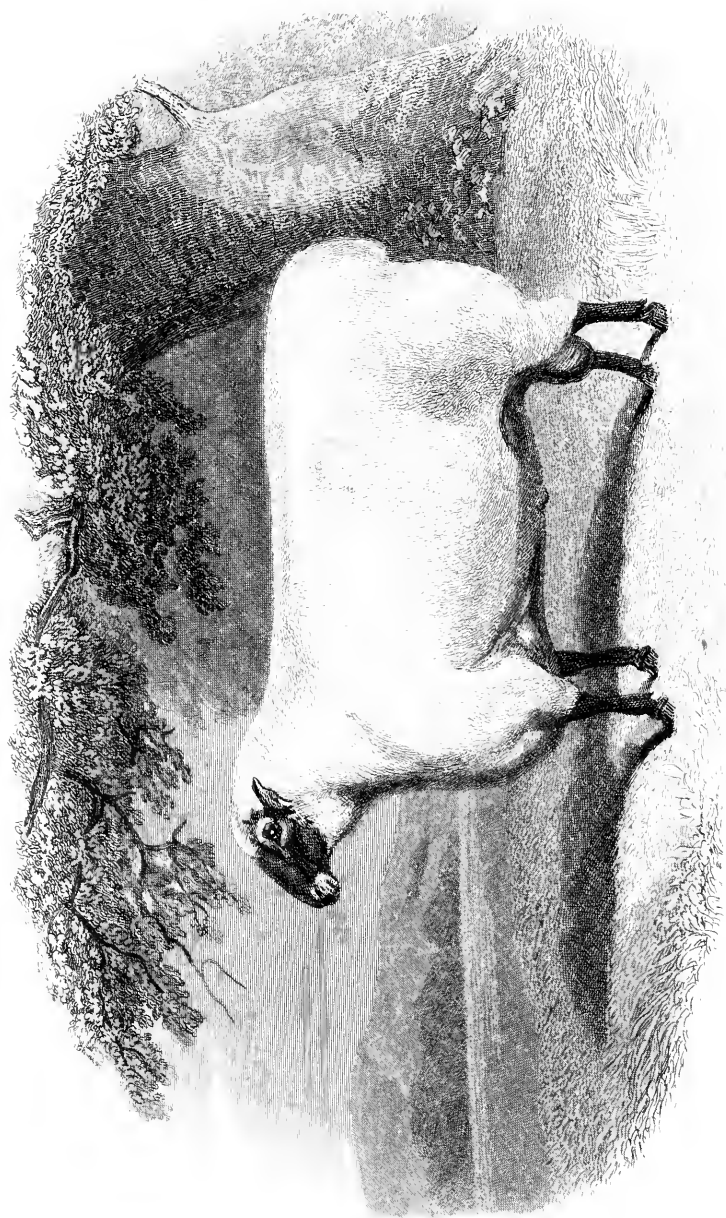
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7. Royal Shropshire, Broom



# THE FARMER'S MAGAZINE.

JANUARY, 1876.

PLATE.

A ROYAL SHROPSHIRE RAM.

THE PROPERTY OF LORD CHESHAM AND THE REST OF HIS CLASS AT TAUNTON.

THE FARMERS' CLUB.

THE TREASURES OF THE AIR, THE SOIL, AND THE SUBSOIL.

The concluding meeting of the Farmers' Club, for the present year, was held last Monday evening, Dec. 6, in Salisbury Square, Dr. Voelcker in the chair; when, notwithstanding very inclement weather, there was a large attendance. The subject appointed for consideration, on the introduction of Mr. J. J. Meehi, was "The Treasures of the Air, the Soil, and the Subsoil."

The CHAIRMAN, in his introductory remarks, said the British farmer was always grateful to anyone who put him in the way of making an honest penny (laughter). Their worthy friend, Mr. Meehi, was going to tell them that evening something about "The Treasures of the Air, the Soil, and the Subsoil," and he was quite sure that any hints which he gave the members of that Club as to how they might extract those treasures and convert them into increased produce, so as ultimately to augment their balance at their bankers, would be thankfully received. He would not make a speech on that occasion, as he would have to speak at some length on the following day at the annual dinner, at which he hoped to see a large attendance.

Mr. MEEHI then read the following paper:

THE TREASURES OF THE AIR, THE SOIL, AND THE SUBSOIL—How can we best obtain them? Until 1820 (immortal Sir Humphry Davy, as Liebig called him) and 1840 (illustrious Liebig with a giant mind) agriculture, here or elsewhere, had no theory or scientific basis, but was a mere empirical or experimental art: effects were ascertained, but causes were unknown. By chance or experiment bones were found to fertilise land in Cheshire, but nobody knew why, while on other soils in other districts bones had no effect. Happily, chemical analysis and philosophic sagacity at last enlightened us. Liebig justly says, in his dedication to the British Association, of his "Chemis-

try in its Application to Agriculture and Physiology." "But it is not the mere practical utility of these truths which is of importance. Their influence upon mental culture is most beneficial; and the new views required by the knowledge of them enable the mind to recognise in the phenomena of nature proofs of an infinite Wisdom, for the unfathomable profundity of which language has no expression." It is a significant omen of good to agriculture that the Committee of this Club ventured to elect for its chairman a man of profound agricultural science, thus indicating that the time has arrived for something, in British agriculture, more than the mere practical man. Our chairman's great and scientific instructor, Liebig, says, in his *Modern Agriculture*, published in 1859, p. 262, "Agriculture is, of all industrial pursuits, the richest in facts and the poorest in their comprehension. Facts by the million cannot be bequeathed, but scientific principles, which are expressions for these facts, may be so, because they are immutable in their nature. Facts are like grains of sand which are moved by the wind, but principles are these same grains cemented into rocks. A fact simply tells us of its existence, but experience ought to inform us why it exists." "Perfect agriculture is the true foundation of all trade and industry; it is the foundation of the riches of States. But a rational system of agriculture cannot be formed without the application of scientific principles; for such a system must be based on an exact acquaintance with the means of nutrition of vegetables, and with the influence of soils, and action of manure upon them." (Liebig's "Chemistry in its Application to Agriculture and Physiology," p. 173.) I ventured to propose this subject because we are so fortunate as to have for our chairman one eminently capable of enlightening us in the important and now acceptable and needful chemistry of agriculture. I do not believe that a farmer need be less a practical man because he knows, by science, the causes of all the effects produced on his farm. On the contrary

he becomes more able and more successful in the management of his business. Before I became agricultural I had very little knowledge of chemistry, but I then desired to know more about it, and have devoted some time to the study of the works of those modern lights in agricultural chemistry who have conferred lasting benefits on mankind. We are passing from the time when book farming in agriculture was ridiculed and despised, and are now willing to believe that correct theory can never be opposed to sound practice. I agree with Liebig that theory should precede practice in agriculture, as it does in other arts and professions. We have good proof of this in the case of the students who have emerged from the Royal Agricultural College at Cirencester, and are now taking a foremost place in the ranks of intelligent and progressive agriculturists. Most of us will agree that the art of producing human food must be the most necessary and important of all the arts. Any one who doubts this should go without a dinner for a week: conviction would speedily follow. The time is, therefore, gradually approaching when "practice with science" will be more generally accepted and adopted by the British farmer. It has been the motto on the title page of the Royal Agricultural Society's *Journal* for the past 32 years. I feel sure, therefore, that you will excuse my making copious reference to the works of our most eminent and dependable agricultural chemists and philosophers, selecting such portions as bear directly upon our present subject. We are passing rapidly away from what were called "the good old times," when permanent pasture was 20 to 1 of arable, and when nature did her own work almost unassisted by man. It has often surprised me on examining the library of schools for farmers' sons that there was not to be found a single volume on agricultural practice or science. I strongly commend to every intelligent agriculturist a study of these great works of Baron Liebig, especially the "Natural Laws of Husbandry," his last great work:—1. Chemistry in its Application to Agriculture and Physiology. 2. Principles of Agricultural Chemistry. 3. Letters on Modern Agriculture. 4. The Natural Laws of Husbandry. 5. Familiar Letters on Chemistry. A perusal of these will, I think, convince him, as it has me, that Liebig knew more about practical agriculture than any farmer in existence. We certainly as agriculturists owe a heavy debt of gratitude to science, for Liebig, in his "Modern Agriculture," says at p. 265, "Guided by a careful study of the elements of the food of plants, science in the year 1840 pointed out to the agriculturist guano as one of the most infallible means of raising the produce of corn and flesh, and most urgently recommended its application. Before 1840 guano had never been used as manure on a European field. "The man of theory, who had predicted the effects of guano, had not seen the favourable results of its application, but the prediction of its utility had been simply based on the results of its chemical analysis, and was only a corollary deduced from the principle that it is indispensable to restore to the field, exhausted by the growth of corn, the mineral elements taken away in the crops. Science placed in the hands of the agriculturist the means of making phosphate of lime more readily available for the nutrition of plants, by treatment with sulphuric acid." Liebig himself was the discoverer or original adviser in both these cases, and out of his laboratory have issued Way, Playfair, Voelcker, and many other eminent agricultural philosophers. Our manure sellers have realised their fortunes by manures which are almost entirely mineral, and free from ammonia. I mean phosphate of lime, thus affording the very strongest proof of the correctness of Liebig's great mineral theory.

**THE AIR AND THE SOIL.**—Our loaves of bread and rounds of beef are dependent on an alliance between the elements of plant food in the air and in the soil, aided by sunshine and water. If they were not brought together by some means there could be no food. Nature does this without the aid of man. Witness the enormous forests, the vast plains of rich pasture, the varied and abundant fruits and other natural productions. But nature is just, for that which is grown upon the land is restored to it by decay or by the animals and birds which consume it. It is man alone who robs and impoverishes the land, by neglecting, to return to it its incombustible elements. Liebig says, truly at p. 229 of his "Modern Agriculture," "large towns, like bottomless pits, gradually swallow up the conditions of fertility of the greatest countries." What a rebuff to us for not utilising our sewage!

**HOW ARE PLANTS BUILT UP OR FORMED?**—We ought, as agriculturists, to know this: so as to be able to employ

the right building material in the right places—I mean in the subsoil as well as in the top soil; for we cannot manure the subsoil through the upper soil, for the latter has the power to arrest much more of the elements of manure than we ever apply to it. Liebig's "Modern Agriculture," p. 25 says: "Plants contain combustible and incombustible elements. The latter, which compose the ash left by all parts of plants on combustion, consist, in the case of our cultivated plants, essentially of phosphoric acid, potash, silicic and sulphuric acids, lime, magnesia, iron, and chloride of sodium. Their combustible portion is derived from carbonic acid, water, and ammonia, which, as elements of food, are equally indispensable. By the vital process plants are formed from these materials, when the atmosphere and soil supply them at the same time in suitable quantity and in the proper proportions. The atmospheric elements do not nourish without the simultaneous action of the elements of the soil, and the latter are equally valueless without the former. The presence of both is always required for the growth of the plant. . . . An element of food is ineffective if there be absent a single one of the other elements of food which are conditions of its activity." In Cheshire the one thing wanting was bone-earth (phosphate of lime). Our own bodies are formed of the same elements as plants, and I have often caused merriment when I have said, in the presence of a goodly assemblage, like the present, of well-developed agriculturists, that we are all gas and water, except a very small percentage of earthy matter. If desiccated, 76 per cent. of our weight would go off as steam, and, if we were then burned, 20 per cent. more would go to the air as gases, leaving only the small percentage of incombustible ash which we had consumed in our food, and which was indispensably necessary for our formation. Without plenty of water the elements of our bodies, like the sap in plants, would not circulate. We can see, at the Keusington Museum, the details of our formation. Economical housewives would feel uncomfortable if aware that in every pound of lean meat they get three-quarters of a pound of water; Meat is much dearer food than bread and cheese, or than oatmeal and milk, and our labourers well know this. In my mind's eye, I picture to myself the atmosphere filled with undeveloped forms of plants and animated creatures. We may safely paraphrase Shakespeare—substituting chemist for poet—who says, "The poet's eye, in a fine frenzy rolling; doth glance from heaven to earth, from earth to heaven, and as imagination (science) bodies forth the form of things unknown, the poet's (chemist's) pen turns them to shape, and gives to airy nothing a local habitation and a name." Professor Tyndall has enlightened us on the subject of solid matter in air; and, as for its perpetual motion, we have only to examine a sunbeam in a dark room or cellar. The bulk of every plant and living object is derived from, and ultimately goes to, the air. Undertakers always bore a hole in leaden coffins for the escape of gases, which would otherwise bulge and burst the coffin. A neighbour of mine died. The undertaker (rather green in the matter) omitted to make a hole in the leaden coffin, and was astonished at finding it forced out of shape, and a gurgling noise within. In his distress he applied to the clergyman, who soon managed an escape for the impet gases. The 120,000,000 tons of coals which we raise annually once came from the air as vegetation, and disappear in air by combustion, again to form vegetation, except in both cases the trifling percentage of incombustible ash which ever was, and ever will be, earthy and non-aerial. A city or a haystack disappears in combustion, leaving only the earthy or non-aerial ashes. Well, then, if the air is so full of good and necessary things, how can we best obtain them for our use and profit? How can we best get back from the atmosphere that enormous amount of carbonic acid and ammonia (plant food) given to it by decay, combustion, and by other sources? In well-drained and properly-cultivated soils the air circulates freely, and the roots of plants obtain from the carbonic acid and ammonia circulating within it a portion of their food by their roots, just as the leaves do from the carbonic acid and ammonia in the atmosphere. Liebig, in his "Principles of Agricultural Chemistry," No. 7, p. 19, says, "The roots of plants in regard to the absorption of their atmospheric food behave like the leaves—that is, they possess, like these, the powers of absorbing carbonic acid and ammonia, and of employing these, in their organism, in the same way as if the absorption had taken place through the leaves."

**TILLAGE AND HEAT.**—Every farmer will admit the advantages of tillage of the top soil, but we never hear of the tillage

of the molder or subsoil, and that is why the subsoil is poor, dense, uncrated, and unaltered. But draining and the steam plough are correcting this error. As a more perfect intermixer of the soil, I prefer the steam plough to the steam cultivator, but care must be taken not to bury the cultivated soil under a mass of poor subsoil. The cultivator afterwards crosses the ploughed land. Some prefer ploughing to the surface the bad soil, and then, after a time, ploughing it down again. I am firmly of opinion that the double plough—that is one under and following the other—is the safe and true principle. Thus the subsoil and upper soil become gradually intermixed. This has been my practice for 30 years. Liebig is eloquent and impressive on the benefits from tillage. The attraction by soil for the heated portion of the sun's rays is very great, as shown by the annexed table, and has a most important influence on vegetation. The want of sunshine, and consequent low temperature, during the last three weeks of last July had a fatal effect on our crops. On a fallow the portion of the air in contact with it becomes heated and expanded, and straggles upwards through the superincumbent cooler air in visible wavy lines. During sunshine on a cool day I have felt the heat from the soil through the thin soles of my boots. The earth is from 65 degs. to 81 degs. warmer than air in the shade :

	In perfectly fine weather.		Elevation of Temperature by Sun's Rays, in degrees.
	Mean Temperature of the		
	Earth's Surface.	Air in Shade.	
	degs.	degs.	
January .....	54.1	24.6	29.5
February .....	56.2	43.0	43.2
March .....	59.5	46.6	52.9
April .....	121.6	61.7	59.9
May .....	131.2	67.3	63.9
June .....	139.8	75.2	64.6
July .....	146.3	81.3	65.0
August .....	130.1	68.9	61.2
September .....	119.8	68.0	51.8
October .....	89.8	42.8	33.0
November .....	72.7	40.1	32.6
December .....	59.2	35.6	23.6

These tables are extracted from p. 411, vol. xvii., of the Royal Agricultural Society of England's *Journal*, Mr. Jamieson's prize essay, "On the Action of the Atmosphere on Newly-deepened Soil." I recommend a perusal of the remaining tables, showing the increased temperature of the soil and subsoil, even to the depth of 4 feet, most important as affecting vegetation.

**DRAINING.**—In land undrained, naturally or artificially, water stagnates, and air is excluded, so that we only get water plants instead of land plants. A cork, stopping the hole in our flower pot, would illustrate this statement. Liebig, in his "Natural Laws of Husbandry, p. 90, says, "A great many fields unsuited, by their constant humidity, for the cultivation of cereal plants and the superior kinds of forage grasses, have been reclaimed by drainage and made fit to produce food for man and beast. . . . A path is opened for the air to reach the deeper layers of the ground, and to exercise upon these the same beneficial influence as upon the surface soil. In winter the earth, at a depth of 3 to 4 feet, is warmer than the external atmosphere; hence the air coming up from the drain-pipes may contribute to keep the temperature of the arable surface higher than it would be without the current of air. The air in the drains is generally richer in carbonic acid than is the case with atmospheric air."

**SEA AIR: ITS FAVOURABLE EFFECTS ON MEN AND VEGETATION.**—All around our coast farm crops prosper (witness the Isle of Thanet), especially wheat and mangolds. Inlanders, when there, imbibe health, and so do our sailors, and well they may, for Liebig tells us in his valuable work, "Chemistry in its Relation to Agriculture," 3rd edition, pp. 80 and 81, touching the volatilisation of sea-water: "It is known also that in sea-storms leaves of plants, in the direction of the wind, are covered with crystals of salt, even at the distance of

from twenty to thirty miles from the sea; but it does not require a storm to cause the volatilisation of the salt, for the air hanging over the sea always contains enough of this substance to render turbid a solution of nitrate of silver, and every breeze must carry it away. Now, as thousands of tons of sea-water annually evaporate into the atmosphere, a corresponding quantity of the salts dissolved in it—viz., of common salt, of chloride of potassium, magnesia, and the remaining constituents of the sea-water, will be conveyed by wind to the land. The volatilisation is a source of considerable loss in salt works." We know that in some coast districts trees cannot thrive, owing to the quantity of salt in the air.

**TREASURES IN THE AIR.**—Liebig, "Modern Agriculture," p. 85: "If all the carbonic acid and ammonia dispersed throughout the atmosphere were collected in one stratum around the earth, and possessed the same density as at the surface of the sea, the layer of carbonic acid would be a little more than eight feet high, and that of the ammonia less than a quarter of an inch. Both are absorbed by plants, and the quantity of these gases in the atmosphere consequently diminishes. Were the whole surface of the earth a continuous meadow, from each hectare (2½ acres) of which five tons of hay was yearly reaped, these meadow-plants would, in 21 to 22 years, exhaust the whole of the carbonic acid in the air, and the whole living creation would at the same time come to an end. The air would no longer support plants—that is, could no longer furnish them with an indispensable condition of life; but we know that careful provision is made for the continuous duration of organic life. Men and animals live on plants. All organised beings have only a passing and comparatively short existence. In the vital processes of animals the food which nourishes them is transformed into its original form; and the same change takes place with the bodies of all animals and plants after death, and their combustible elements re-assume the form of carbonic acid and ammonia. Both of these substances are gaseous, and return to the atmospheric sea, to serve once more for the formation and development of a new generations." p. 87.—"The atmosphere is never at rest; even in the absence of every breeze, it is in continual ascending and descending motion. The food which it gives up to plants in one spot is immediately replaced from another—'from ever-flowing sources.'" And he reminds us that while in some parts of our globe the air is cold, and vegetation at a standstill, in other parts the sun shines brilliantly on a luxuriant mass of growing vegetation. Thus is the atmosphere for ever and everywhere self-arranging and equalising. Men and animals absorb oxygen from the atmosphere, and give off carbonic acid. Plants absorb carbonic acid, and give off oxygen—that which would be death to one gives life to the other. By a good system of ventilation, which permits the carbonic acid to escape, and allows of the entrance of fresh air to replace it, the health of ourselves and our animals within doors would be preserved.

**SEA VEGETATION.**—I may be asked, "What has this to do with British farming?" I reply, stop the supplies of guano, all made from fish, and we should soon awaken to the interest we ought to feel in marine vegetation. But we are unwittingly grateful, for we return to the sea, by our rivers, the food produced by the guano. What a financial mistake! In the deep and wide ocean, where no aid of man is required there is an amount of vitality both of plants and living creatures, as great, or greater than on land. Liebig, in his "Familiar Letters on Chemistry," No. 53, says, "Every one knows that in the immense, yet limited expanse of the ocean, whole worlds of plants and animals are mutually dependent upon, and successive to, each other. The animals obtain their constituent elements from the plants, and restore them to the water in their original form, when they again serve as nourishment to a new generation of plants. The oxygen which marine animals withdraw in their respiration from the air, dissolved in sea water, is returned to the water by the vital processes of sea plants; that air is richer in oxygen than atmospheric air, containing 32 to 33 per cent., while the latter only contains 21 per cent. The oxygen now combines with the products of the putrefaction of dead animal bodies, changes their carbon into carbonic acid, their hydrogen into water, while their nitrogen assumes again the form of ammonia. Thus we observe that in the ocean a circulation takes place without the addition or subtraction of any element, unlimited in duration, although limited in extent, inasmuch as, in a confined space, the nourishment of plants exists in a limited

quantity." We well know that marine plants cannot derive a supply of humus for their nourishment through their roots. Look at the great sea-tang, the *Fucus giganteus*; this plant, according to Cook, reaches a height of 360 feet, and a single specimen, with its immense ramifications, nourishes thousands of marine animals, yet its root is a small body, no larger than the fist. What nourishment can this draw from a naked rock, upon the surface of which there is no perceptible change? It is quite obvious that these plants require only a hold—a fastening, to prevent a change of place—as a counterpoise to their specific gravity, which is less than that of the medium in which they float. That medium provides the necessary nourishment, and presents it to the surface of every part of the plant. Sea-water contains not only carbonic acid and ammonia, but the alkaline and earthy phosphates and carbonates required by these plants for their growth, and which we always find as constant constituents of their ashes. All experience demonstrates that the conditions of the existence of marine plants are the same which are essential to terrestrial plants; but the latter do not live, like sea-plants, in a medium which contains all their elements, and surrounds with appropriate nourishment every part of their organs; on the contrary they require two media; of which one—namely, the soil—contains these essential elements which are absent from the medium surrounding them—i.e., the atmosphere. Is it possible that we could ever be in doubt respecting the office which the soil and its component parts subservise in the existence and growth of vegetables? That there should have been a time when the mineral elements of plants were not regarded as absolutely essential to their vitality? Has not the same circulation been observed on the surface of the earth which we have just contemplated in the ocean, the same incessant change, disturbance, and restoration of equilibrium?

A MATRIMONIAL ALLIANCE.—"MARRY, GOOD AIR."—Liebig says that we are indebted to Professor Way (whom I look upon as one of our most profound agricultural philosophers), and to Messrs. Huxtable and Thompson, for the discovery of the causes of fixation of ammonia from the air in the soil as silicate of ammonia, and I would refer you to Way's able and exhaustive paper on this subject in the Royal Agricultural Society's *Journal*, vol. xiii., p. 123, "On the Power of Soils to Absorb Manure." He says, p. 140, "We have seen the power which soils possess of abstracting ammonia from the air. This power is not confined to periods of rain; it is not even limited to the periodical recurrence of dew. So often as air charged with carbonate of ammonia comes into contact with a surface of soil, so often will that soil be enriched by ammonia to the extent to which the air contains it." Agriculturists should read the whole of this paper, which highly commends both the Tullian and the late Rev. Samuel Smith's system of tillage. In fact, the particles of earth should be rendered accessible to air by cultivation and drainage. We should have a surface kept open, loose, and porous, instead of what we too often see, a dense, unmoved, pasty covering, inaccessible to aëriform fertilisers. I have observed how refreshed root crops appear after a horse-hoeing in dry weather. When we can operate on the soil almost entirely by steam-power, without man and horse-treading, and plough-sole squeezing, our land will be better fertilised. I except from these remarks blowing sands. Let me refer you to a prize essay and very able article on "Action of the Atmosphere upon Newly-deepened Soil," by Mr. Thomas F. Jamieson, Ellon, Aberdeenshire, in the Royal Agricultural Society's *Journal*, vol. xvii., p. 407. At the end of the 66 pages of valuable matter, he concludes amusingly and wittily as follows: "Sir Joseph Paxton, for instance, advises 'that the surface of all strong land should be laid up in ridges during the winter, as the action of frost, by expanding the moisture in it, leaves it, when thawed, in a fine pulverised, friable, or loosened state, by which it is rendered fertile, and ready, immediately after levelling, in favourable weather, to receive the intended crop.' . . . Many other benefits, however, than those of the frost will result. Are the oxygen, ammonia, carbonic acid, nothing? Let the agricultural mind, therefore, be of good cheer; the atmosphere is a force everywhere present. Although his farm may be, like Justice Shallow's 'barren, barren,' he has at least this consolation—'Marry, good air.'" In short, it is an indisputable truth that unless, by good tillage we marry the air with the earth, by allowing them to come together, there will be no fecundity. I mean by earth not only the top soil, but the subsoil. No

one ever did this so effectually as the late Rev. Samuel Smith, of Lois-Weedon, whose crops were inspected by a deputation from this Club. I also inspected them. The air is full of water in the shape of steam (vapour), which is visible as clouds at a certain temperature, and becomes water at the dew-point, so that, after the hottest day in summer, vegetation is moistened with watery dewdrops, and we can sweep the condensed vapour, now water, from the tops of our painted gates. Where the land is kept loose and friable between our root crops, the absorbed vapour, which contains ammonia, fertilises the soil as well as moistens it (see Way), and this explains why cultivating frequently for and between our roots is so beneficial. So it is with steam-ploughed and untrodden fallow. Liebig first discovered ammonia in the air by condensing from it the vapour or steam which contained it. The earth obtains it in the same way by dew and rain. Steam or vapour of water is a great purifier, as I have found it in my great tank. The steam from a boiler burst into a line of factory privies, and thereby sweetened them, although quite an opposite result was feared and expected. Carriers of raw and tainted skins, working in a cloud of steam, are particularly healthy. Steam converted into rain fertilises our soil and subsoil where the land is drained. It displaces air, and is replaced by air.

FOOD-COLLECTING PLANTS AND THE FOUR-COURSE ROTATION.—The fallow, root, and green crops are especially fitted by their abundant foliage for abstracting the aerial treasures, while their deeply-descending, powerful, and abundant roots appropriate the good things of the soil and subsoil. The ample cultivation of the soil, both before and during their growth, permits the earth also to abstract from the atmosphere its fertilising elements. Well may the alternation of green and root crops with cereal crops be esteemed as good and improving agriculture. Liebig ("Modern Agriculture," p. 174) says: "A practical agriculturist (Albrecht Block) is reported to have said, 'A farmer can afford to sell and permanently alienate only that portion of the produce of his farm which has been supplied by the atmosphere. A field from which nothing (meaning the minerals) is abstracted can only increase, not decrease, in productive power.' The axiom (says Liebig) thus enunciated is only a natural law. In the opinion of this truly experienced man, to whom future agriculture will surely raise a monument, is at once expressed the whole foundation and groundwork of rational farming, and all the knowledge that the science of nature can teach the practical farmer." Of course Block did not mean that the farmer should not sell his crops, but that if he did so he should take care to return to the soil all the mineral elements (about 3 to 4 per cent.) which the crops had abstracted from the earth, and which the air could not supply. Butter does not exhaust a soil, for it contains no ashes, but cheese and milk are very exhaustive, and require replacement of minerals, such as bone earth (phosphate of lime), which has been a God-send to cow farmers and cheesemaking Cheshire. On the same principle, putting fat on full-grown animals does not impoverish the soil, but rearing and selling lean stock requires a restitution of minerals (bone earth) by cake feeding. My friend, the late Mr. John Hudson, of Castleacre, was perfectly aware of this practically, and on his naturally weak soil acted accordingly by fattening full-grown animals. The modern system of feeding with cake, which is very rich in minerals, adds fertility to our soil, and releases us from the necessity of a fixed rotation; but, except in very rare instances, recourse should be had to roots and broad-leaved green crops, which permit cultivation, and which collect from the air its fertilising elements. The rich black soils of Russia, which grow fine wheat every year, have insufficient potash for beet-root, which can only be grown by manuring with farmyard manure every fourth year, thus supplying the needed potash. Chemical analysis explains this apparent anomaly. In ordinary farming the straw is returned to the soil, and as the grain carries off but a trifling quantity of potash, there is thus little loss of that mineral. But root crops are great appropriators of potash, as well as other minerals, and therefore the sale of straw and root crops must greatly impoverish the soil. Beet-root growers should consider this. Some soils contain naturally much more potash than others.

PERUVIAN GUANO.—Peruvian guano is very deficient in potash and silicic acid, and is therefore in many instances fertilising, in others exhausting, to grain crops, which, minus their straw, require little potash, but much phosphates. It supplies the latter, and by its excess of ammonia renders available the

straw ingredients in the soil, but being deficient in potash it is unsuited for potash plants, such as mangel, turnips, potatoes, or other potash plants, when grown on soil deficient in alkalies. Good covered-yard manure from animals fed on roots, hay, and cake, will never exhaust land, for it contains all the elements for any crop. I apply it for my root crops, and where these are drawn off use Peruvian guano and salt for the subsequent corn crops. Phosphate of lime answers admirably for turnips, provided the soil contains potash; but where the soil already contains enough phosphates, adding more gives no return for the outlay. On one acre of mangel 5 cwt. of it, added to my ordinary manure, gave no increase of crop. It is profitable to leave a portion unmanured, to test results. The excess of ammonia in guano enables us to take out from the soil its alkalies, so that selling sugar-beet off the farm must prove gradually exhausting, especially in non-potash soils, unless amply supplied with straw manure. Liebig says, at p. 225 of his "Modern Agriculture," the excrement of man contains the full complement of mineral elements removed in grain and flesh; but in guano there is wanting a certain quantity of potash to replace fully these ash constituents. Hence, on soils poor in potash (in lime and sandy soils) the action of guano after a certain time perceptibly diminishes. . . . The continuous use of guano exhausts even this land. . . .

The following passage may be useful to sugar-beet and potato growers: Liebig, "Modern Agriculture," p. 225—"In the average produce of 3 hectares of land, the potato-grower sells and takes away from the soil the grain constituents of four wheat crops, and upwards of 500 lbs. of potash in addition. In the produce of 3 hectares of land, the beetroot-grower sells and takes away from the soil the grain constituents of four wheat crops, and 10 cwt. of potash besides. The single sugar factory at Waghlenich supplies to commerce every year 200,000 lbs. of salts of potash, obtained from the residue of the molasses, and which were originally derived from the beet-root fields of Baden. . . . In potato and beet-root fields, poor in alkaline elements, farmyard manure, which abounds in alkalies, answers better than guano."

WHAT SCIENCE DOES.—Science explains and confirms successful practice, and also warns us against unprofitable agricultural experiments and practice. It would also prevent or detect much fraud in manures and cake, could farmers be persuaded to consult the agricultural chemist. It should be, and is, a safe guide, where untrodden paths are many and intricate. Had Mr. Hemming had such a guide, he would not have attempted, and failed, to grow beans after turnips drawn off, tops and all, on a field poor in potash (see his Prize Essay in Royal Agricultural Society's *Journal*, vol. xiii., p. 409). Science confirms and approves of the rotation of crops, such as the four-course shift, but it also explains why in certain highly farmed and rich soils more than one grain crop can be taken in succession. It tells us that our broad-leaved plants obtain and condense from the atmosphere much ammonia, which is beneficial to the cereal crops. It also explains how the powerful and numerous roots of bulbous plants search for and bring up from the soil and subsoil food which cannot be obtained by the weak-rooted cereals. It also warns us that if these roots and clovers are not consumed on the farm the soil becomes more quickly exhausted, unless fertilised by extraneous means. Sugar-beet growers should consider this. Nitrate of soda, now so much used, acts favourably by dissolving and diffusing phosphate of lime, where it is found abundantly in the soil and subsoil; but too often it only gives us a dark green colour, where the land is deficient in phosphates. It is exhaustive in its nature, where, unaccompanied by other manures. The action of these salts and also of common salt, is fully explained in Liebig's "Modern Agriculture," p. 661. Science renders unnecessary, and would prevent, thousands of costly and unsuccessful practices or experiments in agriculture. I, therefore, tender the following advice to my young farming friends: When you are calculating your probable requirement of capital on taking a farm, be pleased to put down in the list £30 to £50 for an agricultural library. If you are intelligent, and desirous to acquire knowledge of your business, it will be the most profitable part of your investment, especially the 30 odd volumes of the *Journal* of the Royal Agricultural Society, Davey and Liebig's works, and several others, as specified in my book, "How to Farm Profitably."

THE WHEAT-GROWING DIFFICULTY.—CHEMICAL ANALYSES AT FAULT.—This matter is so important that I strongly re-

commend a perusal of the whole chapter viii. in Liebig's "Modern Agriculture." Chemical analysis can tell that we have in our soil the inorganic materials for 7½ full wheat crops, but it remained for Liebig's sagacity to explain why that supply is insufficient to produce even one full wheat crop. This puzzled and perplexed Professor Way, who says in his paper, Royal Agricultural Society's *Journal*, vol. xiii., p. 142, after giving a table of the mineral constituents (277 lb.) of a crop of 35 bushels of wheat and two tons of straw, "the fact is that there is an almost unlimited supply of the mineral requisites of plants in soils, but that the great agricultural problem is to get at them to render them available; and here again, it seems reasonable to suppose that abundant cultivation, which lets in carbonic acid and ammonia to the soil, may, by that very act, be providing the potash and phosphate of lime which the former, and the silica which the latter, are endowed with the power of dissolving, and presenting to the roots of plants." The whole of Way's paper is most instructive. Liebig says, in "Modern Agriculture," p. 113: "If these three-fourths of an average crop do not yield to the agriculturist a sufficient excess of income over expenditure, if they merely cover his expenses, then the crop is no longer remunerative. He considers the field to be now exhausted for wheat crops, although it still contains 7½ times more food than an average crop yearly requires." And at p. 110 of the same work, he explains the matter fully by saying that "Each rootlet absorbs, according to its diameter, the food with which it comes in contact on its way downward." And as the wheat roots only come in contact with one granule out of 100, the 99 are unavailed of, for he states that the mineral food elements are, as it were, painted on the outside of each granule, and are unavailable to the plant, unless the rootlet touches it. The whole subject is very interesting and instructive, showing why we can grow many crops of rye where a remunerative crop of wheat cannot be produced. It appears to me that Rivett bearded wheat has a much more power of development of roots than the fine white wheats. This, I presume, is the reason why I can grow a fine crop of Rivett wheat after a crop of white wheat, on land which has been in clover. The wheat plant has a very feeble development of roots, and for this reason the soil suitable for its growth should be abundantly fertilised with its needful elements. Liebig says ("Modern Agriculture," p. 143), "Chemical analysis has, with its rigorous methods, proved that of thousands of fields, there is scarcely one which contains more than 1 per cent. of the ash-constituents of plants—of clover for instance—in a state available to the wants of plants." And then he gives details of a vast number of analyses. Half per cent. in a soil ten inches deep, would be five tons of mineral food per acre, a very large quantity compared with the plant requirements of a single crop. Liebig, p. 111: "According to our assumption, which probably hardly reaches the full amount really present, an acre must contain from the surface downwards, in order to yield an average crop of wheat, at least 4,400 lb. of potash, and 2,200 lb. of phosphoric acid." Liebig reckons an average crop of wheat to be 29 bushels of grain (1,764 lb.), and nearly two tons of straw (4,410 lb.). This is a greater proportion of straw to grain than is grown in a fine season on good English farms. Liebig estimates the grain and straw together to contain only 220 lb. of mineral substances, or less than a thirtieth part of the phosphoric acid and potash present in the soil. So powerful is the attraction in the soil for the three most important elements of plant-food, potash, phosphate of lime, and ammonia, that an acre of pulverised land ten inches deep can withdraw from a solution 4,000 lb. of potash and 2,000 lb. of phosphate of magnesia and ammonia ("Liebig's Modern Agriculture," 33). Dr. Voeleker says, at p. 545, vol. xix., Royal Agricultural Society's *Journal*, "It is true that stiff clays are not always very productive, but generally they contain within themselves all the elements of fertility, and it is only for want of proper cultivation that their productive powers are not fully developed. . . . Whatever the agriculturists may think of the Lois-Weedon system of culture, the Rev. Mr. Smith certainly has the great merit of having shown, with indefatigable perseverance and zeal, that certain clay soils only require constant working in order to yield consecutive crops of wheat for a number of years." Liebig says, at p. 83 of the "Natural Laws of Husbandry," "The work performed by the plough may be compared to the mastication of food by those special organs with which Nature has endowed animals. . . . It acts beneficially by preparing the existing nutri-

ment for the support of a future crop. . . . The ground must not be so adhesive as to prevent the spreading of the roots." Accepting Liebig's calculation that a full wheat crop of 40 bushels can only take one-hundredth part of the food provided for it in the soil, we can readily comprehend why for 34 years in succession, without manure, Mr. Lawes grew an average of 14 bushels of wheat per acre. No doubt he will continue to do so for many years to come, perhaps at a slowly and gradually diminishing rate of production. In our colonies, and the early colonised States of America, 50 to 80 years of continued wheat-growing have reduced the yield to a minimum of a few bushels per acre. The growth and sale of root crops would have completed the work of exhaustion very much sooner. You all know the value of lime and chalk, and also of clay burning, as a means of rendering available plant-food in the soil, so that I need not detain you on these points. Where lime is cheap and abundant, its too frequent use has, in many cases, exhausted the soil. Nor need I dilate on the national folly of wasting our town sewage; for that will be remedied some day by public common sense.

**PROUT AND MIDDLEDITCH'S FARMING.**—Messrs. Prout and Middleditch's farming has so intimate a relation to the subject which we are now considering, that I venture to make some remarks upon it, first expressing my admiration and appreciation of the great public benefit which must accrue from such an extensive, judicious, and profitable investment of capital, thus affording a much greater employment for human labour, and a greatly increased production of food. Under-drainage and deep steam cultivation have permitted the free and fertilising circulation of air within the soil. In the case of Mr. Prout, the manuring (under the advice, I believe, of Dr. Voelcker) is with artificial manures, and is thus an illustration and verification of Liebig's great mineral theory. No doubt the continued sale of straw will ultimately necessitate an application of potash. Judging from my own experience, I should prefer, instead of continual corn crops, a rotation; for, by a variety of crops and animals, we not only avoid having too many eggs in one basket, but adapt our farming to the wants of the people as well as to the varying climatic conditions. Witness this year, when barley is a better and more profitable crop than wheat. Oats, too, are good. The work of the farm is better distributed by a rotation, and the land better fertilised. Nor can I commend the manner of disposal of the crops, on the score of profit, and of other considerations. The purchasers must derive an intermediate profit which should belong to the farmer. The continuous corn cropping system deprives the land and the farmers of the treasures of the air, especially the costly ammonia. Liebig says (at p. 329, "Natural Laws of Husbandry"), "The fodder plants, which thrive without rich nitrogenous manure, collect from the ground and condense from the atmosphere, in the form of blood and flesh constituents, the ammonia which is supplied from these sources; and the farmer, in feeding his horses, sheep, and cattle with the turnips, clover, &c., receives, in their solid and fluid excrements, the nitrogen of the fodder in the form of ammonia, and products rich in nitrogen, and thus he obtains a supply of nitrogenous manures or nitrogen, which he gives to his corn-fields. It is easy to see that the accumulation of nitrogenous food by farmyard manure in the uppermost layers of the ground, so very important for the perfect growth of cereal plants, must chiefly depend upon the successful growth of fodder plants." With regard to manures, the cost of artificials is very considerable, and, according to Mr. Lawes', Dr. Voelcker's, and my own opinion, greater than that of manure made by fattening animals. The continuous fertility of the soil would undoubtedly be better preserved by the rotation of crops, but much capital would be required, and perhaps a more troublesome mode of management. Already I perceive by the published statements in the Royal Agricultural Society's *Journal*, Part I., 1875, that the same difficulty is experienced on these farms as to the continuous growth of white, glassy wheats, as I have observed on my own farm when I attempted the too-frequent growth of that kind of wheat. Rivett wheat is, therefore, substituted. I find Rivett does well after white wheat, and the late Rev. Samuel Smith, of Lois-Weedon, was obliged to substitute Rivett for other wheat, because it could be got to stand better. The silica or glassy coating of the white wheat is not, I presume, dissolved or rendered available in time for such successional crops. On this matter I recommend a study of Professor Way's paper in vol. xiii., p. 137, of the Royal Agricultural Society's *Journal*

We can understand by that paper why salt is so beneficial to wheat crops; it renders both those and barley stiff in the straw. But while I commend the feeding of animals as the most profitable mode of obtaining manure, it must, in the case of cattle, not be in open, uncovered, and unpaved farmyards, which, in time to come, no landlord will permit on his estate. It is impossible to read Dr. Voelcker's able article on this subject, in the Royal Agricultural Society's *Journal*, vol. xvii., p. 191, without being convinced that the open and unpaved yard and uncovered dung-heap practice is one that deprives the land of much valuable manure, and the farmer of much profit. That single volume (xvii.) contains several treasures for the intelligent young agriculturist. But I fear it is too often unread and even uncut; for, said a farmer of 500 acres to me, "I always get the journal, but never read it." I thank our able secretary (Mr. Jenkins) for now having its leaves cut. In conclusion, apologising for this very long story, I now bid you, my brethren of the Farmers' Club, adieu—for a time—perhaps for ever—for, in my 74th year, I consider my agricultural career as virtually terminated. I shall therefore arrange with the Messrs. Routledge, of Broadway, Ludgate-hill, to publish, cheaply, in three volumes, under the title of "How to Farm Profitably," the records of my sayings and doings, extending over thirty years, and occupying over 1,400 closely-printed pages. My sole object in saying and doing this is to promote and stimulate agricultural improvement, which has ever been my earnest desire. Here let me thank those journalists who have so kindly forwarded my views by inserting them in their papers. Many years have elapsed since I joined this Club. It has prospered, and will continue to do so; for it has gradually advanced from mere practice to science and theory, with which correct practice must always agree. Once more I bid you all God speed.

Mr. C. S. READ, M.P.: Mr. Chairman, I rise to make two or three remarks on Mr. Meech's paper, which, as usual, like all that emanates from his pen, and generally from him, is very interesting. He has pressed very persistently the mineral theory on Baron Liebig. He tells us that the chemist and the theorist is a better farmer than the practical farmer, but I do not believe that any practical farmer has made more mistakes in agriculture than that great and glorious man, Liebig. If anybody has ever tried the mineral manure which he recommended, I am positive that he would never try it again, except with the idea of an experiment; because I remember, in my young and ardent days, having a "go" at this wonderful mineral manure, and the result was most disastrous. I think that modern experiments in farming have really dissipated some of those wonderful theories which chemists have formed. What did Mr. Smith, of Lois Weedon, do? He continued to grow wheat, not year after year certainly, but every alternate year, and produced very wonderful crops, removing the straw and applying no manure, simply by fallowing one portion of the land and bringing the mineral constituents of that land into a state in which they can be made available for the wheat; but, according to Liebig's theory, Mr. Smith ought to have grown no wheat at all. In the course of a few years it would have been exhausted, and he ought to have supplied the manure which contains those constituents; whereas I contend that in the clay lands of this country we have a vast fund of mineral manure, and we need not think so much about it as the other portions of the manure. Mr. Meech has touched lightly on his favourite scheme of manuring the subsoil, but he did not tell us how we were to do it. I contend that you do not want to manure the subsoil. Manure the upper soil, and it will certainly find its way down into any subsoil that is drained, whether naturally or artificially. My attention has been recently called to the chemical constituents of water from underdraining on arable or pasture land. In all of these there cannot be any doubt that a certain portion of the volatile manures is washed away by the heavy rains; and, after the enormous deluges of rain which we have lately had, I am sure that in the spring you will find that some of the manure which you have applied to your wheat crop has gone into the next river rather than having been retained to fertilise your crops for the following season. Why, if the water goes through the soil and the subsoil to the depth of four feet, and this is found to contain certain mineral matters which you desire to retain, surely in its passage through the subsoil, if it is good for anything, a certain amount of manure will be retained there; therefore our subsoils may be manured without actually applying manure to the subsoil. With regard

For steam cultivation I believe that Mr. Mechi does not steam-plough his ground.

Mr. MECHI: Yes, I do.

Mr. READ: But digs it.

Mr. MECHI: I have steam ploughed 120 acres in the last two years. Originally I began by digging.

Mr. READ: Well, in June or July last, I saw the digger doing good work on his grounds. So that he has not abandoned it. The digger is the best implement, for with it you move the subsoil and turn up only a portion of it, though quite enough for any tenant-farmer to manure. If, as Mr. Mechi tells us, you should turn up the subsoil, you must be careful how you do it. You must not do too much of it at once, but only a little of it at a time, and even that little will, in all probability, require a heavy dressing of manure before it would produce good crops. One thing to which Mr. Mechi called our attention was that we should not stop the supply of guano; but I doubt whether that will not stop without action on our part. I fear that we shall soon exhaust the whole of the guano supply, that the best of it is already exhausted, and that the quality of the miserable stuff which we now receive is utterly unreliable. One cargo may be very good and the next exceedingly bad; and, as the Peruvian Government insist upon its being all sold at one price, I venture to say that the sale of guano will very much diminish in this country, and that, therefore, practically, the supply will stop. I do not think that I need detain the meeting further. We are much indebted to Mr. Mechi for giving us such valuable information as he has done to-night, and for making such copious extracts from learned authors. He has said that when a young farmer begins business he had better devote £50 to the purchase of an agricultural library. He also said that it would be the best investment possible if he were to purchase all the volumes of the *Royal Agricultural Society's Journal*. Now, as in my younger days I was a contributor to a considerable extent to the *Journal*, I hope I may be excused for saying that if any body will give me a very small amount of money for mine, and I have them from the first, I shall be happy to sell them to any young farmer (Hear, hear, and laughter).

Mr. T. C. SCOTT, of 19, King's Arms Yard, Moorgate-street, E.C., and Knappill Farm, Surrey, rose and said it was generally considered that one volunteer was worth two pressed men, and he was afraid he stood in the latter unenviable capacity, as he had only risen in response to the chairman's third time of asking. Mr. Scott continued: They had had some very interesting practical remarks from Mr. Read in the way of comment on Mr. Mechi's paper. Some of those remarks, however, appeared to him to be founded in mistake—for instance, when he says that, in corn growing, all the constituents were taken from the soil and none from the atmosphere. In speaking of Mr. Prout's successful corn growing, extending over 13 or 14 consecutive years, Mr. Mechi did not, he believed, say that Mr. Prout did *not* draw anything from the riches of the atmosphere (Hear, hear). The whole secret of Mr. Prout's success was, on the contrary, that he *did* draw the main constituents of plants from the atmosphere in the shape of nitrogen and ammonia, and only restored to the soil, through artificial manures, the minerals which the atmosphere could not supply.

Mr. C. S. READ, M.P., said he did not speak of Mr. Prout's system, but of the Lois Weedon system, under which no manure was used.

Mr. T. C. SCOTT continued: He had learned from science as well as from practical experience that the soil contained an almost inexhaustible quantity of mineral matter, and that plants took away an ascertained amount, and, therefore, it appeared to him quite clear that if they restored that artificially they might go on growing corn crops or any other for ever. He believed that abundant mineral substances existed in almost all, except peat soils; but then they required to be commuted and disintegrated, by stirring and exposure to the atmosphere, to render them fit for the immediate food of plants. Mr. Pratt, of Yorkshire, Mr. Middleditch, of Wilts, and other perpetual corn growers, taught them the necessity of constantly stirring the soil to enable it to imbibe the manurial constituents of the air, and to disintegrate the minerals in the soil itself. The disintegrated granite soils of Aberdeenshire were well known to produce roots that made more and better beef and mutton than those grown in the South of England,

with the addition of corn and cake. So much for the mineral theory. Having always obtained his living from the practical cultivation of the land, he was more likely to eschew scientific theories than applaud or adopt them; but, by inductive reasoning, scientific men have already found out for us many sound conclusions, which could only have been arrived at by the purely practical man by a long course of perhaps ruinous field experiments. In the practice of Mr. Prout, what do you see? Why, immediately after harvest and before the shocks of corn are carted off the field, the steam plough rolling the land about to enable it to fertilize itself by the absorption of ammonia from the atmosphere. Then, under the guidance of our scientific president, Prof. Voelcker, Mr. Prout applies a dressing of mineral manure, and another little stimulant in spring; and the result has been, for the last three years during which he had inspected the crops, that he (Mr. Scott) had been ready to challenge England for equal crops on from 100 to 400 acres grown in any other way on similar soils, and this without producing an ounce of animal food or applying an ounce of animal manure. The system was not one that could be applied to the whole country, but it was one which should be considered dispassionately by all of us, with the view of seeing whether profit could or could not be derived from it on some particular farms (Hear, hear). From his schoolboy days he had had the pleasure of visiting and inspecting Mr. Mechi's farm many times and at all seasons, and had seen many excellent crops grown on the opposite principle, namely, that of heavy manuring. Now, although he had always consistently differed with Mr. Mechi on many practical points, this had never made any alteration in their friendship (cheers). But at one time he had agreed so entirely with him in regard to cattle feeding and manure, that he had gone so far as to say in a letter in *The Times*, that if we were enabled and induced by a prohibitory duty to produce all the meat we consumed we could then grow all the corn we required. Having been tutored by a tenant-farmer, who never had fewer than from 140 to 250 head of cattle tied up, and having since then had many head of cattle fattened under his eye, he had found, as a rule, that the main compensation for the cost of their maintenance has been simply their manure, for the subsequent production of cereal and other crops. Even now, when animal food is at such an enormous and still rising price, he (Mr. Scott) questioned if their is much direct profit in making beef and mutton, unless the feeder runs his own stock. But whether cattle pay, or are indispensable as manure makers or not, the question is one that should be discussed and not scouted. Whether it is better to produce manure by the maintenance of live-stock or to purchase it in the market, in the shape of sulphate of ammonia, nitrate of soda, superphosphate of lime and other things, was partly a question of profit and partly one as to maintaining what may be called the normal fertility of the soil. It was, however, hardly worth while at present to discuss that matter, because 90 per cent. of the farmers of England were in such a state of thralldom, or so tied down by ancient usages, that they could not do as they would, nor avail themselves of the discoveries of science, until there was perfect freedom of action. Those who had the command of sufficient capital, and yet were not allowed full swing for their talents and enterprise, could not be expected to show much interest in the development of the resources of the soil (Hear, hear). He well remembered hearing Professor Low, of the University of Edinburgh—a man who had written a book, designated the "Elements," but entitled to be called the Bible of Agriculture—ridicule the pretensions of science, especially of chemistry, and tell his pupils to rely solely on the beaten tracks of practical experience, and yet since his day chemistry had specially become the handmaid of practical farming. Another remarkable Scotchman, however, antecedent to Low, Lord Kames, a judge of the High Court of Justice as well as a great agriculturist, took quite a different view of what science would do for us, and predicted that the time would arrive when farmers would be enabled to carry to the field, in their hats, sufficient manure for an acre, and he was subjected to the witty retort that when that time came farmers "would carry back their crops in their waistcoat pockets" (laughter). He (Mr. Scott) was a great advocate for looking over the hedge, and seeing what the rent and tax-paying farmers of England were doing; but their most successful operations may have cost them or their predecessors a lifetime of floundering experiments; whereas science enables us to arrive at conclusions by a shorter



cut. Witness the discovery by the almost prophetic genius of Liebig of how to dissolve bones and render them fit for the immediate food of plants—before which we were obliged to wait years for their decomposition and action, and waste the interest of our capital besides. Geology, meteorology, and many other sciences have also aided, and continue to aid us in our business in the cultivation of the land. These circumstances show the mastery that mind had already gained over matter, and leave no man at liberty to dogmatize as to the future. But it is only he who, from time to time, throws the plummet into the intellectual or scientific ocean, who can tell of the vast subterranean current that is flowing so silently but irresistibly along.

Mr. H. NEILD (The Grange, Worsley, Manchester) said the discussion which they had had that evening had taken them at such very high latitudes, that common-place people like himself might well feel a little diffident in rising to make any observations; but he wished to say one or two words. It appeared to him that all the wonderful appliances of science in reference to the land of which they had heard required the greatest consideration from those who used them in connection with the variations of soil and climate, which were spread over this country; and they should all be guided, to a great extent, by the experience gained in their respective districts. He had been very much struck by what he might call the glib manner in which Mr. Mechi had spoken of the necessity of manuring for the potato crop. He understood that gentleman to say that a potato crop absorbed four times as much as a wheat crop, alluding especially to Cheshire. In that county, with which he was well acquainted, they were accustomed to grow potatoes and wheat, wheat and potatoes, one after another, year after year; and the finest crops of wheat in Cheshire had been grown after potatoes.

Mr. MECHE: With town manure.

Mr. NEILD: Without any manure. Sometimes potatoes were followed by clover or seed; and he believed that if Mr. Mechi were to see the crops he would confess they would compare favourably with some of the best results obtained in the South of England. He (Mr. Neild) was delighted when the gentleman who preceded him pointed out how that discussion involved the question of freedom in farming. [A VOICE: "Question."] He believed he was speaking to the question. They came there for the sake of instruction, and he must acknowledge that he was indebted to the discussions of that Club for a great deal of most valuable information. He could, indeed, wish that the report of those discussions were disseminated far more widely than they were among the farmers of England—though he believed that even without that "the bread cast on the waters would be found after many days." These discussions had taught him, among other things, that they should always bear in mind that differences of soil and climate had a great deal to do with success in cultivation; and when they compared the soil of Cheshire with that of Norfolk they must feel that "wisdom was justified" in the practice of such different counties.

Mr. MECHE inquired how much town manure was used in the cultivation of potatoes in Cheshire.

Mr. NEILD said that Cheshire farmers used as much as 25 tons per acre.

Mr. CLEMENT CADLE (Gloucester) whenever he listened to Mr. Mechi, expected to hear a great deal that was valuable; but he must confess that on that occasion he felt rather disappointed, having hoped that he would enter a little more fully into the question of the benefits of cultivation. He had no wish to criticise the paper, but there were one or two points on which he would have liked to hear more explanation. Mr. Mechi had told them that 76 per cent. of the meat they produced was water, and we know that from 80 to 90 per cent. of our root crops is also water. Supposing that out of four tons of meat no less than three tons consisted of water, and out of 20 tons of roots 16 to 18 were water, it appeared to him that what they should do was to banish the mineral theory much more than they did, and endeavour to ascertain how they could convert liquids and air into solids (Hear, hear). As regarded the scientific part of the question, it seemed to him that what they had to consider was whether the mineral theory was not more like the oil for the machinery, or the water Mr. Mechi had alluded to required for building a house. He (Mr. Cadle) had long thought, and what he had heard that night still more confirmed it, that we should look more upon a farm as a machine for manufacturing food from air and water than we

do. Thanks to Dr. Voelcker, he (Mr. Cadle) had a little knowledge of chemistry, and it was with great pleasure that he heard Mr. Lawes introduce there a subject kindred to that some years ago. On that occasion he showed, by means of tabular statements, that during twenty-five years he had been enabled to produce on the same land an average of fourteen and a-half bushels of wheat per acre every year. That was just about half the quantity which was produced on the average throughout the kingdom by growing wheat every other year; and the fact that the average of the kingdom was about 28 or 29 bushels per acre showed, he thought, the great advantage of growing wheat in this way, and thus saving seed and labour; and it also showed that the rain, air, frost, and sunshine were only sufficient to change into plant-food what was required for this quantity of wheat. It seemed to him that the mineral theory also required consideration, from the fact that Mr. Lawes, while showing that the actual produce of his land was fourteen and a-half bushels per acre every year, without any manure at all, he, by simply applying a small quantity of nitrate of soda, permanently raises the produce to 25 bushels per acre, or at the rate of 72 per cent. Can any one believe implicitly in the mineral theory after this? About 18 or 19 years ago he (Mr. Cadle) was a pupil of Dr. Voelcker. They all knew what a pleasant man the Doctor was—(laughter)—and he recollected his saying one day to a number of students, "Gentlemen, if you want to make your fortune, you have only to invent something to dissolve the silicic acid out of the sand, and you can apply everything else required, and grow whatever crop you please." This invention has not yet taken place, and we are still dependent upon the rain, air, frost, and sunshine, and so the more we horse-hoe and cultivate our land the better crops we grow. He must repeat that, in his opinion, the great question for them to consider as farmers was how they might better convert water into solids by cultivation or otherwise (laughter).

Mr. F. TALLANT (Easebourne Priory, Midhurst) said Mr. Mechi had told them in effect, that in order to make a successful farmer you must pass through Cirencester College, and buy £50 worth of books. He, on the contrary, thought that in the present aspect of affairs, the best education for a farmer was practical experience, and that a young man who meant to get his living by a farm should learn how to draw a straight furrow, how to work drills, and how to use in a proper manner the various implements with which he had to deal. They all knew that the labour question was one of the most difficult questions of the day, and without wishing to utter a word against the results of chemical experiments, he must say he was quite sure the most successful farmers of the present day were those who were most thoroughly acquainted with the nature and value of the operations they had to perform, and that young farmers would do well to imitate them, in that respect.

The CHAIRMAN, in closing the discussion, said: Gentlemen I wish first to express the great pleasure I have felt in listening to Mr. Mechi's paper. Mr. Mechi's remarks are always of great interest, because they are so suggestive, because they make people think and bestir themselves, and give them something to talk about. Anything which tends to destroy the lethargy which prevails in large portions of the agricultural community must be very useful. In this respect Mr. Mechi is certainly one of the best friends that English agriculturists have ever had, and I am extremely glad to hear that he is going to publish a collection of his writings on farming (cheers). There has been a good deal said this evening about the mineral theory; and perhaps you will bear with me if I make a few remarks on that subject—(cheers)—a subject which has, I think, been very much misunderstood, and has been discussed in what I may call an agricultural party spirit. Now what is the truth as regards the mineral theory? That theory is in itself perfectly correct. All that Liebig said is that in the case of certain crops certain mineral manures are essential to the bringing the crop to perfection. Without a certain amount of lime, potash, phosphoric acid, sulphuric acid, and so on, you cannot, according to this theory, grow wheat to perfection, and the same may be said with regard to other crops. This theory is entirely confirmed by the common experiences of farmers in every district. Try for a succession of years to grow a wheat crop on poor, light land, and you will utterly fail, if you make use of sulphate of ammonia, or nitrate of soda, and if the soil does not contain the mineral constituents which are necessary to bring the



grain to perfection. I think, therefore, that Liebig rendered great service to agriculturists by pressing on their attention the fact that certain mineral substances are as absolutely necessary for the growth of plants as air, water, and moisture. But it is one thing to announce a theory and another to apply it (Hear, hear). Where Liebig failed was in the application of his theory; and I am sure that if he had had the good fortune, which I enjoyed for 14 years, to live in the midst of a purely agricultural district, having had during that period comparatively little intercourse with scientific men, and a great deal of intercourse with thoroughly practical, sound, intelligent, and experienced agriculturists, he would not have made the mistake into which he fell—the mistake of applying the theory through what I may call, in plain, homely language, thick and thin. We all know that however good a theory may be, it cannot always be adopted to its full extent; that it requires to be modified, according to varying circumstances and conditions, in order that it may be properly applied. We have a practical illustration of this in Mr. Prout's farm. I have visited that farm almost every year for several years, and have watched with the greatest interest the results which Mr. Prout has realised by his peculiar system of farming. In many of his fields he has grown wheat year after year, and if he were to sell his land to-morrow it would fetch a considerably larger amount than he gave for it. So far from deteriorating he has really improved it by his system of cultivation; or, far from any elements of fertility having been withdrawn from it, it has arrived at such a state of fertility, that he asked me not long ago whether he might not cut down the bill for artificial manures and yet realise the same as he had done for years. Now, Mr. Prout does not go on the theory merely of applying mineral manures, he depends mainly upon nitrogenous matters. He uses dissolved Peruvian guano for his lighter land, and nitrate of soda for his heavy land, and he is mainly dependant upon these for his nitrogenous matters in the growth of heavy crops of corn year after year. I have no doubt that if he should at any time find it desirable to alter his course of farming, and take to a course of ordinary cropping, he would be able to grow as heavy crops of roots, and as fine a crop of clover as any man in England. Indeed, I have seen as heavy crops of sainfoin and clover on his farm as you could find anywhere; and he has told me that last year, wishing to supply a few cows, he grew as many as 60 tons per acre of mangolds on his wheat land, and that he also obtained £17 an acre for his clover. That does not look as if the land were exhausted. You will see, therefore, that the mineral theory

is not applicable in Mr. Prout's practice. There are soils which have almost inexhaustible stores of mineral matters; but, as Professor Way truly remarked, the difficulty is to get at them (Hear, hear). The whole policy of farming has for its object to convert inexpensive elements of the soil, air, and manure, into organic vegetable produce. Now, however you may effect this, whether it be by artificial manures, or by deeper ploughing, or by superior feeding, in every case you only realise a profit when you convert something of less value into something of greater value. In seeking to do this, we are dependent on the nature of the locality, the circumstances and conditions of the soil; and I believe there could be no greater mistake on the part of scientific men than to lay down fixed and definite rules. At the same time, I would not speak disparagingly of any of the experiments of scientific men, however much they may have been mistaken in their practical application. There is at the present time a movement in favour of inducing men to institute practical experiments. I must say that I do not expect that such practical good will arise from such experiments; but yet I would be the last man to say a word against them, because I like to hear of some kind of experiments which tend to open the eyes of the understanding and the mind of agriculturists, and to rouse such people from their dormant condition. Nothing can be more hurtful than stagnant water in soil, and nothing can be more hurtful to the mind of any person, be he an agriculturist, or whatever may be his avocation in the world, than to be satisfied with the existing degree of advancement, and "rest and be thankful" (laughter). I hope that we shall never arrive at that state; and, therefore, though I may differ from my friend Mr. Mechi, I always hail with pleasure a paper from him, and I am sure the members of the Club who are present will heartily join in supporting the vote of thanks which I now move for the able paper with which he has favoured us this evening (cheers).

Mr. C. S. READ, M.P., having seconded the motion, it was put and carried.

Mr. MECHE, after returning thanks, alluding to the remarks made by Mr. Read respecting the *Journal* of the Royal Agricultural Society, observed that it contained the essence of the results of the studies of hundreds of men who had devoted their lives to the improvement of agriculture, and that it was a treasure-house of instruction to those who perused it.

On the motion of Mr. H. CHEFFINS, seconded by Mr. Mechi, a vote of thanks was given to the chairman, and this terminated the proceedings.

## THE GENERAL ANNUAL MEETING

TUESDAY, DECEMBER 7, DR. VOELCKER IN THE CHAIR.

The following report from the Committee, with the balance-sheet, was received and adopted:

During the past year seventy-six new members have joined the Club; the annual subscriptions received are also slightly in excess of those on the previous balance-sheet, while the arrears have again been closely collected, and the cash at present available in the bank is larger than at the last audit.

When it is borne in mind how long and how directly the question of English Tenant-Right has been associated with the proceedings of the Club, it has naturally followed that with a bill on the subject before Parliament, the business in the earlier part of the year turned to this measure. At the March meeting Mr. James Howard read a paper on Freedom of Contract, in which the principle of Tenant-Right was advocated as one of the chief points. On the next day a deputation from the Club, introduced by Sir John St. Aubyn, M.P., had an interview with the Premier, when the right of the tenant to compensation for unexhausted improvement was urged, not only as a farmer's question, but as one of public interest. At the April meeting Mr. Henry Neild again referred to the matter in his address on Freedom in Farming; and in May

Mr. R. H. Masfen spoke directly to the Agricultural Holdings Bill, when the following resolutions were passed:

That, in the opinion of the Farmers' Club, the Agricultural Holdings Bill, owing to its permissive character, is valuable only as a concession to the principle of Tenant-Right, the necessity of which was demonstrated by the Duke of Richmond in introducing the bill, and admitted by the Premier in his reply to the deputation from the Club. It is therefore submitted that, in order to carry out the principle thus recognised, the Government should make the Act practically effective by striking out Clause 37, and otherwise amending the measure. This Club also desires to express its conviction that any legislation which only unsettles the existing relations of landlords and tenants, which does not fix them in a secure and uniform basis, would be more likely to prove injurious than beneficial to the great body of tenants holding from year to year.

The Act, however, stands as the first recognition of the principle by the Legislature, a step not without its weight, as already not without effect. In July a special meeting of the Committee was called, at the instance of Mr. James Howard, to consider the proposed amendments offered in the House of

Commons to the bill, and protests entered against a number of these in a report which was circulated previous to the passing of the Act amongst the members of the Government and of the House of Commons.

At the February meeting Mr. Lawes read a paper on the more frequent Growth of Barley, and subsequently invited the Committee to inspect his experiments at Rothampstead, where a small party was hospitably received.

The Committee has received the following communication from the Directors of the Agricultural Hotel Company: "At the last meeting of the shareholders of this Company much dissatisfaction was expressed at the present arrangement with the Farmers' Club, and the general feeling was that the present terms were not only wholly inadequate for the accommodation given, but that the rooms now occupied by the Farmers' Club were greatly needed for the business of the hotel, and the shareholders therefore considered that the agreement should terminate."

Notice was accordingly issued by the Directors of the Company to the Committee of the Club to give up possession of the rooms on March 25th, 1876, in accordance with the terms of the agreement. The Committee has, however, engaged rooms at the Caledonian Hotel, Adelphi-terrace, upon which it has been thought better to enter on the 1st of January, 1876.

Mr. Thomas Horley, jun., of the Fossa, Leamington, has been elected Chairman of the Club for 1876.

The following members of the Committee, who went out by rotation, were re-elected: J. Bradshaw; W. T. Brown; Alfred Crosskill; F. L. Dashwood; T. Hemsley; T. Horley; R. Leeds; J. J. Mechi; E. Sherborn; G. Smythies; W. Thompson; J. Tyler; J. Weall; J. Wood.

The Auditors, Messrs. T. Willson, N. Rix, and the Rev. G. Smythies were re-elected, and a vote of thanks passed to them for their services, which was acknowledged by Mr. Willson.

The proceedings closed with a vote of thanks to the chairman.

## THE ANNUAL DINNER.

The annual dinner took place on Tuesday, December 7th, when there was an unusually good attendance. Dr. Voelcker, the Chairman for the year, presided.

After the usual loyal and patriotic toasts,

The CHAIRMAN proposed "Success to the Farmers' Club, and thanks to those gentlemen who have read papers during the past year." He said: Gentlemen, I rejoice to see so many of my friends here to-night, and allow me heartily to congratulate you on manifesting your continued interest in the welfare of the Farmers' Club. It would not be becoming in me to speak of the success which the Club has achieved. It has existed for a great many years, and any one who takes the trouble to look over the record of its proceedings will, I am sure, agree with me that matters of very vital importance to agriculture have been discussed here, while there can be no doubt that in consequence of the establishment of this institution they have been discussed in far wider circles elsewhere than they otherwise would have been. On all questions of the greatest importance to the agricultural interest this Club has always taken the initiative, and the proceedings of the Club during the last Parliamentary session afford an illustration of the fact that no question arises seriously affecting the agricultural interest which does not at once receive constant and close attention from some of the leading members of this institution. You can hardly need to be reminded of the Agricultural Holdings Bill, and the important papers which were read during the last session, and the important discussions which followed the reading. Gentlemen, I must confess that I feel somewhat like a fish out of water in talking to you in reference to the Agricultural Holdings Bill; but there is one aspect under which that bill especially presents itself for the consideration of scientific men like myself—I mean that which is connected with unexhausted improvements. That is a very important question in connection with that bill; but this is rather delicate ground to tread upon. It is one thing to speak of the theory of the manuring value of food consumed; it is another thing to speak of the practical manuring value of the amount of cake or substances of various kinds that has passed through an animal. The one does not necessarily coincide with the other. It does not follow, for instance, because you obtain in linseed-cake a certain amount of ammonia in dung that that dung is worth £3 a ton as manure, or that because you find in cotton-cake—I mean decorticated cotton-cake—twice as much ammonia as you do in what I have just mentioned therefore it must be worth £6 a ton as manure. I venture to say that no farmer would give £6 a ton for decorticated cotton-cake if he had to pay that amount for it in the shape of manure. I merely mention this by way of illustration to show that the theoretical or calculated value does not practically coincide with the real value or the value which can be transported at once into the farmer's pocket (Hear, hear). Under this aspect the Agricultural Holdings Bill has a very important bearing upon farming matters. One paper which has been read during the past year related to a matter of very great importance: I allude to the paper on Freedom in Farming (Hear, hear). The longer I live the more deeply convinced I am that great progress in agriculture is only consistent with perfect freedom (cheers). No amount of legislation, no amount of rules binding a landlord

to give certain compensation for what are called unexhausted improvements, will ever make up for the loss sustained by a truly intelligent tenant-farmer through his not being allowed to do what is profitable to himself, and, as I believe, will in the long run prove conducive to the prosperity of the landlord (cheers). The interests of landlords and tenants are not divided: what is for the permanent interest of the intelligent tenant is also for the lasting benefit of the landlord. But let the truth be confessed. Many landlords do not want improving tenants; they want tenants who will do precisely what they are told to do, who will be satisfied with their lot in life, and never strive to improve their position. Many landlords object to any change in the system of farming on their estates. If I were a landlord I should not like a gentleman farmer who walked about in kid gloves or put his hands in his pocket. I should not like to have a tenant who would run through his patrimony; one who, having had a good fortune left to him, would very soon lose it. But it is a very different thing to have an intelligent tenant, who, besides having gentlemanly feelings, has intelligence and capital, and who has good sense and judgment enough to lead him to do what is best for himself, and what, in the long run, will tend to the improvement of the estate. I consider the paper which was read this year on Freedom in Farming, and the discussion which followed it, very important. It is usual for the chairman at the annual dinner of this Club to take a brief review of all the papers on the card for the current year; but I feel some little difficulty in that respect, especially as I have to propose, together with "Success to the Farmers' Club," "Thanks to those gentlemen who have read papers during the past year." Having read a paper myself, I appear here in a double capacity, and I may appear to be proposing thanks to myself (laughter). I am sorry for the absence of one of the readers, Mr. Mechi, an old farmer, a man of indomitable energy, unbounded good nature, and great intelligence, whose papers, if not all very practical, are all very suggestive (cheers). I say I am sorry that he is not here this evening. You all know that, if you want to do any good, you must often put things in a strong light, and must not weigh your words too nicely. There are people who balance their words so exactly that nothing is left. In order that an impression may be made, we want men like Mr. Mechi, who will put things in a strong light, and give people something to talk about. Even Mr. Mechi's extravagances have done a great deal of good. It is not every man of business who is always ready to come forward as he is. Even his occasional extravagances have, I say, done good. Gentlemen, I hope this Club will continue to flourish; I hope that, wherever its quarters may be, whether at the Salisbury Hotel or at the Caledonian Hotel, or at some other place, it will always be prosperous. I regret that we shall have to leave this comfortable building. I thought the Club had a tenancy for life, and on the strength of that I built up my laboratory just opposite, in order that I might be near the Club, and have as many opportunities as possible of seeing my friends from the country. Circumstances have, however, decided differently, and, after all, distances have been so much shortened practically by the Metropolitan District Railway, that it takes only about seven minutes to get from this place to the

Caledonian Hotel, where we are to be quartered in future. I hope that nothing will be wanted on the part of the management to make our new quarters as comfortable as they possibly can be made; and although I regret the necessity for moving, yet I hope that, as this is in the opinion of some a critical period in the history of the Club, all its friends will rally round it, and pull together so heartily that the prosperity of the Club cannot be diminished (loud cheers). The toast was drunk with great cordiality.

Mr. C. S. READ M.P., on rising to propose "The Chairman," said: Whenever I have had the honour of addressing an assembly of farmers or of my constituents during the last two years, if any notice has been taken of what I said, some kind, compassionate, and friendly critic was sure to say that I must have felt exceedingly uncomfortable. But I can assure you it may be that I am very dense, or ignorant, or stupid, but, upon the whole, I have felt tolerably self-satisfied (cheers). I can assure you that on the present occasion I feel very jolly (renewed cheers). I believe that the tenant-farmers of England are a reasonable body. They know what one man can do, and they know what one man is among a great multitude; and although I have not perhaps been so active in speaking during the last twelve months, or two years I might say, still I can assure you that I have done what I could (cheers). I believe that the farmers still trust me (renewed cheers). These reassuring cheers do my heart good. When I took office under Government I stipulated that I should have perfect freedom to speak on all agricultural matters; and although I have not obtruded my opinions, I believe that I have given vent to them independently and fearlessly (loud cheers). I also said, gentlemen, that if I believed that the agricultural interest was neglected by any department of the Government, I would no longer continue a member of that Government (prolonged cheering). Well, I do believe that the interests of the stockowners of the country have been persistently ignored by the Veterinary Department of the Privy Council (Hear, hear). I say that in error; but I believe most truly that they have habitually neglected our interests; and that being the case, I have to inform you that I am no longer the Secretary of the Local Government Board, and that I only hold office until my successor is announced. Having made that statement, probably you wish me to proceed with my toast; but if you would bear with me for a little, I will only trespass upon you a few minutes, as I do not wish to be misunderstood in the statement I have made; and although the story is long, I will endeavour, for your sakes and for my own, to make it as short as possible, and with your permission tell my own story. I have to take you back, then, to the year 1873, when you will remember that in the House of Commons I obtained a Committee to inquire into the working of the Contagious Diseases (Animals) Act of 1869. I had nothing to do with the nomination of that Committee. It was appointed by the whips or by the Government. That Committee was adverse to my views, and I was in a hopeless minority. We divided several times, and only one important resolution was passed unanimously by the Committee. It was this—that whenever pleuro-pneumonia occurred among cattle they should be immediately slaughtered; that compensation should be paid to the owner to the amount of three-fourths the value of the animal, and that whatever was done in Great Britain should be done throughout the United Kingdom. Mr. Forster, in a very great hurry, soon after the report of the Committee, issued an order applying slaughter to Great Britain, but saying nothing about compensation, and not extending it to Ireland. It was found that some slight legislation was necessary in Ireland, in order to levy a rate for the purpose; and I believe that it was Mr. Forster's intention in the following year to remedy that evil. But we had a change of Government in the meantime; and, during that memorable election, when there was not only a change of public opinion, but a change of Government I took upon myself to say that, if the agricultural interest were better represented in Parliament, I was perfectly sure that some of the errors and faults of the Veterinary Department would be remedied. Quarter Sessions protested against this order, which was enforced in England, and requested that it should be extended to Ireland. A deputation of the Central Chamber of Agriculture waited upon the Duke of Richmond, and Lord Hampton introduced the deputation, who were supported by many political friends of the Government. I went as one of the deputation, and spoke to the first resolution, which was that this order should be extended to Ireland or be rescinded. For doing that I was—I hardly

know what to call it: I am not sure what is the Parliamentary term to apply to it; but I was censured by the Prime Minister, and I told him that if I was not at liberty to make those observations in public I should certainly not remain in the Government, and I then offered him my resignation. At that time the Premier was very ill, and the Chancellor of the Exchequer came to me in the kindest way in the world, "and said, "Don't leave us now: withdraw your letter," which I did with a great deal of pleasure, and I was promised that something should be done about Irish cattle. I waited, I protested, I entreated in vain. Our quarter sessions, in Norfolk, again memorialised the Privy Council; and what did they do? They sent on the memorial to the Dublin Veterinary Department, and that department sent a veterinary surgeon to Norfolk, who made a sensible and mild report, in which he undoubtedly proved the truth of our complaint. My friend, Mr. Barclay, in Parliament, asked for the production of this report, and the Chief Secretary for Ireland would not give it, unless in addition to that was given a report by Professor Fergusson commenting on his own official report. The upshot of this report of Professor Fergusson was this: He said it was all fiddle-dee-dee to say that pleuro-pneumonia existed in Ireland; that the truth was that the keeping of our cattle in Norfolk in loose boxes and well-littered straw-yards, without removing the manure but once or twice a year, was the cause of pleuro-pneumonia. At the meeting of our central committee in Norwich I thought it my duty to comment upon this most outrageous report. I called it ignorant; I called it insulting; and I called it a libel on Norfolk farmers (cheers). I was asked whether the memorial which we were about to present to the quarter sessions should go to the Privy Council or to the Prime Minister; and seeing that the Central Chamber of Agriculture were about to wait upon the Premier I thought it would save trouble to go to the fountain head at once, and I recommended that the memorial should be presented to the Premier. For this I was again rebuffed by the Prime Minister. I once more tendered my resignation; and this time I am happy to say that it has been very kindly, most courteously, and most generously accepted. Now, gentlemen, I need not tell you that I have made a sacrifice that I can ill afford (sympathetic cheers). The tenant-farmer whose principal income is derived from the occupation of some six or seven hundred acres of land knows very well that £1,500 a-year is an extremely convenient addition to his income, and the man would be a fool who did not value the honour and high position in which I was placed (Hear). I also liked my work at the office, and I am sufficiently egotistical to say that I was almost "up" to my work. I was on the best terms possible with my right hon. friend the President of the Local Government Board, and I had great respect for the staff—the hard working staff of that department. I admire the ability of my great political chief. I most cordially support and endorse the foreign, colonial, and domestic policy of the Government. Therefore I felt that it was the harder for me to make the sacrifice; but not for one moment did I hesitate, and I am quite sure that I have done right, and that you will approve of what I have done (loud and protracted cheering). And now, gentlemen, having talked so much about myself that I had almost forgotten what I rose for, I have great satisfaction in proposing the health of our excellent chairman (cheers). Twelve months ago I had a similar duty to perform, and I then ventured to say that the Club did honour to itself as well as to Dr. Voelcker by making him the chairman for this year. How he has performed his duties I leave you to judge. I am quite sure that I express the feeling of every member of this Club when I say that we feel deeply obliged to him for the paper which he read—a paper in which he united in a remarkable manner science with practice. It is, indeed, the strong claim of Professor Voelcker upon farmers that he does not dogmatise from the laboratory on some extraordinary theories, but that he carries theory into general practice, making science assist practice rather than altogether govern it. That is, in my opinion, the reason why science, as taught by him, confers such great benefit upon agriculture. In the speech which he has just delivered he intimated that we must not take for granted all that chemists tell us with regard to the value of unexhausted manures. I entirely agree with him on that point; but it is satisfactory to know that although practice and science may appear to differ, yet when you leave minutiae and come to general results, you find that they agree. Thus, with regard to the experiments made by Mr. Lawes, you

find that the manurial value which he gives and that which is given by practical men are almost exactly the same. I believe we are quite safe in the hands of Dr. Voelcker; we look upon him as our great guiding chemist, and feel perfectly sure when he tries his experiments in the field he knows that whatever care may be taken in planting, and however well a crop may be watered, still results must be left to a higher Power. Gentlemen, I gave you the health of our excellent chairman, Dr. Voelcker, and I am quite sure you will drink it with three times ture.

The toast was then drunk with the honours suggested by Mr. Read, and three cheers were afterward given to the hon. gentleman himself, for having maintained his independence.

The CHAIRMAN, in returning thanks, said he was much gratified to find that the interests of the Club were not supposed to have suffered during his presidency.

Mr. CALDECOTT proposed, "The Royal Agricultural Society of England, the Highland Society of Scotland, and the Royal Agricultural Society of Ireland." He said he knew nothing of the Scotch and Irish Societies, except from hearsay, but, as an old member of the Agricultural Society of England, he could bear testimony to the powerful impetus which it had given to the improvement of agriculture. He had witnessed that in his own experience, and he felt that a deep debt of gratitude was due to that Society. He had no doubt that the two other societies had also been very useful, and as they were all interested in the success of agriculture, he felt great pleasure in proposing the toast.

Mr. WISE, in responding, said they all knew that the times were not as joyous as they could desire them to be for the tenant-farmers of this country. It had been said that "hope is energy, and energy is life, and life is happiness;" but the hopes of the tenant-farmer had been recently damped in a great degree by the spread of dire diseases among his flocks and herds. In conclusion, Mr. Wise promised a cordial reception to all the visitors to Birmingham.

Mr. JOHN THOMPSON proposed "The Vice-Chairman," Mr. T. Horley, the Chairman for 1876. Whether that gentleman were acting on the Council of the Royal Agricultural Society, or the Council of the Smithfield Club, or on the Committee of that Club, he always brought to bear on the discharge of his duties a large amount of sound practical sense, and did everything in his power for the advancement of agriculture. It was now some years since they had seen in the chair of that Club a *bona fide* practical farmer, and it appeared to him a very happy circumstance that such a man as Mr. Horley would succeed the most scientific and eminent agricultural chemist of the present age. It was a happy omen that the most eminent scientific agriculturist should be followed by one of the most practical agriculturists (cheers). In that case science and practice were united in the truest sense. He did not stand there to flatter Mr. Horley, but he was quite sure that the Committee could not have made a better selection for the office of President (cheers).

The toast having been drunk with three times three,

Mr. T. HORLEY said he felt very much obliged for the kind manner in which the toast had been proposed and received, and such a reception would strengthen his resolution to do all he could to promote the prosperity of the Club. This Club had long had very strong ties upon him, and those ties were certainly never more powerful than at the present moment. This Club is now an old institution, and one reason why its members had kept together was, that party differences and opinions had found no place in its proceedings (cheers). Even a handful of men who were united as they were need not despair of being able to exercise a most useful influence; and he was happy to see in the room some of those who were the founders of that institution. Now that he had accepted the responsible office of Chairman for the next year, he almost trembled at the thought of following in the footsteps of Dr. Voelcker; but, having accepted it, he would perform the duties to the best of his ability; and although this is considered by some a critical period in the history of the Club, because it had to remove to other quarters, upholding as it did principles which were dear to the hearts of all English farmers, he felt confident that it would long continue to be one of the leading agricultural institutions of the country (cheers). He would conclude by proposing "The Smithfield Club." This is the oldest institution of the kind in the kingdom, and he believed it was well worthy of support. He had carefully watched its progress for a great many years, and had been intimately con-

nected with its management; and he was happy to say that, whatever might have been the case some years ago, it was now conducted on the most intelligent and the broadest principles, and he believed no other society in the kingdom had had such a good show of cattle as had been seen in this Metropolis for the last five or six years. There had been some criticism in many quarters as to the policy of excluding animals connected with other shows. He was quite sure none regretted this rule more than those who had the management of the Smithfield Club; but they thought that they had done only what was necessary for the protection of men who sent valuable animals for exhibition. This Club has stood almost alone during the last few years, in having had no foot-and-mouth disease at its shows, and he would appeal to the stockholders of England, as a body, whether they were not right in adopting the course of which some persons had complained (Hear, hear).

Mr. NEWTON, in responding, observed that the Smithfield Club had been gradually, year after year, spending an increased amount on prizes; and in order to enable it to do that it ought to have a large addition to the number of its members.

Mr. HARPER proposed "The Committee of Management." They would, he remarked, all agree with him that for the success of that Club they were indebted in a great degree to the exertions of the Committee, and the satisfaction of the members of the Club generally was evinced by the fact that all retiring members of the Committee had that day been re-elected. The Committee had an arduous task before them in connection with the removal, but he hoped that, notwithstanding that, the Club would be as successful next year as it had been this year. He had great pleasure in coupling with the toast the name of Mr. Allender.

After a cordial reception of the toast,

Mr. ALLENDER returned thanks. He said he had been called upon to do that in consequence of his being a member of the House Committee, which had had to find a new home for the Club. A few months ago the General Committee received an unceremonious notice to quit the old quarters. For a month after they thought they might possibly be able to make arrangements for remaining; but before they could make any actual proposal with that view, the Salisbury Hotel Company intimated that there was no hope of such a result, and consequently they became, as it were, houseless wanderers (laughter). The sub-Committee which he had mentioned looked out in all directions, and the result was that an arrangement was entered into with the new management of the Caledonian Hotel, which would probably secure for the Club not only as good accommodation as they had there, but even better. He asked the members to bear with them for a time while the new arrangement was being carried out, the task of the Committee being very arduous; but he believed it would be found in the end that the new rooms were more cheerful, and situated as they were near Charing-cross, and in a very central position, more easily accessible than the present rooms (cheers).

The CHAIRMAN said they all knew that the exertions of the Committee of Management without an active man and a good man of business in the office of secretary, would be all in vain. He had, therefore, great pleasure in proposing the health of Mr. Henry Corbet (cheers). All he would say of that gentleman was that he had always found him a good, active man of business, polite, ever ready to do an act of kindness to any member of the Club, and well up to his work, and zealously working to promote the success of that Club. He was sure they would all unite in heartily drinking the health of their esteemed Secretary.

The toast was drunk with three times three.

Mr. H. CORBET, after thanking the company for the manner in which they had drunk his health, said he thought that if they reflected on the proceedings of the past year they would see that they pointed in every way to the continued success of that Club. For the last thirty years, or even more, the Club had been fighting under all sorts of difficulties, and with all sorts of persons, the Tenant-Right question; and during the last Session the Lords and Commons passed a measure which was altogether identified with the history of that Club. The strongest thing ever done for agriculture was the Tenant-Right Act of last Session, and any gentleman who was familiar with the proceedings of the Farmers' Club must know that throughout it had worked that question more than any other body in the country, and that for a long time it was the

only body that worked it (cheers). He must say thus much for the present Government, that when they went before Mr. Disraeli, as the Premier, on that subject, he promised to do all he could; and he (Mr. Corbet) would affirm, in opposition to contrary opinions, that Mr. Disraeli had kept his word. The Premier had carried a measure which he believed no other man could have carried; he had succeeded in passing a bill which some of the greatest landlords in this country had already taken up; and although no man could regret more than he (Mr. Corbet) did the difference which had arisen between the Government and Mr. Clare Sewell Read, he felt bound to testify thus far in their favour (cheers). He believed that if the Liberal Government had remained in office they would never have passed any measure at all. He would now dismiss that point and proceed to another—namely, the approaching removal of the Club from the Salisbury Hotel to the Caledonian Hotel. He might say, without presumption, that he was one of the discoverers of Salisbury Plain, and a very "plain" place it was when they first came to it (laughter). It now appeared that the Hotel Company which they created had, like the monster of whom they had read, become too big for those who called it into

existence, and had almost threatened to eat them up (laughter). But he did not despair (Hear, hear). He thought they might do as well on the wilds of Caledonia as they had done on the plains of Salisbury (laughter). As to the manner in which they had been treated, he would say nothing, though he held a strong opinion on the point; but as regarded the future, he thought they had at least cause to feel hopeful. The members of the Club were under great obligations to the House Committee which had recommended the removal to the Caledonian Hotel, and in particular to Mr. Allender. Of course that Committee did not expect any praise in connection with their labours, which had been very arduous. If everything went right, they would not get any praise; if anything went wrong, they would perhaps get some abuse; but he repeated that in his opinion they had no cause for despair, and much cause for hope, for matters were anything but "ship-shape" for years after they came into Salisbury-square; while, looking to the general position of the Club, he was quite sure that it never stood so well before the country as it did at that moment (cheers).

The concluding toast was "The Visitors," which was responded to by Mr. POPE from the United States.

### MR. C. S. READ'S RESIGNATION.

Almost immediately on the accession of the Conservative party to power, manifestations of disappointment and discontent were observable, although not from the quarter which might have been expected. The Liberals, appalled apparently by the result of the election, held their peace, or made but little sign from their place as the opposition element. The movement was the rather one of rebellion than of opposition. The country squires were offended, the agricultural interest was offended, although here might be assumed to centre the chief strength of the Ministry. No doubt the hopes of the farmers, more especially, had been raised by the appointment of a farmer to a seat in the Government: the member for Norfolk would do this, and would look to that, and the grievances so long complained of would be speedily righted. The budget, however, of the new Chancellor of the Exchequer, at once dispelled such sanguine aspirations, as herein there was little promise of Local Taxation being adjusted forthwith, and none whatever that the Malt-tax was about to be repealed. A somewhat furious expression of opinion followed, and Mr. Sewell Read came in for quite his fair or unfair share of abuse: as a member of the Government, why had he not dealt more vigorously with the abuses of taxation? and why, above all things, had he not repealed the Malt-tax? It was idle for Mr. Read to explain that he was not the Premier, but a subordinate; or, further, that the farmers themselves were not agreed as to the policy of taking off the duty on malt. As he put it again at Diss, on Friday: "He might he asked how it came to pass that he did not make his stand upon something else—why he did not make a row about the Malt-tax, for instance? He was sorry to say that in the present Parliament, and in the present state of public opinion, it was no use to fight the battle of the Malt-tax. Was even the present meeting agreed about the Malt-tax? Were the farmers throughout the country in favour of the repeal of the Malt-tax? He feared that they were not. He believed that if the present Parliament was polled, more members would vote for the Malt-tax being doubled than for its being taken off." Since that outburst in 1874, the question has almost died out; as any man possessed of common sense cannot fail to have seen that, under any Government, the repeal of the Malt-tax would be regarded as a boon about which the farmers, and more especially the county members, were not unanimous; and Mr. Sewell Read's sins so far have been forgiven, if not quite

forgotten. Then followed the renewed agitation over Tenant-Right and the introduction of another bill, which was opposed either directly or indirectly, and by none so systematically, as the sham Farmers' Friends, who sit on the Ministerial benches. Why did not Mr. Read answer all these people? and why, above all things, did he not make the measure compulsory? Again we heard the taunt that he was muzzled; but bearing with what he did, and knowing, as every sane man does, that no compulsory bill would ever have had a chance of passing, he did not deign to explain why he had not set the Thames on fire, or had not rivalled an honourable baronet in his attempts at perpetual motions.

The explanation has come at last. Much to the astonishment of those who heard him at the Farmers' Club the other evening, Mr. Read has repeatedly tendered his resignation of office, and this at length has been accepted; the conduct of the Veterinary Department of the Privy Council office rendering his retention of place incompatible with his own feelings and opinions: "On a deputation to the Duke of Richmond I spoke to a resolution which proposed that an Order as to the prevention of cattle disease should be extended to Ireland or be rescinded. For doing that I was—I hardly know what to call it. I am not sure what is the Parliamentary term to apply to it, but I was censured by the Prime Minister; and I told him that if I was not at liberty to make those observations in public I should certainly not remain in the Government, and I then offered him my resignation." This was not accepted, but Mr. Read was promised that something should be done about Irish cattle. Nothing, however, was done; and being further rebuffed by Mr. Disraeli, the resignation was again tendered and accepted.

For some years we have shown that it was absurd to pass regulations which did not extend to Ireland, the great source of disease; but there has been little support given to any such extension of the Orders. Previously and during the past autumn have Chambers of Agriculture and other special meetings passed resolutions against the introduction of foreign stock, but carefully omitted to deal with the Irish supplies; as nobody has done so much harm in this way as the Home Cattle Defence Association, which has always shirked this matter, and suggested public expression accordingly. In fact, Mr. Read, sound and impressive as ever, has not been properly supported by his fellows, as the Government must have

seen. The Privy Council, however, by its general indifference to the matter, has much to answer for, by increasing the difficulties of the Premier to an extent so far but little thought of.

Since making the declaration he did at the Farmer's Club, Mr. Sewell Read has stated further, at Diss, that "he did not believe his retirement would weaken the Government," as this is altogether in accordance with the innate modesty of the man; but we believe that his loss will seriously weaken the Government. Mr. Read does not represent a mere county; Mr. Read does not represent a mere party; but in his own especial province he is the representative of the country, and he carries his constituents with him. As the Farmer Member he has the farmers to a man once more at his back, as never was his popularity so great as at this moment. Some of his fellows in the House or in office who professed to be with him, but were becoming more and more jealous of his success, will probably not mourn his loss; whereas from outside everybody is with him in his opinion of the Veterinary Department of the Privy Council Office as "utterly inefficient," and where "some radical change is necessary if anything is to be done to check the pro-

gress of disease." The Admiralty and the Privy Council Office threaten to be terrible stumbling blocks in the way of the triumphant majority; and more resignations will be required before Mr. Disraeli can regain for his Government the respect and confidence of the country.

Mr. Read showed at the Farmers' Club the cost at which a man of independent spirit has often enough to preserve his independence. But the sacrifice was appreciated, as the ringing cheers again and again testified; and already a movement has been made to present him with some tangible recognition of the esteem in which he is held. The best way for working this would have come before the Committee of the Farmer's Club at the meeting in January; but, in the interim, a meeting has been called for Monday next in Salisbury-square. Testimonials are often sad rubbish; but a testimonial to a tenant-farmer who has resigned an appointment of £1,500 a-year, where he was alike efficient and popular, out of consideration for the interests of his brother farmers, is doubly armed. It does honour alike to him that takes and to him that gives.—*Mark Lane Express* of December 13.

### THE ABUSES OF FAT STOCK FEEDING.

The show of the Smithfield Club is threatened with direct opposition. An advertisement has already appeared in some of the local journals, soliciting the co-operation of breeders and feeders in the establishment of another Christmas fat stock show to be held in or near London, at which no vexatious restrictions as to the previous exhibition of animals will be tolerated. The locality, as we hear, has even been determined on, although one shudders at the very thought of a cattle show being celebrated in mid-winter—say such as that which we are now experiencing—on the bleak heights or in the moist valleys of Muswell. The proposal was taken up during the late Manchester meeting, and cattle disease was ripe in the Pomona Palace, as there were suspicious cases in Bingley Hall; some entries having to be destroyed after their arrival in Birmingham, from Manchester or Oakham. As it seems to us, an unwholesomely over-pampered beast is a far more likely subject to develop disease of some kind from continual travel and excitement than a store one; and yet, in the ordinary course of things, animals, after encountering contamination at probably all these three earlier exhibitions, would have come on to London, weary, jaded, and foot-sore, if not in a more decidedly dangerous condition. Dangerous, in fact, they must have been, from the company which they had been keeping of late.

This movement, no doubt, traces back to the prize-mongers, who are disappointed at not having the opportunity here or there of getting their money back again. The business of buying fat cattle to keep on cannot of late have been a very remunerative trade, considering the prices for champion stock which are asked and given; while it is one which should in every way be discouraged. An over-due animal at a fat show is an absurdity, and it will be necessary for the council of the Club to strengthen the rule now in force against such a practice. A beast shown in extra stock can compete for the champion plate at any age, against others in the classes of not more than four years and a-half old; as some have been held over with this object, and no other. Beyond such an extra stock privilege being unfair to other exhibitors, it is manifestly impolitic on more general grounds, as encouraging an artificial state of things which is artificial enough

already. Let, then, no ox be exhibited at a Smithfield Club show at a greater age than that specified in the classes, at least not for high honours; and let the council permanently embody the condition in its rules, which now from time to time prohibits a beast shown about the country for a month or so previous to being brought to Islington. Despite the higher scale of premiums offered elsewhere, as with other commodities, the best and freshest of everything comes to London.

It is now more than two years since we dwelt at some length on the enormous price to his feeder and the shameful loss to the public involved in the preparation of an over-ripe prize ox. As we then showed, such an animal at five years old would have consumed some £200 worth in the stalls, a sum upon which two or three good beasts might have been made ready for market; while we went to quote from the instructions given by the Club to the judges how these authorities "are to keep strictly in view the object for which the Smithfield Club was originally instituted—viz., *the supply of the cattle markets and other places with the cheapest and best meat.*" The italics are those of the Council. More recently some of our contemporaries have come to adopt our views as to this glaring abuse, and the necessity for its being put down with a strong hand. Anybody with money or credit can buy a beast already distinguished amongst his fellows, the chief aim in doing so being to buy silver cups and gold medals, which carry with them little honour to the man who neither bred nor fed the animal. Of course the prize system is something in fault here, as the overflow of funds has led to an increase and multiplication of premiums which tend to nothing more than unseemly extravagance on the part of exhibitors. When one beast can take one or two hundred pounds' worth of prizes at a meeting, and then be reserved with the chance of doing as much or more in another year, there is scarcely any saying where this kind of thing will end. Early maturity implies an animal fit for the butcher at the earliest age, and not one which has been fed until he drags on an altogether artificial and in every way unprofitable existence.

The Devon has tired of all that's good,  
The pampered Shorthorn loathes his food,  
The White-face wearies of his stall,  
Of Islington and Bingley Hall.

## THE TREDEGAR AGRICULTURAL SOCIETY.

## MEETING AT NEWPORT.

The prevalence of foot-and-mouth disease in the country militated considerably against the success of the exhibition, as breeders and farmers were afraid to send their stock to be exposed to the risk of contagion. Notwithstanding this unfortunate drawback, the show was a good one, and some animals of great merit were exhibited. The number of Cattle entered this year was 116, against 143 in 1871, 141 in 1872, 130 in 1873, and 136 last year. The greatest falling off, however, was observable in the sheep and pig classes.

## P R I Z E L I S T.

JUDGES.—HORNE STOCK, SHEEP, PIGS, AND IMPLEMENTS: T. Morris, Gloucester; T. S. Bradstock, Colreay Park, Ross; W. Farthing, Stowey Court, Bridgwater.

## CATTLE.

North Devon yearling bull.—Silver Cup, Mrs. M. Langdon, Flitton Barton, North Molton, Devon (Duke of Flitton 12th).  
North Devon two-year-old heifer.—Silver Cup, Mrs Langdon (Actress 8th).

North Devon bull, cow, and offspring.—Prize, 6 gs., Mrs. Langdon (Duke of Flitton 8th and Graceful).

Shorthorn yearling bull.—Silver Cup, J. Stratton, Alton Priors, Marlborough (Royal James).

Two-year-old Shorthorn heifer.—Silver Cup, J. Stratton (Miriam).

Shorthorn bull-calf.—Silver Cup, R. Stratton, The Duffryn, Newport (Hampden).

Heifer calf.—Silver Cup, R. Stratton (Icele).

Hereford yearling bull.—Silver Cup, T. Thomas, St. Hilary, Cowbridge.

Two-year-old Hereford heifer.—Silver Cup, T. J. Cardwardine, S'ockton, Bryr, Leominster (Helena).

Hereford bull-calf.—Silver Cup, E. Lister, Cefn Ha, Usk (May Duke).

Hereford heifer-calf.—Silver Cup, H. R. Hall, Ashton House, Leominster (Constance).

Yearling heifer.—Silver Cup, Lord Tredegar, Tredegar Park, Newport (Ladylove).

Breeding cow, above three years old.—Prize, £10, J. H. Risdon, Washford, Taunton.

Stock bull, above two years old.—Silver Cup, R. Stratton (Protector).

Fat cow.—Silver Cup, R. Stratton (Nectarine Bud).

Fat ox.—Silver Cup, R. Keene, Pancraig, Caerleon.

Pair of two-year-old Hereford steers.—Silver Cup, R. Keene.

Pair of Shorthorn yearling steers.—Prize, 5 gs., Lord Tredegar.

Pair of Hereford yearling steers.—Prize, £5, R. Keene.

Pair of Hereford two-year-old steers.—Prize, £10, R. Keene.

Shorthorn yearling stock heifer.—First prize, £6, R. Stratton (Queen Bess); second, £4, W. Evans, Llandowlas, Usk, Hereford (Von Molte 2nd).

Hereford in-calf heifer, under three years old.—First prize, £7, W. Evans, Llandowlas, Usk; second, £3, W. Evans.

Shorthorn cow in milk, or within three months of calving.—First prize, £10, T. Lewis, Park Farm, Llangibby, Mon.; second, R. Stratton (Passion Flower).

Hereford bull, cow, and off-spring.—First prize, £10, R. Stratton (Charles 1st); second, W. Harris, Lansoar, Caerleon, Newport.

Male horned breeding animal, selected from any class in the yard.—A piece of plate, value 20 gs., R. Stratton (Proctor).

Female horned breeding animal, selected from any class in the yard.—A piece of plate, value 20 gs., J. H. Risdon, Washford, Taunton.

## SHEEP.

Ram lamb, Cotswold longwool.—Prize, silver cup, T. Thomas, St. Hilary, Cowbridge.

Four shearing ewes, longwool.—Prize, £5, T. Thomas.

Ram lamb, Shropshire Down shortwool.—Prize, silver cup, M. Rees, Clydach, Swansea.

Four shearing ewes, Shropshire Down shortwool.—Prize, £5, M. Rees.

Four black breeding ewes and one black ram of real Welsh mountain breed.—Prize, £6 6s., P. James, Abercarne House, Abercarne, Newport.

Four wether lambs, longwool.—Prize, £5, T. Thomas.

Four ewe lambs, longwool.—Prize, £5, T. Thomas.

Four yearling stock ewes, longwool.—First prize, £5, W. Jones, Pantlhiwgoch, Castleton, Cardiff; second, T. Thomas.

Four breeding ewes, longwool.—First prize, £5, T. Thomas; second, W. Jones.

## PIGS.

Fat pig, small black.—Prize, silver cup, executors of late J. Wheeler and Sons, Long Compton, Shipston-on-Stour.

Boar.—Prize, silver cup, W. Yells, Knoyle Down, Hindon, Berkshire.

Boar and sow of any breed, under a year old, white improved Berkshire.—Prize, silver cup, H. Workman, Castleton, Cardiff.

Breeding sow with litter of pigs, small white.—Prize, £5, executors of John Wheeler and Sons.

## LEEDS SMITHFIELD CLUB CATTLE SHOW.

The entries showed an increase over those of last year, but the fear of foot-and-mouth disease appears to have deterred many from sending their animals, and amongst the cattle there was a great number of empty stalls. With Shorthorn oxen the first prize was gained by Mr. Robert Wortley, with the first of his class, at Birmingham; as to this animal was also awarded the cup for the best animal on the show ground, and of course the Innkeepers' Cup for the best animal in the Shorthorn classes. Mr. J. J. Clark, of Welton-le-Wold, was the second at Birmingham, and the Earl of Ellesmere third. With Shorthorn cows Mr. Hutchison, of Catterick, was first with Dairy Girl, also first at Birmingham. Of Shorthorn heifers there was only one animal shown, by Mr. J. Reid, of Alfordon, which was awarded a second

prize, Mr. Stratton's Nectarine Bud not being sent on although entered. In the two cross-bred and Irish classes were some good animals; but here again some prominent breeders who had entered were absent. The prizes for the cross-bred cows or heifers were carried off by Mr. J. Bruce, Fochabers, whose animals were the only ones forward. In the Scotch classes there was also a number of vacant places. The tenant-farmers' classes included some good beasts, where for the best ox Mr. R. Wortley was again first with his Hereford, which was successful at Birmingham and other shows. Sheep were a fair show, and pigs also.

## P R I Z E L I S T.

JUDGES.—CATTLE: J. Bromet, Healaugh; J. Ketlewell, Milby; J. Stead, Bishop Thornton. SHEEP AND PIGS: R. Beckett, Welwaug; W. Keywarth, Adel.



## CATTLE.

## SHORTHORNS.

Ox of any age.—First prize and ex-Mayor's Cup and Leeds Innkeepers' Cup, R. Wortley, Suffield, Norfolk; second, J. J. Clark, Welton-le-Wold, Louth; third, the Right Hon. the Earl of Ellesmere, Worsley Hall.

Cow, having a living calf.—First prize, T. H. Hutchinson, Manor House, Catterick; second, W. Hill, Wetherby; third, the Right Hon. the Earl of Feversham, Duncombe Park, Helmsley.

Heifer, not exceeding four years old.—Second prize, J. Reid, Greystone, Alford, Aberdeen.

## OTHER BREEDS.

Cross-bred or Irish ox.—First prize and Leeds Tradesmen's Plate, Sir W. C. Trevelyan, Bart., Wallington, Newcastle-on-Tyne; second, J. Bruce, Burnside, Fochabers, N.B.; third, J. Stephenson, Sancton Grange, Brough.

Cross-bred or Irish cow or heifer.—First prize, J. Bruce; second, J. Bruce.

Polled Scotch ox, cow, or heifer.—First prize, G. and J. G. Mitchell, Ballindalloch; second, J. and W. Martin, Newmarket, Aberdeen.

Highland ox, cow, or heifer.—First prize, Lady Mary Vyner, Newby Hall, Ripon; second, Thomas Francis, Skipton Bridge, Thirsk; third, Hon. Mrs. Meynell-Ingram, Templenewsum.

## TENANT-FARMERS' CLASSES, NOT BEING LANDOWNERS.

Ox.—First prize and Leeds Butchers' Association Cup, R. Wortley; second, J. Stephenson; third, Wm. Brown, Linkwood, Elgin, N.B.

Cow or heifer.—First prize, J. Reid; second, Thomas Gray, Morpeth, Northumberland; third, Thos. Willis, Carperby, Bedale.

Fat cow, in milk, for slaughtering.—First prize and cup, Joseph Botterill, Middleton, Leeds; second, James Hindle, Park Side, Beeston; third, William Pollard, Seacroft.

## EXTRA STOCK.

Highly commended: J. Reid.

## SHEEP.

## LIFCISTER OR OTHER LONGWOOLS.

Pen of three wethers or gimmers under two years old.—First prize and cup, J. P. Clark, North Ferriby; second, E. W. Usher, Warter Wold, Pocklington.

## OTHER BREEDS.

Pen of three South or other Down wethers, of any age.—First prize, Earl of Zetland, Aske, Richmond.

Pen of three cross-bred wethers of any age.—First prize, Earl of Zetland; second, J. and W. Martin.

Pen of three horned Scotch, loak, or mountain wethers, of any age.—First prize, J. and W. Martin; second, J. McGill, Rotchell, Dumfries.

## PIGS.

Fat pig, large breed, any age.—First prize, J. Gibson, Low Wortley; second, W. Rushforth, Idle; third, T. Strickland, Thirsk.

Fat pig, hog, or gilt, middle breed, exceeding twelve months old.—First prize, C. Hill, Wetherby; second, T. Dixon, Upper Wortley; third, J. Hallas, Huddersfield.

Fat pig, hog, or gilt, middle breed, under twelve months old.—First prize, B. Wright, Woodhouse Carr; second, S. Scott, Halton; third, R. Spafford, Leeds.

Fat sow, middle breed.—First prize, W. Sadler, Leeds; second, D. Keighley, Exley Head; third, J. Hallas.

Fat pig, hog, or gilt, small breed, exceeding twelve months old.—First prize, J. Hallas; second, L. Ellis, Hunslet; third, J. Oddy, New Wortley.

Fat pig, hog, or gilt, small breed, under twelve months old.—First prize, Mrs. Mollet, York; second, Executors of J. Wheeler and Sons, Loug Compton; third, Executors of J. Wheeler and Sons.

Fat sow, small breed (cup).—First prize, the Right Hon. the Earl of Ellesmere, Worsley Hall; second, Executors of J. Wheeler and Sons; third, J. H. Heaton, Dewsbury-road.

Pen of three pork pigs, all of one litter, not exceeding twenty weeks old.—First prize, W. Oldroyd, Newsam Green; second, T. Hannam, Leeds; third, W. Oldroyd.

## EXTRA STOCK.

Silver medal: T. Hannam; bronze medal, W. Oldroyd.

## EDINBURGH CHRISTMAS FAT STOCK SHOW.

## PRIZE LIST.

JUDGES.—BULLOCKS AND HEIFERS: J. Wallbank, Berwick; J. Wilson, George-street; T. Gibbons, Townfoot, Longtown. COWS: C. Edmonstone, Bradford; P. Grime, Preston; C. Smith, Whittingham. SHEEP: J. Paterson, Hawick; J. Smith, Pittengardner; C. Gath, Haddington. PIGS: P. Goose, Leeds; I. Turner, Dalkeith; A. Brown, Haddington.

## CATTLE.

Shorthorns, not exceeding three years.—First prize, C. Alexander, Easter Knowe, Stobo; second, Sir W. Gordon Gordon Cumming, Bart., Altyre.

Shorthorns, exceeding three years.—First prize, R. Scott, Philiphaugh, Selkirk; second, C. Alexander; third, W. Drysdale, Kierie, Kinghorn.

Cross, not exceeding three years.—First prize, W. F. Bell, Barns of Claverhouse, Dundee; second, G. F. Irvine, Nigg, Ross-shire; third, J. Allan, Billie Mains, Ayton.

Cross, exceeding three years.—First prize, A. Henderson, Grauge Farm, Dunfermline; second, R. Husband, Gellet, Dunfermline; third, F. Farquharson, Greenburns, Cupar-Angus.

Polled, age considered.—First prize, A. D. Grimmond, Gleniericht, Blairgowrie; second, J. Stephen, Conglass, Inverurie; third, W. M. Combie, M.P., Tillyfour, Aberdeen.

Highland, age considered.—First prize, Sir W. Gordon Gordon Cumming, Bart.; second, G. S. H. Drummond, Blair Drummond; third, J. J. Dalgleish, Ardnaraurchan.

Heifers, exceeding two years, but not exceeding three.—First prize, W. F. Bell; second, Sir G. G. Montgomery, Stobo Castle, Stobo; third, E. Liddell, Morris Hall, Northam.

Heifers, exceeding three years.—First prize, J. Allan; second, C. Lyall, Old Montrose, Montrose; third, J. Ramsay, Straloch, Aberdeen.

Cows, any pure or cross breed.—First prize, C. Alexander, Beidlestone, Dyce; second, W. A. Fraser, Brackla, Nairn; third, J. Bowman, Newark, St. Monance.

Cows, dairy, Shorthorn, or cross breed.—First prize, and cups and medal, J. Souter, Roseshall Dairy, Dalkeith-road; second, W. Colthert, 28 India-place; third, J. Niven, 9, Huntly-street.

Cows, dairy, of the Ayrshire breed.—First prize, R. White, 217, Canongate; second, J. Meikle, Bellfield, Corstorphine; third, R. White.

## SHEEP.

Cheviots, under twenty-three months.—First prize, R. H. Durie, Barney Mains, Haddington; second, R. H. Durie.

Cheviots, above twenty-three months.—First prize and cup, C. Alexander, Easter Kuowe, Stobo; second, Duke of Roxburgh, Floors Castle.

Blackfaced, age considered.—First prize, J. and W. Martin, Aberdeen; second, T. Roy, Ballenduik, Bridge of Earu.

Cross breeds, under twenty-three months.—T. Roy, Ballenduik, Bridge of Earu.

Any other cross breed, under twenty-three months.—First prize and cup, Lord Polwarth, Humberie, Upper Keith; second, E. Sutherland, Tannachie House, Fochabers.

## PIGS.

Three fat pigs, not exceeding twelve months.—First prize, A. Leslie, Royal Edinburgh Asylum; second, J. H. Dickson, Saughton Mains.

Three fat pigs, exceeding twelve months.—First prize, B. O'Connell, Beaverhall; second, A. Leslie.

Fat pig, exceeding eighteen months.—First prize, A. Leslie



## FRAMLINGHAM FARMERS' CLUB.

## THE LAMB DISEASE OF 1875.

The first discussion meeting for the session was held on Monday, Mr. R. Goodwyn-Goodwyn in the chair. The lecturer for the evening was Mr. C. W. Sutton, of Stowmarket, chemist and veterinarian, and the subject was the Lamb Disease of 1875.

The CHAIRMAN, in introducing the lecturer, said that the Club was sometimes said to be growing old, but at any rate it seemed to take a stronger and deeper root than ever, and it seemed to grow in the respect of its neighbours.

Mr. SUTTON then read his paper as follows: I have accepted your invitation (for the third time) to introduce a subject for discussion before your club, and I do so with much pleasure. It was here I read my maiden paper, as a perfect stranger to you. Since that time I am pleased to number several members of your club as my personal friends, and my devotion to the study of horses, cattle, and sheep in health and disease has assumed the nature of a passion. It is my recreative pastime and delight, and if I am able to add somewhat to your knowledge of the subject for this evening's consideration, it will give me sincere pleasure. The subject we are about to discuss is one which, in a greater or lesser degree, affects both the producer and consumer, and is this year especially interesting, as it comes home to ourselves. When we hear or read of a disease affecting the stock in some distant county, we lack the interest that is felt when it is in our midst, and I have chosen the lamb disease for my subject as being one of which there is but little known amongst those most interested, and less understood. Hundreds of good lambs in this and neighbouring counties have fallen victims to it, and it behoves us, as practical men, to look the difficulty in the face, and to adopt such precaution and means in the future as our knowledge of the past has afforded. What infinite advantage would follow the perfect union of thought between the purely scientific and purely practical men if they acted in concert—if the intelligent observation of the practical man was directed to search out and note facts for the guidance of the other, and means were afforded for testing conclusions arrived at. But I must not trespass further upon the time of this meeting, but go at once to my subject. With regard to the losses that farmers have sustained by the lamb disease the sum total is enormous, and I will read you a letter I had from a farmer in a neighbouring county. He says, "You ask for information of my experience of the lamb disease, and I am sorry to say I know of many cases of losses of 100. Some have lost one-half, some one-third of their whole lamb flock, and the loss has fallen quite as heavily upon those who pay much attention to their flocks as those who do not. One instance I will give you of a noted ram-bree'er who saves all his he-lambs for rams, who of course does them as well as possible, and lost 79 out of 160 within a month; and to-day I have had in my yard a man who bought four hundred lamb-skins in one market to-morrow last Friday. I have always suffered most the year following a dry season, when the seeds have missed, and the ewes and lambs have been grazed upon two-years-old seeds. I believe in constant change of food, in connection with medicine given daily in the summer, and feel assured that those who adopted this course would have comparative immunity from this disease. But, as you know, farmers are rather a careless race, and after escaping two or three years, we are caught out just as if we had never heard of the disease before," &c. The species of worm which gives rise to hoose or husk in calves is called the small-tailed strongyle, *Strongylus micrurus* (Cobbold). It is like a small piece of thread, or cotton; the female measures about three inches from head to tail, but the male acquires only half that length, and is furnished with a kind of hood at the end of the tail. Males and females alike infest the bronchii of calves. In lambs the parasite is called *Strongylus filaria*, from one to two and a-half inches long; the female is white, larger than the male, which is of a yellowish colour, its body of uniform size, but tapered at both ends. The head is short, stumpy, and rather angular. The part infested by these worms is not always the same, for they are found in the bronchial tubes, in the lungs, in the cavities of the heart, in blood-vessels,

and the bowels (Williams). In full-grown sheep they are generally encysted or buried in the tissue of the lungs, giving them the appearance of being filled with minute tubercular deposits, which for a long time led to the belief that the affection was purely tubercular. It is quite evident this disease has gained ground of late years, and the present year, at all events in this locality, seems to be worse than all. The presence of these parasites does not always cause the same amount of irritation in old sheep, inasmuch as the lungs of the primest sheep killed for mutton have been found loaded with them. But occasionally they bring on debility and bloodlessness, and caused the death of many lambing ewes in certain districts last year. In lambs, the structures being more delicate, the parasites found their way through the lung structures into the bronchial tubes, and there gave rise to the irritation and cough, symptoms of this lamb disease. I cannot, in the time allotted to me, go minutely into the controversies of scientific men, how these worms gain access to the lungs, &c., but we can easily realise the amount of constitutional disturbance that must be set up, when we think of the unbearable irritation resulting from a hair or even a bread-crumm which has accidentally found its way to the glottis or entrance to the windpipe. Convulsive coughing, painful in the extreme, is the result. Then how much greater would be the effect produced by the wriggling, tortuous movements of live worms insinuating themselves on these delicate structures, and adhering to them by the natural hooklets or barbs! You will say, How are they first admitted into the animal? It is a generally-received opinion that the ova or eggs and young worms are taken up with the food, and from the alimentary canal into the circulation, and from thence into the lung-substance, and afterwards into the bronchial tubes; and you may, therefore, readily understand how necessary it is to separate diseased from healthy animals as soon as the nature of the attack is an established fact. The tenacity of life is so great in these worms that they showed signs of life on being moistened, after drying for 50 days, and at other times after immersion in spirits of wine, solution of alum, &c. The large number of embryo worms found in the lungs of one sheep, added to those hatched in the intestinal canal and discharged from an infected sheep may infect a pasture to such an extent, that a whole flock following would probably become diseased. Dr. Crisp in his prize essay says it is from over-stocking, by turning lambs upon old pastures or second-crop clover that has been fed off by old sheep, but you will agree with me that this is not of itself sufficient to cause the disease; there must have been infected stock upon the feed, and then it would certainly become foul by the parasites or their ova, and the most scientific men tell you, which has been proved by painful experience to be true, that this disease is more prevalent after wet seasons during summer or early autumn. The symptoms of the disease vary according to the seat of the parasites in the animal. Thus, when they infest the intestinal canal, we find diarrhoea and dysentery prevail accompanied by straining. The dung is tinged with blood, or clots of blood are passed with it. When the lungs or bronchial tubes are the seat of the disease, we find upon going into the fold they begin to cough with an effort peculiar to the disease, as if endeavouring to get rid of some irritating substance; the breathing is more hurried than usual. In old sheep we may not be able to discover any of these symptoms; and it is only after death that the cause of the wasting disease and *anaemia* or bloodlessness, which may have been present during life, is discovered. In some cases the appetite is depraved, and intense thirst, with colicky pains, in which the poor animal will madly drink the muddiest, dirtiest water. The treatment is divided between the preventive and curative; the preventive shall have our first consideration, and if generally adopted would go far to put a stop to the great losses sustained by farmers. Only the other day, in a conversation I had with a farmer whose flock I had treated successfully, I was struck with the lamentable ignorance which prevails in regard to this disease. He told me he had been losing his lambs before adopting my treatment at the rate of two or three

a day, and meeting with a neighbour whose flock was similarly affected, advised him to adopt the same means he had tried successfully, and was met by this response, "No: I suppose they must die; my doctor (meaning his veterinary, but not a veterinary surgeon) says nothing can be done for them." Now, if any flockowner here present has got such a notion in his head, I beg he will get rid of it at once, and he will be rewarded by finding that (unless in exceptionally aggravated cases), this disease is amenable to proper treatment. The preventive measures I would suggest, are not to feed lambs on second-crop clover or old pastures, especially if they have been previously grazed by old sheep. This applies more particularly to wet and warm seasons, which experience proves to be more favourable to the development of the ova of the worms which are the cause of this disease, and therefore it is necessary in such seasons to be more careful where you place your lambs, and also to note premonitory symptoms with an interest begotten by our knowledge of the evils which must follow. I am inclined to follow the advice of one of our most eminent veterinary authorities, who says, Give a few doses of saline medicine, combined with vegetable tonics, stimulants, and turpentine, in the month of July or August, which will have the effect, if not of preventing the disease, at all events of moderating its severity, and rendering them less liable to tapeworm or scour when put upon turnips. If the seasons are damp, select the driest pasture, giving them as much change as possible, and supplement any deficiency of green by artificial food. In the curative process there is more diligence, owing to the distaste (and you must pardon me for saying it) that farmers have either for drenching or fumigating a flock, owing to the time and trouble necessarily expended on the process. But if this discussion is to be of any real practical value to the member of this club I must speak plainly, and impress upon you the necessity of prompt and energetic action in adopting the course which science and practical experience show us to be the best, and not to procrastinate whilst every day is of importance, and the baneful effect of the parasite is in rapid progress. Upon noticing the first symptoms of cough peculiar to this disease, let the whole flock have a dose of the medicine I have before mentioned, and repeated frequently before the more difficult process of inhalation is attempted. Chlorine gas, generated by pouring sulphuric acid upon chlorinated lime and water, seems to answer the purpose well; but in using this agent, care must be exercised that it is only inhaled when mixed with air, or the lambs will be killed by wholesale. The sulphurous fumigation is not so dangerous in inexperienced hands, and I prefer its use for this reason—it is easily produced by burning sulphur; that is, throwing flour of sulphur upon red-hot cinders, or igniting it in the most convenient way. In either of the above processes of inhalation, the animals are to be confined in some building provided with means of ventilation, which can be opened or shut, so that upon the least appearance of distress amongst the lambs the fresh air may be admitted. When using chlorine gas, I have always kept in the building as long as I could bear it, and then left, taking the apparatus used with me. I know one farmer who covers his barn-floor with freshly-slaked lime, and then bustles his sheep about amongst it, so that the air is filled with the minute particles of lime, some of which is inhaled, and said to be useful in putting a stop to the disease; but I need scarcely add, such a plan would be useless if the worms were in the intestinal canal. When by any of these modes of treatment the worms are destroyed or dislodged, the weakness which follows is best treated by stimulating food, such as Thorley's, or any good cattle pie, mixed with crushed oats, pea or bean meal, dressed cake, &c., or drenched with a mixture of sulphate of iron, gentian, and ginger, in proper doses. Change them at once from the keep upon which the disease was first taken, and you will find colewort most valuable at such a time. I believe it has been the custom to give far larger doses of medicine than the lambs, weakened by this disease, are able to bear, and I attribute the success I have met with this year to giving less than half the usual doses that even those best acquainted with this subject have administered.

Mr. PETTIT (Aldeburgh) said he had the disease in his flock, and suffered severely. He had relieved the flock by treating them with Mr. Sutton's medicæ, and fumigating them in the way indicated. He fumigated about five score at a time, in a stable. He lost none by fumigating. The

animals he lost were chi-fly lambs. He found that a change of feed was good for them, especially sainfoin.

Mr. SUTTON: The best thing you could give them.

The CHAIRMAN: What had they had?

Mr. PETTIT: Coleworts and maiden layer. The change of food is certainly a remarkably good thing. The symptoms were exactly as Mr. Sutton describes.

Some discussion took place as to whether the size of the flock had anything to do with the spread of the disease.

Mr. GOODWYN said his impression was that it had, because generally the smaller flock had more room than a larger one.

Mr. SUTTON, in reply to Mr. H. Clutton, said that the worm was the same as affected calves.

The CHAIRMAN said he had a few questions to ask: Was the more frequent and general use of artificial manures likely to produce disease because of its producing more luxuriant herbage? The opinion prevailed generally that it did, and it was worth knowing whether there was any ground for it. Another question was, how long might these parasites be dangerous to animals following upon the herbage upon which diseased animals had been? It was useful to know how soon it would be safe to turn fresh animals upon pastures on which diseased ones had been. As to the separation of diseased animals, that of course was a good thing to be done in all cases of disease, but how soon could they tell by the symptoms how far were the worms developed before the animals would show it?

Mr. PAUL READ asked whether the animals being in a state of debility would render them more likely to take the disease? As to artificial manures causing the roots to affect the animals, he quoted Professor Voelcker's lecture at the Central Farmers' Club of the previous week, in which it was stated that the great prize roots contained 90 per cent. of water. If they gave animals food in which there was 90 per cent. of water they could not expect all to go well.

Mr. GOODWYN asked if the red rust, or the gossamer, or cobweb seen on the pastures, caused the disease in any way.

Mr. SUTTON said that the rust was undoubtedly injurious to animal life, as it was a fungus, and fungus in any form was bad for animal life, whether it was on musty hay which caused broken wind, or oats or cake. The cobweb on the pastures was not fully understood at present. As to the effect of artificial manures on the roots, he thought of the farmers' clubs when reference was made to it, because he believed the clubs did go in for big roots, and did not care much for the constituents of them, whether they were saccharine matter or water. The roots whose growth was forced too fast by artificial manures held too much water and too little nitrogenous food, especially when the manure had been used in larger quantities than the soil required. Dr. Voelcker said it was perfectly childish of farmers to show big roots, which contained so much water, and to expect them to be good feeding stuff. As to the length of time that the worms would live on the grass, they would not live on the grass, but they might exist there for some time. He did not think that debilitated lambs would take the disease unless they came in actual contact with the ova of the worms in some way or other. It was a disease which must be taken by direct contact. Mr. Sutton replied at length to various other questions, and was warmly applauded.

The CHAIRMAN thanked Mr. Sutton for the lecture.

Mr. SUTTON replied, and asked members of the club to return the compliment by giving a lecture to the members of the Stowmarket Club.

A LONGHORN SOCIETY.—A meeting of breeders was held in Bugley Hall, on Monday, to consider the desirability of forming a Longhorn Society, and establishing a herd-book for the breed. Mr. T. L. Pusep, in the chair, moved, "That in consequence of the increasing interest manifested in Longhorns, and with the view of securing this old-established breed its proper position amongst English cattle, this meeting is of opinion that it is desirable to form a Longhorn Society." This was seconded by Mr. Satchwell, and unanimously carried. It was also resolved, on the motion of Mr. Towseley Parker, seconded by Mr. Gofrey, that, "Believing that purity of breed is essential to improvement, this meeting is further of opinion that the pedigree of Longhorns should be duly authenticated and recorded, which object will be best attained by establishing a Longhorn Herd Book." A committee was appointed to carry out the resolutions.

## THE IXWORTH FARMERS' CLUB. MANAGEMENT OF SHEEP.

At the first discussion meeting the subject was "The Management of Sheep," introduced by Mr. EDWARD GREENE, M.P., the President, who said:

The difference between an animal well-bred and an ordinarily-bred animal was the difference between profit and loss. Their habits, with reference to their flocks, had so entirely changed within the last 25 years, that it was necessary to consider which kind of flock was the best to live on their respective farms. Many in the room would remember when no farmer in that neighbourhood had anything except Southdown sheep. It was then thought that Southdown sheep were not profitable enough; they had not weight enough; and Suffolk farmers consequently turned their attention to something different. He was, however, inclined to think that if they had turned their attention to Southdown sheep, and treated the lambs as liberally as those they now bred, they might have proved as profitable as anything they could keep on their farms. But wool as well as mutton advanced in price, and they were naturally desirous of growing more of both; hence they began the cross between the long-wool sheep and the Down sheep, and now, where they found one Down flock, they would find a hundred of the black-faced and half-bred. Therefore it was for them to consider what class of sheep was of the best character to produce the finest mutton and the best wool. Half-bred ewes, on the whole, were the most profitable. He would commence with the starting point of the half-bred flock. He thought the best cross was a Lincoln tup to a Down and Hampshire ewe, for he did not consider the Shropshire or the black-faced Suffolk a pure animal. No doubt both the Suffolk and the Shropshire were a good sheep, but he did not think they were the best to breed from. He should purchase some forward Down lambs, and endeavour to breed from them the first year, as they would then be of more value as shearlings. He thought, probably, many practical men would differ from him, and he was not prepared to say he was right in his views, but he was strongly of opinion that if all the conditions were fulfilled, by adopting his ideas they would have more money in their pockets—and, after all, that was the great question. He would recommend them to buy lambs bred early in the year—in February—and let them be well kept through the winter, and tugged not so early as the general flock. In his opinion there was no better means of obtaining a good ewe than by adopting this course. Supposing they gave 45s. for a pure half-bred in the month of August, a lamb which he presumed to have been bred early in the year, they would tup that lamb in October. In his opinion the cause of there being so much failure in tugging lambs was because frequently they had been bred in the month of April, and they were, therefore, not old enough and strong enough for the purpose. He would not put their produce at a very high figure, but suppose they averaged £1 a head for their lambs. They started with a ewe lamb at 45s., and would spend, perhaps, 10s. on it in artificial food, which would bring the price up to 55s., and they would get £1 for her lamb, and about 10s. for the wool, which was 30s. altogether out of the 55s. expended. They would then start in the following year with a ewe that had a lamb at 25s.; whereas if they went to the market to purchase her they would have to give 55s. or 65s. for her. Let them bear in mind that they could not make an omelet without breaking an egg, and they all knew that even if they gave 55s. or 65s. for a ewe lamb, it was often a very risky animal to breed from. The great object for them now to consider was, having got their flock, how were they to keep that flock up? He had lately been round Mr. Lugar's farm at Hengrave, and there were few men who had studied sheep more than Mr. Lugar had. He (Mr. Greene) at one time was of opinion that the plan Mr. Lugar adopted in breeding sheep was not likely to be a successful one; but he was glad to say he was not prejudiced on any point, and he thought that when a man found his opinion was not quite correct, the best thing he could do was to acknowledge it. As he said, he had been of opinion that Mr. Lugar's plan would not succeed, but he had that day seen Mr. Lugar's flock, and he must say that he had

not seen a flock like them in the neighbourhood. They had Down faces, and there were many of them that might be taken for Down sheep. He must confess that he was surprised that such results could be obtained from Mr. Lugar's mode of breeding. He had some conversation with Mr. Lugar, and he found that sheep-breeders ought to be very careful in the selection of their rams. They must also take care to have the best shearing ewes, and not be content with the refuse of some one else's flock. To go back to the principle of Mr. Lugar's breeding: he started originally with the cross from the Down ewe and the Cotswold tup, he liked Aylmer's tups. Of course the first start would depend, in a great measure, on the nature of the soil on which they wanted to put their flock. On ordinary farms, taking everything into consideration, the Down ewe was the best to start with. Therefore the important point, in carrying out Mr. Lugar's system, was to begin first. Let them start with the best cross, then they must take care to use a right sort of tup—one with an immense lot of the Down character about it. He observed, with regard to Mr. Lugar's sheep, that they were a capital sheep to graze; indeed, he must acknowledge that Mr. Lugar had obtained an excellent flock of sheep altogether. He was surprised at the very good lambs Mr. Huddleston had at his side, for he did not think, when he saw the ewes by themselves, that they looked like producing such a lot of lambs. Their excellent character was mainly due to his having used a proper tup to his ewes, and by this means remedied a great many defects in the breed. They were really a splendid lot of lambs, and he only grieved that Mr. Huddleston did not continue in his farm, and go on developing his flock of sheep, as there was no doubt he would have succeeded in making a first-rate flock of it. He protested against breeding from a ewe of the black-faced Suffolk or Shropshire type, although they were very valuable breeders for certain farms, as he would not breed from anything that was not pure-bred on one side or the other. Let them start with a Lincoln or a Cotswold, and not go to a Shropshire or Norfolk. Now the Shropshire was a very capital ewe, but some time ago it was made larger, being crossed from a Down ewe with a long-wool tup, and then they went back again to the Down. Therefore it was not a pure-bred animal. If, however, they crossed their sheep in the way he had pointed out, by judicious management they might get their half-bred flock up; although, if they asked his opinion, he would never breed from anything but the old cross. But they could not all do this, and it was therefore satisfactory to find that they could keep up their flock of half-bred sheep by using the best ewes and crossing them judiciously. With regard to the treatment of sheep, he saw that in the lecture he delivered before on this subject he went somewhat into detail, and he saw no reason now to depart from anything he then said. There were certain farms on which it might not be practicable, but he was in favour of rather earlier lambing than they usually had. It was said that, with earlier lambing, feed would run scarce in April, but this might be met, directly harvest was over, by putting in a mixture of feed, such as coltsed, round turnips, and other things, so that they might have something to go on with until their layers were fit. He had tried this on his own farm, when he farmed about 400 acres of land, and he had always found it practicable, although possibly it might not be on some ordinary light land farms. He never found a late lamb catch an early one. Having had their lambs early, his opinion was that they should be put to feed as soon as they could do so. He was not an advocate for much artificial food, but he was in favour of a little; and he thought if they gave them some as soon as they could feed, they would find a 200 note spent in that way would save them 450. He was sure that when sharp weather set in, and in times of trouble and difficulty, they would find it answer their purpose; as every pound of mutton they lost would be worth 10d., and it would cost them 8d. more to put it on, making their loss altogether eightpence a pound; and, looking at the price of meat, it would thoroughly pay them to take care that no animal lost any of its original fat. Prices of things were different now to

what they were when he last read a paper to them on this subject, but his calculations then seemed to be that he took the lambs to be worth 32s. a-piece on the 1st August, and he would spend 31. a week on artificial food for each lamb from that time until the 21st December, which would be 20 weeks, making an expenditure of 5s. a-head, and from the 21st December to the 21st February—nine weeks—he would spend 6d. per week per head, giving 4s. 6d. expended on each lamb, or a total cost price of 41. 6d. ahead. They might then reckon, taking the average of years, that in the month of February that lamb would be worth 50s. He had seen a good many lambs in the month of March not worth so much as in the month of February; but if those lambs had been kept well up to that time, they might have been worth a good deal more. Another point was to start with well-bred ewes. They all knew that had been, perhaps, one of the worst years they had experienced with regard to their ewe flocks, as in the spring of the year there was hardly any green food. Mr. Lugar had told him that, in his flock, he had 14 score out of 25 score with pairs of twins; and he must say he was astonished at it. He was therefore convinced that keeping the best ewe-lambs, and keeping them well, was the best way to have a flock of sheep. In conclusion he remarked that he had been advocating the best way of developing a half-bred flock; but he did not run away from his old views. There was no sheep, in his humble opinion, equal to the cross from the long-wool to the pure-bred ewe; but the difficulty of getting that cross was so great, that he had confined his remarks to the best manner of keeping together a half-bred flock. Still he did not depart from his old opinion, that the best cross was that from the Cotswold to the Hampshire or Down ewe.

Mr. Peto said he did not agree with Mr. Greene on one point: it was far more difficult to get a good half-bred animal than one that was pure-bred. He was sure it required a great amount of study, and more than they gave credit for, to produce the animal Mr. Lugar had produced. He (Mr. Peto) had for some time fallen into Mr. Greene's views; he had procured his ewes from Hampshire, and his tups from the Cotswold Hills, and so far he was perfectly satisfied with the result. He did not say the Cotswolds were better than the Lincolns, but those two were the most profitable cross they could use. He thought, in the first instance, the Down sheep would produce a deal of mutton, and fat quickly, and produce a good deal of lean in the mutton too. The Lincoln did not do that, for it was nearly all fat. The Cotswold, therefore, was the most profitable to the community as well as to the farmers themselves. He thought also they produced the most wool. He believed they were indebted to Mr. Greene for the Oxford Downs. The difficulty, however, when they had got the stock, was to find the best kind of stock to cross them with; but he thought they were a very profitable animal. Mr. Lugar had called his attention to some which quite bore out that opinion. To breed a half-bred lamb, he did not think they could find a better cross than the Southdown or West-country sheep with the Cotswold tup. Mr. Lugar's were very good sheep, but there was certainly greater difficulty in keeping them than any they could produce. With regard to feeding, it was economy on the part of the breeder that the lambs when young should have some quantity of cake until it was thought advisable to increase their food for the purpose of making them fat.

Mr. H. STANLEY must give preference to the black-faced sheep. He had taken account of the produce of his sheep during the three years he had kept them, and he had always found his black-faced sheep produced considerably more than the half-bred. They were more prolific, they were hardier sheep, and their produce always sold far better than the half-breds. No doubt the pure-bred sheep required more time to mature than the half-bred, but they generally found that they exceeded a great deal the price of the half-bred animal. With reference to ewe-lambs, the pure-bred black-faced were worth 10s. a head more than the half-bred lambs. As to feeding, Mr. Greene's remarks not only applied to sheep, but to every animal, whether a horse or anything else: let it be kept well from the time of its birth.

Mr. MATTHEW had two farms of about the same size; one farm had 500 black-faced, and the other 500 half-bred sheep upon it, and both flocks were managed in much the same way. He generally made one shilling per head more of the lambs from the black-faced flock than the half-bred lambs had fetched.

He had at one time made £100 more of his wool from the black-faced ewes than that from the half-bred. There was nothing like a cross from a Lincoln to improve the quality of the wool.

Mr. G. GAYFORD, jun., said, though the plan of breeding hogg is not pay remarkably well on farms of good land, where a man kept only hoggets, and gave them the advantage of being fed by themselves, it appeared to him such a system would be attended with great difficulty on the *bona-fide* flock farms, because it would involve keeping them from the rest of their ewes, and thus extra expense would be incurred, without gaining those advantages which alone would make them pay for breeding. He had bought sheep that had had lambs, and if they were started with the flock about Michaelmas, they would be better than shearings that have not had lambs.

Mr. JOHN BOUTY said that, as far as his experience went, the lamb from the Down and Lincoln cross was the animal he liked best.

Mr. W. MANFIELD thought it was desirable, if they could, to get at some pure breed, and if they could not obtain that, let them get sheep from a very pure source. The best plan would be for a farmer to select them from his own flock. He was of opinion that the best way of obtaining and keeping up a good flock was to adopt the plan shadowed forth by Mr. Greene—buy the best lambs in the month of August, and keep them as fat sheep. They would pay for their keep by their produce and their wool, and then they would have left an excellent shearing at a fairly moderate price, such as Mr. Greene had mentioned. For his part, he did not like the black-faced sheep—at all events, if he had to sell the lambs. He thought, perhaps, it would be best for them to sell their lambs every year, and buy again about Michaelmas, as great losses were often experienced by people who kept them throughout the summer. He should certainly buy them later in the season.

Mr. T. GOLDSMITH said the origin of Mr. Lugar's flock was a lot of black-faced ewes crossed with a Down tup. They should endeavour to get good mutton, without too much fat, and this he considered was the failing of the Lincoln and Leicester breeds.

Mr. HUDDLETON said the greater part of his flock were from a Down flock crossed with a long-wool tup. Mr. Sierman, his predecessor, had been breeding in-and-in, and when he (Mr. Huddleston) began he bought some Oxfordshire Down tups, which he got from Mr. Overman. Nearly all Mr. Sierman's ewes were from pure Down sheep. He had been keeping his lambs on sainfoin, with a little cake, which several gentlemen said was very good keep.

The PRESIDENT replied, remarking, amongst other things, that in his opinion they could do no better, if they wished to improve their flocks, than by judiciously crossing them with the best kind of tup. Let them get the breed to cross with their flock which will produce them the lamb to graze. A Suffolk ewe, though a good animal herself, was a beast to breed from. Let those who had the half-bred flocks take care to use such tups as the Oxford, Down, or Overman's, and not breed from a Suffolk ewe, which would produce a long-legged, unprofitable animal.

A vote of thanks was accorded to the President for his paper.

## SALE OF MR. R. H. CHAPMAN'S TWO-YEAR LONGHORN HEIFERS,

AT BIRMINGHAM, ON MONDAY, NOVEMBER 29.

BY MR. J. B. LYTHALL.

Princess of Wales.—Mr. Hall, Walton-on-Trent, 27 gs.  
Lady Sparkenhoe 17th.—Lord Howe, 28 gs.  
Rowena.—Mr. Marsh, Hartington, 27½ gs.  
Lady Hardendale 2nd.—Mr. Cox, Spaldon, 27½ gs.  
Upton's Last Lark.—Mr. Cox, 47 gs.  
Lady Upton 77th.—Lord Howe, 43 gs.  
Rollright's Rese.—Mr. Newdegate, Harborough, 31 gs.  
Maid of the Marsh.—Mr. Marsh, 28 gs.  
Maiden of Olden Times.—Lord Howe, 42 gs.  
Brindled Nancy.—Mr. Towneley Parker, 30 gs.  
Lady Arden the 2nd.—The Duke of Buckingham, 34 gs.  
The Welsh Rose.—Mr. Lancaster, Ashby, 31 gs.  
Maid of Bodeiwyddan.—Mr. Hall, 31 gs.  
The Crossal Daisy.—Mr. Hall, 30 gs.  
The Dishy Maiden.—Mr. Towneley Parker, 40 gs.

## MORAYSHIRE FARMER'S CLUB.

## THE OUTGOING TENANT.

At the quarterly meeting, held in the Assembly rooms, Elgin, Ex-Provost Cameron in the chair,

The CHAIRMAN said the subject for discussion was: Under the usual conditions of leases in this county, by virtue of which an outgoing tenant is entitled to receive value by arbitration of first and second year's grass, fallow, and dung, does any, and, if any, what value remains in the farm for which the outgoing tenant receives no compensation?

Mr. YOOL (Conlard Bank) said: The answer to the question as to whether, under the usual conditions of leases in this county, by virtue of which an outgoing tenant is entitled to receive value by arbitration of first and second year's grass, fallow, and dung, any value remains in the farm, for which the outgoing tenant receives no compensation, seems to me to depend very largely on the previous management of the farm. If little or no purchased manures or feeding stuffs have been used, then there will be little or no value remaining, for which the outgoing tenant receives no compensation. If, on the contrary, the outgoing tenant has, up to the end of his lease, farmed highly and expended a considerable amount annually on extraneous manures and feeding stuffs, then there will be a considerable value left, for which he will receive no compensation. This, I think, must be perfectly well known to any one who has been fortunate enough to enter a farm which had been left in high condition; and perhaps still better known to one who has been unfortunate enough to enter a farm which had been left by the preceding tenant in an exhausted condition, and who has found out to his cost that it takes not only a large outlay on manures to bring such a farm up to the state of condition in which it becomes profitable, but also a considerable number of years to do it. The application of a large amount of manure to land in low condition will give bulk of straw, but will not give either quantity or quality of grain in proportion. In short, in such a case, it takes the continued application of fertilizers for a considerable number of years to produce full and remunerative crops. This is the result of my own experience, and I think it will be found to be the universal testimony of those who have been unfortunate enough to enter on the occupation of land in an exhausted condition. But to come more to particulars. If a farm has been kept up to the end of the lease in high condition, then the outgoing tenant will, to a certain extent, receive compensation in the value of his grass for such condition, but not to the full extent, because he will receive merely the consuming value of the grass, and nothing for the unexhausted manure left in the soil at the end of the grass season. But there will, under these conditions, be unexhausted value left, must be patent to any one who knows how much better a crop of wheat or oats can be grown after grass well laid down than after grass badly laid down. Then as to fallow. The outgoing tenant is paid the rent of the fallow land, and the labour performed on it, and if he has been cropping hard and not manuring liberally, then there will be little or no value remaining, for which he receives no compensation. On the other hand, if he has continued to farm highly, and has applied manures liberally to the preceding crops, the incoming tenant will be able to grow larger green crops, and at less expense, than he otherwise could do, and that by means of the unexhausted manures left in the land by his predecessor, for which he gets no compensation. As to dung left, the better the dung is the outgoing tenant will get the more for it as a rule, and consequently there will be less likelihood of value remaining than in the previous cases, for which he will receive no compensation. But even in this case, where considerable quantities of feeding stuffs have been used, I doubt if he generally gets as much as the additional value caused by the consumption of such feeding stuffs. Again, if the outgoing tenant lays down his barley crop well (amongst which the incoming tenant sows grass seeds), while he will undoubtedly be compensated to a considerable extent in a larger crop of barley, the following crop of grass will be better, of which the incoming tenant reaps the benefit, a benefit produced by the unexhausted value of the manures applied by the preceding tenant, for which he has only been

partially compensated by his increased barley crop; and so on through all the other crops that may be grown; and so also for draining or other improvements effected by the tenant, for which, under the usual conditions of leases in this country, he receives no compensation. I have thus endeavoured to answer the question as to whether, under the usual conditions of leases in this county, any value remains in the farm for which the outgoing tenant receives no compensation; and my answer unhesitatingly is—that if the outgoing tenant farms highly to the end of his lease, then there is a very considerable value left, for which he receives no compensation. And thus our system of leases, although admirable in many ways, is incomplete, because a tenant is almost compelled in self-defence to reduce the condition of his land towards the end of his lease, sometimes no doubt to his own loss, if he proceeds to do so too soon, or goes too far, and always to the loss of the incoming tenant, and consequently to the loss of the proprietor and consuming public. In short, gentlemen, this "see-saw system," as it has been happily applied by the present Prime Minister, is a loss to all the parties concerned. The next part of the question is the amount of the value left for which the outgoing tenant receives no compensation. To this question I think there can, from the nature of the subject, be no general answer given applicable to all cases. Each individual case must stand on its own merits as much so as the value of any particular field of grass or corn or turnips. As well might one ask what is the value of a field of grass? The answer, of course, would depend on many considerations—such as the appearance presented by the field, the abundance or scarcity of plants, the quality of soil, the climate, &c., &c.—and so the answer to the latter part of the question seems to me to be that the amount of value left, for which the outgoing tenant receives no compensation, depends, and must in the nature of things depend on the circumstances of the particular case, and cannot be determined by any fixed unvarying rule.

Mr. MACKENZIE of Ardye, said this was a subject that they could merely touch in its chief points. There were matters of much more importance to farmers regarding outgoing tenants than unexhausted manures; he meant in the way of building, draining, and fencing. Without fences and proper buildings, a farmer could not go on, and he would rather give a farmer compensation for these things, because he meant to say that unexhausted manure was a thing impracticable to get at, which could not be found out. He knew the farmers in Morayshire very well, and he was satisfied that they were not such simpletons as to put anything into the land that they could not get value for. More than that, he never yet knew a man keep up his farm who was not well paid for it. He had known many a man who had ruined himself by exhausting his land, whereas if he had done otherwise and kept his land in good condition, he would have been well paid for it. The man who kept his land up to the last got payment for everything.

Mr. HARRIS (Earnhill) said that it was a very great pity that ever the question was received by the Club, either at this or the previous meeting, because at a very large meeting held shortly before the last general election, when there was a very large number of proprietors present, his friend Mr. Walker (Alyre) was in the chair, and read a most able paper on the subject. On that occasion, under his persuasive eloquence, backed up by the influential opinion of many large proprietors and factors present, they came to a decision upon the question. With their permission, he would read the question and the decision: Question—"What is the opinion of members as to compensation to be given by proprietors for unexhausted improvements in agricultural subjects, especially as regards building, draining, and enclosing?" Decision of meeting: "That any legislation in this matter would be inadvisable; that the question ought to be matter of agreement between landlord and tenant; that in any contract or lease provision should be made to ensure the tenant's payment for unexhausted improvements." Well, having come to that decision that such a thing as unexhausted improvements did exist, and that it would be for the benefit of agriculture that compensation for

them should be ensured, they now, a year or two after, sit down to carefully consider whether there was such a thing as unexhausted improvements. It appeared to him if they were not very careful about their decision, they would make themselves ridiculous. This Club had always been behind in its opinions. It was a great deal more landlordly and narrow than it ought to be, although he did not mean to combine landlords with narrowness. They passed the most conservative and old-fashioned opinions, but let any man come forward for their suffrages with a liberal programme, and where were they then? He was not talking politics when he said their present Member had put forward his opinion that tenants should be paid for what they left in the soil, and that the President of their Club, a very able man, and a leader of the Conservative party in the House of Lords, actually had a bill before Parliament for the purpose of providing compensation for agricultural improvements; and then they were sitting down there to consider whether such a thing existed. He never heard anything of the kind. That was a question which should not have been before them now; and it was put forward in a most incorrect manner. If the question was not altogether incorrect, it was certainly misleading. Having read the question as set down for discussion, Mr. Harris proceeded to say that the fact was that the system of giving up payment to waygoing tenants was freely creeping into the county. On one or two of their largest estates, payment for second year's grass was entirely suspended, and the tenants on these estates knew whether there should be such a thing as payment for unexhausted improvements. These conditions for payment were paraded as gifts to the tenants, as it were. What the tenant received was the payment for first and second year's grass, for fallow and dung; but it was forgotten that that was part of the produce of the land for which he paid rent. They were not giving the tenant any payment for what he did not pay with his labour. They would ask the question, after those things which they were legitimately compelled to pay the tenant, what did he leave for which he got no compensation? He said the great bulk of the tenants in that county, if they remained in their farms, and took them again, or when they left the farms to be taken by others, had always a very large sum for which they got no compensation. He would easily show them how that was. He had a very vivid recollection of what the county of Moray was like when he came to it, 27 or 28 years ago, a young man. Perfectly the impression of what the county was then like was still plain on his mind more vividly than with those who had been born and brought up in the county; and he could say that the difference between what it is now and what it was on that harvest morning when he first saw it was great and marvellous. Large tracts of land had been improved, and great and marvellous changes had been brought about by the large outlay and skilful manner in which tenants improved their land, first by drainage, and next by the application of bones and cake. A great deal had been said about the difficulty of following unexhausted manures. One ounce of that was worth a bushel of argument. Some of them had lately been in the county of Lincoln. Did any of them ever see such another county, for they had the best buildings, the wealthiest farmers, the best crops, and the highest rents, all in consequence of a yearly tenancy, with a very strict tenant-right. He said that a tenant should be paid for buildings which he erected, for all fixed engines, for drainage, for fencing, hedges, hedges, feeding cotes, and for all other things in effect tending to add to the value of the land while he occupied it. In terms of that he was prepared to speak. The hardship to a man, from the end of his lease was sometimes not so great because he had an opportunity of recovering something for himself. But take the case of the death of a tenant. He could point out cases where the landlord had repudiated his share, and where the representatives of the deceased tenant got precious little. The resolution which he should submit to the meeting for approval was in these terms:— "That it is the opinion of this Club, that under the usual condition of leases in this county, the outgoing tenant receives no compensation for any buildings he may erect, nor for any improvements he may effect on those existing on the farm; that he is not paid the value of any fixed engine, nor for any road making, drainage, or fencing, nor for the unexhausted improvements effected by liming or boning land, or by consuming cake on the same, and the Club is further of opinion that if compensation were secured to the outgoing tenant

for the before mentioned subjects and other similar improvements, the produce of the soil would be materially increased, and the bonds of good feeling between landlord and tenant considerably strengthened."

Mr. SMITH, factor, (Inverallan) said that the question put did not condescend upon any rotation of cropping succeeding the arbitration, and the whole subject lay on that. There were various rotations of cropping throughout the county, and the practice on the estates with which he was connected, which formed no inconsiderable portion of the county, was the fifth shift. He came to the conclusion that any tenant working on the fifth course shift going out any day, and having the power to nominate arbiters to fix the value of his grass, dung, and fallow, got the full market value of what he left. Unexhausted manures and unexhausted improvements were without the question, and he was not involved there at all.

Mr. WALKER (Alyre) said he understood the discussion simply resolved itself into a complicated question about unexhausted improvements. His opinion would hardly let him endorse the suggestion that Mr. Harris made, that a farmer should be paid for everything that he chose to do. It was just possible that a farmer might go wrong in some little thing. It would be just as well that there should be a court of appeal to settle disputes. Mr. Yool had said that it was the easiest thing in the world to arrive at a conclusion—

Mr. Yool.—I did not say anything of the sort.

Mr. WALKER.—You said that grass would be very easily valued.

Mr. Yool.—Excuse me for interrupting you; but I did not say it. I said it was easy to see where the difficulty lay.

Mr. WALKER said the difficulty was as to how they were to prove the things that were to be valued. Mr. Mackessack, who had a pretty extensive knowledge of such matters, told them it was impossible to value manures in the soil; and that was a little bit of a hint to them. Mr. Yool had told them that grass could be very easily valued. He thought that nine tenants out of ten would endorse the opinion that when they paid for grass they had never been able to realise the value other people put upon it. When they could not tell the value of the visible crop, how could they tell the value of the other things when it came to be a question of estimating what was not seen.

The CHAIRMAN recalled attention to the terms of the question under discussion, and suggested that speakers should confine themselves more directly to it. Two years ago the Club gave a decision on the question of the tenant's right to compensation for buildings, drainage, and such like improvements. Now they were considering the branch of the subject relating solely to the tenant's claim for compensation for liming, boning, using cakes and other feeding stuffs.

Mr. Yool said he confined himself strictly to the terms of the question put.

Mr. MACLEAN said that Mr. Yool had confined himself to the point in question, but Mr. Harris went somewhat beyond it. It would be better that everybody were allowed to say what they had to say.

The CHAIRMAN said his object was, as president of the meeting, to perform the duty expected of him of keeping the discussion to the subject in hand.

Mr. HUNTER, Dipple, agreed with the chairman that they should stick as closely to the subject as possible. It seemed to be the opinion of the previous speakers that some value was left in the land, but no one had ventured to say how that value was to be arrived at. Mr. Mackessack, who was a very good authority on manures, said that no man could tell after the manures were put into the earth what value was in them. Some people told them they had tradesmen's bills from which to arrive at a conclusion; but everybody knew that there were a good many kinds of cake and bones and coprolites, and that every landlord would not be willing to take the arbitration of people upon the bill of a seller of these artificial things. But there were two kinds of farmers as well. There was the farmer who entered his farm in good condition, and who left it in a wretched condition. How was the value to be got at in that case? The landlord might, he thought, have a very good claim for compensation against the tenant.

Mr. TON, Ardivot, said it seemed to him they had nothing to do in this question with permanent improvements. The value left in the land by an outgoing tenant depended entirely upon the condition of the land. If the outgoing tenant had wrought the land so that it was entirely exhausted, the in-

coming tenant paid far too much for the dung handed over to him. It was a well known fact that grass in the spring of the year never looked better than when the valuations were made. A stranger looking upon the grass at that time, especially after a few warm showers, and then looking upon it two months afterwards, would not know it to be the same crop.

Mr. BUNTON, Inchebrook, said that every person having experience of farming was quite aware of the fact that the difference between a farm in a high condition and a farm in a low condition was so great, and the advantage to the incoming tenant in the former case such, that the outgoing tenant should get compensation. It was rather difficult to put a value upon the compensation, but his opinion was that there was the difference of a rent in the first five years between getting a farm in bad condition and a farm in good condition. The matter should be settled by arbitration. He thought Mr. Tod was quite right when he said that the incoming tenant almost always paid more for his grass than its value. When grass was valued in the beginning of the season, even upon very poor land, it would have a sweet appearance, and the buyer was sure to be a loser. Land in good order would throw up grass during the whole season, but land in bad order would not. That had been his experience, and it was patent to everybody. He thought it was quite apparent that there was compensation to be made to the tenant who left his farm in good order.

Mr. HAY, Trochelhill, thought there was a necessity for some change in the principle of fixing valuations. At the time when value for grass, fallow, and dung was first allowed, it was considered fair and satisfactory as between outgoing and incoming tenants. Since that time the introduction of artificial manures and the introduction of feedings off had revolutionised the experience of farming, especially in that county where such liberal allowance of both were given. He thought that where these manures and feedings off were liberally and judiciously used until the land got into a right manurial condition, there was an element of fertility added to the land which it did not originally possess, and the improvement thus created was, he thought, the best value and the easiest realised that a man got on entering a farm. It that were so, then the outgoing tenant had a right to be compensated for it. It was a very difficult thing to value the condition of a farm now to what it was nineteen or twenty years ago; but when the principle was allowed, on arriving at the value compensation would follow as a matter of course. He thought a valuation for increased condition of the land should be allowed, at the same time that the landlord ought to have a clear claim for deterioration—whether it was caused by extra cropping, or any other cause. There should be a clear line drawn between the capital of the different parties.

Mr. MURRO, Covesa, as a farmer of over thirty years' experience in the county, begged to differ very materially from some of the previous speakers. He farmed a considerable quantity of land; when he got it it was in very bad order, he had tried to put it in good order, and it was now yielding him very good crops. He knew by experience that the more a farmer did by his land, the more it did by him. Land was exceedingly grateful, much more grateful than they were to one another. ["Oh!" and "Question?"] That was the question. He manured equally well as any of his neighbours, and his experience was that no man could find out the value of the improvements effected by manuring. The farmer got the full value of the manure in his crop. It was just like a fellow taking a good beef steak and a glass of toddy—(laughter)—it had its effect, but did not leave so much as he thought. He had found that in thirty years' experience. He had found these manures would produce a crop for the time being, but where were they afterwards? Nowhere! (Laughter and cheers.) And no man of experience in going over the county of Moray would fail to find, as he had done, that the man who farmed his land well always did well. They had very good landlords, who did not let good tenants away, and there was a great deal said about these unexhausted manures both in his opinion. (Laughter and cheers.) He expressed it now most explicitly that, for one tenant who left a farm, there would be a dozen who would have to pay on the other side. That had been his experience, and he had observed it. He thought when any of them took a farm they took it to make the best of it they could, and if they made their bargain and stuck to it, they did not need any legislation at all.

Mr. MACLEAN of Westfield said that of what he had heard

of the discussion there was a great deal with which he could not agree. Mr. Harris had said the subject should not have been brought up there at all. He submitted it himself to the committee of the Club. Mr. Harris heard it read at the meeting of the Club in February, and there was no word that it was in any way a subject which should not be submitted. He wished to correct the statement, and to say that the committee and himself were within their duty. In submitting the subject to the Committee, he had utterly forgotten that a somewhat analogous subject had been raised in that place two years ago. He was only reminded of the circumstances two or three weeks ago, when Mr. Macdonald kindly sent him a report of the proceedings of that evening, and, strangely enough, that report brought to his mind that he had read in some local or agricultural journal a commentary on the discussion of that night, which he thought was anything but complimentary to the Club. The writer, so far as he remembered, said that the Club was venerable, not in the respectful sense of that term, but rather that the Club was venerable only in the sense of having become an old woman in her dotage, and that the only young vigorous blood in her whole composition was that which then circulated in the veins of their friend Mr. Yool, and which, he was happy to see, circulated there to that day with unexhausted speed. He was not present at that meeting in November 1873, and although he had heard others express something to that effect, he had never himself seen anything that indicated any amount of decrepitude or senility on the part of the old Club. Rather, at that moment it was, though venerable in point of years, young in action, and as unexhausted as the youngest of its admirers. He fully agreed with the whole of the gentlemen who had already spoken, that the principle of compensation for unexhausted improvements and unexhausted manures was the right of any tenant where they had been created by his skill and means. No doubt of that. At the same time, he thought some of the speakers had unduly magnified the present evil, and also greatly overrated the beneficial effects that would flow from the remedial changes which Mr. Harris had indicated. It was evident that a measure affecting the relations of proprietors and occupiers of land in Scotland would be passed in the ensuing session of Parliament. That measure would necessarily be one more or less of compromise, which would not be wholly acceptable to any party, but which would nevertheless be equitable, and more or less satisfactory to all moderate men. One thing alone was certain, that whatever else that measure contained, it would fully recognise a liberal principle of compensation. As to the practical adjustment of that compensation, that was quite a different matter, on which those who were agreed that legislation was necessary differed very widely amongst themselves. He had never known any scintilla that was not open to serious objection. One man said he could trace the effects of his outlay on five or six successive crops, and another that it was lost on one crop. One man told them that the effects of liming would be seen for twenty to fifty years, and another, with just as much knowledge of the fact, that it would be exhausted in ten or twelve years. It was impossible that a guide could be found just and fair to all concerned. If any ingenious member of the Club could invent an instrument capable at once of measuring the natural fertility and manurial condition of the farm, the fertilisometer or dynamometer would banish the lawyers of the large harvest of litigation which would certainly follow from any legislation. It had been said that the tenant was virtually prohibited from increasing the fertility of his land, or maintaining that increase to the end of his lease, because he has then no claim for the value of any manures remaining unexhausted in the land. It had also been said that were this disability swept away, capital would be attracted to the soil which was in the meantime held aloof by reason of the insecurity of the investment; and that if the security were rendered safe, more capital would be given to the land and production increased. There were both truth and exaggeration in these allegations. His remarks applied solely to the Loich of Moray, and he maintained that there was at that moment more capital waiting investment in the land than there was room for, and that that capital was not deterred from seeking investment by any fear of security. There were men possessed of adequate capital who would be glad to invest it in farms, untroubled by a shadow of doubt as to its security. Lord Derby said a few years ago that the application of capital would double production, and that was probably true of some parts of England, of



which Lord Derby was speaking, but not of this part of Scotland. They had lately been told, through the Scottish Chamber of Agriculture, that all that was required to bring a farm into excellent order was heavy manuring, to the extent of even six or eight rents of the land. Apply that principle to the Laich of Moray supposing the rent of land to be £2 an acre, and they spent eight years' rent on artificial manures. They would have an expenditure of some £20 an acre, and he would like to know where they would be by the end of a lease or half a lease if they followed that prescription. It might be followed on some land in the vicinity of towns, from which turnips and potatoes were sold at £20 to £40 per acre, but it would not be profitable on the average land of the county, where a storm in harvest might destroy their grain crop, as it had done his this season to the extent of £3 an acre. Mr. Maclean also supposed the case of all the farmers in the room being in a position of having the fee simple of the land, and being willing to do their utmost to produce the largest crops with a due consideration to profit. Would they try to raise eight or ten quarters where they now only raise four or six? They would, no doubt, in time add to the amenity of the homestead, and to the general appearance of the county; but in his opinion they would be regulated by the amount of rent paid to landlords, and by nothing more. Capital could do almost everything, but not quite everything for the land. It could build, and drain, and manure, but it could not change the climate. Profitable production was very soon attained, and if they forced production by the application of manures, the issue would be loss and not gain. He was for moderate husbandry as distinguished from high-pressure farming.

Rev. BRODIE INNES said that between an outgoing tenant and the landlord or incoming tenant, the question came to be, What did you pay for when you went in, and what do you leave worth paying for when you go out. How were they to make a deteriorating tenant keep up his land to the end of the lease or pay for the falling off? A few years ago he took a farm and paid for the grass at valuation, some of which he cut as hay, and found it cost him 3s. 6d. per stone. Six years after he let the farm, and his successors cut the same field of grass as he had done for hay. He bought the hay from his successor, and paid him for it double the amount that he received as valuation. What became of the valuation there? He would like that they would put in a word for discovering whether the outgoing tenant left anything in the land. A proprietor would be very glad to remunerate a good tenant by giving him his farm again, but as to remunerating him in money for having the farm in good condition, he was unable to see it.

Mr. WALKER (Alyre) said the argument had been brought to bear that, on the death of an occupant, there was great loss and hardship. He was ready to endorse that opinion so far; but that night he had heard two of the largest farmers in the county, whose predecessors were cut off during the currency of lease, say that they had paid a great deal more than value under the valuations.

Captain CHETWYND instanced a case in Devonshire where a proprietor remunerated his tenants at the end of the lease for unexhausted manures.

Mr. COOPER (Synie) spoke of the immense advantage to an incoming tenant following a man who had managed his land well. That was especially the case on retentive soils.

Considerable discussion took place as to whether Mr. Harris' motion should be put as the finding of the meeting, or whether the chairman should sum up the discussion and indicate the general result.

Mr. ROSS (Millhead) seconded Mr. Harris' resolution.

Mr. MACLEAN moved that the chairman sum up, and Mr. Walker seconded the motion.

On a show of hands being taken, 17 approved of the chairman summing up, and seven were in favour of the adoption of the motion of Mr. Harris.

Mr. HARRIS then remarked that it appeared to be settled that it was informal for a member of the Club to propose a resolution for their acceptance, and proceeded to reply to some remarks that had been made on what he said. It was a pity the Committee did not put in the question the words they meant, because by its terms buildings, drainage, and fencing were certainly admissible. The words referred to value left on the farm, and if they had meant value left in the soil, it was a pity they did not write what they did mean. As to

the matter of capital, it could easily be proved that its application enhanced the productiveness of the farm. They saw a fine farm advertised, which had been so many years in the occupation of the proprietor, and what did that mean but that he had expended capital upon it knowing that it was secure. There was a measure before Parliament, and the fact was that it would be moulded by the opinions given by such Clubs as that. As to his not objecting to the question previously, if it had come up at last meeting he should have done so. Dr. Maclean admitted that he had forgotten that an analogous question had been previously discussed. So he stood upon his ground, and said the question was being discussed over and over again.

Mr. YOOL then, in reference to the remark by Mr. Mackessack that manures in the soils could not be valued, said that it was done every day. It had been done in Lincolnshire since 1819; and what was done in Lincoln might surely be done in Moray. With reference to Mr. Walker's remarks about high valuation of grass, he said valuers were but mortal men, liable to error, but that did not at all interfere with the principle involved. It had been remarked by Mr. Hunter that a tenant might allow a farm to deteriorate, and in that case he agreed with Mr. Hay, and recalled that six months before he had said that if the tenant were remunerated for what he left, the proprietor should be remunerated for what the tenant took away. He was glad Mr. Maclean admitted the principle of compensation to be sound. There were, undoubtedly, difficulties in determining the amount of compensation, but there were difficulties in everything, and they could be overcome. They had been so in Lincoln, as Captain Chetwynd had told them in Devon, and on the estate of Ochtertyre, where the proprietor had introduced compensation clauses into his leases.

The CHAIRMAN summed up, and said he had some difficulty in doing so from the turn which the discussion had taken, and the rather hazy views some had expressed. The conclusion he had come to was that there was an equal number on either side. But, running through the whole debate, there was a very distinct feeling that, if there were any unexhausted manures left in the farm by the outgoing tenant he should most unquestionably be paid for them. That was best expressed in the words of Mr. Maclean when he said that, where improvements had been created by skill and industry, they should be paid for. It might go forth as the decision of the Club, by a very considerable preponderance of opinion of those present. If he might be allowed to express his own opinion, both practically as a man of business and as an owner of land, he was exceedingly glad to find an opinion expressed round the table that, if a man did not do something to leave the farm in a better state than he got it, he should not be entitled to anything. In other parts of Scotland it was not the rule that a person should be paid for either first or second year's grass when he left the farm. In the south of Scotland, where his own property was, the incoming tenant simply paid for the grass seeds sown out with the crops. If they were to give compensation to tenants for unexhausted manures they must have evaluation of the farm when the tenant enters and when he leaves.

AUTHORITY.—The French press-laws weigh heavily upon papers that assail the Government: this is especially true of the provincial journals, whether they belong to small towns or large cities. In Paris an Opposition sheet may go great lengths; in the provinces the length to which it may go depends wholly upon the caprice of the prefect, to whose caprice is superadded, under the state-of-siege system, that of the general commanding the district. Prefect and general, both these dignitaries can deal with newspapers such as it suits them. M. de Poigufemaye and General de Flambergue-Anvent were both gentlemen who, to use the popular expression, did not like that mustard should be made to mount to their noses. Adepts in that particular kind of firmness which consists in bringing a foot down when a little finger will do, they ruled over their departments by a continuous series of ukases, abolishing this or that, or putting down somebody. It was the prefect's delight to shut up clubs, to close cafés, under pretext that politics were talked there; to



isterdict annual village fairs, agricultural dinners, or orpheonic contests, because of the "ebullition of popular feeling to which these solemnities might give rise;" and every time he thus interfered with the business or amusements of the populations over whom he ruled, M. de Poizfermaye was wont to remind them that these are times when the principle of authority must be strenuously affirmed. One would have thought that the principle of authority was a something with a tangible

form which there was danger of losing, and which it was expedient to exhibit as frequently as possible, just as the priests of old used to exhibit the relics deposited in their churches to prove that they had not dishonestly made away with them. The general, trumping the prefect's valiant head, was for ever issuing orders of the day to his troops, commanding them to draw their swords and ply them unparingly on civilian aggressors.—*The Cornhill Magazine* for December.

## STOWMARKET FARMERS' CLUB.

### PASTURE LANDS.

At the first discussion meeting for the season, the subject was, "How do we farm our Pasture Lands?" introduced by Mr. Thomas Woodward, of Old Newton. Mr. R. J. Pettward in the chair.

The PRESIDENT, in introducing the lecturer, said that in this district they had certainly attended more to the cultivation of corn than to their pasture; they had not, in fact, given the pastures a fair share of attention, so they had not yielded to the farmer the profit of which they were capable. He trusted they would hear that evening whether there was any reason, even in this climate, why the pastures should not be as grateful for generous and judicious treatment as arable lands. What the pastures required was study and experiment, and if only the same amount of experiment was given to the pastures which had been given to the plough lands, they would most likely have been in a far more remunerative condition than now.

Mr. WOODWARD ventured to say that his subject was one which was well worthy of consideration, and which would afford ample room for debate. He neither proposed to read a long paper, nor to touch upon what were called "water meadows," but would confine himself to upland permanent pastures. He asked, Are they not in most cases neglected? How often do they receive a dressing of either artificial or farmyard manure? Is it not frequently the practice to feed the cattle and sheep upon the meadows, and remove them either to the arable lands to fold, or the yards to shelter, without any return of manure? Are not rushes, thistles, coarse grass, or what we term cushion grass, ant hills, &c., allowed to remain, taking the place of nutritious grasses? And is it not often the case that the same meadows are mown for hay? In inviting attention to a better system of management of pastures, he said there were two great objects to be sought, to extirpate useless and pernicious plants, and to continue and multiply useful ones. The first was accomplished by thoroughly under-draining such meadows as were too wet, by regularly weeding, by harrowing, rolling, removing ant-hills, and by alternately feeding and mowing; the second, by manuring, folding with sheep, and sowing in the spring the most nutritious grasses on places which might be bare. He recommended thorough draining, at a depth of from three to four feet, and at distances varying according to the subsoil. On most pastures a distance of twelve yards would be found close enough, and on many soils four feet deep, and from fifteen to twenty yards apart would answer well. Draining enabled them to feed cattle and sheep on the pastures when arable land was too wet; it improved the quality of the grass, and extirpated rushes and sedges. Weeding should be done before the seed-weeds were allowed to ripen. Thistles were best cut with a scythe or reaphoot as soon as they showed their bloom. Harrowing and rolling should be done every spring. The former process pulled up moss, levelled slight obstructions, opened the surface, and scattered manure left by cattle; the latter levelled the meadows for the mowing machine. The removal of ant-hills, though a very important part of farming, was frequently neglected, much to the hindrance of the growth of grass. They formed one of the greatest obstacles to the mowing machine. One mode of destroying them was by turning them over with the spade in the winter, and laying them grass downwards, leaving the hole open for three or four weeks to secure their destruction by the rain or frost. After this the flag might be replaced and trodden down level with the surface. Another method was to put quicklime or salt into the holes, and spread sufficient of the mould of the sod to level the surface. This was best done in the spring. A prime point in feeding was to carefully time the shutting

out of cattle from depastured meadows, both to prevent poisoning of the sward and to promote the grass crop for hay. The exact period for this could not be easily regulated by fixed rules, as much depended upon the autumn season. Heavy cattle should seldom be suffered to remain later than November; sheep, however, might be allowed to remain later. In the spring, cattle should not be admitted upon such lands till they began to possess a proper degree of firmness. The quantity mown for hay must depend upon management and circumstances; but it should not be more than half the pasture, and, where practicable, it should be alternate. The portion intended for mowing is obviously much better not fed down at all, or very little, with cattle in the spring, and certainly not so much as with sheep. By attention to this the pasture will not only ensure a more abundant produce, but a much earlier one, and, of course, have an advantage in making the hay and securing the crop. He commenced cutting hay last year on the 17th of June. The quality of hay cut early was much better, and early cutting should be adopted on cow farms, as it was better not to let the seed stem arrive. Having said that draining was the first step towards improvement, he thought manuring would take the second place. He anticipated a diversity of opinion as to the best time to manure. If they asked themselves the question, he believed many would say, "We never manure, and therefore how should we know the best time?" He would first take the pastures in hand from the 11th of October. He suggested that a liberal dressing of Peruvian guano and super-phosphate of lime—from two to three cwt. of the former, with about half the quantity of the latter per acre—should be sown the latter part of March or the beginning of April, on land to be mown for hay the next haysel. After the hay was taken off, let them manure with ten tons of good farmyard manure per acre. The rowen would soon overgrow the manure, and yield in most seasons an abundance of rowen feed. On the portion intended for feed, the same dressing of farmyard manure, applied the latter part of January or beginning of February, would nurse up the young grass for early feed. A thin, patchy, and worn condition of an old meadow might be renovated by sowing a mixture of white clover, and any seed, rye grass collected from hay of good quality. In conclusion, Mr. Woodward asked whether, considering the present high price of meat and dairy produce in comparison with the low and unremunerative price of corn, it was not worth while to better farm upland pastures. Of course, there were many other ways of improving meadow lands, such as by liquid manure irrigation, folding with sheep, carefully spreading the droppings of cattle, &c., which could not all be put in one evening's paper, but he hoped he had said sufficient to invite a good discussion.

The PRESIDENT, in opening the discussion, observed that the labour bill was much less on pasture than on arable land, which was of course a material consideration now-a-days. Another great feature was that one got a crop from it every year; there was never a rest or a fallow; but on the other hand, there were climates which were by no means suited to pasture farming. He had heard it said that about 30 inches of rain in the year were wanted to make pastures thoroughly productive. Of course, they must take the land and the climate as they had it, and try to ascertain what was best to be done with them. Mr. Woodward had suggested first of all drainage, which on most soils was no doubt very desirable. He had also made several suggestions with regard to manuring, a point which had hitherto been very much neglected on pastures; in fact, everthing had been taken off the pastures and put on the arable land. He (the Chairman) would like to hear some

estimate as to the relative exhaustiveness of a hay and corn crop. He imagined a crop of hay was not much less exhausting than a crop of corn. Of course, in manuring they must consider what elements were needed to be supplied to the plants; but a manure which Mr. Woodward had not mentioned was bone manure.

Mr. J. S. COCKSEGE asked whether the Cambridge ribbed roll or the flat roll was the better for pastures, and whether a chain-harrow was better than the old pointed harrow.

Mr. WOODWARD said he believed the more pastures were rolled the better, and preferred the Cambridge roll. As to the harrows, he believed in harrowing in the spring, and the rougher the harrows the better; but at the same time he did not advocate harrowing on in the spring.

Mr. COCKSEGE said he had found that the Cambridge roll was considered the best.

Mr. S. PAGE said he put muck on the pastures whenever he could get it, and if he had not got it on the farm he went into the town and bought it. He also put some damaged malt chives on the land, and he believed they did more good than bone manure or superphosphate. Guano was, he thought, the best artificial manure, for either pasture or arable land; and he believed if a man did not drain his pastures, and farm them well, they would soon farm him, for they would not grow anything.

Mr. HENRY CROSSE said he would spud every thistle as soon as it came up, and also narrated how he got rid of bull's-eye daisies by manuring. He had not had much practical experience of artificial manure, but he did not think lands in that neighbourhood required either bone manure or superphosphate; there was enough chalk already. As to seeds, he did not think it was much use sowing what was immaterial to the soil, and said he once sowed rye grass on a pasture, but after a few years he lost sight of it.

Mr. S. W. HUNT said pasture farming was a subject which required a great deal of study, and considering the prices of meat and corn, he was sure it would pay to study it. He could not call Suffolk farmers good pasture farmers, for riding about one saw knobweed, yellow-rattle, thistles of various kinds, nettles, docks, sheep's parsley, drabane, mountain flax, burdock, ragwort, and many other pernicious weeds. Unless these were eradicated they could not hope for a good return from their pastures. The first thing to be done, with reference to hard land pastures was to underdrain them, in order to sweeten the soil, eradicate the weeds, and then manure. There would undoubtedly be a great difference of opinion as to manuring, but he advocated long muck in the spring. Some advocated manuring pastures after the hay had been taken off, but he should recommend a horse rake to take it off again. He recommended the making of a reserve of the scourings of ditches and the parings of banks. He would harrow the pastures with a rough harrow till he made them nearly as rough as a ploughed field; then later on let the Cambridge roll be taken over them, which would produce little creases. Ten or twelve pounds of seed scattered broadcast would fall into these creases; and let it be covered up, with some of the mould of which they made a reserve. He recommended for sowing the following grasses: Vernal green, meadow fescue, meadow foxtail, tall fescue, fine-leaved fescue, hard fescue, round cocksfoot, perennial rye grass, Timothy grass or cat's tail, smooth-stalked meadow grass, rough-stalked maiden grass, cow grass, alsike clover perennial, and clover and yellow trefoil. Above all things they must not forget the manure.

Mr. S. PECK asked whether it would be wrong to harrow now. He believed in manuring the pasture, and also in draining low lands.

Mr. CROSSE observed that sand or gravel was a capital thing on low-lying pastures, and some of the moulders' foundry sand would be good stuff.

Mr. COCKSEGE said he was pleased to hear that, for it accumulated rather fast, and in future, if a use could be made for it, a small charge might be made, say 2d. a bushel.

Mr. J. FARROW expressed an opinion that the mere rolling of pasture was of little or no use, whatever kind of roll was used. Rolling the land would not manure it, and he could not see what virtue it would impart to it. The subject under consideration was no doubt an important one, and the gentleman who had introduced it was enthusiastic on the point of deep draining; but as far as his (Mr. Farrow's) experience went, in cases where the pasture suffered from an undue amount of moisture,

a drain of 24 or 30 inches deep was all that was required. He now referred to upland pasture with a clay subsoil. He farmed a tenacious clay land, and he would offer a challenge that any man might dig a hole 50 feet without any water running into it.

Mr. WOODWARD: Fifty feet?

Mr. FARROW: Fifty feet if you like; but to be more reasonable, say 20 feet, and if deep water will not rise then, I should like to know of what use deep drainage is. Mr. Farrow proceeded to say that there was no doubt that pastures suffered from insufficiency of manure; but how was it possible to get the manure for the pastures? For his own part, he required all his manure for the arable land, and a good deal more than he could find. If there was any manure to spare, it was no doubt the right policy to apply it to the first crop of grass.

Mr. S. PAGE said he should like the opinion of the members of the Club as to whether it was right to leave the aftergrass for the spring, or to feed it in the autumn. As to leaving the hay on the ground, he cited the instance of a gentleman who, after cutting, left it, but he got no aftergrass, and there was no feed beyond the old rubbish, and this the stock would not eat.

Mr. WM. NOBLE remarked that the most important part of farming was to farm the pastures well, as they were thereby producing something to improve the arable land. The first step towards improving the pasture land was, no doubt, drainage. He had not done any deep draining, but he had seen great benefit resulting from it on other land, and where there was springy land you could not go too deep. With regard to the manuring, he had tried different kinds—artificial, guano, nitrate of soda, &c., and he must say, though interested in the sale of artificial manures, that he never found anything so beneficial as long muck well made. He considered the use of a gang of harrows at this season of the year, when sufficiently dry, was of benefit.

Mr. KISTRUCK said he was much plagued with rushes, and he should be glad if any one could tell him how to get rid of them.

Mr. S. PAGE: Bleed them.

Mr. KISTRUCK: You may bleed them, and you may do what you like, but you can't get rid of them. I will give any man £10 who will show me how to clean my farm of rushes.

Mr. PAGE said he believed there was nothing better than a free application of sand to the rushes.

Mr. KISTRUCK: But I cannot get the water away.

Mr. WAKELING (Wetherden) observed that if you fed the young grass off you did not get so much grass as if you left the rough grass. The rough grass was no doubt better for stock after there had been a good frost or two. He thought deep draining was the best way of getting rid of rushes; gravelling was also useful, and digging them up would check them very much.

Mr. FARROW said he once saw a grass pasture covered over ten inches deep with sand and gravel, and it was thought that that would be an effectual cure. Some tares were planted, and there was a splendid crop. After three or four years the rushes came up as thick as ever.

Mr. EBDEN thought that if you persisted in cutting the rushes they would be much weakened, if they were not in the end totally destroyed. The reason thistles did not die when cut was because there were buds below where the scythe went. If they were cut an inch or two below the buds they would, he thought, die off. Sheep parsley was a very troublesome weed, especially where there were a number of trees, and he knew of no method of getting rid of that weed except perhaps by digging them up. He had a piece of pasture covered with weeds of this kind, and he attempted to get rid of them by digging them up, and he as near as possible succeeded; but after a time they came again. With respect to the exhaustion of land by grass as compared with corn, he was of opinion that grass did not exhaust the land like corn, because grass took something in from above which went to the root of the plant for future growth. He considered the use of harrows very beneficial, because the soil was loosened and the old grass threw out a fresh root. After some good rough harrowing there would be nothing so useful as a good smooth roll.

Mr. HEWITT said he took it to be the general opinion of the Club that there was nothing like a good coat of muck for pastures, and the great difficulty with some appeared to be as to where it could be obtained. Folding sheep on the pasture

would, he believed, be found very beneficial if fed with root or cake.

Mr. Cross said the plan pursued by Mr. Howard, of Blakenham, used to be to throw mangold on to the pastures, but before doing so he put down a quantity of halm, which prevented the sheep from doing much injury to the pasture,

and it at the same time acted as a covering, which, in certain seasons, was beneficial to the grass.

Mr. Woodward replied generally to the debate, and votes of thanks to him and the chairman concluded the proceedings.

## BOTLEY AND SOUTH HANTS FARMERS' CLUB.

### STEAM CULTURE.

At the November meeting, Mr. W. Warner in the chair, Mr. JOHN TRASK, Northington, Alresford, thought he owed something of an apology to them in not doing as he promised last autumn, which was to show what good was derived from the practice of steam cultivation. He was there now, however, to redeem that promise, and must ask them to forgive him for any disappointment he might have caused them to feel last year. He would now read what he had written. Mr. Trask then continued: There can, I think, be very little doubt but that, especially during the past two or three years, considerably increased attention has been paid by farmers, and by all thoughtful people having anything to do with the management of land, to the subject of steam cultivation; and as I myself, from several reasons, was led about two years ago to purchase a set of tackle for my own use, I was the more readily willing to accede to the request made that I should offer to the members of the Botley Farmers' Club my own views on the subject. It will not be necessary for me to give a list of all the various systems to be met with, nor to give a list of prices, for they are easily obtainable from our local agents, or through the catalogues of the respective makers. The prices vary for single engine sets on the roundabout system from about £600 (Barford and Perkins) to about £1,200 (Messrs. Howard), whilst for double engine sets on the direct system the prices vary from the 6-horse power tackle of Messrs. Fowler, costing about £1,100, to their 30-horse power double set, costing about £3,000. It will, therefore, at once be seen how wide is the scope offered, and to how small or how large a cost it is possible for any intending purchaser to venture. The last public trials were held under the auspices of the Royal Agricultural Society at Wolverhampton in 1871, when Messrs. Fowler carried nearly everything before them, and there is but little doubt that they have by far the lion's share of patronage as regards the manufacture of steam-ploughing machinery. The sets of tackle are known under two classes, as I have already hinted—viz., the roundabout and the direct. The first-named is, I suppose, the oldest that has come into extensive use, for Borelli's traction engine, travelling over the land and drawing the plough behind it, which I well remember seeing at the Royal Agricultural Society's Show at Salisbury in 1857, was soon pronounced impracticable. There are roundabout sets, made by Messrs. Howard, Fowler, and Barford and Perkins, which latter is a professed improvement on Mr. Smith's plan, so long known to the agricultural public as "the Woolston man." The manufacturers of the direct system are Messrs. Fowler, of Leeds, and Aveling and Porter, of Rochester, and their implements and prices, too, are almost identically the same. The only recommendation the roundabout system can have is its cheapness, whilst the only drawback the double-engine system can have is the apparently large outlay necessary. The manual labour in the former system is now, by the use of Campaign's anchors, and others somewhat similar, reduced to about the same number of hands as is necessary with the direct system, so that the disadvantage of being obliged to employ about six hands is now done away with. I have not seen at work the comparatively new small set of direct tackle 6-horse power of Messrs. Fowler, but the makers claim for it several important advantages over any other small set, and amongst them are the lightness and adaptability of the engines for other purposes, and that the cost is about the same only as a complete roundabout set. I think the questions to be asked before embarking in any system are something like the following: To what extent can I conveniently lessen my number of horses on the farm? How far is my occupation suited as regards depth

and character of soil? and how easy of access are coals and water? Good roads and tolerably square fences should also be taken into consideration. If the railway station is far distant, or if the water supply is scanty, and there is no chance of getting the surplus rainfall stored in convenient spots, in ponds or tanks, there will be more expense in working, and at times considerable difficulty in using the larger double-engine system; whilst, on the other hand, with the roundabout system, the advocates of which make so great a point of the ability to use the ordinary engine on the farm, will it not occur to every one that the engine may often be wanted for thrashing when it should be ploughing, and *vice versa*. It is possible, in many parts of the country, and our own county too, to hire steam ploughing tackle on the direct system, and if one could always get served at the proper time, and the prices charged were reasonable, there would almost be an end of the matter; and I do not think the day is so very far distant when one may almost be able to obtain steam ploughing or cultivating done for hire with about the same ease that the thrashing by steam is now obtainable. The prices generally charged, I think (but I speak subject to correction), by steam ploughing companies, and by one or two enterprising firms in our own neighbourhood, vary for ploughing or digging, according to depth, from 1s. to 18s., and perhaps more, per acre; for cultivating once about 10s., twice about 15s., and harrowing once 3s., and twice 5s.; farmers finding horses for carting water, generally two, and coals, which, if the Hucknall coal is obtainable, should not on an average take much more than a ton per day for both engines. It is, I think, hardly possible to draw a comparison or to go into figures as to the relative cost of steam and horse-power. The operation thoroughly completed by steam is an entirely different one, and the land is left in a state that will far more readily produce tilth than after a similar piece of work is done, or attempted to be done, by means of horses. Some years ago, when the cost of manual and horse labour was much less than it is now, it was estimated by practical men that the cost of steam-power was about three-fourths that of horse-power, and, at the same time, far more efficient, and I think we cannot much err if we put the cost now-a-days at nearer one-half on all land that is more particularly suited for steam cultivation. On very stony land, or light land, such as the broken-up downs, and such land, of this and neighbouring counties, I think it a grave question whether a pair of horses driven by reins, or, failing that, a two-furrow plough drawn by three horses, is not as cheap a motive power, taking everything into consideration, as has yet been obtainable by the employment of steam. I will just give you what I have been able to do in my own case. Before I purchased steam tackle I was not master of my work with less than thirty-two cart horses. I believe I am now in a better position as regards efficiency with a pair of Fowler's engines and twenty horses, besides being now and then able to help a neighbour out of a tough piece of work. In order to profitably use steam I had to obtain consent to grub out several acres of hedgerows and small pieces of woodland, which otherwise would have prevented my working economically, and I had to get extra ponds made, for I am nearly always dependent on surface water, and without ponds I should have been obliged to go a distance of two and sometimes three miles. These items are of course, and should be considered as, part of the first cost; but I feel certain that my investment was a sound one, and that I am working now much more cheaply than before. The number of horses mentioned is the minimum that I consider and find necessary, and I do not think any other set of tackle would more completely answer my purpose. The implements I use are the ordinary ones—viz.,

plough, cultivator, and harrow. I much prefer ploughing or digging in the autumn, and cultivating or harrowing in the spring and summer. I know many people make a very great point of cultivating stubbles, but I hardly ever yet saw a piece of stubble, intended next year for roots, that presented anything like so workmanlike an appearance after the cultivator as after the plough. In many instances I have felt sure that it was labour thrown away, and neither use nor ornament, whilst the ordinary steam harrow in the spring behind the plough or digger leaves a perfect seed-bed for spring corn, and it is only necessary, unless the land be foul, to give one line with the cultivator, and your land is ready for the drill for either turnips or swedes. One of my neighbours came across to my men last March when working the steam harrow on land for barley, which had been well ploughed in November, and expressed his approval of the merits, not only of the work done by the implement itself, but of the inventor, by saying that "the man who made that thing ought to go to heaven;" and it is certainly very instructive to notice with what ease, compared with horses, the steam engine harrows down your fallows; the drill follows, and the field is sown; whilst here I would say that I have found in practice that it is best to be careful to see that your field is not left too loose and hollow, for there is a certain amount of consolidation of the soil required by every crop, and in this respect your horses must do what the steam tackle does not do, and according to the varying circumstances of almost every particular field. Steam rollers and drills are to be had, but I think that, as you must have a certain number of horses, these operations will be more economically performed by such means. During the past week or two Messrs. Fowler have written, I dare say, to all their customers, saying that they have constructed a presser, almost similar in appearance to the old-fashioned wheel presser so much in favour amongst us, to follow their plough, and they recommend its use when ploughing ley or other ground for wheat or oats. I have not yet had mine; but if such an implement can be found to work well, and I have no doubt it is so, it will be a very considerable advantage, and tend to remedy some part of the objection referred to in the preceding paragraph. Any remarks on steam cultivation would, I think, be imperfect if no reference were made to those steam-cultivated farms of Mr. Prout, of Sawbridgeworth, and Mr. Middleditch, near Swindon, for it has been hardly possible to go through the pages of an agricultural paper during the summer months of the past year or two without meeting with some paragraph or leading article, telling us of the wonderful effects of steam cultivation on the farms alluded to; and there is no doubt but that they are wonderful effects, and that they would be unattainable save by the mighty power of steam. It is, however, I think, very doubtful how far it is wise to hold up such examples as if it were possible worthy of being extensively followed. Stock-keeping is of far more importance than continued corn-growing, and at anything like the prices that now prevail is more profitable, and, so far as as I have found, the working of the land by steam is no hindrance to the keeping of a fair and even large head of stock on a farm. England is the granary of the world, and there is no doubt but that continental nations, as well as our Western cousins, are doing their utmost in their fertile foreign soils, aided as they too are by the steam ploughs and cultivators of Fowler and Howard, to grow corn expressly for the English market, and for English gold. They can grow it far more cheaply than we can, and such being the case, with the knowledge that wheat-growing in England is not on an average a very paying game, and yearly getting more precarious, should it not rather (putting the labour question on one side) be insisted on, that the plain, straightforward work of the English farmer should be, not to inordinately extend his area of white-straw crops, but to breed and keep as full as possible an amount of stock. Having quoted largely from an article in the *Farmer* on Mr. Prout's farm at Sawbridgeworth, he continued: There is another instance of steam cultivation, or rather, perhaps, reclamation, standing perhaps almost alone—namely, that now being carried on by the Duke of Sutherland on his property at Lairg, in Sutherlandshire. Almost every conceivable form of work is here being carried out, at an annual outlay of £18,000. Several sets of Fowler's double tackle are here at work, doing almost every necessary operation, and, to quote the words of one of Fowler's men, using a strange lot of implements: ploughing, grubbing, stone, tree, and root-clearing, are all done by one of Fowler's engines.

Whatever results may in the end accrue to his Grace, there can be no doubt but that through the experiments now being carried on at Lairg, the Messrs. Fowler will obtain hints and will learn many things, which, but for his Grace, would not have been attempted. In bringing these few remarks to a conclusion, I would say, in order to make steam cultivation obtainable by the majority of farmers, the landlord must help. He must facilitate the making of roads, the straightening of fences, and the supply of water, for it is no doubt time that the saying that you must not make a man do what a horse can do, and you must not make a horse do what a steam engine can do, was fast getting nearer realisation. The higher price of manual labour, the very much higher price of horses, and the increasing difficulty of getting horses well cared for by your carters, will make people use to as great an extent as possible steam-power, and it will be before long an ordinary, everyday sight to see what the old northern farmer would rather die than see—viz., "A kittle o' steam, Huzzin' an' maazin' the blessed fealds wi' the Devil's own team." But let us hope that some congenial and propitious owner than that indicated by the Poet Laureate, may have the command of the team so long as any of us may have need or occasion to use it. I can only say that I took the trouble to travel many hundred miles to look at tackle before I used it myself, and shall be very pleased to answer any question any gentleman may wish to ask.

Mr. J. C. SUTTON, having taken great interest for many years past in steam cultivation, having been an agent from the same year mentioned by Mr. Trask, when Mr. Bowdell's engine was exhibited at Salisbury, and having been practically engaged at Chester, where the prize was first awarded, and at many other Royal Agricultural Societies' trials of steam plough tackle since that date up to the present time, he would venture to make a few remarks. He could not endorse all that Mr. Trask had stated as regarded the double engine system, knowing full well that it, like the roundabout tackle, had its advantages and disadvantages. Neither could he agree that any description of tackle was to be considered best for all circumstances, for what was good in one county was not so in another, and what might suit one farm might not be the most desirable for the adjoining one. Besides, the outlay for the double engine system would prevent many farmers from purchasing, while the roundabout systems come within easier range of the greater number. He would remark here that Mr. Trask stated that the roundabout systems varied in cost from £600 to £1,200, and he would just observe that the best system with traction engine, self-moving machines, and all appurtenances, made by Messrs. Howard, of Bedford, cost £750. These matters of outlay were of great consideration to the farmer, and he thought the single roundabout system the best, because one advantage it had over the double engine system was that they could work their tackle from the road or the adjoining fields rather than traversing the fields, and without any removal of the engine. He could point to a set of roundabout tackle, with small 8-horse power portable engine, that was doing a four-furrow plough and 4-wheel pressure, at a cost of about 4s. 6d. per acre, and other instances of a similar character. Mr. Trask might shrug his shoulders, but he would say it was so, and those gentlemen could prove it who used the single-engine system. There was no doubt that steam cultivation had extended and would continue to extend in its use, and that every farmer occupying 300 to 400 acres of land would possess one of his own. He was equally interested in any system, double or otherwise, and, with the difficult question as regards wages and the high price of horses, he saw the great importance it day by day assumed. In conclusion he would read them some remarks from a letter written by a gentleman known to many in that room, published in the *North British Agriculturist*, "The farmer, however, who possesses his own engine has the additional advantage that he can do his work at the best time, and has not, as is so often the case, to wait his turn for the double sets. Having for fourteen years cultivated our own farms by steam, we are firmly of opinion that, for the tillage of the whole country, steam must become the motive power, and that on large or moderate-sized farms the farmer will, at no distant date, be very generally in possession of his own steam cultivating appliances." That is from the pen of a farmer who has been using steam cultivation for fifteen or sixteen years.

Mr. SMITH wished to know if 4s. 6d. per acre meant coal,

water, and labour? because if it did, it must mean that they must have steam cultivation. The great object was to get horses fitted to subsoil, and upon light soil horses would do more good, and he would rather adopt this.

Mr. J. WARNER: Pressing included?

Mr. SMITH said he had a presser but he had a great deal of land that did not require pressing. He would rather have a Cambridge roller than a land-presser. He was of opinion that it was better to press land by harrowing, and take the horses over three or four times, acting in fresh directions. He might be wrong and might see his error in time, but from what he had seen in his neighbourhood, he could not change his opinion.

The CHAIRMAN: Do you mean your own land or every person's land?

Mr. SMITH said his meaning was that the presser was not necessary upon light land, and that was the reason why he should like to go around the neighbourhood to see the root-ropers to judge of that. He could not understand that land could be ploughed for 4s. 6d. per acre.

Mr. W. C. SPOONER said he had but few observations to make, because, although he had seen a good deal of steam cultivation, his own farm was too small to use it. He thought they had had an excellent paper, and one very reliable and trustworthy. He remembered when Mr. Trask purchased his steam implements, and, he having had the advantage of them for two seasons, he thought they could depend upon the results as given. What operated upon his mind was that Mr. Trask had made a practical statement, which could be relied on, whilst the favourable reports of noblemen and gentlemen not depending on farming, or even their agents, however good, did not carry conviction to the minds of practical farmers who had to live upon their farms. They had the advantage of having this question brought forward by a practical man, and there were one or two points as to small or large or double engines to which he would like to speak. For profitable farming purposes on a large farm the double engine must be best, but undoubtedly a small engine would be very much the best to those who cannot afford to expend so much capital. He should like to ask what would be the minimum-sized field in which the large apparatus could be used? and what for the small engine? Another point raised by Mr. Trask was the plough over the cultivator.

Mr. TRASK: Only for the autumn.

Mr. SPOONER said he had thought for some years that the cultivator had been over-estimated, and that the old plough, which had stood its way for years, had been very much underrated, but was really the best of the two. The old iron plough had the same advantages which had been applied to propel ships, and he thought the sacrificer ought to take more the form of a plough. That opinion he just threw out, because he saw it was rather enforced by Mr. Trask in his paper, and it was worthy of discussion, and at the same time it was conducive to the diminution of labour. From the experience of Mr. Smith, of Woolston, it appeared, if small instruments were used, better advantages would be gained. They could not expect a first-class discussion for want of opposition, but much good would be done by the paper being read.

The CHAIRMAN (to Mr. Trask): You say plough as deep as you can?

Mr. TRASK: I make it a point to plough my stubbles as soon as convenient after harvest, by steam.

The CHAIRMAN: How as to couch?

Mr. TRASK said he did not think farmers wanted to consider this. Taking this into consideration, if there were couch, he would plough as deep as it was. He ploughed from six to seven inches deep.

Mr. J. BLUNDELL said, after the subject had been opened in such an able manner by Mr. Trask, and the able observations of Mr. Sutton and Mr. Spooner, he would detain the meeting but a few moments. It was now seven years ago that they had the subject introduced by Mr. Sutton, but there was still not much controversy to enlighten the minds of the public. The object now was to take stock of the progress made in seven years. This was a matter of very great importance. Mr. Sutton also took up the subject of the double-furrow plough, and this was a matter which it seemed well to come in and supplement horse-power; and then the next question on that point was whether they should have horse or animal-power, or adopt the steam cultivator. They knew that there were many men in agriculture who were not in favour of steam cultivation.

steam-power entailed, but in some cases they would be the gainers by reducing their horse power and getting steam-power. This seemed to be the great point. Their chairman now had 450 acres in arable cultivation, and it was a matter of question whether he should keep horses or displace some and adopt steam power. They all knew the caution of their president, and the exact manner in which he calculated everything before he made a movement, and therefore he hoped he would set them an example on this subject. Before contemplating a change of such magnitude they must think it over; they must have a change of leases, which would enable a man to take advantage of this, and be benefited by the new system of cultivation. And this led him on to the question whether they should treat the land by ploughing, or subsoiling, or scarifying, which should be carefully considered. They could not have subsoiling without observing a benefit, but he must also say they might do an immensity of mischief by ploughing deeply. He went over a farm on the south coast which had been deep-ploughed, and he found it brought up weeds which had lain dormant for generations. Subsoiling would not do this. Let them take land out of chalk. By deep ploughing they would bring up weeds, which required chalk, therefore they would entail extra expenses in chalking. Such a process would load the land with weeds, and stifle the crops upon the land. Cultivating was a matter of great importance, and he thought, by either steam or horse power, to plough deep upon light soil was wrong. Let them subsoil by steam, if they liked. Mr. Trask had wisely stated that he qualified his observation on deep ploughing as depending upon the land being clean, but the land in the South was very far from clean, and it would take three or four ploughings to make it clean. If they did anything, let them get rid of the couch. He was an advocate for having upon all those farms—and their name was legion—which could not take to steam cultivation, a system of economising horse labour, and he advocated single-horse power labour, to have horses not less than 17 hands, and these would do the work. Having referred to Mr. Prout's steam cultivation, he said that that led up to a question of vital importance—that of stock *versus* corn—which he would not then enter upon.

Mr. SMITH quite agreed with Mr. Trask as to deep ploughing in autumn. Couch would not live below five or six inches; thus deep ploughing was certainly right in his opinion. He had grown good crops in the two years he had been here, and where he had seen a former furrow ploughed three inches he had ploughed it five inches. He did not mean to say they should altogether farm for stock, but every man was justified in farming for stock where he could get it. It appeared to him that some people would grow root-crops, and not feed them off, and the question was if those crops might not do as much for the land as manure? But then they did not keep stock for the community. The more stock they could keep the more corn they would grow, that was certain. Mr. Prout's system would not do for every person, because it would not feed the population.

Mr. THOS. WARNER said it was all very well for a person with a large farm of 400 or 500 acres, where they could have engines which would work over hedges and ditches. He quite thought that deep ploughing in the autumn was preferable to cultivating. It was no use to use the steam cultivator without draining, because if they did their ground would be "poached," and they would get no horse to work upon it. He did not think the farmers considered about the community.

The CHAIRMAN: The community do not consider about the farmer.

Mr. T. WARNER, continuing, said there was a question as to whether stock or corn was the most advantageous in that district, and he believed in five years out of seven they lost more from stock.

Mr. HARRIS concurred in the idea that keeping sheep in winter was not preferable in this district.

Mr. JOHN GATER (West End) thought, whether double or single engines were best was the question to be discussed, and he was sorry to see it nipped in the bud. There were three things before them—horse power, single and double engines, and as soon as they could dispense with the horses it seemed to him they could not doubt the single engine was best as it would require a large farm to use it. He thought it was a pity that the farmers should not have a chance of discussing this question, as it was a matter of great importance to the community.

question whether it would not be necessary to move the engine in case the field was not square?

Mr. TRASK: It would not make any difference.

The CHAIRMAN said he would then suggest that they should propose a resolution showing that they were bound to give up horses and take up single or double steam tackle.

Mr. GATEY wished to know whether they were to hire men or superintend the tackle themselves?

The CHAIRMAN said they must confine themselves to the advantages of steam culture, and they had to enter into the merits of the double or single engine, or else the discussion would never finish. He had tried the single engine, and it answered well, indeed, and he had tried the double engine, but with less success, certainly at a very bad time, and his observations would only apply to his heavy land. It would not apply to light or to any land. He thought they should confine themselves to the question whether they should have steam culture instead of horse culture. In reference to this,

he should prefer the plough to steam cultivators or diggers. He should advise every one to plough the land instead of cultivating it. If they had a lot of couch, two or three horses and furrows would get it off the land. He should prefer slight scarifying, and then to plough deep. He would suggest whether they should not have a resolution.

Mr. TRASK, in reply, said he did not wish to contend that the system of which he had spoken would be applicable to this neighbourhood entirely, although in a great part it would. He then proposed the following resolution: "That it is the opinion of this club that steam cultivation, with the various improvements lately introduced, and with the reservations expressed in the paper read, is worthy of every encouragement and support."

The proposition was carried unanimously, and the meeting terminated with votes of thanks to Mr. Trask and the chairman.

## THE AYRSHIRE FARMERS' CLUB.

### THE ROTATION OF CROPS.

At the first meeting of the season Mr. Robert Wallace, Braehead, in the chair, the subject for discussion was the rotations of cropping.

Mr. W. Wallace, Braehead, son of the chairman read the following paper: The subject suggested for discussion to-day is "The Rotations of Cropping." Of course it would be out of place for me in opening up this subject to suggest or recommend any particular course of cropping, as what might be suitable for one district would be totally unsuitable for another. I shall therefore confine myself briefly to a statement of the system pursued on the farms with which I am connected, and then leave to the members of the club the consideration of the question "Is it profitable to either proprietor or tenant that there should be restricted rules for cropping enforced for the whole or any part of a lease?" My own experience in farming has of course been very short, and I would not venture to give it here were I not associated in farm management with one who has been much longer in the agricultural field. Our rotation of cropping has been somewhat varied of late, to suit such contingencies as the rise and fall in the price of straw and manure, and the value of the produce most in demand. The object in view is to keep the land in a high state of cultivation, which never fails to prove most profitable to tenant and proprietor, and consequently to consumers. The farms being situated near a town, where manure and fieldworkers are easily procured and where the cartage is short, we find it most profitable to follow the four course rotation which is generally adopted on farms in the immediate vicinity of Ayr—viz., 1st, oats; 2nd, green crop; 3rd, wheat or barley; 4th, green hay or pasture. When town manure is plentiful, and straw commanding a good price, we sell all the produce off the land, and keep up its fertility by carrying back a liberal supply of solid manure. On certain soils we find that even the four course rotation has to be departed from. Around the town of Ayr, there is a tract of land which will not carry white crop, but is somewhat suitable for grass and green crop, and with liberal manuring may be made remunerative; but it would yield neither rent nor profit were the tenant restricted to the usual rotation laid down on leases. For this class of land it is necessary to chalk out a special course of cropping, it being obvious that, if the tenant were restricted to the ordinary course laid down in leases, it would be impossible to make the land pay. This brings me to the question "Should a tenant be tied down to any particular course of cropping during the whole or any part of his lease?" Inexperienced as I am, I will not venture to give any very decided opinion on this subject, but will throw out a few ideas in connection with it which may tend to open up the subject, and elicit discussion on the part of the members. Of course there are two sides of the question. On the one hand there is the interest of the proprietor, who must see that his land is in no way deteriorated in value; on the other hand there is the interest of the tenant, who must see that he gets a fair return for his labour and capital expended. It is true that there are many tenants so blind to their own interests that they would

ruin both themselves and their landlord. To guard against such cases it may be necessary to have certain restrictions during the last three or four years of the lease which would prevent a grasping tenant from having more than a reasonable proportion of his land in white crop. When proprietor and tenant are both desirous of making a new agreement, the best means of keeping up the fertility of the soil, and, consequently, securing the interests of the proprietor, maintaining the tenants' profits, and raising the most produce for the wants of our country, would be to renew leases three or four years before their expiry. This early arrangement would be of vast importance, as it would enable the tenant to go on with his approved rotation of cropping, which it would take him years to alter were he obliged, towards the close of his lease, to bring his practice into strict conformity with its terms. Were either party unwilling to renew the agreement, then the conditions at the end of the lease would still keep in force. There is a clause put in most leases, which I think should be sufficient of itself to protect all concerned, viz., the tenant is bound to cultivate the land according to the rules of good husbandry. Nothing else will pay any one, and when this rule is infringed, the sooner the tenant is separated from the land he occupies the better. Should, however, the question come up, "what are the rules of good husbandry?" it might be settled in the same way as questions of a similar nature by arbitration. There are many other points which I might take up, not bearing directly on this subject, but all more or less affected by it, such as Tenant-Right compensation clauses, &c., &c. I will not, however, touch on these, as the object of my paper is to bring the subject of rotation of cropping before the club, and open the discussion upon it. The committee, I understand, in fixing on this subject for our consideration, suggested that the discussion should take the form of answering two questions put to each member: 1. "What in your opinion is the best rotation of cropping for your farm and district;" and 2. "Should there be any restricted rule for cropping enforced during the whole or any part of a lease?" I will therefore leave the members to answer these questions.

Mr. R. M. CUNNINGHAM (Shields), said, with regard to the questions which Mr. Wallace had suggested, should be answered by the members of the club, he might mention that on the farm, which he at present occupied the rotation practised, and which was customary on the estate, was the fifth course, especially on the lighter land, and although he might be willing to alter it, the fact that there was just one break in each field prevented him doing so. He observed the district in which he farmed was very much affected with a certain kind of grass or weed, what was sometimes locally known as garcken or couch grass. On the light soils to which it seemed natural, they were very much troubled with it. Where the land had been laid down to grass, and they took an oat crop off it, this couch grass overran the land very much. He had come to be of opinion that this grass seeded during the season the land was in oats. The seeds lay

at a considerable depth in the soil. They knew that these small seeds—like the mustard seed—would keep fresh and viable for years, until they were turned up to near the surface, when heat and rain caused them to vegetate and grow. This weed shed before the oat crop was cut, and the seeds getting down into the soil, were nourished there to spring up anew, and there was considerable difficulty in extirpating them. When he had an opportunity—and he had noticed some of his neighbours who had better opportunities—of departing from the usual rotation, and taking two green crops in succession, he found that was the only effectual plan of getting this weed extricated from the soil. Of course they might find that proprietors, and those who had charge of the land for them, objected to the taking of two green crops in succession; but where this was not practicable, and where they were tied down in a lease, as was generally the case, it could only be done occasionally, or when opportunities were afforded. He thought a lease was sufficiently restrictive when it provides that the land should be farmed according to the rules of good husbandry. This was quite enough to ensure the land being well farmed, because most people saw it to be to their own interest to farm well. He thought that proprietors, or those who were acting for them, should do as the farmers endeavoured to do when engaging their farm servants. They should pay more regard to the character and abilities of those with whom they enter into an engagement for a farm. The uniformity in leases was quite absurd, and not at all suited to the many different kinds of soil. Where the land was light or heavy, or where it was of that variety to which Mr. Wallace had alluded, which would not yield a white crop after a green crop, it was necessary to devise some other method to work up the land, so as to make it yield crops which would not injure it. They found that if they did not cover the soil with a crop of some kind, nature was busy in putting on something that was neither beneficial to one part or another of the field. It was neither profitable to the landlord nor the tenant that there should be a strict adherence to a certain rotation of cropping. He observed it stated in a paper, read the other day by an East Lothian farmer, in which he took notice of those who had to draw out those leases, and had the oversight and management of estates, that it would add very much to the comfort and advantage of both landlord and tenant, if those gentlemen were practical agriculturists, who knew how to advise between the two parties as to the management of land, and to arrange as to the suitable accommodation, and all these things. He (Mr. Cunningham) quite agreed with that gentleman. There were individuals who had the charge and oversight of estates, who were not brought up to practical agriculture, and it could not be expected that they were qualified to assist in matters between landlord and tenant. The consequence of this was, that many tenants suffered. It would be most advantageous for agriculture if they had men who were qualified to take a practical view of any suggestion with regard to departing from the prescribed rules of cropping when made in the interests of good husbandry. It would make matters flow better; there would be more pleasure in working into one another's hands, when they knew they had to deal with parties who could sympathise with them in their labours.

Mr. WHITE, East Rose, Kilmarnock, said it was generally dairy farming that was followed in his district, and the system was one which they consider better adapted for growing grass, which was the principal crop with them. The rotation generally followed was that, when the lea was broken up, two crops of oats were taken, then a crop of hay, and pasture again. Of green crop they had a few turnips, potatoes, and cabbages, but there was a field kept in the four-course shift for this purpose. A few years ago the land was mostly in green crop, but labour had become so dear that that system has generally been departed from. With regard to laying down a system of cropping in leases, he had a serious objection to it. He thought if a proprietor was fully satisfied of the honesty and ability of his tenant, he ought to give liberty to him to make the best of his land during the course of the lease, with the exception, as Mr. Wallace had already intimated in his paper, the three or four last years of the lease, when there might be a specified rotation laid down. The tenant ought to have full control of the land when the landlord was satisfied with the tenant and the rent. When a proprietor laid down a system telling the tenant what he was to plough, and what he was otherwise to do, he thought there ought to be some guarantee

with regard to produce. Unless a certain amount of produce was guaranteed, he would be inclined to follow no man's directions in that way.

Mr. FLETCHER, Auchincloik, said that, in his district, there was not much green crop grown. They generally took two white crops, and the method they pursued was as follows: They top-dressed the hay crop with perhaps 2 cwt. bonedred or superphosphate in the end of March or beginning of April, and about the middle of April with 1½ cwt. of nitrate of soda. When the hay was all removed, 30 cwt. of dung were applied, which kept the land in good condition for four years in grass, and then the two white crops were taken. The green crops are confined to light small patches of land. He was something of Mr. White's opinion, if a man was to pay rent, he ought to have his own way how to make it.

Mr. MURDOCH, Holcheuse, said that the sixth shift rotation was most common in his neighbourhood. The leases were pretty strict, but as regards the carrying of them out the farmers had more liberty. He was of opinion that the rotation should be an open question in the drawing out of leases, because the best farmer that ever lived would find it necessary to depart from the usual rotation. The sixth rotation he found generally best for his district—namely, a white crop, green crop, white crop, hay crop, and two years down in pasture. They were a good distance from manures, and the two years' pasture helped to bring up the fertility of the soil. The only thing he would like to see would be a little more liberty to the tenant as to cropping, when good farming required it.

Mr. CALDWELL, Knockshaggle, Culton, said it sometimes occurred to him that people who knew little or nothing about agriculture, would come to the conclusion, when there were so many different opinions regarding whether the land should be green cropped, or whether it should be laid down to so many years pasture, that the farmers knew very little of their business. The fact was simply that different soils required different rotations. The soil which he farmed, and had done so all his life, was neither the stiffest nor the lightest. It was under the seventh rotation, which was about the best for the district. He tried a number of years back, on one of his best fields, to allow it to lie for a number of years in pasture, when dairy produce came to be much higher. He found that after three years it got worse and worse every year to the seventh. He found it better to lift it up, and put it under the ordinary rotation. He suspected in the Kilmory, Dunlop, and Stewarton districts, the longer grass lay it became the richer, but not so with them. They were not so near manure to enable them to green crop properly on the fourth shift. There had been during the last few years many different plans in agriculture tried. He recollected, about twenty-seven years ago, when one could scarcely take up a newspaper without seeing column after column regarding the great wonders that were going on about Cunning Park and Myre Mill. There was liquid manuring, with horses, and engine, and other appliances for conveying it to the furthest part of the farm. The grass grew so long, so many inches in the acre was to feed so many cattle; and the butter was so fresh that in the London market it gave 1s. 6d. per lb. when it was selling at 1s. and 1s. 2d. From all this they were led to believe that a new era in agriculture was about to begin. After a few years' trial, however, the expense necessary to such a system was found so much that the produce did not pay the interest on the land; and so, lo and behold, the bubble burst. They must just work away in the best and most economical way possible, and follow that course which was best suited to their different localities. They must also look at the landlords' point of view, as it would not do to have no bindings at the latter end of the lease, because there were tenants who, by taking two or three more white crops at the close, would leave the land in weeds and poverty. He quite agreed with the other speakers that there should be a special rotation for the last three or four years of the lease.

Mr. HOWIE, Law Farm, said that he was not very sure of the rotation he followed. It was sometimes one thing and sometimes another. He found light land most advantageous for a green crop, and although he tried to do away with green cropping on his heavy land, he found it better to green crop all the land. He found it most advantageous to take two white crops and then green crop, and sow down. He thought a clause regarding the last rotation was quite sufficient for any lease, and to ensure farming according to the rules of good husbandry, and it was pretty well understood what that meant.



The landlord who does not select his tenants ought to be pleased with the kind of tenants he found out they were afterwards. If they looked for a servant they tried to find one with a character to their mind, and a landlord looking for a tenant should do the same.

Mr. REID (Clun) said his farm consisted of light and heavy soil. The fifth course was followed on the light soil—namely, oats, green crop, white crop, and two years in pasture. On the heavy soil they had cut hay, oats, and green crop. In the neighbourhood of towns it was profitable to sell off a good part of the produce of the farms, but those at a distance could not do that so well. He was against many clauses as to cropping in a lease, but it was right that the landlord should be protected at the end of the lease.

Mr. YOUNG (Kilbenzie) agreed very much with the general tone of what had been said. He had gathered from the discussion that in most of the districts the rotation followed was generally best adapted for that locality. In his immediate neighbourhood the system pursued was either the fifth or sixth shift, he being on the latter shift, which he thought best adapted for his farm. This discussion, however, had gone a long way to show that they were against the landlord laying down a hard and fast line. Mr. White had mentioned that a considerable portion of his land was upon the sixth or seventh, and another portion on the fourth. That showed the impropriety of laying down a rule that all the land should be farmed on the same system. He also agreed with the other speakers that the landlord had a perfect right to say how the land was to be farmed during the last three or four years of the lease. Where the farmer was to get compensation for improvement, or give compensation to the landlord for deterioration of the farm, it would not be so necessary for the landlord to say how the land was to be farmed, but until that was obtained it was quite right that the landlord should have something to say upon the point.

Mr. YOUNG (Highfield) was in favour of a fixed rotation near the end of the lease, but was against rules of cropping being laid down to apply to the whole of the lease.

The CHAIRMAN concurred generally with the different speakers, and referred to the importance of discussing such subjects. There might be some one detail useful to some of the members. He found that, in going through different parts of England and Scotland, he got hints as to some mode which they were not in the habit of practising. He saw in *The North British Agriculturist* some good remarks on the changes of cropping. The gentleman who writes made a change from the fourth to the ninth shift. They might in Scotland—although this was in England—see fit to carry out some of the details of that system. He was running his third lease on his farm, where there was only this restriction—he was bound to farm according to the rules of good husbandry, and not take two white crops in succession. If he had been restricted further in that land, he would not have remained in it. He remembered, when he was a young man, of hearing his father say that he never had his to rub against another of the arable part of the farm. In these days dairying was profitable because feeding was cheap, and the markets were as good then as now, as far as selling of milk and cream was concerned. Had it not been for that his father could not have been on that farm. His (Mr. Wallace's) proprietor, Mr. Ballantyne, of Castle Hill, was very strict and particular as to his leases, still he had the good sense to see that this sort of land could not be managed under the ordinary cropping in the district. Consequently he got him advised to change it, and although it was poor land he had been much the better of it. After a few other remarks from the chairman,

Mr. CALDWELL moved a vote of thanks to Mr. William Wallace for his paper, which was passed.

The next discussion of the club will be on the Agricultural Holdings Act.

## THE YORKSHIRE FAT STOCK SHOW.

### PRIZE LIST.

**JUDGES.**—CATTLE: H. Peacock, Mount Vale, York; T. P. Outhwaite, Goldsborough, Knaresborough; J. Kemp, Spring Bank, Hull. **SHEEP AND GOATS:** G. Robson, Shires House, Easingwold; T. Hobson, Crockey Hill, York. **PIGS:** G. Hutchinson, Prospect House, York; J. Knowles, Middlestown, Wakefield.

### CATTLE.

#### SHORTHORNS.

Ox not exceeding four years old.—First prize, £10, the Earl of Zetland; second, £5, the Earl of Zetland; third, £2, Sir W. C. Trevelyan, Bart., Newcastle-on-Tyne. Highly commended: W. T. Wells, Hall Farm, Lincolnshire.

Ox not exceeding three years old.—First prize, £10, and President's Cup as best ox, W. Knappton, Hull; second, £5, J. Laycock, Newcastle-on-Tyne; third, £2, G. J. Robinson, Manby House, Thirsk.

Cow of any age.—First prize, £10, T. Willis, Manor House, Bedale; second, £5, W. Hill, Wetherby; third, £2, the Earl of Faversham, Duncombe Park, Helmsley. Highly commended: Sir J. Swinburne, Bart., Newcastle-on-Tyne. Commended: J. Upson, Essex.

Heifer not exceeding four years old.—First prize, £10, and Corporation Plate as best cow or heifer, A. Pease, Darlington; second, £5, J. Radcliffe, Easingwold; third, £2, J. Bruce, Burnside, Fochabers, N.B. Commended: R. Danby, Manor House, York.

#### CROSS-BREDS.

Ox not exceeding four years old.—First prize, £8, and cup as best, J. Reid, Greystone, Alford, N.B.; second, £4, T. Bland, Greystone, Tillymerst, Alford, N.B. Commended: Sir W. C. Trevelyan, Bart., Wallington.

Cow of any age, or heifer not exceeding four years old.—First prize, £8, J. Reid; second, £4, J. Bruce. Highly commended: T. Bland.

#### FARMER CLASSES.

Shorthorn ox of any age.—First prize, £7, and Tradesmen's Cup, J. H. Stephenson, Prough, second, £4, T. Radcliffe, Easingwold; third, £2, T. Barnard, Easingwold.

Wolds, Hull. Highly commended: J. D. Gowland, Nun Monkton. Commended: M. and W. Boville, Northallerton.

Shorthorn cow of any age, or heifer not exceeding four years old.—First prize, £7, J. Cattley, Stearsby, Easingwold; second, £4, J. Kirby, Skirpenbeck.

Ox of any other breed or cross.—First prize, £7, and cup, J. H. Stephenson; second, £4, M. and W. Boville; third, £2, T. Robson, Boroughbridge. Highly commended: W. W. Kirby, Stamford Bridge.

Cow or heifer of any other breed or cross, the cow of any age, and the heifers not exceeding four years old.—Prize, £7, J. Radcliffe, Stearsby, Easingwold.

#### SCOTCH BREEDS.

Polled ox.—First prize, £7, and Mr. Roger's silver challenge cup, value £20, T. Bland; second, £4, J. Reid. Commended: W. McCombie, M.P., Tillyfour, Aberdeen.

Polled cow or heifer.—Prize, £7, J. Reid. Highland ox.—First prize, £5, Sir J. Swinburne, Bart., Newcastle-on-Tyne; second, £3, Lord Stourton, Stourton Park, Knaresborough.

Horned Highland cow or heifer.—Prize, £5, T. Francis, Skipton Bridge, Thirsk.

#### EXTRA STOCK.

Prize, £4, J. Reid.

#### SHEEP.

Pen of three Leicester wethers.—First prize, £5, and second, £2, E. W. Usher, Water Wold, Pocklington.

Pen of three South or other Down wethers, under 22 months old.—First prize, £3, and Mr. Peacock's piece of silver plate, value £5, and second, £1 10s., Earl of Zetland.

Pen of three horned Scotch or mountain wethers, of any age.—Prize, £3, R. Swanu, Askham Hall, York.

Pen of three wethers, white-faced or Down cross, under 22 months old.—First prize, £3, the Earl of Zetland; second, £1 10s., R. Daniel, Oulston, Easingwold. Highly commended: C. Hill, Wetherby.

Pen of three wethers, of any Scotch or mountain cross, under 22 months old.—First prize, £3, J. D. Gowland; second,



£1 10s., G. S. Thompson, Moorlands, York. Highly commended: H. Bentley, Hultby, York.

Best sheep of any age and breed, not a ram.—First prize, £2, E. W. Usher; second, £1, the Earl of Zetland. Highly commended: W. Beal, Sutton-on-Derwent, York. Commended: W. Coulson, Gaterley Farm, Welbarn, York.

## EXTRA STOCK.

First prize, J. D. Gowlard, Widdington, Nun Monkton, York.

## PIGS.

Pig, large breed, of any age.—First prize, £3, W. and J. Cooper, Heslington, York; second, £1, T. Strickland, Thirst Junction; third, 10s., J. Blake, Warthill, York.

Pig, small breed, exceeding twelve months old.—First prize, £3, second, £1, and third, 10s., S. Prudames, Low On-egate, York. Highly commended: J. Lamb, Huntington-lane, York. Commended: J. Blake.

Pig, small breed, not exceeding twelve months old.—First prize, £3, J. Hallis, Huddersfield; second, £1, and third, 10s., J. Mollitt, Cattle Market, York. Highly commended: G. Linfoot, York. Commended: J. Leannon, York.

Pig, middle breed, exceeding twelve months old.—First prize, £3, D. Keighley, Keighley; second, £1, J. Loadman, Upper Helmsley, York; third, 10s., J. Hildas, Huddersfield. Highly commended: M. Trees, Darlington. Commended: J. Erry, York.

Pig, middle breed, not exceeding twelve months old.—First prize, £3, J. Mollitt, York; second, £1, J. Milner, York; third, 10s., J. Hallis, Huddersfield. Highly commended: J. Mollitt, York.

Pig of the black or Berkshire breed, any age.—First prize, £3, and cup.—H. Darley, Aldby Park, York; second, £1, C. Hill, Wetherby. Highly commended: H. Darley, York; commended: M. Trees, Darlington; and W. Fall, York.

For the best pen of three pork pigs, under twenty weeks old.—First prize, £3, J. Lamb, Huntington lane, York; second, £1, T. Nicholson, Groves, York; third, 10s., W. Bowman, York. Commended: H. Schofield, York.

## EXTRA STOCK.

First and second prizes, J. Sedgwick, 69, Presley Grove-street, York.

## BULLS.

Shorthorn bull, between the age of six and fifteen months.—First prize, £10 10s., W. Linton, Sherat Junction, York; second, £4, J. Singleton, Teresa Cottage, Pocklington; third, £2, Lord Stourton, Stourton Park, Knaresborough. Highly commended: W. Linton. Commended: S. M. Inge, The Grange, Pocklington.

## FOOTS.

Six specimens of long mangold wurzel, any variety.—First prize, G. S. Thompson, Moorlands, York; second, W. Deffins, West Huntington, York.

Six specimens of Globe mangold wurzel, any variety.—First prize, Hon. E. Lascelles, Middlethorpe Manor, York; second, J. Singleton, Teresa Cottage, Pocklington.

Six specimens of swede turnips, any variety.—First prize, F. Harrison, Wilstrop Hall, York; second, H. Richardson, Flaxton Grange, York.

Six specimens of common turnips, any variety.—First prize, F. Dickson, Heslington, York; second, G. Harrison, Lea Field House, Garraway, York.

Six specimens of carrots, white or red.—First prize, T. Thompson, Peppleton Hall, York; second, G. S. Thompson, Moorlands, York.

Twenty specimens of round potatoes.—R. Whitehead, Heslington, York; second, J. Milner, Skirpenbeck, York.

Twenty specimens of kidney potatoes.—First prize, J. Knowles, Middlestown Farm, Wakefield; second, R. E. W. Hart, Dunnington Lodge, York.

Six specimens of ox cabbage.—First prize, J. Milner, Skirpenbeck, York; second, Henry Richardson, Paxton Grange.

## BUTTER.

Three rolls of butter, 1 lb. (16 oz.) each.—First prize, Mrs. Fishburn, Great Smeeton, Northallerton; second, Miss Smith, Water Fulford, York; third, Mrs. Robson, Dighton, York.

Six half-pounds of print butter, Mrs. Stodd, Cymanthorpe, York; second, Miss Jacques, Langwith, York; third, Miss Smith.

Fancy butter.—First prize, Mrs. Merrell, Burroeton, Bedale; second, Mrs. Robson; third, Mrs. Fishburn.

## BIRMINGHAM AND MIDLAND COUNTIES CATTLE SHOW.

## IN BINGLEY HALL.

The exclusive conditions still maintained by the Council of the Smithfield Club are telling against the success of the local shows, as that now being held in the Midlands is at most points one of the worst which we have seen for some seasons in Birmingham. As we had already intimated, it was very short, and, as we can now state further, very bad. The very exception, indeed, is borrowed from Islington, as far away the best beasts in Bingley Hall are the Shorthorn cup heifer, the Shorthorn cup ox, and the first prize Hereford ox, of the Smithfield Club show in 1874. This trio opposed each other for the chief premiums, and then, *longo intervallo*, came seconds, thirds, and sparse commendations. Over the first established breed, for instance, the judges quickly awarded the hundred pounds premium for the best of the breed, without caring to have out again the five firsts for any formal comparison one with the other. Their choice, and every one went with them, was the ox shown by his breeder, Mr. Richard Hill, of Orleton, in London last year, when he took the first prize in his class, and when, writing on the opening morning, we spoke of him as "long, low, and full of fine character;" and as further, that he should have been first or second for the champion plate. He was purchased in the Agricultural Hall for 70 gs. by Mr. Robert Wortley, of Aylsham, in Norfolk, who has ripened the ox into one of the most magnificent Herefords ever exhibited. Long

and low, as we wrote of him into London, and still maintaining all his fine character, he is very heavily-fleshed, with a firm but kindly touch, and an animal of extraordinary grandeur to meet; if not quite so sharply about his quarters, he has more points in his favour than are often seen in a fat bullock at his age, five years off. He was first, and the rest nowhere; the second prize, a heavy ox, was so ill from a stoppage as well as suffering from lameness, that he should have been removed; and in a class of five there was nothing further to look at. The first of the older steers, although fed by Mr. Heath, was so indifferent that the other premiums awarded might have been withheld; the younger steers were necessarily rather better, but the three or four cows all common enough; while the first heifer, a speckled one, had some good about her, and no question was the next best of the breed.

There were in all eight Devons exhibited, not one of which was worthy of a first prize. When we call to mind what a picture a highly-bred Devon ox should be when thoroughly prepared, and then turn to the best animal of this lot, a high, leggy beast, we may dismiss those behind him without another word. The Aylesbury ox which showed so well at Islington last season, where he stood in for the champion plate, was entered here, but withdrawn in favour of the Smithfield Club, where he goes on again for another chance for the plate, as extra stock. This animal's age is roughly put at just five years

oid, and the question is whether an ox at five years old is, according to the amended Club rules, eligible to compete for the champion plate? With a view of checking the absurd abuse of keeping mature beasts on for another season, no ox in the classes proper is now allowed to be shown at over four years and a half old, but if an animal from the extra stock is allowed to compete for the chief prize at any age the object of the amended rule is defeated. There were four or five Longhorns, and when we bear in mind that they are here in the capital of their country, a Longhorn Herd Book looks like a forlorn hope for rescussitating a breed which, despite its quondam repute, is now dying away. The judges never dwelt over the Scotch cattle or crosses when it came to comparing the several sorts for champion honours, and there was nothing of any remarkable merit amongst them, although some came South as frequent winners about home. The Martins were again first and second with their Polls; it was a near thing between the two Highlanders, although we go with the judges; while in the older class of crosses Mr. Mathieson won with an ox whose size was his chief merit, and in the younger Sir Walter Trevelyan with a smart showy steer out, taking all after the Shorthorn, and far away the best of his class. The Martins showed a good fat cow against little competition, and their other cow in a class, all told, of two entries.

At Manchester last week the judges pronounced a coarse, upstanding, vulgar-looking animal, backed by a bad touch, to be the best Shorthorn in the show, despite the presence of the Scotch cow, old Bella, and the cup heifer of the Smithfield Club, Nectarine Bud; and at Birmingham Lord Ellesmere's champion ox took no prize whatever, even in his class. But they do strange things at Manchester shows, and the awards made this season are simply beneath criticism. At Oakham on Thursday last the judges put out, without place or notice, the Smithfield Club cup ox of last Christmas, and made Mr. Pulver's steer the best of his class; and at Birmingham the judges made the Smithfield Club ox the first prize of his class, and Mr. Pulver's steer the third prize in his class; but none of the judges at Oakham are recognised as Shorthorn authorities. The Smithfield Club ox, shown in London by his breeder, Mr. Bult, but another purchase by Mr. Norfolk Wortley, has not gone on in any way like the Hereford, and has lost much of his gay, blooming looks, though no question he was the second best to, the Hereford, steer or ox, had there still been such a premium. A plain, but big Lincolnshire beast was put second in the class, Mr. Wortley showing another big one, in fact, the heaviest animal of the breed, a white, which has also been winning about the country. Mr. Pulver's steer was beaten by a deep, thick beast from Clapton, Lord Gainsborough being second with a likely steer, which was also second in the younger class last season. There was still some nibbling at Mr. Pulver's steer to go on with, and early in the day the price was not tempting, but the award would no doubt go to make a difference. He is a handsome small beast, finishing indifferently behind, but with style, as it is only fair to say he had beaten the Rowland Wood entry before to-day; but we doubt the Kettering having scale enough to ever ripen into a champion ox. Mr. Cartwright's best young steer has plenty of promise, but we believe he did little at Manchester. There was numerically a strong entry of Shorthorn cows, mostly of a rough inferior sample, over which the Catterick Dairy Girl, with four calves to her credit, but now quite due here, had no difficulty in placing herself. The same return would serve more certainly over the heifers, where Nectarine Bud, though not much grown nor much fatter than at Bedford, was shown at once singled out as the best; the second having been shown at

Oakham as a breeding animal—so small the difference 'twixt tweedledum and tweedledee—and the third a good long heifer bred and fed in the North. And then the judges went on to make Nectarine Bud the hundred pounds Shorthorn, the twenty-five pounds cup beast, as the best bred and fed by an exhibitor, and finally the winner of the Challenge Cup as the best animal in the Hall. Having disposed of Mr. Robert Wortley's Shorthorn over the award for the best Shorthorn, Nectarine Bud had in reality nothing to beat for best of all but Mr. Robert Wortley's Hereford, as a critical public had long previously settled. There was, however, so far as we could gather, an outside majority in favour of the ox—an opinion with which we coincide, as almost the only case in which we differ with the judges. But the Hereford man, wishing to make things pleasant, gave way, and the decision in favour of the heifer was returned as "unanimous," although seldom has there been more showing for a man standing out. As a grand specimen of a breed, as a grand specimen of a fat beast, for flesh, quality, and appearance, we must maintain that the Hereford ox was a better animal than the Shorthorn heifer. But the Shorthorn judge was a strong man, and the Hereford man willing to make himself agreeable, so that Mr. Farthing's casting vote was hardly required—but it was all wrong for all that.

The show of sheep was better than of cattle, but nowhere of remarkable excellence. The first and second pens of Leicesters both showed a deal of breeding, this being Mr. Turner's opening effort in any entry of fat stock; the few Lincolns were good; the fewer Cotswolds moderate, there being three entries and two exhibitors; there were again but two exhibitors of Southdowns, the smart, true stamp of sheep shown from Ebbw Vale being much missed. Lord Walsingham beat his Royal Highness the Prince of Wales twice over, the Merton flock taking the first prize with the second-best pen; as the sheep placed second had far more the style and character of the Southdown than the bigger lot put above them, and surely style and breed should have its reward at a show of any description—for butcher or breeding. The Sandringham sheep are good in their degree, but it takes time to establish a flock, and a Royal flock of all others must not make any sacrifice to mere size against pure type. There was a fair class of Shropshires, where Lord Chesham was beaten with his own weapons, Mr. Nock's pen being by a ram hired from Lutmer, with Mr. Sheldon also showing a capital sample, and as we are inclined to think the best of the three prizes. Neither Mr. Nock's nor Lord Chesham's entries were well sorted throughout, and his Lordship's pens were certainly not so artistically turned out as they usually are: there should be a smarter lot going to London. The best old single wether was a plain sheep, with no very distinctive Shropshire character; and the next best, of more breed, not nicely balanced. Mr. Street showed far away the best Oxford, with which he took first and second prizes, but the class was otherwise indifferent, and we expect to see much better at Islington. The Duke of Portland's Leicester and Southdown cross was the only one of much merit in the class; and, as we have already inferred with some of our leading breeds like the Leicesters, Southdowns, Cotswolds, and Lincolns, the entries barely reached to competition.

The pig show was very short, and as decidedly very bad, the white middle-breed, where Lord Ellesmere won, being the best; and the Berkshires the worst, Mr. Smith, of Henley-in-Arden, never winning with so ill-sorted, indifferent a pen, and then only after the judges had divided as to the merits of the first and second. The judging here was soon over, and we rarely saw cattle

Judges arrive at results so quickly or more correctly. There is nothing like that first glance for a man who really knows what he is about.

In an otherwise so well-managed a meeting, we have again to protest against the numbers placed on the heads of the animals: these are written on small wisps altogether illegible, as often enough thrust away under the beast's head collar, and thus much of the enjoyment of public judging is destroyed. Cannot somebody come to London and see how to do it?

Of corn there was a very limited display, not more than twenty-two entries being made for the eighteen prizes offered. Those of wheat were the most numerous, although the class for the Talavera variety was altogether void. Of barley there were only two samples, and these not worth notice. The quality of the oats was fair, and of the beans good, with the white peas very fine. The show of roots was not extensive. As a rule where size was attained quality was lacking. This was especially the case with regard to swedes. Some good specimens of Globe and intermediate mangolds were shown; but the long reds were coarse all through, without exceeding the average as to weight. The few turnips, of which there were only some ten or eleven collections were, on the whole, commendable. Kohl rabi were very good, and so were the Ox cabbage. The carrots were exceptionally fine, which is accounted for by the fact that four out of the nine lots came from the Clippstone Park Farm of the Duke of Portland. The potatoes, however, constituted the feature of this department. A very considerable alteration had been made in the structure of the prize list by the introduction of classes for types, which include a large number of varieties. By this arrangement many sorts which are offered as distinct in seedsmen's catalogues are found, upon the exhibition table, to be identical; and growers will by-and-bye know what they are buying, instead of old variety under a new name. Last year 153 dishes was thought to be a good show; but on the present occasion there was an aggregate of 338, all noteworthy, and some of marked excellence. In the class for twelve varieties, six tubers of each, the competition was very strong. Amongst the exhibitors Messrs. Sutton, of Reading, and Messrs. Carter, of Holborn, were prominent with their handsomely-arranged collections.

#### JUDGES.

##### CATTLE.

Walter Farthing, Stowey Court, Bridgewater.  
John Thompson, Badminton, Chippenham.  
John S. Walker, Knightwick, Worcester.

##### SHEEP.

Frederic Byrd, Kirk Styles, Dallfield, Derby.  
Charles Hobbs, Maisey Hampton, Cricklade.  
John S. Jordan, North Dalton, Hull.

##### PIGS.

John Dale, Spetchley, Worcester.  
E. Little, Lanhill, Chippenham.

##### CORN.

Edward Daveyport, Mill-street, Aston-road, Birmingham.  
Joseph Guest, Ashted, Birmingham.

##### ROOTS.

Henry Lowe, Comberford, Tamworth.  
Richard Potter, Hawkeswell, Coleshill.

##### POTATOES.

W. Cox, Madresfield Court, Malvern.  
Samuel Evans, Arbury, Nuneaton.  
Edward Freer, 28, Digbeth, Birmingham.

#### CATTLE.

##### SILVER CUPS.

For the best animal, of any breed or age, bred and fed by the exhibitor.—Silver Cup, value £25, to Mr.

Richard Stratton, The Dulryn, Newport, Monmouth (Nectarine Bud).

For the best animal in the Show.—The Elington Challenge Cup, value 100 gs., to be won two years successively, or any three years, by the same exhibitor, to Mr. Richard Stratton (Nectarine Bud).

#### HEREFORDS.

For the best Hereford in any of the classes.—Prize of £100, to Robert Wortley, Ayisham, Norfolk (for ox).

For the heaviest ox.—Butchers' prize, of £10, to Charles McNiven.

Ox, exceeding four years old.

First, Robert Wortley.

Second prize, £10, Charles McNiven, Perrysfield, Oxted, Godstone, Surrey.

Third, £5, William Heath, Lullham Hall, Norwich.

Steers, exceeding three and not exceeding four years old.

First prize, £20, William Heath.

Second, £10, Rees Keene, Pencraig, near Caerleon, Monmouth.

Third, Thomas Statter, Stand Hall, Whitefield, Manchester.

Steers, not exceeding three years old.

First prize, £20, George Bedford, Milton House, Pembroke, Herefordshire.

Second, £10, Richard Shirley, Bancott Manslow, Church Stretton, Salop.

Third, £5, Richard Shirley.

#### Cows.

First prize, £15, Stephen Robinson, Lyulhales, Kingston, Herefordshire.

Second, £10, Henry Bethridge, East Hanney, Wantage, Berks (Lovely).

Third, £5, John Baldwin, Luddington, Stratford-on-Avon (Spot 5th).

#### Heifers.

First prize, £15, Thomas Jones, Red Lion, Shrewsbury.

Second, £10, John Pritchard, Eadon Burnell, Bridgnorth (Daisy).

Third, £5, W. R. Corsex, Moor House, Much Wenlock (Lily).

#### SHORTHORNS.

For the best Shorthorn in any of the classes.—Prize, of £100, to Richard Stratton.

For the heaviest ox.—Butchers' prize of £10 to Robert Wortley (white ox).

Oxen exceeding four years old.

First, £20, Robert Wortley (roan).

Second prize, £10, John James Clark, Walton-le-Wold, Louth, Lincolnshire.

Third, £5, C. Speed, Horn Mills, Exton, Oakham.

Steers, exceeding three and not exceeding four years old.

First prize, £20, executrix of late Rowland Wood, Clapton, Thrapston.

Second, £10, Earl of Gainsborough, Exton House, Oakham, Rutland.

Third, £5, Thomas Pulver, Broughton, Kettering.

Steers, not exceeding three years old.

First prize, £20, Fowler Cartwright, The Grove, Drakelove, near Burton-on-Trent.

Second, £10, T. H. Fenis, Manningford Bohune, Marlborough.

Third, £5, Earl Spencer, Althorp Park, Northampton.

#### Cows.

First prize, £15, T. H. Hutchison, Manor House, Catterick (Dairy Girl).

Second, £10, Col. Loyd-Lindsay, Lockinge Park, Wantage, Berks (Happiness).

Third, £5, Thomas Maco, Sherborne, Northleach, Gloucestershire (Young Louis).

## Heifers.

First, Richard Stratton (Nectarine Bud).  
 Second prize, £10, David Dainty, Behmishthorpe, Stamford.  
 Third, £5, Sir W. C. Trevelyan, Wallington, Newcastle-on-Tyne.

## DEVONS.

For the best Devon.—A prize of Fifty Guineas to Captain William Taylor, Priesthams, Eastbourne, Sussex.  
 For the heaviest Ox or Steer.—Butchers' prize of £10 to Captain W. Taylor.

## Oxen or Steers of any age.

First, Captain W. Taylor.  
 Second prize, £10, W. A. H. Smith, Whimble House, Whimble, Devon.  
 Third, £5, The Queen, Windsor Castle.

## Cows or Heifers.

First prize, £20, Stephen R. Jefferys, Knook, Upton Lovell, Bath.  
 Second, £10, The Queen (Princess Franziska).  
 Third, £5, John Jackman, Hexworthy, Launceston, Cornwall.

## LONGHORNS.

For the best Longhorn.—Silver Medal, value 3 gs., to William Peyton Burbery, The Crofts, Stratford-on-Avon.

## Oxen or Steers of any age.

First prize, £10, W. P. Burbery.  
 Second, £5, Sir John Harper Crewe, Calke Abbey, Derby.

## Cows or Heifers.

First prize, £10, Samuel Forrest, The Chase, Kenilworth.  
 Second, £5, W. T. Cox, Spondon Hall, Derby.

## SCOTCH BREEDS.

For the best Scot or Cross-bred.—A prize of £100 to Alexander Mathieson, M.P., Ardross, Ayrshire.  
 For the heaviest Polled Ox or Steer.—Butchers' prize of £10, to William McCombie, Tillyfour, Aberdeen.

## Polled Oxen or Steers of any age.

First prize, £20, J. and W. Martin, Newmarket, Aberdeen.  
 Second, £10, J. and W. Martin.

## Oxen or Steers of any age.

First prize, £20, George Stirling, Home Drummond, Blair Drummond, Perthshire.  
 Second, £10, Sir Wm. Gordon Gordon Cumming, Altyre, Forres.

## Cows or Heifers.

First prize, £15, James Reid, Greystone, Alford, Aberdeenshire (Heather Bell).  
 Second, £5, Henry D. Adamson, Alford, Aberdeen Molly of Easter Skene).

## OTHER PURE BREEDS AND CROSS-BRED ANIMALS.

For the heaviest Ox.—Butchers' prize of £10 to Alexander Mathieson.

## Fat Oxen exceeding four years old.

First, Alexander Mathieson.  
 Second prize, £10, Trevor Lee Senior, Broughton House, Aylesbury, Bucks.

Fat Steers exceeding three, and not exceeding four years old.

First prize, £20, Sir W. C. Trevelyan Wallington, Newcastle-on-Tyne.  
 Second, £10, Richard Corner, Torweston, Williton, Somerset.

## Fat Steers, not exceeding 3 years old.

First prize, £20, Henry D. Adamson.  
 Second, £10, George Strachan, Ellon, Aberdeenshire.

## Fat Cows or Heifers.

First prize, £15, J. and W. Martin.  
 Second, £5, George and John Gordon Smith, Glenlivet, Ballindalloch.

## S H E E P.

## LEICESTERS.

Three fat Wethers, not exceeding 23 months old.  
 First prize, £15, and extra prize, £10, Wm. Brown, Highgate House, Holme-on-Spalding Moor, York.  
 Second, £10, George Turner, jun., Thorpeldands, near Northampton.

## LINCOLNS.

Three fat Wethers, not exceeding 23 months old.  
 First prize, £15, and extra prize, £10, Charles Lister, Coleby Lodge, near Lincoln.  
 Second, £10, John Byron, Kirkby Green, Sleaford.

## COTSWOLDS.

Three fat Wethers, not exceeding 23 months old.  
 First prize, £15, and extra prize £10, Thomas Mace, Sherborne, Northleach, Gloucestershire.  
 Second, £10, Thomas Mace.

## SOUTHDOWNS.

Three fat Wethers, not exceeding 23 months old.  
 First prize, £15, Lord Walsingham, Merton Hall, Thetford, Norfolk.  
 Second, £10, Lord Walsingham.  
 Third, £5, Prince of Wales, Sandringham.

## SHROPSHIRE.

Three fat Wethers, not exceeding 23 months old.  
 First prize, £15, and extra prize, 10 guineas, Thomas Nock, Sutton Maddock, Shropshire.  
 Second, £10, H. J. Sheldon, Erailes House, Warwickshire.  
 Third, £5, Lord Chesham, Latimer, Chesham, Bucks.

Fat Wether, exceeding 23, and not exceeding 35 months old.

Prize, £5, Robert Wyatt, Acton Hill, Stafford.

fat Wether, not exceeding 23 months old.

First prize, £5, Thomas Nock.  
 Second, £3, Mrs. Sarah Beach, The Hattons, Brewood, Feurkridge.

## OXFORDSHIRES.

Three fat Wethers, not exceeding 23 months old.  
 First prize, £15, and extra prize of £10, George Street, Maulden, Ampthill, Beds.  
 Second, £10, George Street.  
 Third, £5, Nathaniel Stilgoe, Manor Farm, Adderbury, Oxon.

## HAMPSHIRE, WILTSHIRE, AND OTHER DOWNS.

Three fat Wethers, not exceeding 23 months old.  
 First prize, £15, Alfred Morrisou, Fouthill House, Tisbury, Wilts.  
 Second, £5, Alfred Morrison.

## NOT QUALIFIED TO COMPETE IN ANY OTHER CLASS.

Three fat Wethers, not exceeding 23 months old.  
 Prize, £15, Herbert Parthing, Nether Stowey, Bridgewater, Somerset.

## CROSS-BREDS.

Three fat Wethers, not exceeding 23 months old.  
 First prize, £15, Duke of Portland, Clipstone Park, Mansfield, Notts.  
 Second, £5, Duke of Portland.

## EWES HAVING BRED ONE OR MORE LAMBS.

Silver Medals, value 2 gs. each.  
 Leicester, to Geo. Turner, Jun.  
 Lincoln, to J. Byron, Kirkby Green, Sleaford.  
 Cotswold, to S. Smith, Somerton, Deddington, Oxon.  
 Southdown, to Lord Walsingham.

Shropshire, to H. J. Sheldon.  
Oxfordshire, to Z. W. Stilgoe, The Grounds, Adderbury, Oxon.

Of any other pure breed, to Alfred Morrison, (Hampshire.)

## PIGS.

## FAT.

Pen of three of one litter, not exceeding 10 months old.  
First prize, £10, Earl of Ellesmere, Worsley Hall, Manchester.

Second, £5, John Pellingham, Handsworth, Birmingham.

Pen of three of one litter, not exceeding 15 months old.  
First prize, £10, Earl of Ellesmere.

Second, £5, Sons and Executors of late J. Wheeler, Long Compton, Shipston-on-Stour.

Pig exceeding 15 months old.

First prize, £6, Earl of Ellesmere.

Second, £4, Sons and Executors of late J. Wheeler.

## BREEDING BERKSHIRES.

Pen of five of one litter, exceeding three and not exceeding six months old.

First prize, £10, Joseph Smith, Henley-in-Arden.

Second, £5, Heber Hamfrey, Kingstone Farm, Shrivenham, Berks.

## OTHER LARGE BREEDS.

Pen of five of one litter, exceeding three and not exceeding six months old.

First prize, £10, Earl of Ellesmere.

Second, £5, John Godfrey, Wigston Parva, Hinckley.

## MIDDLE BREED.

Pen of five of one litter, exceeding three and not exceeding six months old.

First prize, £10, and extra prize of £3 3s. as best pen of breeding pigs, Earl of Ellesmere.

Second, £5, Peter Eden, Cross Lane, Salford.

## SMALL BREED.

Pen of five of one litter, exceeding three and not exceeding six months old.

First prize, £10, Peter Eden.

Second, £5, Robert Tommas, Windsor Green, Birmingham.

## CORN.

## WHITE WHEAT.

Talavera.

[No entry.]

Any other Variety.

First prize, £2, Col. Loyd-Lindsay (Childham).

Second, £1, The Queen (Childham).

## RED WHEAT.

First prize, £2, J. Greatorex, Stretton, Burton-on-Trent.

Second, £1, David Hodges, Newbridge, Yardley, Birmingham.

## 'BARLEY.

First prize, £2, J. Greatorex.

Second, £1, The Queen.

## WHITE OATS.

First prize, £2, J. Greatorex.

Second, £1, J. Page, Billesley Hall, Alcester (Hallett's Pedigree).

## BLACK OATS.

First prize, £2, N. Stilgoe (Tartarian).

## BEANS.

First prize, £2, The Queen (White-cycl).

Second, £1, C. McNiven.

## WHITE PEAS.

First prize, £2, N. Stilgoe (Second Earlys).

## BLUE OR GREY PEAS.

First prize, £2, Cox Brothers, Monks Hall, Gosherton, Spalding (Laxton's).

## POULTRY.

The show of poultry exhibits, as compared with last year, a slight falling off in the number of entries. Cochins and Dorkings, and game fowls being the principal features in the show. The following weights of the winning pens of ducks, geese, and turkeys may be regarded as curiosities.

White ducks (drake and duck).—First prize, 21 lbs. 9 oz.; second, 20 lbs.; third, 19 lbs. 2 oz.; fourth, 15 lbs. 2 oz.

Rouen ducks (drake and duck).—First prize, 20 lbs. 6 oz.; second, 19 lbs. 10 oz.; third, 19 lbs. 14 oz.; fourth, 19 lbs. 1 oz.; fifth, 18 lbs. 12 oz.

Geese, white (gander and goose).—First prize, 58 lbs. 9 oz.; second, 52 lbs. 4 oz.; third, 42 lbs. 2 oz.

Geese, grey (gander and goose).—First prize, 51 lbs. 9 oz.; second, 39 lbs. 6 oz.; third, 39 lbs. 4 oz.

Turkeys, cock above one year old.—First prize, 33 lbs. 12 oz.; second, 34 lbs. 3 oz.

Cocks, hatched in 1875.—First prize, 29 lbs.; second, 24 lbs. 10 oz.; third, 24 lbs.

Hens, above 1 year old.—First prize, 59 lbs.; second, 40 lbs. 8 oz.; third, 34 lbs.

Hens, hatched in 1875.—First prize, 32 lbs. 8 oz.; second, 31 lbs. 12 oz.; third, 30 lbs. 8 oz.

## ROOTS.

Silver Cup, value six guineas, for twelve Swedes and twelve Globe Mangolds, Sir F. Smythe, Bart., Acton Burnell, Shrewsbury.

Silver Cup, value five guineas, for six Long Mangolds, six Globe Mangolds, and six swedes, Colonel Loyd-Lindsay, M.P.

Silver Cup, value five guineas, for six Mammoth Long Red Mangolds, six Globe Mangolds, and six Golden Tankard Yellow-fleshed Mangolds, Sir F. Smyth, Bart.

Silver Cup, value five guineas, for six Imperial Hardy Swedes, six Mammoth Long Red Mangolds, six Orange Globe Mangolds, and six Champion Intermediate Mangolds, Joseph Cave, Penesfield Farm, Rickmansworth, Herts.

## Kohl-Rabi.

First prize, £2, Messrs. Cocks Brothers, Gosherton, Spalding.

Second, £1, Messrs. G. and J. Perry, Acton Pigott, Conover, Salop.

## Long Mangolds.

First prize, £2, with £2 2s., John Hicken,

Second, £1, A. C. Twentyman, Castlecroft, Wolverhampton.

## Globe and Intermediate Mangolds.

First prize, £4, with £2 2s., Sir F. Smythe, Bart. (Globe).

Second, £1, Messrs. G. and J. Perry (Perry's Selected Globe).

## SWEDES.

Silver cup, value five guineas, for the best twelve Champion Purple-top swedes, the Duke of Portland, Clipstone Park, Mansfield, Notts.

## Swedes, any Variety.

First prize, £2, with £2 2s. added by G. and J. Perry (Webb's Imperial).

Second, £1, Charles Crisp, Sittles Farm, Alrewas, Lichfield (Webb's Imperial).

## COMMON TURNIPS (Tankard).

First prize, £2, the Duke of Portland (Webb's).

Second, £1, the Duke of Portland (Webb's)

## White flesh (except Tankard).

First prize, £2, Colonel North, M.P. (Grey Stone),

Second, £1, Messrs. Cocks Brothers.

Yellow flesh (except Tankard).

First prize, £2, T. M. L. Cartwright, Melville House, Ladybank, Fife.

Second, £1, T. M. L. Cartwright (yellow bullock).

CARROTS (white Belgian).

First prize, £2, the Duke of Portland.

Second, £1, the Duke of Portland.

Any other Variety.

First prize, £2, the Duke of Portland (Alhringham).

Second, £1, the Duke of Portland.

OX CABBAGE.

First prize, £2, Joseph Greatorex.

Second, £1, Joseph Greatorex.

POTATOES.

For Collection of twelve specimens each of Ash-leaf Killneys, Breesees Peerless, Dalnahoy's, Flukes, Red Regents, Hundredfold Flukes, Paterson's Victoria, and Scotch Blue.—Prize, G. and J. Perry, Acton Pigott, Condover, Salop.

For Collection of six varieties, twelve specimens each, to include the new Hundredfold Fluke and the Red-skinned Flour-ball.—Prize, £5 5s., Peter McKinlay, Woodbine House, Beckenham, Kent.

For Collection of eight varieties, twelve tubers of each, four of the varieties to be English and the remaining four American, to include the new American Bread Fruit.—Prize, £5 5s., Peter McKinlay.

Ash-leaf Kidney.

First prize, £1, Duke of Portland.

Second, 15s., Thomas P. Taylor, Lymm, Warrington.

Third, 10s., J. Betteridge, Acton Nursery, Chipping Norton.

Lapstone Kidneys.

First prize, £1, Sir F. Smythe, Acton Purnell, near Shrewsbury.

Second, 15s., Wm. Tinlay, The Gardens, Wroxton Abbey, Banbury.

Third, 10s., J. Betteridge.

Rector of Woodstock.

Prize, £1, Peter McKinlay.

Regents or Dalnahoy's.

First prize, £1, T. L. M. Cartwright, Melville House, Ladybank, Fife.

Second, 15s., T. L. M. Cartwright.

Third, 10s., Duke of Portland.

Paterson's Victoria.

First prize, £1, T. P. Taylor.

Second, 15s., T. P. Taylor.

Third, 10s., Samuel C. Pilgrim, The Outwoods, Hinckley.

Vermont Beauty or Brownell's Beauty.

First prize, £1, Peter McKinlay.

Second, 10s., J. Betteridge.

Snowflake or other White skinned American Variety.

First prize, £1, Peter McKinlay.

Second, 10s., Cox Brothers, Monk's Hall, Gosberton, S<sup>l</sup> ling.

Other White-skinned Varieties.

First prize, £1, Duke of Portland.

Second, 10s., Duke of Portland.

Other Coloured-skinned Varieties.

First prize, £1, Sir F. Smythe.

Second, 10s., Duke of Portland.

Three Distinct Varieties.

First prize, £1 10s., Duke of Portland.

Second, £1, James Betteridge.

Third, 10s., T. P. Taylor.

Six Distinct Varieties.

First prize, £1 10s., Duke of Portland.

Second, £1, Duke of Portland.

Third, 10s., Cox Brothers,

Twelve Distinct Varieties.

First prize, £3, and extra prize of £5 5s., to G. and J. Perry.

Second, £2, Peter McKinlay.

Third, £1, Duke of Portland.

WEIGHTS.

CATTLE.

No.	cwt.qrs.lbs.	No.	cwt.qrs.lbs.
1	20 0 7	60	19 2 21
2	24 0 0	61	16 3 4
3	18 2 0	62	17 1 14
4	19 0 12	63	16 0 25
5	21 0 9	64	12 2 3
6	16 3 0	65	15 3 11
7	17 3 17	66	19 0 9
8	18 1 7	67	
9		68	13 0 3
10	18 0 0	68A	16 1 4
11	12 2 16	69	11 0 3
12	13 3 10	70	
13	11 2 25	71	12 1 17
14	11 3 9	72	17 0 17
15	15 3 2	73	12 3 21
16	15 0 0	74	
17	16 3 0	75	16 0 9
18	16 1 21	76	12 3 5
19	18 0 7	77	12 1 4
20	19 0 6	78	13 1 14
21	14 3 21	79	11 3 14
22	14 2 10	80	16 0 14
23	14 1 10	81	19 3 4
23A	17 0 14	82	17 2 14
24		83	15 1 14
25		84	
26	18 3 4	85	16 3 22
27	23 0 7	86	14 2 5
28	23 1 14	87	
29	25 2 7	88	20 0 0
30		89	18 0 15
31	20 1 10	90	18 3 18
32	23 2 0	91	18 0 14
33		92	
34	18 2 7	93	12 1 21
35	21 3 10	94	17 1 7
36		95	14 2 5
37	18 1 23	96	15 3 21
38	18 3 8	97	
39		98	16 1 5
40	20 1 14	99	
41		100	21 3 17
42		101	19 0 18
43	19 0 18	102	21 2 3
44		103	19 2 6
45	13 2 14	103A	21 2 21
46		104	19 2 16
47	16 3 5	105	19 0 10
48	17 0 3	106	
49		107	
50		108	18 3 23
51		109	
52		110	18 3 0
53	18 0 20	111	16 2 7
54	17 3 0	112	17 0 18
55	18 1 0	113	18 3 10
56		114	
57	18 1 14	115	14 1 26
58		116	14 0 0
59	15 2 21	117	17 2 0

SHEEP.

118	5	1	26	154	1	3	5
119	5	3	4	155	7	1	17
120	5	3	7	156	8	0	21
121	5	0	21	157	7	0	2
122	6	0	15	158	6	2	7
123	7	0	18	159	7	2	8
124	7	2	13	160	7	1	21
125	7	2	7	161	6	2	7
126	8	0	3	162	6	2	11
127	7	3	3	163	6	3	0
128	6	3	20	164	6	2	25
129	7	0	13	165	5	3	23
130	5	0	0	166	6	3	20
131	5	2	13	167	5	2	0
132	5	2	17	168	5	2	0
133	4	3	14	169	5	1	16
134	5	0	21	170	6	2	21
135	6	1	25	171	7	2	20
136	5	3	5	172	6	0	16
137	5	3	21	173	7	0	22
138	6	0	3	174	7	0	0
139	6	3	2	175	2	0	3
140	6	2	3	176			
141	5	3	14	177	3	0	22
142	5	3	13	178	2	0	13
143	5	3	23	179	2	3	7
144	5	1	7	180	1	2	20
145	5	3	11	181	1	2	27
146	5	3	5	182	2	0	22
147	2	1	11	183	2	2	5
148	2	2	16	184	2	0	9
149	2	1	23	184	2	3	0
150	2	1	3	185	2	0	17
151	2	1	0	186			
152	2	1	0	187	2	0	18
153	2	0	15	188	3	0	15

injurious to them, appears to be, beyond doubt, the cause of this scourge; and that increased transit has arisen from the necessities of the country, and the changes in the practice of feeding stock. Local efforts have proved powerless to check the complaint, while nothing but the application generally of systematic measures can possibly eradicate it. I venture to think that our Council might fairly be asked to take the question into its consideration, with a view of pressing the urgency of the evil on the attention of the Government, even should it not be able, as I should hope to verify it might, to recommend the adoption of specific regulations." The consideration of the above letter having been deferred until the present meeting, Mr. Goring, who was not present, proposed the following resolutions: 1. That the Council of the Bath and West of England and Southern Counties Association, finding that exceptionally heavy losses have been inflicted on the country generally, and on the agricultural classes in particular during the past year, by the prevalence of foot-and-mouth disease, is of opinion that the system now in force, based on the Act of 1869, and the Orders in Council, is inadequate to check that complaint, partly through its own defects, and partly through the conflicting powers of the various local authorities.

2. That the Council, being apprehensive that the constitutional vigour of our cattle and sheep must suffer if continually subjected to attacks of this complaint, desires to represent to Her Majesty's Privy Council the reasons urged of their taking effectual steps to extirpate the complaint from the United Kingdom, and prevent its re-entrance through our ports. With this view this Council desires to recommend: 1. That the main course suggested in the resolutions adopted by the Central Chamber of Agriculture. 2. That the Secretary be instructed to forward copies of the above resolutions to such members of the Society as are members of the House of Lords and Commons, and to request their support in the Parliament of the views of the Council on this subject. The resolutions were seconded by Mr. T. Duckham. The Privy Council will be feared their difficulty in approaching the Privy Council would arise from the fact of their not being in a position to recommend any particular course of action. Mr. Ash supported the resolutions, and recommended the stoppage of fairs and other markets to which the extension of the disease was attributable. Col. Luttrell said that in the county of Somerset at least 23 per cent of the stock had been affected, but the virulence of the disease was now abating. Mr. March was of opinion that no good would result from the adoption of the course recommended, unless they were in a position to suggest some definite course of action. The Earl of Cockburn said it would be unworthy of a great Society to approach the Privy Council, without having it in their power to recommend some specified changes which they considered would prove advantageous to the cattle trade generally, and moved the previous question. This having been seconded by Colonel Luttrell, a division was taken, when 14 votes were given for the amendment and 5 for the original resolutions, which were secondarily lost.

On the motion of Colonel Luttrell it was resolved that at the Hereford meeting members of the Society be admitted free to the stand at the horse-ring on producing their members' tickets.

CLEVELAND AGRICULTURAL SOCIETY.—A show of thoroughbred horses was held at Guisborough on Tuesday, when a prize of £200 was awarded to the winner upon condition that he remained within the district bounded by Stokesley, Yarm, Guisborough, and Loftus, from the 1st March, 1876 to the 20th July, 1876, inclusive. Eight were entered, and five were brought upon the show ground for exhibition, comprising—Moldavia, three years, owned by Mr. W. Robson, of Gateshead; Inveresk, six years, belonging to Mr. W. Macauliffe, East Whilton; Sacerdos, four years, owned by Mr. A. H. T. Newcomen, of Kirkcubham; Sadmere, twelve years, belonging to Mr. R. Cowell, of Normandy; and Merry Sunshine, a five-year-old bay, by Thornaby, out of Sunbeam, bred by Mr. Merry, and owned by Mr. W. T. Sharpe, of Baumber Park, Harrogate. The judges unanimously awarded the first prize to Merry Sunshine, and highly commended the three-year-old Moldavia. The judges were: Mr. Joseph Harrison, of White House, Ormsby; Mr. T. Garbutt, Yarm; Mr. G. A. Gray, Milfield, Northumberland; Mr. A. L. Maynard, Newton Hall, Darlington; and Mr. C. Holmes, Bar House, Beverley. This is the first experiment of the kind tried in Cleveland.

BATH AND WEST OF ENGLAND SOCIETY,

AND

SOUTHERN COUNTIES ASSOCIATION.

At the monthly Council meeting, held at the Grand Hotel, Bristol, on Tue-day, the Earl of Ducie in the chair; there were also present the Earl of Cork, Sir J. T. B. Duckworth, Messrs. H. G. Moysey, C. T. D. Adlam, J. D. Allen, Archer, H. Badcock, J. T. Bosseawen, C. Bush, T. Duckham, T. Dyke, F. W. Dymond, C. Edwards, H. Fooks, Gilbert, J. Goring, J. D. Hancock, H. P. Jones, J. W. King, J. E. Knollys, Luttrell, H. Mayo, J. March, R. Neville, G. Radmore, C. A. W. Troyte, R. Wippsell, H. Spackman (official superintendent), and J. Goodwin (secretary and editor).

The tender of Mr. Lewis, Northgate-street, Bath, for the printing and sale of the Society's Catalogues for the term of five years, was accepted.

It was determined that the railway circular lately issued as to the future charges for the conveyance of stock should accompany the Stock Prize Sheet and Implement Regulations.

Sir J. T. B. Duckworth, Bart., gave notice that at the January meeting he will move that the number of Council meetings be reduced.

Mr. J. W. L. Ashe, formerly of Exeter, but now of Kensington, was appointed a member of the Arts Committee in the place of Mr. R. M. Daw, resigned.

FOOT-AND-MOUTH DISEASE.—At the last meeting of Council the following letter was read from the Rev. John Goring, of Wiston Park, Steyning, Sussex: "I am very desirous to call the attention of the Council, or at all events to learn the proper way to do so, to the alarming prevalence of foot-and-mouth disease, which is causing heavy losses to farmers and to the community, and which threatens to do so far more seriously. The consideration of the possibilities of remedy or mitigation for this state of things would appear to me to fall most properly within the province of such a body as our Council, whether by a committee specially appointed or otherwise. The transit of cattle in ways unnatural and

## THE SMITHFIELD CLUB SHOW.

## THE OPENING MORNING.

The morning opened with anything but ladies' weather, snow falling heavily during the earlier part of the day; and remote Islington was to many almost altogether inaccessible. As we stated some weeks since, the numerical strength of the show is about on a par with that of last season, which was one of the shortest known for some years. The leading breeds run to about as many entries each as those of 1874, there being some lack of competition in the sheep classes, the chief accession in every way being amongst the cross-bred cattle and extra stock. Our own table stands thus, a number or two more or less:

	1868	1869	1870	1871	1872	1873	1874	1875
Devons .....	40	41	33	40	35	46	33	31
Herefords .....	31	24	43	30	28	33	23	22
Shorthorns .....	60	50	45	41	43	65	32	33
Sussex .....	25	23	26	28	21	33	32	27
Scots and other breeds .....	19	23	28	26	24	16	34	72
Sheep .....	183	172	182	149	167	188	177	161
Pigs .....	42	55	55	60	5	49	47	46
Total entry.....	477	418	474	444	426	486	398	392

[The other entries of cattle not enumerated were made up of other breeds, crosses and extra stock.]

The Devons still offer a striking contrast at Islington to what they do in Birmingham; there is a good, fair show, if certainly not equal to that of last year. Captain Taylor wins, as he did in Bingley Hall, both in the elder steer and ox classes, with two well-bred, well-fed beasts. In Devon heifers, another good class, Her Majesty and the Prince of Wales are separated on the prize list by Mr. Turner, junior, who breeds his own Devons in the Shires; and Mrs. Langdon shows the best cow in Lovely Queen, one of the late James Davy's breed, and, at nine years and a-half old, the dam of half-a-dozen calves.

The Herefords are only good here and there—the best of them a six-year-old, or nearly so, fed by Mr. Heath, bred by Mr. Philip Turner, and shown as extra stock, where he beats Mr. Senior's Devon, a rather beast kept over from last year, and not so good as he was. The Hereford, on the other hand, is a grand, ripe ox, and unquestionably one of the best in the Hall. In the classes proper there are only two Hereford cows, and both are indifferent; again there are only two heifers in the class, of rather better type and quality. The steers are good in places, and Mr. Groves wins with a smart young beast bred by Messrs. Heighway.

This is the worst show of Shorthorns probably ever seen at Islington—that is, again, in the classes; whereas in the extra stock there are some eight cows and heifers standing side by side which make a show in themselves. Amongst these is Mr. Wright's cow, the best at Birmingham last year, now grown into a very coarse animal, as might be expected with only half a pedigree, and that only on one side of her head. She is another of the over-due beasts, kept on only to be worsted, as she is but third in the class, where the first is a charming, blood-like, level white cow, which, unfortunately, has never bred, called Bride of Windsor, and exhibited by her breeder, the well-known Mr. Willis, from Bedale way. These extra stock cows were the feature of the show. In the Shorthorn classes Mr. Sowerby had a likely ox, which, of course, was first, and Her Majesty a clever cow, which goes to the butcher with only one calf to her credit. The

second and third prizes, and occasionally the first, are often won by exhibitors who have never made such a mark previously at a Smithfield show. In fact, the repute of the Shorthorns rests beyond their own proper section.

There is a creditable entry of Sussex, but with nothing very extraordinary amongst them; a few Norfolk Polls, where a prize or two was withheld; and a capital bridled Highland ox, bred and fed by the Duke of Sutherland. The Scotch Polls were not remarkable, and Mr. McCombe this season is doing nothing in the show-ring; but the few Welsh runts were of marked merit, and the judges recommended the third beast in the entry as worthy of a third prize. But then, Mr. Sewell Read is half a Welshman himself. As we have intimated, there were some good crosses, where Mr. Heath Harris won with a fourth cross from a Shorthorn, and Mr. Elliott with a nice level heifer; and the extra, as we have already stated, included some of the best beasts in the Hall.

The sensation of the sheep show was in the Southdown classes, where the Prince of Wales was again in force, this year with sheep in place of cattle. The Sandringham flock beat Lord Walsingham twice over for the younger wethers and for fat ewes, although Merton took the cup for the best pen with quite a magnificent lot of old sheep. The Leicesters were a short but good show; the Cotswolds but few, and bad; and the Lincolns all of some excellence, as they usually are now. Lord Chesham regained his lead amongst the Shropshires; and Messrs. Street and Druce maintained theirs with the Oxford, of which the entry was, however, inferior to last year.

Never was there so poor a pig show, which the judges disposed of in little more than an hour. Mr. Homer's pen of white Dorsets was the only really good one of that colour; and Mr. McNiven's black Dorsets were not only a long way before anything else in the short entry of blacks, but the cup pen of the day. The extra-stock pigs were very bad, and in some of the classes the entries did not extend beyond the two prizes.

## DURING THE WEEK.

The prize-list given in our last number included nearly all the awards with, as the chief, the exception that over the £50 Plate for the best pen of three sheep: this took a deal of doing, but ultimately, of course on a division being taken, the return was made in favour of Mr. George Street's pen of shearing Oxford, their chief opponents being Mr. Byron's Lincoln and Lord Walsingham's two-shear Southdowns. The decision appears to be well warranted, for a grander pen of sheep at their age, alike for breeding and feeding, has rarely been seen at Islington; while they are beautifully matched, and throw back so thoroughly to the Biddenham flock that a judge, after it was over, might have reasonably expected to find the entry in the catalogue standing in Mr. Charles Howard's name. We should have taken the Merton Downs for second, as the short-wool judges would have put them first; but beautifully matured as they are, they lack the recommendation of early maturity; and the popular feeling certainly went with the decree which declared the superiority of the Oxford. Lord Walsingham's pen, however, was, as stated in our last number, deservedly declared to be the best lot of Downs. Nevertheless, Mr. Woods, as a member of the Council,



will move, at the next meeting, that the Champion prizes for sheep be discontinued. Necessarily, with so many men holding so many different opinions as the Long-wool Short-wool, and "other" judges called on at last to work together, the result must always be something of a lottery, if not a matter of simply numerical strength; and the division on Monday amongst the nine was as close as five to four, but, as the award was a correct one for all that, the threatened motion would scarcely seem to be well-timed. We said in our report of the Birmingham meeting that it takes time to establish a flock, but the Prince's, from the sample shown here, is establishing itself very rapidly; and, as Lord Walsingham was now twice worsted by his Royal neighbour, it may be worth his while to enter the lists again at his own county show, as his lordship's supremacy has now been so successfully disputed.

It is not our intention here to go very elaborately through the classes, the more especially as we hold altogether to our report written on the day the show opened, and previous to the awards over chief honours being arrived at. No breed of sheep is coming to show more evenly good than the Lincoln; and none either at a breeding or a fat show, has for many years been so indifferently represented as the Cotswolds, although there was a pen or two here of more merit. Amongst the Shropshires Lord Chesham, as we had expected, did better than in Birmingham, although he lost the cup; while the chief subject for remark was the terribly short show of the breed. There were not so many pens exhibited as in the Midlands, and for eight premiums in four classes of Shropshires, but eight entries competed. Of Oxfords, again, the show was generally short, and, beyond the champion pen and Mr. Druce's smart ewes, of no very noteworthy excellence. The Cheviots and Dorsets were but few; and the new classes for lambs would look to be an innovation scarcely justified. There was but one pen of Leicester lambs, one of Cotswold, two of Lincoln, five of Southdowns, three of Hampshires, none of Shropshires, two of Oxfords, one of Dorsets, and five of Cross-breds. The West-country Downs were generally in more numerical force than usual, with some exhibitors new to the Smithfield Club amongst the entries, but the quality was not so good; and the Leicesters opened the list with a capital first-prize pen, uniting breed with size, good heads and necks, famous legs of mutton and firm in their touch, so that Mr. Turner, whose sheep were not very cleverly prepared, confessed himself fairly beaten. There was the usual supply of Kents and other curiosities; and Mr. John Overman regained his lead with his long and short-wool cross, but there was not much behind him.

We said in our last number that the show of Short-horns was very indifferent, only reserving Mr. Sowerby's ox and the cows and heifers in the extra stock. Writing, as we did, before the final awards were made, we took no especial notice of Mr. Beaven's heifer, ultimately pronounced to be the best cow or heifer in the classes and the reserve Shorthorn; but as these compliments were very generally regarded as not justified, but rather as egregious mistakes, we see no reason to amend our previous report. She is a commonish-looking beast, very faulty in places, and with little of the style of an improved Shorthorn; as her reaching so high clearly implies the inferiority of those who finished behind her in the contest for the best of the breed. Mr. Sowerby's ox has grown into a great useful butcher's beast, with also but little style about him, while last year he was thought to be but a moderate second to Mr. Bult's champion ox, that, in a good year, could himself have had little claim to rank very forward. So that we have here, again, further proof of the quality of the Shorthorns as fat beasts

during this show season; Lady Pigot, one of the few breeders of any note who exhibited, showing an old cow, Victoria Spes, with two calves as her produce in nine years, and in any other way doing little credit to Ward or the herd. The winner of the Champion prize came fresh into the ring, it being certainly on every consideration a point in her favour that she had never previously been exhibited. As we have said, she is a well-bred, charming, blood-like, level cow, and no Plate has ever been awarded on a better showing. Like the Prince's Champion cow, she is a white, and, like her, goes to the sacrifice at Oremore. Of the cross-bred and Mr. Wright's heifer, put second and third to her, we thus wrote when they came together last year in Bingley Hall: "No question the Nocton Heath heifer is a valuable butcher's beast, carrying plenty of good meat, and being, indeed, fed to the highest possible pitch. She begins, too, with a kindly head but bad horn, and is wanting in fine feminine character, as there is a coarseness in her appearance which conveys the impression of her not being very highly bred. In fact, her pedigree, as given in the catalogue, only goes half-way, and that not very clearly—sire, a son of Lord Panton (22204). Indeed, Mr. Stutter's cross-bred gives one the idea of being the better bred Shorthorn of the two; as a very true comely cow she is especially grand to meet, and if the two come together again we should take the cross for the preference." And they have come together again, and the cross has the preference.

The Sussex were a fair level lot, well maintaining their place as a breed; while amongst the Devons, the absurdity of keeping on over-due beasts reached, we should hope, its climax, when the best of the breed was, now at five years old, declared to be the ox which won the same premium at the last show at four years old, and may possibly be reserved to compete for it again! The sooner the four years and a-half limit for oxen is extended to extra stock the better it will be for the reputation of the Smithfield Club. As it is, the condition, being but partial, does not really reach the evil. The best of all the Herefords, a thoroughly good beast, will, at three years old, be reserved for the old class of oxen next year, although he has changed hands in the interim; but, with all justice, this animal may again compete for the premier prize; as he was certainly here a long way the best of the white-faces in their classes, otherwise but a moderate entry. The Duke of Sutherland's brindled Highlander took the cup as the best of the Scots; but for breed, symmetry, and wonderfully fine character, as a butcher's beast, moreover, long and deep, with the good beef especially where it is worth most, he should have been the best steer or ox in any of the classes. They certainly did keep him in the ring, but as the Devon and Hereford, and the Shorthorn and Cross benches had of course each a champion of their own, and there was only one Scotchman amongst the other trio, it necessarily followed that the Highlander was quickly out-voted, and the cup went, as usual, to a Shorthorn; although, as a true specimen of the best beef, the Shorthorn was really nowhere by the side of the Loughora. We do not go so far as Mr. Woods in his proposed motion for the abolition of these extra prizes, but the system, or rather want of system upon which they are adjudicated, requires looking into. The Shorthorns, save in the extra stock, were generally indifferent, and the Shorthorn ox which took the prize as the best male, and the Shorthorn heifer which took the prize as the best female, were neither entitled to anything, beyond the prizes that, for lack of creditable competition, they took in their classes. But the judges persevered gamely enough in maintaining their mistake over the Wiltshire heifer, and so put a climax to the thing, the effect of which must surely lead to some

reform. No animal, however good, has now any chance against anything called a Shorthorn.

### LIST OF JUDGES. CATTLE.

Devons, Herefords, and Sussex.  
John Ford, Rushton, Blandford, Dorsetshire.  
Thomas Pope, Horningsham, Warminster.  
Henry Overman, Weasenham, Brandon, Norfolk.  
Shorthorns, and Cross or Mixed.  
Edmund Lythall, Radford Hall, Leamington.  
Richard Woods, Osberton, Worksop Notts.  
L. C. Crisp, Hawkhill, Alwicks.  
Norfolk or Suffolk, Scotch, and Welsh.  
Thomas Fulcher, Elmham, Dereham.  
C. Sewell Read, M.P., Houlingham Thorpe, Norwich.  
James Bruce, Ruthwell, Annan, N.B.

### SHEEP.

Leicesters, Cotswolds, Lincoln, Kentish or Romney Marsh.  
James Tremaine, Polsue, Graupound, Cornwall.  
Edward Paddison, Ingleby, Lincoln.  
T. Brown, Marham Hall, Downham Market.  
Southdowns, Hampshire or Wiltshiredowns, Ryeland,  
Cheviot, Dorset, and Mountain.  
J. W. Brown, Uffcott, near Swindon.  
E. Baunton, West Knighton, Dorchester.  
George W. Baker, Luton 1100 Park Farm-office, Luton, Beds.

Shropshire, Oxfordshire, and Cross-bred.  
J. C. Canning, Sherbourne, Warwick.  
F. M. Jonas, Chris-hall Grange, Saffron Walden.  
R. J. Newton, Campsfield Farm, near Woodstock.

### PIGS.

Joseph Smith, Heuley-in-Arden, Warwickshire.  
John Angus, Whitefield, Morpeth.  
Edward Little, Lanhill, Chippenham.

### CATTLE. DEVONS.

Steers, not exceeding 2 years and 6 months old.  
First prize, £25, to T. L. Senior, Aylesbury.  
Second, £15, to C. McNiven, Oxted, Surrey.  
Third, £10, to W. R. Fryer, Poole, Dorset.  
Reserve.—H. R. H. Prince of Wales.

Steers, not exceeding 3 years and 3 months old.  
First prize, £25, to Capt. Taylor, Eastbourne, Sussex.  
Second, £15, to W. Smith, Whimble, Devon.  
Third, £10, to Major Buller, Crediton.  
Reserve.—J. Ham, Broadclist.

Steers or oxen, above 3 years and 3 months, and not exceeding 4 years and 6 months old.  
First prize, £25, to Capt. Taylor.  
Second, £15, to J. Overman, Burham Market.  
Third, £10, to S. R. Jeffreys, Bath.  
Reserve.—W. Smith, Whimble.

Heifers not exceeding 4 years old.  
First prize, £20, to H.M. the Queen, Prince Consort's Norfolk Farm, Windsor (Princess Victoria Louise).  
Second, £10, to G. Turner, juv., Northampton.  
Third, £5, to H.R.H. Prince of Wales (Pretty Maid).

Cow, above 4 years old.  
First prize, £20, to Mrs. Maria Langdon, North Molton (Lovely Queen).  
Second, £10, to H. Kelsey, East Grinstead (Tinker).  
Third, £5, to T. L. Senior (Moss Rose).  
Reserve.—S. R. Jeffreys (Julia).

### HEREFORDS.

Steers, not exceeding 2 years and 6 months old.  
First prize, £25, to W. Heath, Norwich,

Second, £15, to R. Wortley, Ayl-harc.  
Third, £10, to J. Baldwin, Luddington.  
Reserve.—Heighway and Son, Shrewsbury.

Steers, not exceeding 3 years and 3 months old.  
First prize, £25, to W. Groves, Shrewsbury.  
Second, £5, to P. A. Pike, Tewkesbury.  
Third, £10, to R. Wortley.

Steers or Oxen, above 3 years and 3 months and not exceeding 4 years and six months old.

First prize, £25, to R. Wilkes, Shrewsbury.  
Second, £15, to W. Evans, Usk.  
Third, £10, to W. Heath.  
Reserve.—Sir J. R. Bailey, Crickhowell.

Heifers, not exceeding four years old.

First prize, £20, to S. R. Jeffreys.  
Second, £10, to H. M. the Queen, Prince Consort's Flemish Farm, Windsor.

Cows, above 4 years old.  
First prize, £20, to J. Baldwin (Luddington Rose).  
Second, £10, to S. Robinson, Kington (Holly).

### SHORTHORNS.

Steers, not exceeding 2 years and 5 months old.  
First prize, £25, to G. and J. Perry, Conover.  
Second, £15, to Sir J. Swinburne, Newcastle-on-Tyne.  
Third, £10, to J. Smith, Swindon.

Steers, not exceeding 3 years and 3 months old.  
First prize, £25, to J. How, Broughton, Huntingdon.  
Second, £15, to Lieut.-Col. R. Loyd-Lindsay, Wantage.  
Third, £10, to J. Walter, Bearwood, Wokingham.

Steers or Oxen, above 3 years and 3 months and not exceeding 4 years and 6 months old.  
First prize, £25, to G. Sowerby, Luton.  
Second, £15, to J. Agate, Horsham.  
Third, £10, to Lieut.-Col. J. Reeve, Grantham.

Heifers, not exceeding 4 years old.  
First prize, £20, to W. F. Beaver, Marlborough (Emma).  
Second, £10, to R. H. Harris, Forres, Moray (Tyne Lily).  
Third, £5, to J. Smith, Swindon (Red Rose).  
Reserve.—Lieut.-Col. R. Loyd-Lindsay.

Cows, above 4 years old.  
First prize, £20, to H. M. the Queen, Prince Consort's Shaw Farm, Windsor (Alice).  
Second, £10, to H. N. Goddard, Wootton Bassett (Duchess).  
Third, £5, to J. Smith, Swindon (Cherry).  
Reserve.—Lady E. Pigot, Weybridge (Victoria Spes).

### SUSSEX.

Steers, not exceeding two years and six months.  
First prize, £20, to L. Steere, Dorking.  
Second, £10, to J. Neale, Pulborough.  
Third, £5, to J. and A. Heasman, Aumering.  
Commended: G. C. Coote, Arundel.

Steers, not exceeding three years and three months old.  
First prize, £20, to J. and A. Heasman.  
Second, £10, to J. Neale.  
Third, £5, to E. and A. Standford, Steyning.  
Highly commended.—T. Paige, Lewes.  
Commended.—Right Hon. the Speaker, Lewes; G. Smith, Crawley.

Steers or Oxen, above three years and three months, and not exceeding four years and six months old.  
First prize, £20, to J. Braby, Rudgwick.  
Second, £10, G. C. Coote, Tortington.  
Third, £5, L. Steere, Dorking.  
Commended.—Mrs. Coote, Littlehampton.

Heifers, not exceeding 4 years old.

First prize, £20, to L. Steere (Primrose).  
Second, £10, to A. Agate, Horsham (Young Shiremark).  
Third, £5, to T. Cosens, Bognor.  
Reserve.—E. and A. Stanford.

Cows, above 4 years old.

First prize, £20, W. Wood, Crawley (14th Dark).  
Second, £10 to J. M. Montchroy, Crawley.  
Third, £5, to A. Agate, Horsham (Betsey 2nd).  
Reserve.—E. and A. Stanford.

#### NORFOLK OR SUFFOLK POLLED.

Steers or Oxen, of any age.

First prize, £15, to E. Cooke, Norwich.  
Second £10, to J. J. Colman, Norwich.  
Reserve.—W. Darrant, Norfolk.  
Heifers or Cows, of any age.  
Second Prize, £10, to R. E. Loft, Bury St. Edmund's (Cauliflower).

#### SCOTCH HIGHLANDERS.

Steers or Oxen, of any age.

First prize, £25, to Duke of Sutherland, Golspie.  
Second, £15, to Duke of Roxburgh, Kelso.  
Third, £10, to Sir W. G. Gordon, Cunnings, Forres.  
Reserve.—W. Heath.

Heifers or Cows, of any age.

First prize, £20, to Sir W. C. Trevelyan, Wallington.  
Second, £10 (withheld).

#### SCOTCH POLLED.

Steers or oxen of any age.

First prize, £25, to J. and W. Martin, Aberdeen.  
Second, £15, to R. Jardine, Lockerbie, Dumfries.  
Third, £10, to J. Stephen, Inverurie, Aberdeen.

Heifers or Cows of any age.

First prize, £20, to H. D. Adamson, Alford, Aberdeen.  
Second, £10, to J. Reid, Alford, Aberdeen (Meg).

#### WELSH.

Steers or Oxen (Runts), of any age.

First prize, £15, to R. D. Jenkins, Cardigan.  
Second, £10, to J. S. Postle, Smallburgh, Norfolk.  
Highly commended.—W. Roberts, Llangeini, Anglesea.

#### CROSS OR MIXED-BRED.

Steers not exceeding 3 years old.

First prize, £25, to A. Longmore, Banff.  
Second, £15, to J. Tait, Inverurie, Aberdeen.  
Third, £10, to W. Scott, Huntly, Aberdeen.  
Reserve.—W. and J. Lawson, Huntly.  
Steers or Oxen, above 3 years and not exceeding 4 years and 6 months old.

First prize, £25, to R. H. Harris, Forres.  
Second, £15, to G. Napper, Horsham.  
Third, £10, to G. Shand, Banff.  
Reserve.—W. Seott.

Heifers not exceeding four years old.

First prize, £20, to T. Elliot, Jedburgh.  
Second, £10, to Sir W. C. Trevelyan.  
Third, £5, to J. Reid, Alford, Aberdeen.

#### S H E E P.

##### LEICESTERS.

Wethers, 1 year old (under 23 months).

First prize, £20, to B. Painter, Oakham.  
Second, £15, to G. Turner, jun., Northampton.  
Third, £5, to W. P. Herrick, Loughborough.  
Reserve.—W. Brown, Holme-on-Spalding Moor.

Ewes above 3 years old.

First prize, £10, to J. and E. Tindall, Killington.  
Second, £5, to Lord Lonsdale, Oakham.  
Reserve.—T. Marris Ulceby.  
Commended.—L. Willmore, Leicester.

Wether Lambs born in 1875.

The prize of £5 to Lord Lonsdale.

#### COTSWOLDS.

Wethers, 1 year old (under 23 months.)

First prize, £20, to T. Mace, Northleach.  
Second, £15, to J. Baldwin, Luddington.

Ewes above three years old.

First prize, £10, to R. Jacobs, Burford.  
Wether Lambs born in 1875.  
The prize of £5 to J. Baldwin, Luddington.

#### LINCOLNS.

Wethers, 1 year old (under 23 months).

First prize, £20, to J. Byron, Sleaford.  
Second, £15, to T. Gunnell, Milton.  
Third, £5, to J. Pears, Lincoln.

Reserve.—T. Close, jun., Stamford.

Ewes, above 3 years old.

First prize, £10, to J. Pears.  
Second, £5, to T. Gunnell.  
Reserve.—R. C. Catling, Wisbeach.

Wether Lambs, born in 1875.

The prize of £5 to T. Gunnell.

#### KENTISH OR ROMNEY MARSH.

Wethers, 1 year old (under 23 months).

First prize, £20, to H. Page, Walmer.  
Second, £15, to J. Newport, Ashford.  
Third, £5, to B. W. Tassell, Patricbourne.

Ewes above 3 years old.

First prize, £10, to H. Rigden, Lyminge.  
Second, £5, to H. Page.

#### SOUTH DOWNS.

Wethers, 1 year old (under 23 months).

First prize, £20, to H. R. H. the Prince of Wales.  
Second, £15, to Lord Walsingham.  
Third, £5, to H. Humphrey, Pulborough.  
Highly Commended.—H. H. Penfold, Chichester.

Wethers, 2 year old, (above 23 and under 35 months).

First prize, £15, to Lord Walsingham.  
Second, £10, to Duke of Richmond.  
Reserve.—H. R. H. the Prince of Wales.

Ewes above three years old.

First prize, £10, to H. R. H. the Prince of Wales.  
Second, £5, to Lord Walsingham.

Wether lambs born in 1875.

The prize of £5 to E. Herington,  
Reserve.—J. and A. Heasman, Arundel.

#### HAMPSHIRE OR WILTSHIRE DOWNS.

Wethers, 1 year old (under 23 months).

First prize, £20, to A. Morrison, Tisbury.  
Second, £15 to J. and M. Arnold, Petersfield.  
Third, £5, to T. Dodd, Wallingford.  
Highly Commended.—J. Barton, Basingstoke.  
Commended.—B. W. Tassell.

Ewes above 3 years old.

First prize, £10, to J. Rigg, Sevenoaks.  
Second, £5, to W. Newton, Stockbridge.  
Highly commended.—A. Morrison.

Wether Lambs, born in 1875.

The prize of £5 to W. Newton, Wallingford.  
Highly commended.—A. and E. de Mornay, Wallingford.

#### SHROPSHIRES.

Wethers, 1 year old (under 23 months).

First prize, £20, to Lord Chesham.  
Second, £15, to G. Cooke, Linton.  
Third, £5, to W. Yates, Shifnal.

Wethers, 2 years old (above 23 and under 25 months).

First prize, £15, to Mrs. Beach, Brewood.  
Second, £10, to Lord Chesham.  
Reserve.—Lord Falmouth.

Ewes above three years old.  
First prize, £10, to Lord Chesham.  
Second, £5, to J. Coxon.

Wether Lambs born in 1875.

[No entries.]

#### OXFORDSHIRES.

Wethers, one year old (under 23 months).  
First prize, £20, to G. Street, Maulden.  
Second, to Z. W. Stilgoe, Adderbury.  
Third, £5, to E. Hanbury, Highworth.  
Reserve.—Lieut.-Col. R. Loyd-Lindsay.

Ewes above three years old.

First prize, £10, to A. F. M. Druce, Eynsham.  
Second, to A. Brassey, Chipping Norton.  
Reserve.—N. Stilgoe, Adderbury.

Wether lambs born in 1875.

The prize of £5 to G. Street.  
Reserve.—A. Brassey.

#### CHEVIOTS.

Wethers, of any age.

First prize, £15, to Duke of Sutherland.  
Second, £10, to Duke of Roxburgh.  
Reserved.—J. M'Gill, Dumfries.

#### RYELANDS AND DORSETS.

Wethers, not before specified, of any age.

First prize, £15, to H. Farthing, Bridgewater.

#### RYELANDS, CHEVIOTS, AND DORSETS.

Ewes, not before specified, above 3 years old.

First prize, £10, to Viscount Bridport.  
Second, £5, to H. Farthing.  
Reserve.—H. M. the Queen.

#### KENTISH, RYELAND, AND DORSET LAMBS.

Wether Lambs, not before specified, born in 1875.

The prize of £5 to H. Farthing.

#### MOUNTAINS (NOT BEING CHEVIOTS).

Ewes, whitefaced, of any age.

First prize, £15, to Mrs. M. Langdon.  
Second, £10, to W. Smith.

Wethers, blackfaced or speckledfaced, of any age.

First prize, £15, to J. M'Gill.  
Second, £10, to J. and W. Martin.  
Highly commended.—Duke of Roxburgh.

#### CROSS-BREDS.

Wethers one year old (under 23 months).

First prize, £20, to J. Overman, Burnham Market.  
Second, £15, to W. Robinson, Haynes, Bedford.  
Third, £10, to The Corporation of Norwich.  
Fourth, £5, to C. Crawshaw, Attleborough.  
Reserve.—H.R.H. the Prince of Wales.

Wether Lambs, born in 1875.—The prize of £5 to T. Rush, Babraham, Cambridge.

#### PIGS.

##### WHITE.

Not exceeding 9 months old.

First prize, £10, to J. T. Homer, Hemsworth.  
Second, £5, to Duke of Marlborough, Woodstock.

Above 9 and not exceeding 12 months old.

First prize, £10, to E. C. Tisdall, Epsom.  
Second, £5, to C. Charwood, Reading.

Above 12 and not exceeding 18 months old.

First prize, £10, to Lord Radnor, Highworth.  
Second, £5, to J. and F. Howard, Bedford.

##### BLACK.

Not exceeding 9 months old.

First prize, £10, to H. D. de Vitre, Wautage.  
Second, £5, to J. Coate, Blandford.

Above 9 and not exceeding 12 months old.

First prize, £10, to Jennings and Baker, Blandford.  
Second, £5, to A. Benjafield, Stalbridge, Blandford.

Above 12 and not exceeding 18 months old.

First prize, £10, to J. P. King, Wallingford.  
Second, £5, to H. A. Brassey, Aylesford.

Above 9 and not exceeding 12 months old.

First prize, £10, to J. Coate, Blandford.  
Second, £5, to Lady A. Murrey, Aylesford.

Above twelve and not exceeding eighteen months old.

First prize, £10, to C. M'Niven, Oxted, Godstoue.

#### OTHER BREEDS.

Not exceeding 9 months olds.

First prize, £10, to C. M'Niven.  
Second, £5, to E. Drew, Marahull, Blandford.

#### EXTRA STOCK.

##### CATTLE.

Steer or Ox.—£20 and Silver Medal, to W. Heath, Norwich (Hereford; second, £10, and reserve, T. L. Senior (pure Devon).

Heifer or Cow.—£20 and Silver Medal to T. Willis, Carperby, Bedale (Bride of Windsor—Shorthorn); second, £10, T. Statter, Stand Hall, Manchester. Highly commended.—R. Wright, Nocton Heath (Shorthorn).

##### SHEEP.

Leicester, Cotswold, Lincoln, Kentish, or other long-woolled Wethers.—Silver Cup, value £5, to J. Byron, Sleaford. Highly commended.—J. Pears, Lincoln.

Southdown, Hampshire or Wiltshire Down, or other shortwoolled Wethers.—Silver Cup, value £5, to W. Rigden, Hove, Brighton.

Shropshire, Oxfordshire, Cross-bred, or other Wethers not specified in prize-list.—Silver Cup, value £5, to G. Street, Maulden, Amptill, Bedford.

##### PIGS.

Best single Pig.—Silver Cup, value £5, to A. Benjafield, Stalbridge, Blandford. Reserve.—E. C. Tisdall. Commended.—J. Kent, Chichester.

#### C U P S.

##### CATTLE.

Silver Cup, value £50, for the best Steer or Ox in any of the classes, to G. Sowerby, Luton, Beds (Shorthorn).

Silver Cup, value £50, for the best Heifer or Cow in any of the classes to W. F. Beaven, Marlborough (Shorthorn).

Silver Cup, value £40, for the best Devon, to T. L. Senior. Silver Cup, value £40, for the best Hereford, to W. Groves, Brompton, Shrewsbury.

Silver Cup, value £40, for the best Shorthorn, to T. Willis.

Silver Cup, value £40, for the best Sussex, to W. Wood, Crawley (4th Dark).

Silver Cup, value £40, for the best Scot, to Duke of Sutherland.

Silver Cup, value £40, for the best beast of any other breed specified in Prize List, to T. Statter, Stand Hall, Manchester.

##### SHEEP.

Silver Cup, value £20, for the best pen of Leicesters, to B. Painter.

Silver Cup, value £20, for the best pen of Cotswolds, to R. Jacobs.

Silver Cup, value £20, for the best pen of Lincolns, to J. Byron.

Silver Cup, value £20, for the best pen of Southdowns, to Lord Walsingham.

Silver Cup, value £20, for the best pen of Shropshires, to Mrs. Beach.

Silver Cup, value £20, for the best pen of Hampshire or Wiltshire Sheep, to J. Riggs, Sevenoaks, Kent.

Silver Cup, value £20, for the best pen of Oxfordshires, to G. Street.

Silver Cup, value £20, for the best pen of Cross-breeds of any kind, to J. Overman.

Silver Cup, value £20, for the best Kentish, Ryeland, Dorset, or any pure-bred Sheep, not specified in prize-list, to Mrs. M. Langdon, Flitton Barton, North Molton, Devon.

PIGS.

Silver Cup, value £20, for the best pen of White Pigs, to J. T. Homer, Hemsworth, Wimborne, Dorset.

Silver Cup, value £20, for the best pen of Black Pigs, to C. M'Niven, Perrysfield, Godstone, Surrey.

Silver Cup, value £20, for the best pen of Pigs of any breed, excepting Black or White, to C. M'Niven.

CHAMPION PLATE.

Best Beast in the Show.—Champion Plate, value £100, to T. Willis, Carperby, Bedale (Bride of Windsor—Shorthorn).

Best pen of Sheep in the Show.—Champion Plate, value £50, to G. Street, Maulden, Amphil (Oxfords).

Best Pen of 3 Sheep in the Show.—A Piece of Plate, value £50, to G. Street, of Maulden, Amphil, Bedford (Oxford Downs).

LIVE WEIGHTS OF CATTLE AND SHEEP.

[The numbers marked \* are first prizes. The best beast in the show is 179; the best pen of Sheep in the show 298; the best Ox in the classes 67, and the best Cow or Heifer in the classes 74.]

CATTLE.

DEVONS.				STEERS.			
YOUNG STEERS.				OXEN.			
No.	WEIGHT.			No.	WEIGHT.		
	cwt.	qrs.	lbs.		cwt.	qrs.	lbs.
1	11	2	4	30	16	2	7
2	12	0	19	40	17	2	0
*3	11	1	10	*41	20	1	25
4	12	0	2	42	19	3	4
5	13	1	8	43	20	0	12
6	8	3	0	44	18	1	14
7	12	0	2	46	19	3	18
8	13	1	0	47	17	3	2
	STEERS.			*48	20	0	18
10	12	2	19		HEIFERS.		
11	12	2	1	49	15	0	3
12	17	0	22	*50	12	2	9
*13	15	3	15		COWS.		
	OXEN.			51	17	2	22
14	13	2	12	*53	14	2	24
15	16	2	12		SHORTHORNS.		
16	12	2	8		YOUNG STEERS.		
17	14	2	1	54	13	2	9
18	15	3	12	55	13	0	22
19	17	0	6	56	13	0	22
*20	15	0	2	57	12	0	15
	HEIFERS.			*58	15	2	14
22	13	3	12	59	13	3	14
*23	12	2	1	60	16	3	20
24	10	3	26	61	13	2	6
26	11	3	16	62	13	2	12
27	12	0	8		STEERS.		
	COWS.			*63	16	2	11
28	11	1	12	64	17	1	20
29	18	1	0	65	19	0	7
30	11	3	6		OXEN.		
*31	13	2	0	66	18	0	20
	HEREFORDS.			*67	23	0	2
	YOUNG STEERS.			68	20	0	16
32	14	0	10	69	20	2	2
*34	13	2	10	71	20	1	26
36	14	1	2	72	17	1	19
37	11	0	9	73	22	3	5

HEIFERS.				HEIFERS.			
COWS.				SCOTCH FOLLS.			
No.	WEIGHT.			No.	WEIGHT.		
	cwt.	qrs.	lbs.		cwt.	qrs.	lbs.
*74	17	1	18	131	12	1	20
75	14	3	10	132	12	1	10
76	15	0	16	*133	13	0	14
77	16	0	8		COWS OR HEIFERS.		
78	15	3	1	138	15	2	0
79	17	3	25	*139	15	0	16
80	19	2	11		WELSH.		
	COWS.			*140	19	2	18
81	16	3	10	141	20	0	6
*82	17	1	19	142	20	3	4
83	18	1	14		CROSS-BRED.		
84	17	1	21		STEERS.		
87	16	0	10	144	18	1	5
	SUSSEX.			145	17	2	0
	YOUNG STEERS.			146	18	1	8
88	15	1	2	147	18	1	7
*89	15	0	0	148	18	3	12
90	14	2	23	149	17	3	1
91	11	1	6	*151	18	0	25
92	13	1	24		OXEN.		
	STEERS.			153	18	1	23
*93	15	0	20	*154	20	2	5
94	17	0	7	155	21	3	8
95	18	3	12	156	19	0	6
97	16	3	16	157	24	2	11
98	16	0	10	158	19	3	20
99	17	2	14	159	21	1	11
	OXEN.			160	18	2	10
100	17	3	4		HEIFERS.		
101	20	1	14	161	18	1	5
102	17	0	1	162	16	0	6
103	16	2	16	163	16	2	2
*104	18	1	2	164	18	2	1
	HEIFERS.			165	15	3	15
105	16	1	10	166	19	0	27
106	13	3	10	*167	18	3	12
*107	16	2	7		EXTRA STOCK.		
108	15	2	26		OXEN.		
	COWS.			168	21	2	12
*110	17	0	16	*169	23	1	24
111	15	1	18	171	15	0	20
112	18	0	1	172	20	1	22
113	16	2	24		COWS.		
114	14	3	0	173	19	3	6
	NORFOLK OR SUFFOLK			174	18	2	10
	POLLS.			175	13	3	16
*115	14	2	21	176	17	1	0
116	17	2	16	177	17	0	20
117	17	3	12		COWS.		
118	15	3	19	178	17	0	5
119	16	3	6	*179	18	1	4
120	16	3	22	180	22	0	20
121	11	2	12	181	17	0	22
	HEIFER.			182	16	2	14
122	15	0	20	183	19	1	19
	HIGHLAND.			184	15	2	16
123	17	0	23	185	13	0	8
124	17	3	2	186	17	3	18
126	16	0	20	187	14	3	8
127	16	2	6		SHEEP.		
*128	19	1	17		LEICESTERS.		
129	15	3	22		WETHERS.		
130	16	2	22		EWES.		
	LEICESTERS.				WETHERS.		
	WETHERS.				EWES.		
No.	WEIGHT.			No.	WEIGHT.		
	cwt.	qrs.	lbs.		cwt.	qrs.	lbs.
188	6	0	14	193	6	1	10
189	5	1	12	194	6	0	8
190	5	3	11	195	6	2	4
191	6	0	4	*196	7	0	15
*193	6	1	7	197	6	3	24

No.	LAMBS.		
	WT.	QRS.	lbs.
*198	3	1	0
COLSWOLDS.			
WETHERS.			
199	7	0	3
*200	7	3	9
EWES.			
201	7	3	18
202	6	3	24
*203	8	2	27
LAMBS.			
*204	4	3	3
LINCOLNS.			
WETHERS.			
205	7	0	19
*206	8	0	20
207	7	1	17
208	8	0	4
209	6	2	7
EWES.			
210	8	2	6
211	7	3	26
212	8	1	6
*213	9	0	27
LAMBS.			
214	4	3	8
*215	4	2	8
KENT.			
WETHERS.			
216	6	2	27
217	6	2	24
*218	7	1	11
219	6	2	11
EWES.			
*220	7	2	21
221	7	1	0
222	7	1	8
EXTRA STOCK.			
224	2	3	14
225	2	2	23
226	2	3	14
227	3	0	11
228	1	2	4
229	1	3	1
230	2	0	2
*231	3	0	11
232	3	1	7
233	2	1	14
SOUTH DOWNS.			
WETHERS.			
234	5	1	11
235	5	3	4
236	5	2	27
*237	5	1	14
238	4	2	1
239	5	3	25
240	5	1	27
241	5	2	0
242	5	2	13
243	5	1	13
OLD WETHERS.			
244	6	2	17
*245	5	3	2
246	6	1	20
247	6	1	4
EWES.			
248	5	0	22
249	5	0	16
250	5	2	17
*251	5	2	25
252	5	3	19
253	5	0	10
LAMBS.			
254	3	2	4
255	3	3	8
256	3	1	18
257	3	1	8
*258	3	3	24

HAMPSHIRE OR WILT-SHIRE.	
No.	WEIGHT.
	WT. QRS. lbs.
259	5 3 26
*260	7 0 19
261	7 1 6
262	7 0 7
263	7 1 1
264	6 3 16
265	6 2 16
266	7 2 5
EWES.	
*267	6 3 14
268	6 1 13
269	7 3 6
LAMBS.	
270	4 3 24
*271	5 2 24
272	4 2 18
EXTRA STOCK.	
*273	1 3 2
274	2 0 11
275	1 3 5
276	1 2 9
277	1 3 20
278	2 0 11
279	1 3 10
280	1 3 14
281	1 3 20
282	2 0 10
283	2 1 11
284	2 1 9
285	2 0 3
286	2 0 3
287	2 0 23
288	1 3 12
SHROPSHIRE.	
WETHERS.	
*289	6 2 16
290	6 0 2
291	5 3 20
OLD WETHERS.	
*292	7 3 23
293	7 1 14
294	7 1 13
EWES.	
295	6 2 2
*297	6 3 4
OXFORDS.	
WETHERS.	
*298	8 1 3
299	6 3 20
300	6 2 24
301	7 1 8
302	7 0 16
303	7 1 22
EWES.	
*304	7 1 11
305	7 0 16
306	7 0 19
307	7 1 0
LAMBS.	
*308	4 1 2
309	3 2 24
CHEVIOTS.	
WETHERS.	
310	5 3 0
311	5 1 12
312	5 2 21
*313	5 3 24
DORSETS.	
WETHERS.	
*314	6 1 2
EWES.	
315	4 2 10
*316	6 3 14
317	5 3 13
LAMBS.	
*318	4 0 0

MOUNTAIN.		LAMBS.	
No.	WEIGHT.	No.	WEIGHT.
	WT. QRS. lbs.		WT. QRS. lbs.
319	3 2 3	331	5 1 25
*320	6 0 15	332	3 3 18
BLACK-FACED WETHERS.			
322	4 3 8	333	3 2 18
*323	3 2 22	334	5 2 16
324	5 1 8	*335	5 2 23
EXTRA STOCK.			
		336	2 0 22
		337	1 3 3
		338	2 1 20
		339	2 2 0
		*340	2 2 13
		341	2 0 14
		342	2 1 19
		343	2 1 15
325	7 2 12	344	2 1 21
326	8 1 21	345	2 1 1
327	6 3 0	346	1 3 24
328	6 2 24	347	2 1 25
*329	7 1 19	348	1 2 13
330	7 3 10		

THE IMPLEMENTS.

The display of implements at the Christmas show loses none of its interest either as regards the number or quality of the exhibits, and is the best answer that can be given to those who consider agricultural implements and machinery overdone, or declining in importance. After the cattle, the machinery certainly receives a careful inspection from those who are experienced, and competent to judge of the efficiency, quality, and price of the articles. In the limited space at command in the Hall, the difficulty is to accommodate the increasing number of applicants; and although nearly 260 have been admitted, yet there are many others who have been shut out, and have had to obtain a location elsewhere. The home trade and the export trade in machinery and agricultural implements are both very active at present. Our agricultural engineers are taking high rank as a professional class, and holding their own even against American ingenuity and invention, sharp as is the competition in some of these novel ideas of our Transatlantic brethren. There is a small decline in the aggregate value of machinery and mill work, as compared with the corresponding period last year. Our agricultural implement-makers have established for themselves a name and a reputation in all the markets of the world, and the competitive tests on the Continent, in South America, and the Colonies, have proved the value and efficiency of British-made implements and machinery.

A most severe supervision of the nature of the applications for space to exhibit has been made this year, which is the more necessary when every foot of floor is eagerly sought for; and the galleries are now free from the mass of heterogeneous and miscellaneous entries which formerly crept in under the guise of a connection with agriculture. If this be firmly carried out in the future, all classes will benefit, both visitors and exhibitors, keeping in mind the special object of the show. The implement-makers can, it is true, only make a representative display in the limited space they can secure, and it is more with the view of meeting their customers that they take a stand, than with any object of an overwhelming display of their specialities. Still, an opportunity is here offered of introducing any novelty or improvement, and there are usually many of these presented. The eagerness of makers to compete in the various trials whenever they come off does not bear out, but rather refutes the assertion published in the catalogue distributed by one firm, "that the prize system, as at present conducted by the Royal Agricultural Society of England, has ceased to be of any practical use to either employers or manufacturers of machinery."

We commence our general account with a brief notice of the more bulky machinery and engines on the ground-floor of the hall.

John Fowler and Co., Leeds, had a good display of their steam-ploughing machinery.

Clayton and Shuttleworth, Lincoln, had one of their thrashing-machines and elevators, with patent combined drum-guard and feeding apparatus, as shown at Taunton; a 10-horse power fixed engine; an 8-horse power portable engine; and an improved traction engine.

Edward Humphries, Pershore, Worcester, one of his thrashing machines.

C. Burrell and Sons, St. Nicholas Works, Thetford, Norfolk, a 6-horse power traction engine.

Barrows and Stewart, Cherwell Works, Banbury, a thrashing machine and engine of six-horse power, fitted with a steam-jacketed cylinder.

J. and F. Howard, Bedford, have a selection, comprising ploughs, lever harrows, flexible grass harrows, double-acton haymaker and self-acting horse-rake, rear windlass steam cultivating apparatus, one of their farmer's engines, and one of Lewis' patent potato-raisers, on which improvements have been made.

Aveling and Porter, Rochester, exhibited one of their agricultural locomotive steam ploughing engines for the double engine system, and a four-horse power agricultural locomotive for hauling and thrashing, with a waggon attached, adapted to carry 6 tons.

A. Dodman, St. James's Ironworks, King's Lynn, showed three of his improved combined vertical engines and boilers.

Holmes and Sons, Prospect-place Works, Norwich, besides a thrashing machine and engine, had on their stand some horse hoes for thinning turnips, sowing machines, corn and seed drills, and a clover and seed sheller.

Ransomes, Sims, and Head had a variety of the implements for which this firm is celebrated, including double-furrow ploughs, star and universal haymakers (the last a new machine) and horse rakes, a thrashing machine, and steam engines.

W. S. Edington and Company, Chelmsford, showed one of their steam engines.

E. R. and F. Turner, St. Peter's Works, Ipswich, exhibited an eight-horse power and a four-horse power portable engine, with a double-blast thrashing machine, some corn mills, and some corn, seed, and malt crushers.

S. Lewin, Poole, had some steam thrashing vertical and horizontal engines.

Armitage and Ruston, Eagle Works, Chatteris, Cambridge, exhibited one of their portable engines.

Woods, Cocksedge, and Co., Stowmarket, among their display had a vertical engine, fitted to burn any fuel; a combined engine and boiler, carts, corn mills, and various stock-feeding implements.

Ruston, Proctor, and Co., Sheaf Iron-works, Lincoln, exhibited a twelve-horse power portable, an eight-horse power portable with two cylinders jacketed, and a three-horse engine, a vertical engine, some corn grinding mills, and their safety drum guard for thrashing machine.

Tangye Brothers and Holman, of London, had a horizontal steam engine.

P. and H. P. Gibbons, Wantage, Berks, had one of their steam engines and thrashing machines.

Marshall, Sons, and Co., Britannia Iron-works, Gainsborough, made a good display of horizontal and vertical stationary engines, and a thrashing machine, and portable engines for burning any fuel.

Nalder and Nalder, Wantage, Berks, had one of their thrashing machines, and a steam engine made by Brown and May.

Crosskill and Sons, Beverley, Yorkshire, had a great number of carts of their make, with clod crushers and other implements.

Robey and Co., Lincoln, had five steam engines, a thrashing machine, a traction engine, and a horizontal engine with boiler combined.

Wallis and Stevens, Northants Iron-works, Basingstoke, exhibited an eight-horse portable engine, a four-horse engine, and a thrashing machine.

Garrett and Sons, Leiston Works, Saxmundham, had on their stand two steam engines, a thrashing machine and elevator, a road locomotive, and some drills.

Hornaby and Sons, Spittlegate Iron-works, Grantham, besides their well-known prize Paragon mowers and reapers, had an eight-horse portable engine and thrashing machine, ploughs, and machines for preparing food for stock. The success of the Grantham mowers at Taunton is an unanswerable argument in favour of the prize system; and as shown here, one of the best of all advertisements.

Tasker and Sons, Waterloo Iron-works, Andover, had a six-horse portable thrashing machine and elevator.

Tuxford and Sons, Boston, had a two-horse portable expansion engine, a two-horse engine, and a steam cultivating windlass.

Having completed the tour of the ground floor exhibits, we now proceed to take a survey of the various implements and machines shown in the galleries of the hall.

Abbott and Co., of Bideford, exhibited a turnwrest plough, and other implements, for hilly and flat land.

The Agricultural and Horticultural Association of Westminster, a varied collection of manures and cattle foods. The Albion Iron Works, Rugeley, mills, chaff cutters, and root pulpers.

Alway and Sons, Pentonville, a good collection of dairy utensils.

The Atmospheric Churn Company, London, also showed churns and dairy utensils.

John Baker, Falcon Works, Wisbeach, several corn dressing machines.

J. L. Baker and Co., Hargrave, Kimbolton, exhibited ploughs, hoes, and rakes.

W. P. Baker, King's Lynn, Norfolk, some good horse rakes.

George Bill, North Kelworth, Rugby, showed some agricultural carts; as did W. Ball and Sons, Rothwell, Kettering, some of their prize waggons, carts, and ploughs.

A. C. Bamlett, Thirsk, exhibited some of the reapers and mowers which he would not enter for trial at Taunton.

Barford and Perkins, Peterborough, made a good display of ploughs, grinding mills, and agricultural machinery.

Barnard and Lake, Braintree, among other exhibits, had root graters, pulpers, ploughs, and hoes.

J. Beach and Co., Dudley, are always strong at the Christmas show in the merits of their farinaceous food and condiments for fattening stock.

Geo. Bellamy, Millwall, is noted for his wrought-iron tanks and cisterns, corn bins, and cattle, sheep, and pig troughs.

Bentall and Co., Malden, had a good selection of chaff cutters, pulpers with corrugated steel knives, and seed crushers. The new knife for disc pulpers has advantages over previous strippers.

R. Boby, Bury St. Edmunds, exhibited some of his haymakers, serceus, and hills.

W. Bone, Framlingham, Wickham Market, had some seed cleaning machines.

Boulton and Paul, Norwich, manure carts and sack barrows.

Bradford and Co., Holborn, churns, bone mills, and root washers.

W. Brenton, Polbathie, St. Germans, Cornwall, exhibited his Nonpareil mower and his manual delivery reaper.

The Bristol Wagon Company (Limited) exhibited four carts.

Brown and Son, Leighton Buzzard, had some drills and horse hoes.

Burgess and Key, Holborn Viaduct, some of their reaping and mowing machines.

Burney and Co., Millwall Docks, cisterns, corn drills, and water carts.

Cambridge, Parham, and Webb, St. Philip's Iron Works, Bristol, showed principally improved horse gear, press rolls, drags, and harrows, and a vertical steam engine.

Carson and Toone, Warminster, exhibited chaff cutting engines, horse gear, hoes, and turnip cutters.

C. Clay, Wakefield, Yorkshire, cultivators, horse hoes, and harrows.

J. Cooch, Harleston, Northampton, had some corn dressing machines, and an elevator.

Corbett and Peele, Shrewsbury, dressing machines, horse hoes, and oilcake breakers.

Corbett and Son, Wellington, Salop, exhibited a grinding mill and a potato raiser, which is also useful as a stable plough.

J. Cooke, Lincoln, had a few ploughs.

B. Corcoran, jun., London, made a good display of mill stones and fittings, measures, &c.

Cottis and Sons, Epping, had on their stand chaff cutters, ploughs, and scarifiers.

J. Coultas, Grantham, some of his well-known drills, manure distributors, and horse hoes.

Crowley and Co., of Meadow Hall Iron Works, Sheffield, various chaff cutters.

John Davey, St. Germans, exhibited his Climax turn-wrest single and double furrow ploughs.

Dell and Sons, Mark-lane, exhibited models of grain cleaners, and a simple mill stone dressing machine of American invention.

Dening and Co., Chard, had some drills and horse gear.

Fisken and Co., Leeds, one of their patent anchor windlasses used in steam ploughing.

Follows and Butc, Manchester, made a display of chaff cutters, cake breakers, corn bins, and troughs.

W. Gilbert, Shippon, Abingdon, had one of his Suffolk corn drills.

A. W. Gower and Sons, Winchfield, a corn and patching drill.

Harrison, McGregor, and Co., Leigh, had some of their reaping and mowing machines. They also made a good display of chaff cutters and turnip cutters.

T. Harrison, Lincoln, had some corn and general pupose drills.

G. Hathaway, Chippenham, had a good display of their barrel churns.

Hayes and Sons, Stamford, showed some of their agricultural carts and waggons.

Hempstead and Co., Grantham, some vertical engines, turnip slicers, pulpers, and other machines.

Hetherington and Parker, Alton, a horizontal steam engine.

Hill and Smith, Briery Hill, iron gates, fencing, and sheep and pig troughs.

J. Hodgson, Louth, ploughs, harrows, and horse forks.

Hollings Brothers, Swindon, exhibited a specimen of their two-horse Canadian corn drill.

Hunt and Tawell, Earls' Colne, made a display of cake breakers, root pulpers, cutters, and slicers, and other of Biddell's food-preparing machines, also horse gear.

The Johnston Harvesting Company, King's Cross, showed one of their self-raking reaping machines.

H. and G. Kearsley, Ripon, some grass mowers and corn reapers.

S. A. and H. Kell, Ross, a lever drill

J. Kiddle, Salisbury, an agricultural waggon.

B. Kittner, Louth, a corn dressing and blowing machine.

J. L. Larkworthy and Co., Worcester, had several of the patent Excelsior harrows, known as Seeman's Patent, drags, ploughs, sheep troughs, and cattle cribs.

Josiah Le Butt, Bury St. Edmunds, Suffolk, had some corn and malt screens, drills, and haymakers.

Lewis and Lowcock, Shrewsbury, exhibited several chaff cutters, turnip slicers, pulpers, and cake breakers.

G. Lewis and Son, Kettering, besides horse hoes, and root pulpers, had some sack barrows and lifters.

T. Lloyd and Sons, Old-street, had some excellent steel grinding mills.

The Mallon Iron Works Company (Limited), had a good collection of chaff cutters, root pulpers, oilcake mills, and turnip cutters.

R. Maynard, Cambridge, had a large portable steam combined chaff engine.

F. Mote, March, drew attention to their patent prize lever and steerage horse hoes.

G. W. Murray and Co., Banff, besides their turnip sowing machine, had a potato planter or drill, the principle of which is that the seed is put into a hopper and lifted up by revolving cups.

Murton and Turner, Thetford, had a good collection of corn drills, corn-dressing machines, and horse hoes.

Nicholson and Son, Newark, showed an improvement in their ridge and furrow prize horse rake, a vertical engine, and various root cutters and pulpers for preparing sheep and cattle food; as well as Hughes's harvesting rake.

D. M. Osborne and Co., Liverpool, exhibited the American Kirby mower and reaper.

E. Page and Co., Bedford, had an assortment, comprising a brick, drain-pipe, and tile-making machine, with mills and chaff cutters.

A. E. Peirce, Oxford-street, had a specimen of a wrought iron piggery and a poultry-rearing coop and fowl-house.

Peaney and Co., Lincoln, had some of their corn, malt, and other screens, with root washers, &c.

Perkins and Co., Hitchin, had a model of a stacking machine, with sack barrows and lifters.

Pick and Baker, Bedford, had a number of drag harrows horse hoes, and mills.

Picksley, Sims, and Co., Leigh, had one of their balance standard two-horse mowers, some oilcake mills, chaff cutters, and root pulpers.

J. D. Pinfold, Rugby, a three-horse combined steam engine and boiler, and grist mills.

Rainforth and Son, Lincoln, corn screens, drills, sack lifters, and barrows.

Ray, Mead, and Co., London, had two new combined vertical engines and boilers and two horizontal engines.

R. and J. Reeves and Son, Westbury, made a large display of their liquid maure and seed drills, corn sowers, and ploughs.

B. Reid and Co., Aberdeen, had some of their disc corn and seed drills.

Riches and Watts, Norwich, had on their stand two vertical engines and boilers combined, a revolving gathering rake, and some of their American grist.

Richmond and Chandler, Salford, had a large collection of chaff cutters, corn crushers, and horse gear. A new and simple foot-motion has been introduced to stop the chaff cutters whenever required.

E. and H. Roberts, Stony Stratford, had a model of their stackers or elevators, made on a new principle, with circular iron hoppers, dispensing with all boards.



J. W. Robinson, and Co., Liverpool, showed Aspinwall's simple potato planter.

J. G. Rollins and Co., London-bridge, had a miscellaneous collection of tools and implements, amongst others a light, strong, and durable American horse hay-rake.

C. Russell and Co., Old Kent-road, had a four-horse horizontal combined engine and boiler.

The St. Pancras Iron Works was necessarily stinted for room to show to advantage their stable fittings and stalls.

J. and B. Sainty, Wisbeach, exhibited a corn and seed separating machine, and their Paragon dressing machine.

Samuelson and Co., Banbury, exhibited their Gardner's turnip cutters, a new balance draught-mower, the "Gem," their "Omnium" reaper, and their "Royal" and "Eclipse" reapers, and combined mower and reaper.

Sawney and Co., Limited, Beverley, exhibited their combined winnowing, blowing, and screening machines, sack barrows, and other articles.

Selig, jun., and Co., London, had a combined mowing and reaping machine, and a horse rake.

Sinkwell and Tooley, Dunstable, an ingenious new combined sack-lifter and loader.

Smith and Grace, Thrapston, had a good miscellaneous collection of horse hoes, mills, chaff cutters, and root pulpers.

T. Smith and Co., Ipswich, some rakes and a poultry breeder.

Wm. Smith, Kettering, had patent hoes and turnip-thinners.

James Smyth and Sons, Peasenhall, their well-known Suffolk drills for corn, turnips, and manure.

G. Stacey and Sons, Uxbridge, had some chaff machines and horse gear.

Stidolph and Co., Woodbridge, exhibited a simple and effective seed cleaner and separator.

R. P. Taylor and Co., London Bridge, a variety of chaff engines, oat and bean mills, and root pulpers.

W. S. Underhill, Newport, Salop, exhibited a double-furrow plough, drills, and a cultivator with a small vertical engine.

Vipan and Headley, Leicester, had a good collection of their horse hoes, ploughs, root slicers, and a new grinding mill, which will grind from five to six bushels fine meal per hour.

W. Waide, Leeds, exhibited a variety of revolving-hand churns.

Watson and Haig, Andover, a bone-crushing mill and straw elevator.

R. Waygood and Co., London, had a couple of horizontal and vertical engines.

Wedlake and Co., Romford, a portable steam engine and thrashing machine and horse gear.

John Weyhill, Pickering, a thrashing machine, horse gear, and some grinding mills.

Whitmore and Co., London, exposed a good collection of their corn crushers and grinding mills.

R. Willacy, Preston, has made some improvements in his farmyard manure spreader and his machine for sowing grains and other seeds.

W. Anson Wood, of Upper Thames-street, showed one of his grass mowers and a new sweep-rake reaper.

Walter A. Wood, Worship-street, beyond his self-rake reaper and iron-frame mower, exhibited a novelty in the sheaf-binding machine, not yet quite perfect in its arrangements. This iron wire has been adopted to bind the sheaves.

Woolnough and Co., Kingston-on-Thames, exhibited seed and manure drills and horse shoes.

L. Wright and Co., of Lincoln, a potato planter and a manure apparatus.

Although we have incidentally noticed the various household implement makers, there are many exhibitors of articles indirectly applicable to farming operations, which we must necessarily pass over for want of space. The seedsmen and the providers of cattle-food were more numerous than ever, and made certainly one of the finest collective displays ever shown here; indeed, they begin to monopolise a very large share of the gallery space, and seem to spare no expense in making magnificently attractive shows. The chief error they make is the craving after enormous roots and cabbages, and the grandiloquent announcements of tremendous weight, although most of the exhibitors by placard seek to counteract this exaggeration by the announcement that the produce is all from ordinary field crops, and not specially forced for exhibition. When about twenty rival seedsmen and vendors of feeding-stuffs put in their rival claims, and profess to have the heaviest and most prolific margolds or root crops from the same seed, but produced by various growers, or the purest and best oilcake or condiment for fattening stock, it is very difficult for the purchaser to make his selection. Still, justice requires that mention should be made of those who endeavour at great trouble and expense to make an attractive display of objects of great importance to the farmer in seeds and roots—the elements of his harvest and root crops, his pastures and his food supplies in the stock-yard, or manures for his fields. Each one would require a column of description to himself to do full justice to his exhibits; but these are necessarily seen by thousands, and the eloquent, descriptive catalogues, extensively circulated by most of these firms, acquaint the public interested with the respective merits of each. The stands of Sattin and Co., Carter and Co., Thomas Gibbs and Co., George Gibbs and Co., Radclyffe, and Co., Harrison and Sons, J. E. King, and Webb and Son, were centres of attraction during the week, and all seemed to be fully occupied in booking orders. The roots exhibited on the several stands, owing to the very wet season, were larger than perhaps ever before shown. Artificial fertilisers were extensively shown, and Matthews, of Driffield, had samples of his corn-cake for stock.

## THE SMITHFIELD CLUB ANNUAL MEETING.

The annual meeting took place last Tuesday afternoon, in the Agricultural Hall, when Lord Chesham, the President-elect for 1876, took the chair, in the absence of His Royal Highness the Prince of Wales, President for the current year.

The minutes of the last meeting having been read and confirmed,

The Honorary Secretary, Mr. BEANDRETH GIBBS, read the following Report of the Council:

The Council begs to lay before the General Meeting of the Club the following Report of its proceedings during the past year. The Council has held three meetings, as usual, all of which have been well attended. The Council regrets the unavoidable absence of his Royal Highness the Prince of Wales, the President of the Club for the present year; but from the great interest His Royal Highness has always manifested in the proceedings of this institution, being a large exhibitor at its shows, the Council feels confident, had circumstances permitted, that the President would have attended, and presided on the present occasion. In addition to the ordinary routine business and various minor details, the following subjects have had the careful consideration of the Council:

The preparation of the Prize-sheet for this year's Show. The following comprise the chief alterations and amendments—viz.: The maximum age of oxen in the Devon, Hereford, Shorthorn, Sussex and Cross-bred classes has been limited to not exceeding four years and six months. The prizes in the heifer and cow classes, of the Devon, Hereford, Shorthorn, Sussex, Scotch, and Cross-bred cattle have been made uniform. Third prizes have been added to the young steer classes of the Sussex, Hereford,

to all the Scotch cattle classes, and also to the Cross or Mixed-bred heifer class. In Extra Stock steers or oxen and heifers or cows second prizes of £10 each have been added.

The following classes have been discontinued, the competition in past years not having been sufficient to justify the prizes being renewed: In cattle, Scotch horned cattle, not Highland; Scotch Polled cows, above four years old; Irish cattle; Welsh heifers or cows. In sheep, the following have been discontinued: Crossbred Long-woulded sheep, also the light-weight Southdown class—viz., wethers not exceeding 200 lbs. live weight.

A separate class has been established for Cheviot wethers of any age, with three prizes, and also classes for wether lambs, in the following divisions: 1st, Leicesters; 2nd, Cotswolds; 3rd, Lincolns; 4th, Southdowns; 5th, Hampshire; 6th, Shropshire; 7th, Oxfordshire; 8th, Cross-bred; 9th, Kentish, Ryland, Dorset, or any other pure breed not before specified.

The wording of the conditions of the cups offered for the best animals in each of the different breeds of cattle has been amended, so as to more clearly define the intention of these prizes; and the separate cup offered last year for the best beast under the heading of *any other breed* has been discontinued. These animals now compete for the same cup as crossbred cattle. The champion cup of £100 for the best beast in the show has been continued, and, in compliance with the suggestions made at the last general meeting. The £50 champion cup for the best pen of three sheep in the show has been renewed. The regulations have been amended where it appeared necessary, and clauses inserted in the certificates to indemnify the Club from liability in case of any accident being caused by animals or machinery exhibited. Exhibitors have also been requested to observe certain regulations, which the Council hope will prevent any dishonest conduct on the part of any of the men sent to the show in charge of live stock, either by taking food belonging to other exhibitors or by their bringing from their homes a larger supply of food than necessary for the animals during the time they are in the yard, in order that they might sell what remains when the animals leave. The Council deemed it right to take this course in the interest of the exhibitors, and to prevent there being any inducement to dishonesty on the part of the man. The Council, after again maturely considering the subject, came to the decision to continue for the present year the special rules hitherto in force preventing animals exhibited at any other show within one month being sent to the Smithfield Club Show. Also the rules requiring a certificate from the exhibitors that animals have not been for fourteen days previously in contact with any animals suffering from contagious or infectious disease, and for the due veterinary examination of the animals previous to their admission.

The Council has prepared the house list of sixteen members, from whom it recommends eight for election on the Council, to succeed those who retire by rotation. The scrutineer's report will be duly presented before the close of the general meeting. The Council has again voted its thanks to the Vicar of Islington for having arranged the usual Divine service for the herdsmen and shepherds in charge of the animals. The Council lays before the meeting the printed copies of the annual balance-sheet up to December 1st, duly audited, showing balances in hand amounting to £2,605 12s. Of this, however, £304 10s. belongs to life composition account, and will have to be inserted when the state of the Club's funds admits of this being done. The Club has also to receive the £1,000 from the Agricultural Hall Company for this year's exhibition. Against these amounts there will be the prizes and other expenses connected with the present show. In order to meet the extra expenditure caused by the largely increased amount offered in prizes last year, the Council empowered the trustees to sell out £300 stock from the surplus annual income, which was invested some years back in the Three per Cent. Consols. The invested capital of the Club, therefore, now stands at £4,657 9s. 9d. stock. Of this: £2,357 9s. 9d. belongs to the life composition account, and £2,300 being the balance remaining of the surplus annual income. The total amount offered in prizes is as follows: Prizes, £2,110; cups, £750; medals, £123; rewards to feeders, £72; total, £3,055, being less than in 1874 by £190.

The Council, feeling that some portion of the machinery department in the Hall was superior to the other, and, therefore, should be let at a duly increased rent, the matter has had due attention, and an additional rent of £126 15s. has

thus been obtained this year. By these means, and by the gradual expenditure of some of the surplus, the Council hope to be able to continue to offer a large amount in premiums, a course which has been successful during the last two years in bringing together a satisfactory show of the best animals from different localities. As the arrangements for holding the show for 21 years at the Agricultural Hall will terminate in the year 1882, the Council considered it expedient that an understanding for the future should not be deferred until too late a period, and that, although seven years still remained unexpired, some basis of future agreement should be considered. A committee was therefore appointed, composed of the following—viz., the President, President-elect, the Marquis of Exeter, Lord Bridport, Mr. Charles Howard, Mr. Jacob Wilson, Mr. Newton, Mr. H. Overman, Mr. T. C. Booth, Mr. Horley, and the Hon. Secretary, to confer and consult with the authorities of the Agricultural Hall Company as to the future tenancy or arrangement with them for holding the Smithfield Club Shows after the expiration of the present lease, and to report.

A separate Report from the Council will be laid before the meeting.

The Council, with very great regret, has to announce the deaths, since the last general meeting, of Lord Kesteven, one of the Vice-Presidents of the Club; of Mr. Torr, one of the trustees; and of Mr. John Beasley, a member of Council, and a member of the Club since the year 1826.

The vacancies thus caused have been filled up as follows: Lord Walsingham, *vice* Lord Kesteven; Mr. Charles Howard, *vice* Mr. Torr; Mr. John Thompson (of Balmintoa), *vice* Mr. John Beasley.

The Council having received intimation that it would be a great convenience to the members of the Club if a special privilege of admitting ladies accompanying them during the private view and judging could be arranged, representations were made to the Agricultural Hall Company on the subject, and the Council has had the satisfaction of receiving the very handsome offer of the Agricultural Hall Company, that each member of the Club shall be able to introduce one lady accompanying such member, up to two o'clock on Monday, without payment.

The Council feel that the thanks of the Club are due to the Agricultural Hall Company, and it is hoped that this additional privilege will tend to increase the number of members. In conclusion, while the Council have the satisfaction of congratulating the members on the continued prosperity of the Club, and the generally superior quality of the animals exhibited at its shows, it would, however, draw attention to the desirability of the number of members of the Club being increased, which would thus enable the Council to offer proportionately a still larger amount than it is now enabled to distribute in prizes, and thus further extend the scope and usefulness of the Club.

The following balance-sheet was laid on the table:

DETAIL STATEMENT OF ACCOUNT, from December 1st, 1874, to December 1st, 1875,					
Showing the Cash received and paid, and the Balances brought forward from last year, and the Balances carried forward to next year.					
	RECEIPTS.				
Balance in hands of Bankers, including life compositions, £189, December 1st, 1874.....	£.	s.	d.	£	s.
Balance in hands of Hon. Secretary, December 1st, 1874.....	2,593	19	6		
				9	14
				2,603	13
					7½
Received since (by Bankers)—					
Half year's Dividend on £1,957 9s. 9d., 3 per Cent. Consols, due January, 1875.....				73	14
Half-year's dividend on £4,657 9s. 9d., 3 per Cent. Consols, due July 1875.....				69	5
					7
					143
					0
					5
By sale of £300 Stock Consols at 9½.....				279	0
3 Annual Subscriptions for year 1875.....				3	3
1 Annual Subscription for year 1876.....				1	1
					0
					4
					4

Received by Hon. Secretary and Assistant Secretary)			
Of the Agricultural Hall Co. for Show, 1874	1,000	0	0
Life Compositions during the year	115	10	0
1 Annual Subscription for 1869	1	1	0
2 " " " 1870	1	1	0
3 " " " 1871	2	2	0
4 " " " 1872	5	5	0
5 " " " 1873	8	8	0
6 " " " 1874	47	5	0
7 " " " 1875	286	13	0
8 " " " 1876	26	5	0
	378	0	0

Fines, Non-Exhibition of Live Stock at Show, 1874	4	10	0
Extra Payments on account of Implement space, 1874	13	16	6
Payment for Implement Stands, 1875	1,830	6	0
Non-Members' Fees, Live Stock, 1875	154	16	0
Cheque for a Prize, 1874, not yet presented for payment	16	0	0
	£6,572	16	6½

EXPENDITURE.

Prizes Awarded at Show 1874	£2,185	0	0
Silver Cups (taken in Plate, £350; taken in Money, £390)	740	0	0
Medals	129	8	0
Rewards to Feeders of First Prize Animals	68	0	0
	3,122	8	0
Stewards' Fees	80	0	0
Judges	147	0	0
Veterinary Inspectors and Assistants	42	0	0
Inspector of Implement Galleries	8	8	0
Weighing Clerk and Superintendent	5	1	6
Special Door-Keepers, &c.	5	15	6
Inspector of Sanitary Certificates	2	2	0
	290	7	0

Bills, &c.:			
Printing (Burnett—Balance), Show, 1874	122	13	6
Stationery (Mason)	15	6	3
Advertising—Mark Lane Express	8	11	6
Bell's Messenger	8	11	6
Agricultural Gazette	6	6	0
Chamber of Agriculture Journal	5	11	0
Field	9	11	9
Farmer	6	2	6
Ridgway, Farmer's Almanac	2	16	0
Weighing Machine and Attendants (Hart and Co.)	8	17	0
Agricultural Hall Co., Ingredients for Disinfecting Carts, Labour, and Inspector, &c., &c.	30	3	11
Rosettes for Prize Animals	6	15	1
Placards (Paraman)	10	2	1
Diplomas, Feeders First Prize Animals (Brooks and Co.)	24	2	2
Cases for Ditto (Bishop and Co.)	5	9	4
Carriage of Ditto (Sutton, Carrier)	4	1	0
P. O. Clerks and Postmen's Boxes	1	0	0
Assistant Secretary's and 2 Clerks' Lodgings and Expenses	13	16	6
Bankers for two Stamped Cheque Books, 1875	1	0	0
	290	17	1

Printing (Burnett, on account), Show, 1875	57	3	0
Assistant Secretary's Salary, 1 year up to Michaelmas, 1875	105	0	0
Clerks' Time, as per time book, to Dec. 1st, 1875	63	11	10
Postage and Receipt Stamps during the year (as per Postage Book), Dec. 1st, 1875	31	17	4½
Bankers' Commission on Country Cheques, and Expenses on selling out Stock and Transfer to new Trustees	3	18	3
Entry Fee Live Stock, 1874, returned, Animal not qualified	2	2	0
	206	9	5½

Balance at Bankers, including Life Compositions, £304 10s. (Dec. 1st, 1875)	2,597	1	10
Balance in hands of Hon. Secretary, Dec. 1st, 1875	8	10	2
	2,605	12	0
	£6,572	16	6½

INVESTMENT ACCOUNT.

1875: December 1st—Amount of Stock standing in Three per Cent. Consols in the names of the Trustees £4,657 9 9  
 N.B.—This includes £2,300 Balance of surplus Annual Income, invested till wanted for current expenses.  
 Examined and found correct.  
 (Signed) THOS. C. BOOTH,  
 WALTER FARTING,  
 Dec. 3rd, 1875. THOS. HORLEY, Junr.

On the motion of Mr. GEORGE STREET, seconded by Mr. J. D. ALLEN, the Report was adopted.

The Marquis of EXETER said it was now his duty to propose the election of a President of the Club for 1877. It would be useless for him to occupy their time with a long speech, particularly as the nobleman whom he had the pleasure of nominating was one whose name was well known to every member of the Club. They all highly respected the late Lord Walsingham, who never failed to send some of his beautiful sheep to the exhibition; and he did not think he need do anything further than propose as President-elect for 1877 the nobleman who now bore that honoured name (cheers).

Mr. FOOKES said he was very much pleased to second the motion. He did not think it would be possible to select a better man.

The CHAIRMAN, in putting the motion, said he was sure it would have a unanimous and cordial approval.

The motion was carried unanimously, amid cheers.

Lord WALSINGHAM said: I beg to thank you, gentlemen, for the kind way in which you have assented to the proposal. I can assure you, however, that it has taken me very much by surprise. This is the first opportunity I have had of attending an annual meeting, and I had no more idea that I was to be proposed as President-elect than I had of the most impossible thing in the world. I can only say that it affords me great pleasure to accept the office to which you have done me the honour of electing me; and I can assure you that I am deeply sensible of the very high compliment that you have been good enough to pay me, though I naturally feel that this is not owing to any claims of my own—for I have none—to your consideration, but rather on account of those which have descended to me through the name I have the honour to bear (cheers). In endeavouring to the best of my ability to discharge the duties of the position in which I find myself placed, I shall always feel that my earliest recollections have been associated with competitions for prizes of the Smithfield Club, and the interest which has so naturally descended to me can never fail to be maintained in its full vigour. I thank you again, gentlemen, for the kindness with which you have received my name on this occasion (cheers).

On the motion of Mr. FARTING, the Vice-Presidents were then re-elected; and on that of Mr. T. HORLEY, junr., the name of Lord Tredegar was added to the list.

On the motion of Mr. MOORE, the trustees were re-appointed.

Mr. T. HORLEY, in proposing the re-election of Mr. Brandreth Gibbs as Honorary Secretary, said he did so with the greater pleasure, because, since he was put on the Council and during his stewardship, which would expire after the present meeting, he had seen very much of Mr. Gibbs, and I really he did not know what the Club would do without him (Hear, hear). Every one who had ever taken an active part in the management of the Club must have observed the gentlemanly, kindly, and efficient manner in which Mr. Gibbs performed his delicate functions; and all who wished success to the Club must feel indebted to him (cheers). He, therefore, begged to propose his re-election to the post of Hon. Secy. Before sitting down, he wished to observe that he thought the present one was as suitable an occasion as they could have for doing something more than re-electing Mr. Gibbs and passing a formal vote of thanks to him. This year they had had the honour of having for the President of the Club His Royal Highness the Prince of Wales, the first gentleman in the kingdom, and it would be a suitable recognition of Mr. Gibbs's services, and a proper thing, to pass a special vote of thanks to him for the interest he had taken in, and the services he had rendered to, the Smithfield Club, as its Honorary Secretary, for so many years, to obtain his Royal Highness's signature to it, and to present it to Mr. Gibbs (cheers). Having ascertained the feelings of many gentlemen on the subject, not only the present stewards, but also those who had previously served as stewards, and others

who took a deep interest in the welfare of the Club, he could say that they concurred with him in the opinion that Mr. Gibbs, as the Honorary Secretary, had done what they could scarcely expect any man to do who might succeed him (Hear, hear). It was Mr. Gibbs's good fortune to possess an amiable temper and a courteous and affable manner, and those were not gifts which every man enjoyed. The Club was particularly fortunate in having retained his useful and valuable services for so long a time, and in being represented by so able and efficient an officer (cheers).

Mr. H. OVERMAN had great pleasure in seconding the proposal. All who had acted either as members of the Council or as stewards of the shows would thoroughly endorse everything which Mr. Horley had said (Hear, hear).

The CHAIRMAN: Gentlemen, you have heard the proposition of Mr. Horley. I can only say that I am sorry our President should have selected this year for his visit to India; otherwise, I feel perfectly persuaded he would have been here to-day, and words from him would carry more weight with them than any of mine can do. But I hope you will take what I have to say as I wish it to be taken; and with regard to the motion before us I have no hesitation in saying that I thoroughly agree with what has fallen from Mr. Horley and Mr. Overman, and I hope I shall see all your hands held up in favour of asking Mr. Gibbs to continue his honorary secretaryship, and that you will concur in presenting him with an appropriate memento, signed by the President for the current year. Unfortunately we cannot all sign that document, but his Royal Highness's signature will represent the whole Society (cheers).

The motion was carried amid loud cheers.

Mr. BRANFRET GIBBS, who was received with loud cheers, said: Gentlemen, I do not usually occupy your time at these meetings by making speeches; nor shall I do so on this occasion, because I am taken so much by surprise, that even if I wished to make a speech I should utterly fail. Allow me, however, most sincerely and heartily to return you my best thanks not only for having re-elected me to the office of Honorary Secretary for the third year, but for the handsome compliment you propose to pay me in giving me a vote of thanks, to be signed by H.R.H. the President of the Club. Be assured that when I have received it I shall treasure it highly. I shall often look back upon it as a remembrance of former days, and I hope that it will always be preserved in my family, and be valued by them as a remembrance of one who had gone before them (cheers).

The voting papers having been distributed, the Secretary announced that the following seven gentlemen had been chosen to fill the vacancies in the Council created by retirement by rotation: Mr. A. F. Milton Druce, Mr. T. Horley, jun., Mr. Robert Garre, Mr. Joseph Shuttleworth, Mr. Robert Charles Ransome, Mr. John Ford, and Mr. Henry Tretlow. The scrutineers reported that for the eighth vacancy the votes were equal for Mr. R. Masfen, Mr. Henry Thurnall, Mr. John Greatham, and Mr. John Walter, M.P.

Mr. GIBBS stated there was a bye-law to the effect that in the event of an equality of votes the election should be decided by the meeting on a show of hands.

A show of hands was thereupon taken, with the following result: For Mr. Masfen, 11; Mr. H. Thurnall, 21; Mr. John Greatham, 19; Mr. J. Walter, M.P., 7.

The CHAIRMAN then declared Mr. Thurnall duly elected, and that gentleman briefly returned thanks.

Mr. JAMES HOWARD suggested that the decision of the meeting should be taken as between Mr. Thurnall and Mr. Greatham, the two gentlemen who had the highest numbers.

The CHAIRMAN, addressing Mr. Howard, said: Mr. Howard, when you had been elected a member for Bedford it was not for your constituents to say that you were elected. They recorded their votes, the majority was announced, and you were declared elected. Mr. Thurnall has a majority of votes in his favour, and by that majority he has been elected.

Mr. HOWARD: It is not a parallel case, my lord (laughter).

Mr. T. HORLEY then said, as chairman of the Committee for making arrangements for the future with the Agricultural Hall Company, he had to present the following Report to the general meeting:

The Council begs to report to the general meeting that it is of opinion that the terms named in the following resolution of the Agricultural Hall Company—viz.: "Resolved, that the Board, having re-considered the matter, will recommend their shareholders to agree to a new lease on the terms contained in the suggestions of Mr. Horley's Committee—viz., to give £1,250 per annum, and 100 guineas for cups, with a new lease for 21 years, to commence with the Cattle Show of 1876"—be acceded to, subject to the following: 1st, that for the future the Agricultural Hall Company shall continue to do and execute all the various matters and things they have hitherto done for the purposes of the Show, and the accommodation of the Club; 2nd, that the new agreement shall set forth more clearly than the existing one the rights of the Club and the responsibilities of the Hall Company, in reference to various details connected with the Show; 3rd, that a satisfactory basis shall be arranged, relative to the publication, &c. of the official catalogue, under the control of the Club, and that the same form one the agreement; 4th, that the acquiescence of those who signed the existing agreement be obtained to its being cancelled; 5th, that the Committee shall recommend, and the Council privately decide, by whom the new agreement shall be signed; 6th, that all the covenants in the new agreement shall be to the satisfaction of the Committee and the Club's solicitor, and be finally approved by the Council of the Club before it is signed; 7th, that if, for any cause, the Council and the Agricultural Hall Company are not able to come to a new agreement, then the first agreement shall continue in force until a general meeting or a special general meeting of the Club shall have decided on the course to be pursued; 8th, in the event of the Agricultural Hall Company enlarging the premises, the Council of the Club trusts that an offer of the increased space be made to the Smithfield Club, in order to extend the size of the Show.

Mr. HORLEY, after reading the foregoing report, in moving its adoption, said the Committee had taken considerable trouble, and gone very much into details, in connection with the proposed new arrangement with the Agricultural Hall Company. They of course endeavoured to secure the interests of the Smithfield Club in the matter; but he must say that the Agricultural Hall Company, through their Chairman and other leading members of the Company, had from the first placed before them all the information that they could for their guidance, and had met them in a fair and honourable manner. The Committee were quite unanimous in recommending the adoption of the report now presented. It might be said that seven years was a long time—that being the period which would elapse before the expiration of the present lease—but it should be recollected that in the Metropolis property changed hands much more frequently than it did in the country, and he was convinced that it was desirable that the proposed arrangement should be at once entered into, that arrangement being of course subject to the approval of the shareholders of the Agricultural Hall Company. It should be borne in mind that, during the seven years which had yet to run under the existing lease, they would, under the new arrangement, receive £2,450 more from the Agricultural Hall Company than they could under the present one (cheers).

The motion having been seconded,

Mr. J. COLEMAN asked whether, in the event of an extension of the premises of the Agricultural Hall Company, the Smithfield Club was to have the use of what was added. It appeared from the report that that question was left open, and he thought it would be best to have the case provided for in the new lease.

Mr. T. HORLEY replied that that question was discussed very seriously at the Council Meeting on the preceding day, but it was thought that they were hardly in a position to demand the insertion of a stipulation that they should have a right to the use of any additional accommodation. The directors of the Company had always acted very fairly in reference to such matters, and he felt confident that, if any addition were made, they would be offered the use of it (Hear, hear).

The motion was then adopted unanimously, a vote of thanks was given to Lord Chestam for presiding, and this terminated the proceedings.

## THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

**MONTHLY COUNCIL.**—*Wednesday, December 8.*—Present: Lord Chesham, President, in the chair; Earl Cathcart, the Earl of Lichfield, the Earl of Powis, Earl Spencer, K.G., Viscount Bridport, Lord Vernon, the Hon. W. Egerton, M.P.; Sir T. Dyke Acland, Bart., M.P.; Sir Massey Lopes, Bart., M.P.; Sir A. K. Macdonald, Bart.; Mr. Aveling, Mr. Aylmer, Mr. Booth, Mr. Bowly, Mr. Cantrell, Mr. Dent, Mr. Druce, Mr. Edmunds, Mr. Frankish, Mr. Brandreth Gibbs, Mr. Hemsley, Mr. T. Hooley, jun.; Mr. Hornsby, Mr. Bowen Jones, Colonel Kingscote, M.P.; Mr. Leeds, Colonel Loyd-Lindsay, M.P.; Mr. McLutosh, Mr. Martin, Mr. Milward, Mr. Pole-Gell, Mr. Randall, Mr. Rawlence, Mr. Russell, Mr. Sanday, Mr. Shuttleworth, Mr. Stratton, Major Tuberville, Mr. Jabiz Turner, Mr. Wakefield, Mr. Wells, Mr. Whitehead, Mr. Jacob Wilson, and Dr. Voelcker.

The following members were elected:

Ashford, Edwin Charles, M.D., Moorland, Bigwater.  
Baker, William, Highfields, Audlem, Cheshire.  
Becroft, John, The Manor House, Eye, Peterborough.  
Bell, John, Scale Hill, Lazonby, Penrith.  
Branton-Day, Ralph, Mickfield Green, Rickmansworth, Herts.  
Basssey, Albert, Heythorp Park, Chipping-Norton, Oxfordshire.  
Brown, Rev. L. Dixon, Unthank Hall, Haltwhistle, Northumberland.  
Cock, Charles Hesse, Bridgefoot, Barnet, Herts.  
Cornoock, John, Burling Court, North Nibley, Dursley.  
Ellis, Francis, Trafford Park, Manchester.  
Eubold, Viscount, 7, Charles-street, Berkeley Square, W.  
Farmer, George, Montgomery.  
Forbes, Arthur E. W., Wentworth, Rotherham, Yorkshire.  
Fytch, Major-General Albert, C.S.I., Pyrgo Park, Havering-atte-Bower, Romford, Essex.  
Goose, Daniel, jun., Kinnerton, Chester.  
Green, William Barham, Charleywood, Rickmansworth, Herts.  
Grey, Edward Eastham, Birkhead, Cheshire.  
Halyard, C. P., Beaumont Manor, Lincoln.  
Heskett, John, Plumpton Hall, Penrith, Cumberland.  
Hineks, Captain T. C., Breckenbrough, Thirsk, Yorkshire.  
Lloyd, George Butler, Preston Montford, Strassbury.  
Luttrell, George Fowkes, Dunster Castle, Dunster, Somerset.  
Lyttelton, Hon. Charles G., Hagley Hall, Stourbridge, Worcester.  
Pell, Jonathan Glaystwith, Aberystwith, Cardiganshire.  
Thoyts, Wm. Richard M. Sulhamstead House, Beaing.  
Tyrrell, Avery, Berkin Manor, Ilton, Slough, Bucks.  
Walker, Joseph, The Poppers, Knaresborough, Yorkshire.  
Wetherall, Wm. Squares, 95, Cannon Street, E.C.  
Williams, Christopher, Glyn Teg, Elis, Carnon.  
Wood, Collingwood, Lindsay, Freeland, Bidge of Eern, Perthshire, N.B.  
Wright, William Parkinson, 35, Phillimore Gardens, Kensington.

**FINANCERS.**—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., the Society's accountants, and found correct. The balance in the hands of the bankers on November 30 was £699 17s. 3d.

The Committee recommended that fourteen members who are in arrear of subscriptions, and are not recoverable, be struck out; and that the solicitors be instructed to write to several other members who are in arrear.

That Mr. Shuttleworth be added to the Committee, in the place of Mr. Davies.

The Committee had met nine times, and made nine reports. This report was adopted.

**JOURNAL.**—Mr. DENT (Chairman) reported that the Committee had met eight times during the year, and made eight

reports to the Council. They had added Lord Spencer, K.G., to the Committee, in the place of Mr. Jacob Wilson. They recommended the Agricultural Holdings (En law) Act, 1875, be published in the next number of the *Journal*, with an analysis and explanation; and that 7,000 copies of future numbers of the *Journal* be published, instead of the recently increased number of 6,750, in consequence of the continued addition to the list of members of the Society. They also recommended that Messrs. Ashby, Jeffrey, and Luke be allowed to obtain, at their own expense, electrotypes of the woodcuts illustrating their hay-making machines published in the last number of the *Journal*. This report was adopted.

**SPECIAL CHARTER AND BYE-LAWS.**—Mr. WELLS (Chairman) reported that the Committee submitted to the Council the draft of the new bye-laws as finally revised, and recommended that they be enacted the bye-laws of the Society. This report having been received, it was moved by Mr. Wells, seconded by Mr. Dent, and carried unanimously, "That the bye-laws now submitted by the Committee be enacted the bye-laws of the Society."

**CHEMICAL.**—Mr. WELLS (Chairman) reported that the Committee had received Dr. Voelcker's quarterly report, which they had ordered to be printed for consideration at the February meeting. They had also received Dr. Voelcker's annual report, of which the following summary had been prepared by the Chairman:

Dr. Voelcker shows, in a tabulated summary, that the number of samples of feeding stuffs, manures, soils, waters, &c., sent for analysis in 1875 by members of the Royal Agricultural Society, exceeded that in 1874 by 61, being 704 as against 645. His paper, "On the Composition of Drinking Water," appears to have caused an unusual number of samples of water to have been sent, and among other instances of too injurious effects of impure water, one is given, where the use of water contaminated by manure to the extent of its containing as much ammonia as average town sewage, resulted in the death of a horse, a cow, and two heifers; and another case shows the danger arising from water becoming polluted by soluble lead compounds in the neighbourhood of lead works.

Dr. Voelcker next calls attention to a case of injury done to a stock of ergotised grass. Mr. Garrett's of Cuckton Hall, Saxmundham, having lost several bullocks in the marshes without being able to detect the cause, at length discovered in the stomach and intestines of the last which died some stalks of grass having the appearance of ergotised seeds, which Dr. Voelcker at once recognised as ergot.

The indigestibility of coarsely ground cotton seed husks is again pointed out, and the danger of giving undecorticated cake without a sufficiency of succulent food, such as roots, is dwelt on, and even decorticated cake may with advantage be reduced to powder, and mixed with Indian corn or rice meal. Cottonseed meal is sent from America sometimes, and a mixture of one part of cottonseed meal, one of Indian corn, and two of barley meal, would make a good feeding meal.

Hempseed-cake is not often sold as such, though it is known well enough to oilcake adulterators. About £5 ss. would be a fair price for it if of good quality.

A new description of cake is now made from the starchy and glutinous refuse of the Indian corn flour; but it cannot be recommended for young growing animals.

A good fattening food can be bought in "Sorghum seed;" the analyses of two varieties of the seed are given. A new cake made from a Chinese oil bean is reported on as containing 6½ per cent. of oil, and a high percentage of flesh-forming matters.

A new feeding stuff recommended for pigs, and called Liebig's prepared meat-powder, is mentioned. It consists of the refuse meat fibre in the manufacture of Liebig's extract of meat, and is treated, after Baron Liebig's advice, with phosphate of potash.

Forty-three samples of soil have been sent to Dr. Voelcker for analysis, amongst them being samples of the black Russian soils called Tohernogern, and celebrated for their great fertility. Dr. Voelcker is making inquiries respecting the yield and productive powers of these soils, and hopes to publish the result of his investigations, in connection with practical information respecting their management.

In the past season much injury has been caused in certain districts by aubry, finger-and-toe, and in the case of a sample of soil sent from Westmoreland the cause is traced to a deficiency of available potash and lime.

With respect to artificial manures, Dr. Voelcker reports that of the 50 samples of nitrate of soda sent for analysis in 1875 not one was found adulterated, and most were first-class samples, containing from 95 to 96 per cent. of nitrate of soda.

Only four samples of potash salts were received.

The quality of the samples of Peruvian guano sent was fully equal to that of those sent last year, yielding on an average over 12 per cent. of ammonia. The use of dissolved guano seems increasing. All the samples sent were up to the guarantee, and in good condition.

Dr. Voelcker points out that though mixtures of superphosphate and nitrate of soda are used for cereal crops—and especially for barley—with advantage, the nitrate of soda is not retained in soils like ammoniacal salts or nitrogenous organic matter, and should, therefore, be applied in the spring, which makes it appear to him that Peruvian guano will continue to be used upon land, and for crops which are best manured in autumn. The use of nitrate of soda also is more suitable for fertile clays and heavy land, and in light soils there is great danger of loss of it by drainage in wet weather.

As yet none of the new deposits of guano found in the South of Peru have been brought into the English market. Dr. Voelcker is afraid lest the quality of these guanos should be found to vary, and frauds ensue. He suggests the contractors consigning all cargoes of guano too damp and lumpy to be used raw to the different factories, to be incorporated into one fairly uniform bulk.

Dr. Voelcker calls attention to the worthlessness of phosphatic minerals applied in a powdered state, and undecomposed by sulphuric acid, to the land, and he instances the case of Redonda phosphate, the use of which in a finely powdered state has been recommended to the public by interested persons. Another instance is given, where in 1873 a fertiliser in the shape of phosphate of alumina, imported from the Island of Alta Vela, was much pressed on the market, at £4 12s. 6d. per ton.

Three instances are given of the great variations in the real money value, and the actual price at which artificial manures are sold:

1. Worth	£4	0	0	.....	Sold for	£7	10	0
2. "	4	10	0	.....	"	7	5	0
3. "	9	5	0	.....	"	8	0	0

The papers contributed by Dr. Voelcker to the *Journal* in 1875 are:

1. Composition and Properties of Drinking Waters, and Water used for General Purposes.
2. Annual Chemical Report for 1874.
3. On the Composition of Phosphatic Minerals used for Agricultural Purposes.

With respect to the resolutions proposed by Mr. Randell at the November Council Meeting, and referred to the Chemical Committee for consideration, the Committee reported that, recognising the very great importance of the question submitted to them, they recommended the Council to extend the reference, so as to enable the Committee to obtain the opinion of practical and scientific witnesses as to how far the knowledge we already possess of the fertilising properties of manures and feeding stuffs, especially the latter, can be relied upon as a basis of valuation to be made under the compensation clauses of the Agricultural Holdings Act; and, in the event of those witnesses considering our present knowledge on these subjects insufficient, as to the expediency of making experiments with those objects in view. They further recommended that a

sum of £100 be placed at the disposal of the Committee for any expenses attached to this preliminary investigation. The Committee had met four times and made four reports during the year, and they recommended that Mr. Randell and M. Russell be added to the Committee. The report was adopted.

**BOTANICAL.**—Mr. WHITEHEAD (Chairman) reported that the Committee had met four times and made four reports. They recommended that Lord Eslington, M.P., Sir R. Musgrave, Mr. Frankish, and Mr. Russell be added to the Committee, in the place of Sir W. E. Welby, M.P., Mr. Dent, Mr. Wren Hoskyns, and Mr. Torr. The following report had been received from the Society's consulting botanist:

The results of the experiments instituted by the Society, in connection with the potato competition of 1874, have been digested and arranged, and published as a report in the recent number of the Society's *Journal*. A short paper placing before the members of the Society the observations of W. G. Smith, Esq., F.L.S., on some points in the history of the potato-fungus was also published in the *Journal*:

"Throughout the year I have carried on an extensive correspondence with members of the Society and others in regard to these experiments and the nature of the disease which affects the potato. The whole subject has received fresh attention, and a better direction in the public press, through the action of the Society. I have again supplied members who have applied to me with information regarding the general character, and especially the germinating powers, of their different crop seeds. My attention has been drawn by members of the Society to various diseases or injuries affecting their growing crops of wheat, oats, turnips, and potatoes, which have been investigated and reported upon. These various injuries were either already known and described; or the materials are yet too imperfect to permit of publication."

This report was adopted.

**HOUSE.**—Colonel KINGSCOTE, C.B., M.P. (Chairman) reported that the Committee had met four times and made four reports; and that they recommended that Viscount Bridport be added to the Committee. They also sanctioned the purchase of certain linea and blankets for the use of the porter. This report was adopted.

**IMPLEMENTS.**—Mr. HEMSLEY reported that the Committee had met six times and made six reports, and had added Mr. T. Aveling to the Committee in the place of Mr. Ransome. They recommended that the following conditions be added to those of the Birmingham prize-sheet—viz.: (1) The power of machines entered in Class 4 must not exceed 33,000 foot-pounds per minute at or about 2½ miles per hour; and (2) that a machine may be entered in two classes, if it can perform the operations peculiar to both without adding or taking away parts; a distinct implement must, however, be entered for each class; also (3) implements selected for trial must, after the show, be handed over to the consulting engineers of the Society, who will take charge of them until the date fixed upon for their removal to the trial fields. The Committee had arranged the points of merit to be awarded for perfection in various qualifications of the implements presented for trial in connection with the Birmingham Meeting. This report was adopted after a conversation, in the course of which Mr. Aveling asked whether a steam reaping machine could compete, and was answered that it would be tried as a new invention, and Mr. Martin complained that implement makers on the Committee obtained an advantage over other competitors. On the latter point Mr. Booth stated that there could be no advantage to them, as all the resolutions of the Committee were published immediately; and Lord Vernon added that great advantage had accrued to the Committee by the presence of the implement makers, but he nevertheless thought that they ought to be changed more frequently than hitherto.

**EDUCATION.**—Mr. DENT reported that the Committee had met seven times, and made seven reports. It was also reported that 11 candidates had gained sufficient marks to qualify them for the Society's junior scholarships; of these, six are from the Surrey County School, three from Bedford County School, one from Devon County School, and one from Albert College, Glasnevin.

School.	Name.	Agriculture.		Chemistry.		Land Surveying 100.	Mechanics.		Total Minimum for Scholarship 300.
		Maximum 200.	Pass No. 75	Maximum 200.	Pass No. 75		Maximum 200.	Pass No. 75	
Surrey.....	Richmond, W. H.	112	114	96	190				542
Surrey.....	Nicholls, H.	104	112	85	178				509
Surrey.....	Plant, A. W.	97	122	74	178				469
Bedford...	Stubbs, J.	80	136	88	160				464
Devon.....	Stone, Tom	75	94	74	176				424
Surrey.....	Carmichael, J.	91	107	81	111				420
Glasnevin.	Watson, J.	100	112	52	155				419
Bedford...	Gardiner, W.	83	168	46	109				409
Surrey.....	Mills, Richard E.	73	82	70	153				340
Surrey.....	Barton, W. E.	116	78	60	122				376
Bedford...	Hipwell, J. C.	75	114	48	134				371

As only 10 scholarships were offered, the lowest on the list is not entitled to a scholarship.

The examiner in Agriculture (Mr. J. C. Morton) reported that he did not consider the passers, as a whole, were so good as those which he received on a similar occasion last year. Even those which stand high on the list and include many excellent answers to my questions exhibit very remarkable inequalities.

The examiner in Chemistry (Dr. Voelker) reported that the paper by W. Gardiner is very creditable to the candidate's knowledge of Elementary Chemistry, and for precision of his answers, and the following six papers by W. H. Richmond, H. Nichols, J. Stubbs, A. W. Plant, J. C. Hipwell, and J. Watson, also deserve commendation; they show that Chemistry is well taught in the schools where the candidates receive their instruction. Altogether the papers show a marked improvement in comparison with those of the preceding year's examination.

The examiner in Mechanics and Land Surveying (Prof. Twdsen) reported that a considerable number of candidates had done very well in both papers, and it may be added that those who have done well in one have done well in both. There were four candidates who did particularly well in the paper of Mechanics and Natural Philosophy; of these four were as nearly as possible equal; but W. H. Richmond was clearly first, not only in regard to the correctness of his answers, but also in regard to their style. I have only to add that the part of the examination which has fallen to my lot, has been most satisfactory.

The Committee recommended in future that the superior limit of age be defined, and the Committee propose that the scholarships should be confined to boys between the ages of 14 and 18.

They recommended that the thanks of the Council be given to Dr. Moore, Rev. J. Jowitt, M.A., Rev. J. V. Roberts, Mr. John Bradshaw, and Mr. P. S. Fry, the Local Secretaries, and also that the thanks of the Council, and the usual *honorarium*, be forwarded to the examiners.

The Committee recommended that the scholarships for the year 1874 be paid, upon the receipt by the Secretary of the necessary certificates of attendance at school.

The Committee are of opinion that the step which has been taken in offering junior scholarships has met with very satisfactory support, and they moved for a renewal of the grant. This report was adopted.

VETERINARY.—The Hon. W. EGERTON, M.P. (Chairman), reported that with reference to the scholarship which the Committee suggested last month should be offered by the Council annually, for the pupil who should pass the best examination at the Royal College of Veterinary Surgeons, they had received letters from the Council of that College, and from the Principal of the Royal Veterinary College. Both letters contained suggestions for a conference between the Veterinary Committee of the Society and the governing bodies of those institutions. The Committee, therefore, recommended that an interview be arranged with the deputation appointed by the Royal College of Veterinary Surgeons for the purpose; and that the Principal of the Royal Veterinary College be informed that the object of the Council in offering this scholar-

ship is the general promotion of veterinary science, and not the benefit of any particular institution; but that the Committee would be glad to receive any suggestion from the Governors of the Royal Veterinary College should they wish to make any, in order to carry out the object of the Society in establishing the scholarship.

The Committee begged to move for the grant of a sum not exceeding £500 for the year 1876 (notice of which was given last month) for general veterinary purposes and for special scientific inquiries into pleuro-pneumonia and foot-and-mouth disease, to be carried out by Dr. Burdon Sanderson, the professor-superintendent of the Brown Institution. In reference to this subject, the Committee had received a communication from the Committee of Management of the Brown Institution sanctioning the undertaking of these inquiries by the professor-superintendent of the institution, on the understanding that all the expenses of such inquiry (of which a separate account will be kept) shall be provided for by sums placed by the Society from time to time at the disposal of the professor-superintendent, and that the results of his investigations shall be reported to the Society. With a view further to promote the scientific study of animal pathology in the manner desired by the Society, the Committee of the Brown Institution will be prepared to allow the employment of the Veterinary Assistant of the Brown Institution from time to time (upon application to the professor-superintendent, and with his sanction) as the Society's Inspector, on the terms hitherto paid under the agreement with the Royal Veterinary College.

In the event of the Council making the grant now moved for by the Committee, they recommended that application should be made to the Privy Council for such relaxation of the existing orders as will enable the officers of the Brown Institution to carry out their investigations into pleuro-pneumonia, on behalf of the Society.

The Committee had met eight times. They recommended that Professor Burdon Sanderson and Mr. Duguid be added to the Committee, and that the Committee of Management of the Brown Institution be invited to nominate two of their number to serve on the Committee. This report was adopted, and the grant of £500 for the year 1876 was voted, on the motion of Mr. Egerton, seconded by Mr. Dent, after the following discussion:

Mr. NEWDEGATE, M.P., stated that he had attended the meeting of the Council by permission, and had been charged with a message from the Governors of the Royal Veterinary College. This message had been moved by Mr. Wilkinson, the chief veterinary-surgeon of the army, and seconded by Colonel Somerset, and was in the following terms: "That the chairman be requested to wait upon the Council of the Royal Agricultural Society, with a view of ascertaining, apart from all questions as to the grant of £200 a-year, in the reception of the reports, whether it is the desire of the Council to terminate all connection between the Society and the governing body of the College."

He wished to remind the Council that he was the only survivor of those who had originally negotiated the alliance between the College and the Society, and he feared that the real object of that alliance had been somewhat lost sight of during recent years. Its object was to give the Society a footing in the government of the principal veterinary school in the country; and although it appeared now that the Society thought they could guide the education of veterinary surgeons through the examining board, the experience of the Governors of the College left them on an opposite opinion. He warned the Council that if the Society separated itself from the College, then the College must substitute other influences which superseded those which the Society has hitherto exercised. He did not request any answer to his representation then, but he asked the Council seriously to consider whether they should finally relax their hold over veterinary education. He was of opinion that the connection between the governing bodies of the two institutions ought not to be severed, no matter what misunderstandings had arisen, for which the officers of the two institutions are responsible.

The Hon. W. EGERTON, M.P., as Chairman of the Veterinary Committee, stated that the Council would be glad to hear that the authorities of the College were desirous that the connection between the two institutions should not be broken. The Committee had proposed to the Council a plan of scholarships or prizes, by means of which they hoped to continue the connection, for although it was proposed to throw

these rewards upon the students of all veterinary schools, yet if the Professors of the Royal Veterinary College were the best educators, their pupils would obtain the Society's scholarships. In this way the connection would still be kept up, although it might not be so close as hitherto, and the Committee had not thought it right to propose the restriction of the Society's prizes to the students of one particular school. With regard to the other objects for the advancement of veterinary science, the Council had arrived at the opinion that they would be better attained through the Brown Institution, but their good feeling to the College would still remain.

VICOUNT BRIDPORT observed that he had for many years been a Governor of the Royal Veterinary College, and would have been much pleased if the connection between the two institutions could have been preserved; but he felt that the time had passed for their being re-united on the same terms as hitherto. If the Society must now sever its connection with the College, it was because a more liberal spirit had not been shown at the College to carry out those investigations which the Society considered of vital importance. He thought, however, it was very desirable that the Society should keep up its connection with the College by offering the proposed scholarship to its students.

MR. DENT regretted very much that he could not agree with the last remark which had fallen from Lord Bridport, as he was quite in accord with him on other points. He held that their veterinary scholarship should be as open as those offered in agricultural education. The veterinary department of the Society had not for many years been in a satisfactory condition, and the members had not received that information and assistance from their veterinary officers which they had a right to expect. Very recently they had been told by the principal of the College that there was nothing more to be discovered in reference to important diseases, about which he himself considered they knew very little, and therefore he held that the Society was bound to call in the aid of men who held more extended views.

MR. NEWDEGATE, in reply, stated that he was not in the Council-room to justify the conduct of the officers of the College, but he had come to express the hope that the connection between the two institutions might not be severed. The authorities of the College thought it quite enough that they should be charged with the education of the profession, and they found it no small task. Still, if the College could aid the Society, the Governors would be only too happy that its assistance should be given; but what he chiefly wished to urge was that the Society would not relax its hold upon the practical education of veterinary surgeons at the largest school of veterinary science in the kingdom. On the motion of the President, Mr. Newdegate's message was referred to the Veterinary Committee.

**STOCK PRIZES.**—MR. MILWARD (Chairman) reported that the Committee had met twice, and made two reports, and that they recommended the addition of Mr. Stratton, Mr. Aylmer, and Mr. Pain. They also recommended that the prizes for Shorthorns, Herefords, and Devons at the Birmingham meeting be the same as those offered at Bedford, with the fourth prize omitted, and the classes for Somerset and Dorset horned sheep; further, that condition No. 14 (relating to the preparation of sheep for show by clipping and colouring) be omitted and that there be charged for the shedding for a vehicle sent with each entry in the classes No. 40 to 43, for harness horses to be exhibited with suitable vehicle. It was also recommended that in the prize-sheet for 1878 the ages of all animals be calculated from January 1 instead of July 1. This report having been received, the following discussion arose: MR. JACOB WILSON moved that fourth prizes be offered in the same Shorthorn classes as at Bedford, on the ground that Birmingham, being in a very central position, a large exhibition might reasonably be expected; but he was willing to add a proviso that the fourth prize should not be awarded in any class unless a certain number of animals were exhibited. This proposal having been seconded by Mr. Horley, it was supported by Mr. Rendell, with the understanding that not less than ten animals must be exhibited to justify the award of a fourth prize. This suggestion having been accepted by Mr. Wilson and Mr. Horley, the motion with that addition was carried unanimously.

MR. STRATTON then moved the abolition of the rule in the Stock Prize-sheet, which rendered it necessary that each animal entered in the Shorthorn classes should have four crosses of

blood entered, or eligible to be entered, in the Herd Book. He interpreted this rule to mean that the animals entered for exhibition at the Society's shows must be eligible to be entered in the Herd Book. In this matter the Society must evidently, in his opinion, run in couples with the Shorthorn Society or break from them altogether, and that Society had recently insisted upon an additional cross for bulls. He asked why there should be an exceptional regulation for Shorthorns, and why it should be deemed necessary that a process of book-keeping should be gone through before an animal could be considered a Shorthorn. He could see no reason for the rule, as he felt that the Royal Agricultural Society had nothing to do with pedigree. The conformity of the animal to the type of the breed might be left to the judges in the case of Shorthorns as in the case of other breeds, and Shorthorn breeders do not want instruction as to what animals they ought to buy to improve their herd. Under the present rule breeders who have not entered in the Herd Book are deterred from exhibiting for the next twenty years, and this rule also prevents the formation of new families. It thus comes hard upon small farmers who cannot buy pedigree females at crack sales, although they can buy good pedigree bulls at moderate prices. MR. STRATTON then urged that this was the basis upon which the old Shorthorn breeders acted, with the result of distributing 30,000 Shorthorn bulls over the country; and he gave an account of the manner in which his father had produced the Moss Rose tribe and other families which had sent successful animals into the showyard.

MR. RANDALL seconded the motion. He had always felt that the rule would not stand the test of examination, and he could not see why such a restriction should be applied to one class of animals only. He also thought there was no risk in allowing animals with short pedigrees to be exhibited, or of their winning prizes.

COLONEL KINGSCOTE completely disagreed with Mr. Stratton and Mr. Rendell, and thought that the last part of Mr. Stratton's speech had completely answered the arguments contained in the first part. It was well known that the cross of Shorthorn upon many breeds, as, for instance, the Polled Scot, could not in many cases, after two or three crosses, be distinguished by external characters from a pure Shorthorn; but such animals were not safe to breed from. He felt that, if Mr. Stratton's motion were carried, it would throw the Society back many years. The tendency at the present day was for the breeders of all races of cattle to establish Herdbooks, with the view of being able to guarantee the purity of the breed of their animals; and this Society had always endeavoured, by the conditions of its prize-sheet to uphold and to foster the maintenance of purity of breed in all classes of animals exhibited at the country meetings. He therefore should support the maintenance of the rule as it stands at present.

MR. BOOTH supported Col. Kingscote. He urged that Shorthorn bulls were used all over the world for the purpose of crossing other breeds, because it was an ascertained fact that the true Shorthorn had the faculty of stamping all other breeds with its own character after a few crosses; but if there were any doubt as to the pedigree of animals they would not be purchased for the purpose, and a Royal prize winner had hitherto been accepted as having a character.

MR. BOWLY considered that the opinion of Shorthorn breeders on this question ought to have proper weight, and he was in a position to say that they were much opposed to any relaxation of the present rule, as it was not safe to breed from an animal with even so few as four crosses of blood.

AFTER some further remarks from MR. JACOB WILSON and the PRESIDENT, and a reply by MR. STRATTON, the question was put from the chair, and MR. STRATTON'S proposal was defeated by 18 votes against 13.

ON the motion of MR. JACOB WILSON, seconded by MR. DENT, the notice given by the Committee with reference to the calculation of ages from January 1 instead of July 1 was referred back to the Committee for reconsideration.

THE EARL OF POWIS suggested that prizes should be offered for ponies used in mines; but after some discussion the proposal was negatived.

SUBJECT to the foregoing amendments the report of the Stock Prizes Committee was adopted.

MR. DENT gave notice that at the February Council he would move that at the Birmingham Meeting the full catalogue should be placed in the hands of the judges.

GENERAL BIRMINGHAM.—VICOUNT BRIDPORT (Chairman)



reported that the Committee recommended that in the Country Meeting Queries for 1877 it should be stipulated that land, not exceeding 50 acres of stubble or lea, be provided, in case it may be required for the trials of implements. This report was adopted.

**SHOWYARD CONTRACTS.**—Mr. RANDELL (Chairman) reported that the Committee recommended that the Surveyor be authorised to ascertain at what price Mr. Penny will sell the fittings to the several buildings which are hired annually, in order to determine whether they should be added to the Society's portable plant. They had approved the revised specifications and form of tender, subject to the above arrangement, and had decided that tenders should be sent in on or before February 12. The Committee had met several times and made seven reports, and they recommended that Mr. Frankish and Mr. Aveling be added to the Committee. This report was adopted.

**SELECTION.**—Col. KINGSCOTE (Chairman) reported the recommendation of the Committee, that Mr. R. C. Ransome be elected a member of the Council in the place of Col. F. M. Wilson, M.P., deceased. The Committee had met seven times and made seven reports; they recommended that the Committee for 1876 shall consist of the Chairman of the Finance, *Journal*, Stock Prizes, Implement, Country Meeting, and Chemical Committees, and the following six members of the Council: Viscount Bridport, Hon. W. Egerton, M.P.; C. Randell, Jacob Wilson, Sir W. E. Welby, M.P., and Earl Cathcart. This report, having been received and adopted, it was moved by Col. Kingscote, C.B., M.P., seconded by Earl Cathcart, and carried unanimously, "That Mr. R. C. Ransome be elected a member of the Council, in the room of Col. Wilson, M.P., deceased."

A letter was read from the Council of the Agricultural Engineers' Association requesting an interview with the Council of the Society for the discussion of certain matters, and the Secretary was instructed to reply that the Council would be prepared to have an interview with that body on the day of the February Council, at half-past 1 o'clock, and to request that he should be furnished as soon as possible with a notice of the questions that they wished to discuss.

Letters were read from the Mayor and Town Clerk of Carlisle, cordially inviting the Society to hold the country meeting for 1877 in that locality.

A letter was read from the Secretary to the Railway Clearing House in reference to the charges which in future will be made by railway companies in England and Wales, for the conveyance of stock and agricultural implements to and from agricultural shows.

A letter was read from Mr. T. Bowick, of Bedford, suggesting that in future stock should be judged by a jury of five, each member voting secretly.

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

The usual Christmas holidays to the secretary and clerks were given, and the Council adjourned to Wednesday, February 2, 1876.

At a Special Council Meeting held, in accordance with the bye-laws, at the rising of the Monthly Council, the prize-sheets for stock and implements at the Birmingham Meeting were finally arranged.

The half-yearly general meeting was held on Thursday, December 9, Lord Chesham in the chair.

The Secretary, Mr. H. M. JENKINS, read the Report of the Council, as follows:

The Council of the Royal Agricultural Society have to report that, during the year 1875, the number of governors and members has been increased by the election of 34 governors and 672 members, and diminished by the death of 9 governors and 124 members, the resignation of 115 members, and the removal of 25 members by order of the Council.

The Society now consists of

83 life governors,  
78 annual governors,  
2,133 life members,  
4,996 annual members,  
11 honorary members,

making a total of 6,401, and showing an increase of 533 members since this time last year.

The vacancy in the list of trustees caused by the death of Lord Tredegar, reported at the general meeting in May, has

been filled up by the election of the Earl of Lichfield, while the representation of Monmouthshire on the Council has been again secured by the election of Mr. Richard Stratton, of The Duffryn, near Newport. The Council have also filled up the vacancy caused by the regretted death of Lieut.-Col. Walsby, M.P., by the election of Mr. Robert Charles Ransome, of Orwell Works, Ipswich. The half-yearly statement of accounts to the 30th June, 1875, 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 funded capital has since then been reduced by the sum of £3,000 New Three per Cents., which have been sold out to meet the deficiency in the receipts at the Taunton meeting. The funded property of the Society is now £18,112 7s. 8d. New Three per Cents., and the balance in the hands of the bankers on the 1st inst. was £559 17s. 3d. The Taunton meeting was characteristic of the year 1875, which will endure in the remembrance of farmers and townsmen alike as the period of a succession of disastrous floods. The Society has naturally experienced a loss of some magnitude; but the important accession made to the list of members during the year has enabled the Council to meet the deficiency of the receipts at Taunton without any larger drain upon the funded capital of the society than was entailed by the Bedford meeting last year. It is also satisfactory to know that the visit of the Society to so distant a town in the West of England was thoroughly appreciated. Indeed, judging from the exertions made by the authorities and inhabitants of the town to give the Society a hearty welcome, and from the numbers who visited the show-yard on the only fine day of the week, there is ground for believing that, with a continuance of fine weather, the Taunton meeting would not have affected the funds of the Society to any serious extent, while the amount of information which would have been disseminated would necessarily have been very largely increased. The trials of mowing machines at Taunton excited the greatest interest amongst the competitors and the public, and the prizes were competed for by a larger number of manufacturers, both English and American, than on any previous occasion. A descriptive and illustrated report of the trials, for which the Society is indebted to Mr. Hemsley, one of the stewards, has been published in the last number of the *Journal*; and the consulting engineers have, as usual, rendered it more comprehensive and valuable by carefully-compiled tables showing the results of the trials from a mechanical point of view. The exhibition of live stock at Taunton was naturally not so extensive as that which is seen when the country-meeting is held in a more central locality; but it may be said that all the standard national breeds were fairly represented, and that most of the prizes fell to well-known exhibitors. On the other hand, the competition for the prizes offered for local breeds, both of sheep and ponies, was particularly small, the only exceptions being in the classes for Devon Long-wools. The nature of the competition for the prizes offered for the best-managed farms in the county of Somerset has been already reported to the Society, which is much indebted to Mr. J. Bowen Jones, a member of the Council and one of the judges, for a report containing a very full and interesting description of the farms to which the prizes were awarded, as well as notices of some of the others which competed. This report has also been published in the last number of the *Journal*. The prospects of the country meeting to be held next year at Aston Park, Birmingham, are unusually encouraging. The local committee have very liberally added to the Society's prize-sheet offers of prizes for agricultural horses, hunters, hacks, and harness-horses, Loughran and dairy cattle, Shropshire sheep, wool, butter, and cheese, amounting in the aggregate to £1,010. These prizes, added to those offered by the Society, raise the total amount of the prizes for live stock to be competed for at Birmingham to the large sum of £4,305. The Birmingham local committee have also offered two prizes of £100 and £50 respectively for the best-managed farms in Warwickshire exceeding 200 acres in extent, and prizes of £50 and £25 respectively for the best-managed farms in the county not exceeding 200 acres; and they have further placed a sum of £25 at the disposal of the judges for the recognition of special merit in any of the competing farms. The Council regret to say that, notwithstanding the liberality of these prizes, the entries this year are restricted to five in the large-farm class, there being no entries in the class for farms not exceeding 200 acres. The Council have resolved that the Birmingham

meeting shall commence on Wednesday, July 19th, instead of Monday, as heretofore. They have also resolved that any exhibitor wishing to remove his horse for the night be allowed to do so, on depositing £10 at the Secretary's office, and receiving an official pass, the time of leaving, and that of returning next morning, to be inserted thereon; and, if the animal be not duly brought back, the sum of £10 shall be forfeited to the Society for each show-day the animal is absent; and the exhibitor shall also forfeit any prize awarded to him in any class at the Birmingham Show, and shall not exhibit again at the Society's shows until the forfeits are paid. With regard to the ages of pigs entered in the classes for "three breeding sow-pigs of the same litter," which have hitherto been fixed at over four and not exceeding eight months old, the Council have resolved that in future the limits of age shall be over three and not exceeding six months old. The regulation of the prize-sheet prohibiting the preparation of sheep for show by oiling and colouring has been cancelled. The prizes for implements, offered for competition next year, are confined to reaping-machines and sheaf-binders. The competing implements will be tried at harvest-time, and probably in the county of Warwick, upon suitable crops which will be engaged for the purpose; and it is confidently expected that the interest attaching to these trials will rival that which was exhibited during the trials of mowing machines at Taunton. During the past half-year the attention of the Council has been much occupied by a revision of the Society's bye-laws; and after prolonged consideration and repeated recourse to legal authorities, they have adopted a revised code of bye-laws in conformity with the provisions of the charter, which they hope will tend to increase the interest of members in the Society, especially in the exercise of their function as the electors of the Council at the annual meetings in May. A copy of these bye-laws will be sent to each member of the Society, whose subscription is not in arrear, with his copy of the next number of the *Journal*. The Council have also had under discussion the relations existing between the Royal Veterinary College, and the Society; and the Veterinary Committee have had an interview with a deputation of the governors of the College with a view to arrange matters on a more satisfactory basis than heretofore. The Council regret that they have been unable to come to any other opinion than that the proposals of the Royal Veterinary College did not sufficiently meet the requirements of the Society. They have therefore given notice to the governors that the annual grant made by the Council to the Royal Veterinary College will be discontinued from and after the 31st December, 1875. The future organisation of the veterinary department of the Society has also been carefully considered by the Council. As a basis, they resolved that the annual grant for veterinary purposes should be devoted as follows:

- 1st. To giving members of the Society the opportunity of obtaining the best veterinary advice in the case of any extensive or serious outbreak of disease.
- 2nd. To providing for experiments being made in the treatment of diseases.
- 3rd. To the scientific investigation of the causes and nature of diseases of animals belonging to the farm.

The Council then communicated with the Committees of the Royal Agricultural College and the Brown Institution, the latter being an establishment in London, governed by a Committee of the Senate of the University of London, which was founded for the purpose of facilitating investigations into the diseases of animals useful to man. After considering the report of a meeting between the Veterinary Committee and the Committee of the Brown Institution, the Council have resolved to place a sum not exceeding £500, for the year 1876, at the disposal of the Veterinary Committee for general Veterinary purposes, and for special scientific inquiries into pleuro-pneumonia and foot-and-mouth disease, to be carried out by Dr Burdon Sanderson, the Professor-Superintendent of that institution. The Veterinary Assistant of the Institution will also be authorised to act as the Society's Veterinary Inspector, in cases where members of the Society require Veterinary aid, on the same terms as have hitherto been paid to the professors of the Royal Veterinary College. The past autumn has again been characterised by an extensive outbreak of foot-and-mouth disease, which was doubtless the result of causes that are every year in operation at that season, when farmers generally are buying in their winter supply of store cattle. These cattle in

many cases have been in contact with affected beasts, either in fields, fairs, trucks, or steamboats, or upon markets, and have thus been made vehicles for the dissemination of the disease. The Council have repeatedly represented to the Government the measures which in their opinion are necessary to restrict the dimension and importance of these annual outbreaks. These suggestions were framed upon the conviction that the outbreaks are mainly brought about by the movement of animals during the autumn, being from fair to fair, and so from fairs to farms, instead of, as at other seasons, from farm to slaughter-house. The scientific knowledge of this disease and of pleuro-pneumonia appears to the Council so imperfect that they have thought it desirable to institute further inquiries as to their physiological character, in the hope thereby to guide their own members and the officials of Government in carrying out both preventive and curative measures. The past Parliamentary Session has witnessed the passing of the Agricultural Holdings (England) Act, 1875—a legislative enactment of great importance to English agriculture. The Council intend to publish this Act in the next number of the *Journal*, with an analysis and explanation; and has under its consideration, by what means reliable data can be obtained for the guidance of valuers under the Act, in reference to unexhausted improvements of the third class. Twenty-two candidates, from five schools, were entered to compete for the Society's junior scholarships, and the examinations of the candidates were held at the schools on November 16th and 17th. The following scholarships have been awarded, the names being given in the order of merit: W. H. Richmond, H. Nichols, A. W. Plant, Surrey County School; J. Stubbs, Bedford County School; T. Stone, Devon County School; J. Carmichael, Surrey County School; J. Watson, Albert Institution, Glasnevin; W. Gardiner, Bedford County School; R. E. Mills, W. E. Barton, Surrey County School.

The Council are of opinion that the step which they took last year in offering these junior scholarships has already met with very satisfactory support; and they have accordingly renewed the grant for the year 1876.

Mr. JASPER MORE, in moving the adoption of the Report, said he wished to congratulate the meeting on the prospect of the Society's holding its show next year at Birmingham. Living as he did in a neighbouring district, he thought there was every probability of it at slow proving one of the most successful exhibitions ever held, and he also hoped and believed that it would be one of the most remunerative. He regretted to observe that the prizes offered by the Local Committee at Birmingham for farms under 200 acres, had not produced competition. Had such prizes been offered in Shropshire or in any of the Welsh counties, they would, he believed, have been eagerly competed for. He was glad to find, from the concluding part of the Report, that the Council intended to publish in the next number of the *Journal*, an analysis and explanation of the Agricultural Holdings Act, together with the Act itself. He thought the time had arrived when every one concerned should be able to decide whether he would contract himself out of the Act or not; and farmers must be good lawyers as well as good men of business to understand the 60 clauses of which the Act was composed.

Mr. J. K. FOWLER, in seconding the motion, said allusion was made in the Report to the spread of foot-and-mouth disease as it occurred chiefly in the autumn; but farmers had found in practice that the movement of cattle in the spring equally produced that evil. Indeed, he thought it was of even greater consequence to the grazing districts. The autumnal movements of cattle were made chiefly for the purpose of tying them up during the winter months, and hence he thought a great deal more importance attached to their removal in the spring, and especially in May. For years many of them had been contending that the Government should adopt stringent measures in relation to that matter, that foreign animals intended for consumption should be slaughtered at the point of debarkation, and that there should be stringent regulations for the quarantine of store stock. They must all now regret that one of the most eminent men in the Government, and one who was well known to them as a tenant-farmer, and a remarkable representative of his class, had just left the Government, because he found that he was not in accord with the heads of the Privy Council department (Hear, hear). He was sure that all would give Mr. Read credit for honesty of intention in the course which he had pursued (cheers). Until the great mass of consumers

realised in their minds the great losses which the nation sustained through the spread of the foot-and-mouth disease, the Government would not perhaps, put their shoulders to the wheel in reference to that matter; and hence they should, by disseminating information, endeavour to convince the public that the losses arising from that evil exceeded the whole value of the foreign importations (Hear, hear). Farmers had a clear right to demand to be defended against foreign disease. As regarded the Agricultural Holdings Bill, he thought their best thanks were eminently due to the Government, and especially to the Premier, for grappling with that great question, and carrying it to a successful issue; and though many persons regretted that it was not compulsory, he believed that, founded as it was on the principle for which many leading tenant-farmers had been battling for many years—namely, that what was put in the soil should be the property of the tenant and not of the landlord—future generations would regard that Act as more conducive to the extension of agricultural improvement than anything else which had happened in their day.

Sir J. H. MAXWELL said he was glad to be able to state that he had just ascertained that the increase in the number of members was 433 instead of only 419, the Report being in that respect slightly erroneous. With regard to the Tamerton meeting, he could bear personal testimony to the hearty reception given to members of the Society by the inhabitants of that town, and he thought they deserved such an acknowledgment. As an illustration of the spread of disease among cattle in this country, he might observe that last autumn, while he was on a visit to his friend Sir Wilfrid Lawson, the steward came into the room and stated that a bull which that gentleman bought of Mr. George Moore for 1,200 guineas, only a few days before, had been suddenly seized with foot-and-mouth disease, and on going into the adjacent yard his host and himself found that fine animal suffering from that cause. That showed how the disease suddenly showed itself without any notice. He thought that in spite of all precautions the disease would continue for some years, and that it would ultimately die out.

Mr. NEVILLE-GRENVILLE, M.P., said he had frequently thanked the conductors of the *Journal* for admirable articles which had appeared in it, but he was afraid that, although they took the precaution of having the leaves cut, it was not nearly as much read as it ought to be. If any of the gentlemen in that room had not read the recent article on "The Labour Bill of the Farm," they had better do so. That was a most admirable composition on the labour question. It showed that the farmers were the friends of the labourers, and he believed its wide circulation would do more good for the advancement of the interests of labourers than Mr. Mitchell or any of the agitators on that subject.

Dr. CRISP said he was glad to find that the old connection between that Society and the Veterinary College no longer existed. He was one of the first to protest against that connection, and he believed that it was a good thing for veterinary science and for the public that it had been dissolved. In a country like this, which depended so much upon cattle and other stock, the Government ought, in his opinion, to do something towards establishing and supporting a college that would be worthy of the nation. There could be no question as to the nature of foot-and-mouth disease, which had been thoroughly investigated in France and Germany. The practical question was how it was to be arrested, and in his judgment that would be impossible so long as one rule existed in one parish and another in another in the same district. He did not agree with the last speaker that the disease would die out of itself, any more than he believed that scarlatina would die out. There could be no doubt that for the last two years it had been introduced into this country to a large extent through the animals which were sent from Ireland. As regarded politics, which on former occasions he had been told he must not introduce, he believed that if the rule which excluded politics were abolished the number of members would largely increase, and the Society would then have greater influence with the Government.

Mr. MOORE believed that the difficulty of stopping the spread of foot-and-mouth disease had been greatly increased by the issuing from the Privy Council office of directions which had not been well considered, and it had occurred to him that if the official gentlemen in that department would only take the advice of practical men in different parts of the country, and deal with the evil as a whole instead of piecemeal, great

benefit would result. His own impression was that they would have a recurrence of the disease from time to time; but on the other hand his experience had taught him that measures might be adopted which would lessen the severity of the attack when it came, and such measures could not be adopted without previous consultation.

Mr. STRATTON wished to remark, in connection with the question of the alteration of the bye-laws, that in his opinion the Society could not go on satisfactorily until there was a free and open selection of the members of the Council, and that could only be arrived at through the use of voting papers. He thought members of the Society should have a voice in the election of the Council, but it was not to be expected that any large proportion of them would incur the expense of coming to London for the purpose of voting. The charter of that Society was not like the laws of the Medes and Persians, and if it were inadequate to the necessities of the case, it should be altered. His great complaint was that the Council did not now fairly represent the Society. Let him give an illustration of that. Not long ago he went with a deputation to the President of the Council. Having made some observations to his Grace on the foot-and-mouth disease, he was followed by Col. Kingscote, a member of the Council of that Society, who strongly supported the views he had expressed, and told the Duke of Richmond that on the day before the Council of the Royal Agricultural Society passed a resolution in favour of the establishment of more stringent regulations. The Colonel was immediately caught up by the Duke, who said, "I believe that resolution was passed by a majority of 12 to 11." That showed the position of matters. This question was one of great practical importance to farmers, and yet action was quite barred by the Council itself. Col. Kingscote and he were completely knocked off their legs by that reply of the Duke of Richmond. One fact which showed the serious importance of that question was that Mr. Clare Sewell Read, a man of whom all tenant-farmers were justly proud, a man of the highest integrity and great ability, had just left the Government because the Veterinary Department of the Privy Council had obstinately and ignorantly refused to listen to his advice on that subject. He must say he felt very much dissatisfied with the action of the Council in reference to that question.

The CHAIRMAN, in reply, said, as regarded the question of the introduction of politics advocated by Dr. Crisp, he admitted that there were a great many Farmers' Clubs in which politics might be discussed *ad libitum*; but that was not a political society, and he should be very sorry indeed to see it become one (cheers). They all liked to hear gentlemen make remarks relating to different breeds of stock and scientific modes of cultivating the land; but he for one deprecated the introduction of politics (Hear, hear). On the previous day he was in that room from 12 till about 3 o'clock, three hours being occupied in discussion. He would appeal to Dr. Crisp as to how long the discussions of the Council would be likely to last if politics were introduced? (Hear, hear.) The question had often been raised in the Council whether politics should be allowed; but any proposition in favour of that had been almost unanimously kicked out (cheers). With regard to what Mr. Stratton had said about the election of members of the Council, he would observe that the members now retired by rotation, that at the election in May the scrutineers had to report to the General Meeting whether or not the names submitted to it were approved, and that the election rested with those who attended the meeting. Any gentleman who desired, before the meeting was held, to put forward a particular name was at perfect liberty to send it in.

The Report was then adopted.

Thanks were voted to the auditors, and they were re-elected.

The CHAIRMAN having then invited suggestions for the consideration of the Council,

Mr. FAWCETT directed attention to an alleged grievance of some exhibitors of pigs, the complaint being that the entries of particular animals had been ticketed as false entries. This was, it was stated, in the cases referred to, a label calculated to inflict great injury on the owners; and Mr. Fawcett suggested that in future the judges of pigs should obtain professional assistance of the same kind as that which is afforded to the judges of horses before venturing to ticket an animal with the words, "False entry."

The CHAIRMAN said he believed that the abolition of the

present regulations on that subject would lead to a large amount of deception.

Mr. STRATTON said that if it were in his power to do so, he would be glad to move the following resolution: "That no revision of the rules of the Society will be satisfactory which does not give every member a cheap and simple mode of voting in the election of the Council."

The CHAIRMAN ruled that such a resolution could not be put then, and at the same time intimated that it might be received with a view to its consideration at the next meeting of the Council.

Mr. STRATTON handed in his resolution, in accordance with the suggestion from the chair.

Sir J. H. MAXWELL proposed a vote of thanks to Lord Chesham for presiding. The best proof which his lordship could give of his interest in the Society was to be found in the fact of his constant success as an exhibitor at its meetings. Such, indeed, was his lordship's success in that capacity that one could hardly have been surprised had it been suggested that during the year of his presidency he should be excluded from the competition (laughter).

The Rev. J. STOKER seconded the resolution in very laudatory terms, and it was then carried by acclamation.

Lord CHESHAM said he felt exceedingly obliged to the meeting for that vote, and they might rely upon it that he would always do his best to promote the interests of agriculture. As regarded his success as a competitor, he could assure them that he did not wish to be always at the top of the tree (laughter). He liked sometimes to see others in that position. During the last ten years the Shropshire breed of sheep had entirely changed. The Shropshire breeders had settled down to one type of sheep, that type being as much like the Southdowns as they could get it, with the size and constitution of the Shropshires. More tenant-farmers were now exhibiting in the Shropshire class than in other classes. At Taunton 61 sheep were exhibited in the shearing class, and he did not believe there were more than three or four exhibitors who were not real tenant-farmers. In Southdowns there was a different state of things. There the Prince of Wales, Lord Walsingham, the Duke of Richmond, and some other noblemen and landowners, were almost the sole exhibitors; he did not think there were more than three or four tenant-farmers. He repeated that he felt extremely obliged to the meeting for the honour it had done him (cheers).

The meeting then separated.

### SHORTHORN SOCIETY OF GREAT BRITAIN AND IRELAND.

A meeting of the Council was held at the Agricultural Hall, Islington, on Tuesday, the 7th December, Present: the Earl of Dummore, in the chair; Colonel Kingseote, C.B., M.P.; Mr. Hugh Aylmer, Mr. H. W. Bausford, Mr. T. C. Booth, Mr. E. Bowly, Mr. J. W. Cruickshank, Mr. J. Harward, Mr. C. Howard, Mr. D. McIntosh, Mr. A. Mitchell, Mr. H. Chandos Pole-Gell, Rev. T. Stanforth, Rev. J. Storer, Mr. R. Stratton, and Mr. Jacob Wilson.

The following new members were elected:—

- Alkins, George C., The Lightwoods, Birmingham.
- Bates, Thomas, Heddon, Wy'an, Northumberland.
- Beasley, Albert, Heythrop-park, Chipping Norton.
- Darling, Robert, Plawsworth, Chester-le-street, Durham.
- Cruickshank, Mr. J. Harward, Mr. C. Howard, Mr. D. McIntosh, Mr. A. Mitchell, Mr. H. Chandos Pole-Gell, Rev. T. Stanforth, Rev. J. Storer, Mr. R. Stratton, and Mr. Jacob Wilson.
- Fytche, Major-General, Pyrgo-park, Havering-atte-Bower, Essex.
- Garner, Charles Carter, The Wolds, Snitterfield.
- Graham, Alexander, Brimstage, Bickenhead, Cheshire.
- Hicks, Walter, St. Austell, Cornwall.
- Jervis, William Hudson, Woodford, Thrapstone, Northamptonshire.
- Page, Mark, Newbold Grounds, Daventry.
- Potterton, William Higgins, Boughton Grange, Northampton.
- Snodin, John, Stonesby, Melton Mowbray.
- Tunnicliffe, E. T., Bromley Hall, Eccleshall, Staffordshire.
- Wilson, James, Mains of Scotstown, near Aberdeen.
- Winn, John Russell, Lower Corndon, Coventry.

EDITING COMMITTEE.—The Earl of DUNMORE reported that the pedigrees of the whole of the bulls were in type, and that the printers had commenced with the printing of the pedigrees of the cows. That the Committee recommend that the lists of members and breeders, in the future volumes of the *Herd Book*, be arranged alphabetically, and not according to rank as heretofore. That they recommend the re-entry of three bulls wrongly entered in previous volumes. The Committee had had under their consideration various incomplete pedigrees, and had directed the Secretary to communicate with the parties in reference thereto. The Committee further recommend that an "errata" be published in vol. 22 of the *Herd Book*.

This report was adopted.

GENERAL PURPOSES COMMITTEE.—Colon KINGSCOTE reported that the Committee had examined and passed the secretary's petty cash account for the month of November, and also his receipts for entries for the same period. That the Committee had received the treasurer's report, and had examined the bank-book, and the amount standing to the credit of the Society was £647 2s. 4d. That the Committee recommend that cheques be drawn for various accounts, rent and salaries, &c., amounting to £227 14s. 4d. The Committee further re-

commend that on and after January 1st, 1876, the Society's banking account be transferred from the name of the treasurer, at the Stourbridge Bank, to the name of the Shorthorn Society, at the London and Westminster Bank, and that the treasurer do sign the cheques as directed by the Council from time to time.

This report was adopted.

Mr. H. W. BEAUFORD then brought forward the motion of which notice had been given at a previous meeting of the Council, as follows: That the Society do enter into an arrangement with Mr. Thornton in reference to his *Quarterly Circular*, and continue the publication of the same. He stated that, as the Editing Committee were now fully engaged with the preparation of the forthcoming volume of the *Herd Book*, he should propose that a special committee be appointed to confer with Mr. Thornton upon the subject, and to report thereon at a subsequent meeting of the Council.

Colonel KINGSCOTE having supported the resolution,

Mr. STRATTON asked whether the feeling of the Council was unanimous as to the desirability of acquiring this publication?

Mr. BEAUFORD thereupon moved—That it is desirable for the Society to have in their own hands a work of this kind; and in support of this opinion instanced the great advantages derived from the register of births published in the *Circular*, it being very often a check against errors in the dates of calving of animals, and, further, that the general information given in the work was of considerable interest to Shorthorn breeders.

Mr. HARWARD drew attention to the sub-section C of clause 3 in the Articles of Association, whereby the Society, with the view of promoting the objects for which it was established, was empowered to acquire, and either continue (with or without any kind of modification) or suspend the issue of any publication dealing with or bearing upon such objects. He should, therefore, support Mr. Beauford's proposition.

Colonel KINGSCOTE stated that he had always been of opinion that it was very important to have a work of this kind. False pedigrees had been concocted, and, no doubt, would continue to be in the future; he therefore thought that the issuing of a publication of this nature would greatly tend to the discovery of fraudulent entries, and prevent their insertion in the *Herd Book*.

Mr. BOWLY having seconded Mr. Bausford's resolution, it was carried; and on the motion of Mr. BEAUFORD it was resolved: "That Colonel Kingseote, C.B., M.P., Mr. Beauford, Mr. Harward, Mr. H. Chandos Pole-Gell, and Mr. Jacob Wilson be a Committee to consider and report upon the desirability or otherwise of acquiring *Thornton's Circular*, or of issuing some other similar publication, and also to confer with Mr. Thornton thereon."

On the motion of Mr. HARWARD, it was resolved, that on and after January 1, 1876, members' entrance fees, annual subscriptions, and life compositions be paid direct to the secretary, and by him paid to the credit of the Society at the London and Westminster Bank.

Mr. R. STRATTON then moved, pursuant to notice given at the last meeting of the Council, the following resolutions:

1. That the prevalence of foot-and-mouth disease is a national calamity, its effect on breeding stock being so disastrous as to be the chief cause of the present high price of meat.

2. That the breeders of stock in the United Kingdom should be protected as far as possible from the importation of foreign diseases, seeing that the losses incurred in the home produce by such diseases greatly exceed the total value of the foreign cattle imported.

3. That stringent and uniform measures should be adopted throughout the United Kingdom for the suppression of infectious diseases, and severe penalties rigorously enforced for offences against such measures.

4. That a copy of the foregoing resolutions be forwarded to the Lord President of the Privy Council.

He thought there could be no doubt whatever that the prevalence of the foot-and-mouth disease was a national calamity. The value of stock imported annually had been computed at £5,000,000, but he thought that no one would dispute with him that the loss to the country by this disease could be estimated under £12,000,000. In his opinion the Government were bound to protect farmers as much as possible from the disease, by the carrying out of stringent and uniform measures throughout the country, and that it should be compulsory for vessels and trucks engaged in the cattle traffic to be thoroughly cleansed and disinfected after discharging their cargoes. It was no wonder that foot-and-mouth disease existed whilst there was such dissimilarity in the measures adopted throughout the country for its prevention.

Mr. POORR can speak feelingly in the matter, as he had suffered much from the disease, and he was of opinion that

proper measures had never been taken to eradicate it. It possibly was a question whether any measures would thoroughly stamp it out; but the adoption of uniform measures, both in Great Britain and Ireland, would greatly tend to do so. He had known instances in his own neighbourhood of healthy animals having been driven through roads on either side of which there were animals affected with the disease, but which the owners were prohibited from removing, and hence there was a great probability of these healthy animals becoming infected, and the disease thus carried to other districts.

Col. KINGSCOTE agreed entirely with Mr. Stratton's resolutions, and hoped that they would carry some weight with them, coming from the Council, which represented a large body greatly interested in the prevention of the disease. Importation, in his opinion, was not only the cause of the foot-and-mouth disease, but the reason for its constant recurrence. In illustration of the existing regulations as to the disease, he stated that he had a road passing through his park, on either side of which was a wire fence, and his own stock, being affected by the disease, could not be removed; so that there was nothing to prevent healthy animals afterwards going through this road becoming infected.

The Earl of DUNMORE remarked on the filthy state of some boats engaged in the cattle trade. He knew of an instance where the animals when first shipped were, he believed, thoroughly healthy; but through over-crowding, and the dirty state of the vessel, which did not appear to have been cleansed for some considerable period, the cattle when disembarked were found more or less affected. This state of things, no doubt, greatly tended to help to spread the disease.

Rev. J. STORR thought that if the resolutions did no other good, they would strengthen the hands of their supporters in the press.

It was resolved that a copy of them be forwarded to the Lord President of the Privy Council, in a letter to be signed by the chairman of the meet'g.

The resolutions were carried, and the Council then adjourned until Tuesday, February 1, 1876.

## RUTLAND AGRICULTURAL SOCIETY. MEETING AT OAKHAM.

In the class for Shorthorn oxen or steers there were eleven entries, and one of the unsuccessful competitors was the Smithfield Cup ox of last year. In the next class Mr. Robert Wortley, of Sulfield, was first with a red-and-white Hereford, also first in London in 1874. In the open class for cows of any breed or age the Scotchmen came down and made a clearance, the first prize going into Aberdeenshire, and the second to Ballindalloch. The best heifer in the All-England class was Mr. Stratton's Nectarine Bud, the winner also of the silver medal and the extra prize of 30 sows, as the best beast in all the fat cattle classes. In the class for the best steer not exceeding one year and nine months Lord Exeter showed one of Telemachus' twins, which won. The breeding classes were not quite so good; and the show of sheep was not equal to last year. Mr. Byron, of Kirkby Green, carried off the medal with a four-year-old fat ewe, and also took the first prize for fat Lincoln wethers, a pen which won the premium as the best of all the fat sheep. Lord Lonsdale was, as usual, prominent among the Leicester, and Messrs. Close also largely exhibited. The Prince of Wales took the first prize for Shortwools, but Mr. Street's pen, which was second, was by an error returned as first. The pigs were a larger show. In the open classes the name of Wheeler stood first, and Carver second. In the horse department the competition was very good, the class for cart colts especially; but the strongest parade was that of hunters, there being no less than twenty-two entries.

### PRIZE LIST.

JUDGES.—CATTLE: R. J. Newton, Campsfield Farm, Oxford; J. Colman, Park Nook, Derby; E. Abraham, Barnet-by-le-Wold, Lincolnshire. SHEEP: T. Woods, Osberton; J. H. Casswell, Loughlin; S. Spencer, Snettstone. HORSES: H. Chaplin, M.P.; Col. Luttrell; J. E. Bennett; — Plover, right, Manera; — Thraves, Kirby Birkholme; and H. Adams, Pickworth.

### CATTLE.

Oxen or steers exceeding three years and three months old (open).—First prize, £15, T. Pulver, Broughton, Kettering; second, £7, J. J. Clark, Welton-le-Wold, Louth.

Oxen or steers of any pure breed, or cross or mixed breed, not being a pure-bred Shorthorn, exceeding three years and three months (open).—First prize, £15, R. Wortley, Sulfield, Aylsham; third, £7, J. J. Colman, M.P., Norwich.

Fat steers of any breed, not exceeding three years and three months old (open).—First prize, £10, Mr. F. Cartwright, Drakelow, Burton-on-Trent; third, £5, J. S. Hack, Braunston.

Cows of any breed or age (open).—First prize, £10, J. R. id, Greystone, Aberdeenshire; second, £5, J. and G. Gordon Smith, the Glenlivet Distillery, Ballindalloch.

Heifers of any breed, not exceeding four years old (open).—First prize, £10, R. Stratton, Newport, Monmouthshire (Nectarine Bud); second, £5, R. Parker, North Creake, Norfolk.

Steers not exceeding two years and six months old.—First prize, £10, Earl Spencer, Althorp-park, Northampton; second, £5, R. Pinder, Whitwell, Oakham.

Steers not exceeding one year and nine months old.—First prize, £7, the Marquis of Exeter, Burghley-park, Stamford; second, £3, E. Wortley, Ruffington, Uppingham.

Fat beasts, shown as extra stock, above two years and six months old.—Prize, £5, the Marquis of Exeter.

The best fat beast shown in the classes.—Silver medal and special prize of £5, R. Stratton (Nectarine Bud).

For the best fat beast shown, bred and fed within the district of the Cottesmore Hunt.—Prize, £15, E. Wortley, Riddington, and £5 as the breeder.

Cows above three years old, in milk or in calf.—First prize, £10, D. Dainty, B-lainthorpe, Staunford; second, £5, Marquis of Exeter.

Heifers above two and not exceeding three years old, in milk or in calf, bred within the district.—First prize, £7, Marquis of Exeter; second, £5, Hon. and Rev. A. G. Stuart, Cottesmore.

Heifers above one and not exceeding two years old, bred within the district.—First prize, £7, Marquis of Exeter; second, £4, C. Chapman, Brock Farm, Exton.

Heifer calves above six months and not exceeding twelve months old.—First prize, £8, T. Swinger, Langham; second, £3, Marquis of Exeter. Highly commended: S. Stokes, Duddington.

Bulls not exceeding fifteen months old.—First prize, £10, T. Swinger; second, J. H. Casswell, Loughton, Falkingham.

Cows in milk, &c.—First prize, £5, J. Harris, Langham; second, £2, R. Fardell, Cold Overton.

Heifers under three years old.—First prize, £4, J. Harris; second, £2, J. Williamson, Langham.

Heifer calves above six and not exceeding twelve months old.—First prize, £2, J. Harris; second, £1, W. Hackett, Ezzleton. [The three last classes were confined to tenant-occupiers of not more than 30 acres in the district.]

Breeding beasts over two years old, in calf or in milk, shown as extra stock.—First prize, gold medal or 10 gs., C. Speed, Horn Mills, Exton; second, T. Swinger. Highly commended: T. H. Bland, Dingley Grange, Market Harborough.

For the best beast shown in the breeding classes.—Prize, Marquis of Exeter (Telemachus).

#### SHEEP.

Three fat wether sheep of the Leicester breed, one year old (open).—First prize, silver cup or £10, B. Painter, Burley-on-the-Hill; second, £5, Lord Lonsdale.

Three long-wooled fat wether sheep of the Lincoln breed, one year old (open).—First prize, £10, J. Byron, Kirkby-green, Sleaford; second, £5, W. Grimes, Harmston, Lincoln.

Three short-wooled fat wether sheep (open).—First prize, £10, H. R. H. the Prince of Wales, Sandringham; second, £5, G. Street, Maulden, Ampthill.

Three cross-bred long and short-wooled fat wether sheep one year old (open).—First prize, £10, Earl of Lonsdale; second, £5, C. Barge, Weedon.

For the best pen of sheep in the above classes.—Prize, £5, J. Byron.

Four long-wooled breeding ewes, bred within the district.—First prize, £5, Earl of Lonsdale; second, £3, C. J. Bradshaw, Burley-on-the-Hill. Highly commended: T. Close, jun., Barnack.

Four long-wooled theaves, bred and fed within the district.—First prize, £5, T. Close, jun.; second, £3, T. Close, sen., Barnack.

Four long-wooled wether lambs, bred and fed within the district (ram lambs excepted).—First prize, £5, T. Close, sen.; second, £3, Earl of Lonsdale.

Four long-wooled ewe lambs, bred and fed within the district.—First prize, £5, T. Close, jun.; second, £3, T. Close, sen.

For the best pen of sheep in the four previous classes.—Prize, £5, Earl of Lonsdale.

For the best sheep shown as extra stock (open).—First prize, silver medal, value £5, J. Byron; second, S. E. Dean, Dowsby Hall, Falkingham. Highly commended: E. Howard, Nocton Rise, Lincoln.

#### PIGS.

Fat pigs under eighteen months old (open).—First prize, £5, Executors of the late J. Wheeler and Sons, Loug Compton; second, £3, Carver and Sons, Ingarby.

Fat pig under ten months old, not exceeding thirty stone live weight (open).—First prize, the Executors of J. Wheeler and Sons; second, £3, Carver and Sons.

Fat pigs of any weight (occupiers of not less than thirty acres of land in the district).—First prize, £2, W. Martien, Exton; second, J. Harris, Langham.

#### HORSES.

Cart mares, four years old and upwards.—First prize, £5, W. Bradshaw, Harringworth; second, £3, W. Fabling, Burley.

Cart fillies, under four years old, bred within the district.—First prize, £5, J. Snodin, Stonesby; second, £3, R. L. Bradshaw, Ezzleton. Commended: T. Baines, Brook Priory.

Cart horse, above four and under seven years old.—First prize, £5, and second, £3, Lord Aveland. Commended: R. Ward, Harringworth.

Cart colts, under four years old, bred within the district.—First prize, £5, C. Tiptaft, Tinwell; second, £3, J. Fowler, Exton Hall Farm. Commended: G. E. Forster, Uppingham.

Tenant-farmers or tradesmen in the district, for mares adapted for breeding hunters, and in foal by a thoroughbred horse.—First prize, £10, G. S. Smith, Stowe Farm, Stamford; second, £5, G. Goodlife, Belton. Commended: J. S. Hack, Brannston.

Ponies under seven years old, not exceeding thirteen hands high.—First prize, £3, and second, hunting-whip, F. Hawkes, Belgrave, Leicester.

Hunting mares or geldings above four years old, in riding order (open).—First prize, £20, W. Staplee, Oxnay, Peterborough; second, £10, J. Sinceton, Hasbards Bosworth Lodge, Rugby.

Farmers or tradesmen, for four-year-old hunting mares or geldings, in riding order, bred within the district.—First prize, £30, J. Hornsby, Grantham; second, £15, J. Hill, Oundle. Highly commended: J. Drape.

For the best hunting mare or gelding in the two last classes, able to carry fifteen stone to hounds.—An extra prize of £10, J. Hornsby, Grantham.

Farmers or tradesmen, for three-year-old hunting mares or geldings bred within the district.—First prize, £10, J. H. Stokes, North Luffenham; second, £5, J. Drape, Moulton Lodge.

Ditto for riding mares or geldings under seven years old, not exceeding fifteen hands one inch high.—First prize, £10, Major Bowman, Duddington; second, £5, S. Stokes, Duddington.

Mares or geldings for jumping.—First prize, £10, and second, £7, H. Custance, Mantou; third, £3, J. Hill, Oundle.

## CHIPPENHAM AGRICULTURAL ASSOCIATION.

### PRIZE LIST.

JUDGES.—G. Garne, Churchill; C. Howard, Biddeham; J. Treadwell, Winchendon.

#### CATTLE.

Bull, cow, and offspring.—First prize, R. Stratton, The Duffry (Protector, &c.); second prize, J. Smith, Bynoll.

Fat steers, above three years old.—First prize, R. Stratton; second prize, W. Gosling, Coate, Swindon.

Fat steers, under three years old.—First prize, W. Fox Beavan, Woodborough; second prize, R. Stratton. Highly commended: H. Ferris, Manningford Bohun.

Fat cows.—First prize, J. Smith; second prize, O. Viveash, Strensham, Tewkesbury.

Milch cows.—First prize, R. Stratton; second prize, O. Viveash. Highly commended: J. Goulter, Littleton Drove.

Dairy cows, under four years old.—First prize, I. Cox, Whatley; second prize, W. F. Beavan, Woodborough. Highly commended: R. Stratton. Commended: J. Goulter.

Heifers, under 36 months old.—First prize, J. Stratton, Alton Priors; second prize, J. Goulter. Highly commended: T. Hewer, Inglesham.

Heifers, under 24 months old.—First prize, and the Champion O. Viveash; second prize, J. Smith. Highly commended: R. Stratton.

Heifer-calves.—First prize, O. Viveash; second prize, W. Fox Beavan. Commended: R. Stratton; J. Smith.

Bull-calves.—Prize, C. Hobbs, Maisey Hampton. Highly commended: O. Viveash. Commended: —. Spencer, Chalfield.

Balls, under two years old.—Prize, J. Stratton. Highly commended: J. Stratton.

#### SHEEP.

Fat short-wool wethers.—Prize, E. Burbidge, South Wrexall.

Short-wool breeding ewes.—Prize, W. Webb, Thickwood.

Cross-bred ewes.—First prize, J. A. Miles, Stanton; second prize, J. A. Bedford, Marshfield. Commended: J. and J. C. Fry, Marshfield.

## HORSES.

Two-year-old cart gelding or filly.—Prize, J. Goulter. Commended: R. J. Spackman, Broughton Gifford.

Mares and foals.—Prize, W. Ghey, Littleton. Highly commended: J. Hibbard, Stanton. Commended: H. Reynolds, Dauntsey.

## PIGS.

Boars.—First prize, J. Hibbard; second prize, J. Hibbard. Breeding sows.—First prize, R. Spackman, Broughton Gifford; second prize, G. Taylor, Corsham. Highly commended: J. Hibbard.

Two fat pigs, under twelve months old.—Prize, R. Spackman. Highly commended: J. Hibbard.

One fat pig.—Prize, W. Spencer, Chalfield.

EXTRA STOCK.—Commended: W. H. Poynder, Hartham Park, for Southdowns (two pens).

## CENTRAL CHAMBER OF AGRICULTURE.

On Wednesday December 8, a Council meeting was held at the Salisbury Hotel, Lord Hampton, President for 1875, in the chair.

The CHAIRMAN reminded the meeting that the question of the adoption of the report of the Local Taxation Committee, presented to the last meeting, was postponed till that day, and said that, if any one wished to comment upon it, he would now be happy to hear him.

On the motion of Capt. Craigie, the report was adopted.

The Secretary then read the draft of the annual report of the proceedings of the Central Chamber.

Mr. MUNTZ moved, "That this report, as read, be adopted," which was agreed to.

The CHAIRMAN said he must call attention to the words at the conclusion of the report relating to the subject of an interview with the Premier respecting the contagious diseases of animals. His lordship then read the words to which he alluded, commencing, "Mr. Disraeli declined to accord an interview," and extending to the end of the report. That passage, his lordship continued, implied that, because the interview with the Duke of Richmond was not satisfactory, therefore they should decline to go to him again. Well, if that were the opinion of the Council, it would of course be acted upon; but his own opinion was that it would be much better to go to the Duke again. (Loud cries of "No, no," responded to by a "Yes.") He did not think it was quite fair to conclude, because the deputation some time ago was not met in a manner that was satisfactory to them, that another deputation on the same subject, not, perhaps, asking for the same things, would also not meet with a satisfactory reception. In the passage he had just quoted an appeal to Parliament was mentioned as an alternative course, in the event of a deputation not being sent to his grace. He could see no reason why both courses should not be adopted. In the event of the Council deciding to send a deputation to the Duke of Richmond, they would not thereby be precluded from asking some Member of the House of Commons to bring the subject before Parliament. The question now to be decided was, whether they should give up the idea of sending a deputation to the Government because the Prime Minister had taken what was certainly not an unusual or unnatural course—namely, the course of suggesting that they should go to the Lord President of the Council, with whose department the question of the regulations with regard to the contagious diseases of animals rested.

Mr. C. S. READ, M.P., suggested that the letter of Mr. Disraeli should be read before the discussion was proceeded with.

The secretary then read the following:

10, Downing-street, Whitehall,  
9th November, 1875.

Sir,—Mr. Disraeli desires me to acknowledge the receipt of your letter of the 3rd instant, requesting him to receive a deputation from the Central Chamber of Agriculture, for the purpose of submitting a memorial with reference to the Contagious Diseases (Animals) Act of 1869. In reply, I am to inform you that the subject is one which engages the unceasing attention of her Majesty's Government, and I am to suggest that, should the Chamber desire to express its views thereon, the best course will be for the Association to place itself in communication with the Lord President of the Council, who has given much consideration to the question, and whose department is specially entrusted with its care.

I have the honour to be, sir, your obedient servant,

ALGERNON TURNER,

Hon. Secretary of the Central Chamber of Agriculture.

Mr. C. S. READ, M.P., said he rose, not to move a resolution, but simply to ask a question. He wished to learn from the secretary, who, no doubt, had a record on the subject what course the Council pursued on a previous occasion, when Mr. Gladstone, as Prime Minister, refused to receive a deputation, and suggested that they should go again to the Privy Council. He wished to know whether they went to the Privy Council or took any action at all.

The SECRETARY said that on the occasion to which Mr. Read referred the Council declined to go to the Privy Council. There was some very sharp speaking he remembered, and the Council, after a full discussion, considering that they had been decidedly rebuffed by Mr. Gladstone, declined to send a deputation to Mr. Forster, or to take any further action in the matter.

Mr. STRATTON said twice last session he went before the Lord President of the Council—first as part of a deputation from that Chamber, and afterwards as a member of a deputation from Wiltshire Chamber and the chambers of neighbouring western counties, and he had a lively recollection of the way in which the Duke received those deputations. On the first occasion his grace paid very little attention to anything that was said to him; he was making notes or reading during the greater part of the time the members of the deputation were speaking; and when the second deputation went to him a fortnight after, he seemed to be in total ignorance of the documents which had been handed to him at the previous interview, not knowing where they were or what were their contents. He, for one, should decline to form part of any deputation to the Duke of Richmond, and he hoped the Central Chamber would mark its sense of the treatment which it had received by altogether refusing to go to him again.

The CHAIRMAN: Perhaps you will embody your views, Mr. Stratton, in a resolution, and then I can take the decision of the meeting.

Mr. STRATTON, in compliance with his lordship's request, moved the following: "That this Chamber declines to send a deputation to the Lord President of the Council."

Mr. ARKELL, in seconding the resolution, said he was grieved at reading, in one of the morning papers of that day, of the resignation by Mr. Read of his office in the Government. That was a pretty plain proof that Mr. Read, being a farmer himself and knowing the views of farmers respecting the diseases of cattle, was not satisfied with the course pursued by the Government. It was his (Mr. Arkell's) impression that there was something wrong between the Government and the farmers—that there was some power standing between the Government and the farmers which prevented the farmers from getting the remedy for which they had asked, notwithstanding that there was a Conservative Ministry in power with a strong majority. He thought the best course would be for farmers to do nothing, to take no step whatever with regard to cattle disease. The consumers would, perhaps, then cry out, and they would see whether that would produce any effect upon the Government (cheers). Farmers were told that they wanted protection under another name, and that idea seemed so burnt into the minds of consumers that they would not believe anything that farmers said on the subject. He would say let the whole thing go to the winds: the dearer meat became the better (laughter).

Mr. PELL, M.P., said he should like to say a word on that subject, because he had taken a very active part in relation to it in Parliament. He served on a Parliamentary Committee which arrived at a unanimous resolution in reference to the



cattle of Ireland. His opinion on that point had never been shaken; and though he had been a consistent supporter of the Government, he must declare that, in his opinion, they had not shown sound judgment, to say the least, in their treatment of that question. It was impossible that that question could be allowed to remain in its present unsatisfactory position. The Government were not consistent. Either they were doing what was wrong with regard to that mischievous disease pleuro-pneumonia in England, or they were doing what was wrong with regard to it in Ireland. That was not a question on which the Chamber could be apathetic. But now came the question how they were to deal with it. Mr. Disraeli had thought fit, in the exercise of his judgment, which was no doubt superior to that of most people, to decline to receive a deputation. Then came the question whether they should go to the Duke of Richmond. It appeared to him that it would obviously be a waste of time to do so. He thought he had good reasons for saying that. There was, in that room, an old friend of his, lately a distinguished member of the Government, though occupying a subordinate place, who had, to say the least, tested the feeling of the Government on that question. He was sorry, exceedingly sorry, for what had happened: he could wish that his friend's valuable services, clear head, and resolute, honest, and manly disposition were still in a Government office. They all knew that he would remain a firm adherent of his party; but still it was an important fact that the Government had at that critical time parried with him on the question of the treatment of Irish cattle. Was it likely, under the circumstances, that the Department which had the Duke of Richmond for its head would change its course in deference to a deputation from the Chamber? He thought not. Parliament would meet shortly; Mr. Read would no doubt bring the question before Parliament with great ability at the very earliest opportunity, and the Chamber would then have an opportunity of seeing how the representatives of the farmers behaved on that question. He did not believe it was so much a question between English counties and boroughs as it was a question between Ireland and England; but supposing he were mistaken, if the urban powers should beat them they could not help it. Nothing could be more unstatesman-like than the maintenance of the present state of things, under which diseased cattle on one side of the water were killed, and diseased cattle on the other were left to renew, revive, and continue a disorder which, if it continued, must be fatal to English stock.

Mr. Jabez Turner said he was a member of a deputation to the Duke of Richmond on that subject from the Royal Agricultural Society. His grace received the deputation very politely and kindly, but put them off with a promise that the matter should have the early consideration of the Government. They were requested by him not to give undue publicity to the fact of their having waited upon him, because that would lead to a request that he would receive other deputations. Four or five days after a deputation of Irish cattle dealers, Liverpool butchers, and others was introduced to his grace by one of the members for Liverpool. That deputation was on the opposite side, and asked for the removal of the restrictions which then existed, and by some means or other the speakers contrived to get their speeches reported in the daily papers. Under those circumstances, and having regard to the present state of affairs, he was decidedly opposed to the Chamber's sending another deputation to the Duke of Richmond. Further, if any deputation went to any department or minister of the Government they ought to be very careful about what they asked for. His own opinion with regard to quarantine had been rudely and extensively shaken during the last month. On the 29th of October he bought eighteen beasts, and sent them to his farm in Lincolnshire. On the 6th of November he removed nineteen beasts from that farm to another farm in Huntingdonshire, a distance of fifty miles by rail. They were kept in strict quarantine until the 23rd of November. He then removed ten of those beasts to another farm, and placed the rest in winter quarters. On the 27th foot-and-mouth disease broke out on the farm to which the animals were removed, and two days after on that which they had left. Thus there having been seventeen days' careful quarantine the disease manifested itself on the twentieth day. He thought, therefore, that they should be very careful as regarded the period of quarantine for which they asked. The present restrictions operated most injuriously towards English farmers, and he concurred in the opinion that rather than the present system

should be continued it would be better to have no restrictions at all.

Mr. Treadwell believed that the great majority of practical farmers would not endorse the opinion of Mr. Turner that the beasts which he mentioned had the seeds of disease in them for seven or ten days (cheers).

The Chairman thought it was desirable that they should not be led into a discussion on the value of quarantine. The question was whether they should go to the Government.

Mr. C. S. READ, M.P., said he was as strong a party man as any one; when it was necessary to be so, but he had never been a party man in the Chamber, and he hoped the Chamber would not degenerate into a political club. If they would not go to the presiding genius of the Privy Council, Mr. Forster, he did not see how, as fair and reasonable men, they could go to the present head of the Council because he happened to be a Conservative. He believed the resolutions passed on the subject last month was almost identical with those already presented to the Lord President, and he put it to the meeting whether they had any reason to expect a better reception.

A MEMBER thought it was not desirable to go to the Duke on that subject.

Mr. STRATTON: Nor on any subject.

The resolution was then put and carried, after which the Council adjourned till Tuesday, the 8th of February.

The Annual Meeting of the Central Chamber was then held.

The annual report agreed to at the Council meeting having been presented,

The TREASURER (Mr. T. Wilson) read the balance-sheet for the year. It appeared that the receipts, together with the balance standing over from the preceding year, amounted to £555 15s. 1d., and that the disbursements left a balance in hand of £50, against £60 at the end of the previous year. The arrears of subscriptions of Chambers amounted to £62, and the arrears of members to £155. Mr. Wilson said he was sorry to have to state that a large portion of the £155 was made up of arrears extending over several years, and that several members had never made any payment since they were elected.

On the motion of Mr. ADKINS, seconded by Mr. HENLEY, the report was adopted; after which, Mr. Wilson was re-appointed treasurer, and a vote of thanks was given to him for the labour and attention which he had devoted to the accounts.

The meeting then proceeded to choose eight subscription members of the Council in lieu of the same number of retiring members, the result being the election of the following: Mr. C. S. Read, M.P., Mr. A. Pell, M.P., Capt. Craigie, Mr. D. Long, Mr. Jasper More, Mr. Storer, M.P., Mr. P. Phipps, M.P., and Mr. Jabez Turner. Of these gentlemen, Mr. Storer, Mr. Phipps, and Mr. Turner were new subscription members.

The CHAIRMAN then informed the meeting that Mr. Corrance, who at the last Council meeting gave notice of his intention to move on that occasion a resolution relating to local taxation, had written to say that, in consequence of the depth of the snow, he was unable to appear there that day. His lordship added that Mr. Neville-Grenville had intimated that he should propose an amendment, and that he considered that under the circumstances any gentleman present might propose Mr. Corrance's resolution.

Mr. WALKER (Nettinghamshire) said he should be happy to propose the resolution which was to have been proposed by Mr. Corrance—viz.: "That the Council having early in the year recorded its dissatisfaction at the omission of all mention of local taxation from the Queen's speech, this Chamber finds occasion now to express its further and more emphatic dissent from the course pursued by her Majesty's Government during the past Session in reference to this most important subject." About 30 years ago, he (Mr. Walker) contended that the whole system of local taxation was wrong, and pressed most unfairly on the springs of industry; while, as regarded the poor-rate, he held that every man who was not a pauper should contribute according to his ability. At present the poor-rate was a charge on producers, and though all men were consumers, all were not producers.

Mr. RESSON, in seconding the resolution, referred to a recently passed resolution of the Worcester-shire Chamber, which he represented, expressing dissatisfaction and disappointment at the conduct of the Government, in reference to local taxation. That question was, he said, one not merely of policy but of justice. He was a Conservative, and as such had taken an



active part in parliamentary elections; but he considered that the Conservative Government had neglected their duty on that question almost as much as their predecessors, from whom no one expected any relief of local taxation.

Mr. NEVILLE GREENVILLE, M.P., moved the following amendment: "That Her Majesty's Government having recognised the claims of ratepayers, especially by relieving them in the maintenance of lunatics and police, this Chamber looks forward with confidence to Ministers again carefully dealing with the general question of local, financial, and administrative reform." The hon. gentleman said he did not agree with the last speaker, that the Government had shown a complete forgetfulness of all the promises made by them when in opposition. If they had done so he would not have scrupled to vote against them; but as they had on the first opportunity yielded some of the claims of the local taxation reformers, he thought the passing of the resolution before the meeting would be unkind and ungrateful. (Cries of "No, no," and "Hear.") Would those who said "No" affirm that the Government had done nothing for the local taxation reformers? Would they deny that they had taken up two out of three of the points which the reformers had urged upon them? The Government had already dealt with the cost of the lunatics and of the police. Their action with regard to the administration of justice was still looming in the future; but that question involved a complete reform of the whole system of local administration. He deprecated anything that would look like a vote of want of confidence in the Government. They had already got, if not the whole loaf, considerably more than half. ("No, no.")

Mr. C. S. READ, M.P., in seconding the amendment, said he regretted that Mr. Corrance was not there, as he had constantly twitted him about the way in which his official livery fit him, and he would like then to have a round with him. (Laughter.) He considered Mr. Corrance's resolution out of date, unjust, and also ungrateful. The last Government did nothing but impose new burdens, and the very first time the present one had an opportunity they made a contribution towards the relief of local taxation. Some gentlemen present appeared to think that that contribution was not half a loaf; a gentleman who sat near him said it was not even a crumb. At all events, it was a fair slice, and, like Oliver Twist, he was for asking for more, and would expect to receive it. There was no time in the last Session to reconsider that difficult and intricate question. It was a bigish affair, involving, as it did, the reform of the whole system of administration as well as the relief of burdens.

Mr. GARDNER thought that by passing Mr. Corrance's resolution the Chamber would be acting most ungenerously to vote against the present Government. The whole course of action showed that they meant to deal with the subject in a broad and comprehensive manner; and, in this opinion, he considered they ought to give them credit for what they had done, and regard it as an indication of what they would do in the future.

Mr. JASPER MOSE regretted that the advocates of local taxation reform did not accept the offer made by the late Government, through Mr. Goschen, to devote £1,200,000 to the relief of local burdens. They had not received nearly so much from the present Government, and no previous Government ever had such a chance of reducing the pressure of local taxation. In opposition to the opinion of others, he believed that if Mr. Gladstone had not dissolved Parliament in such a hurry he would have brought in such a comprehensive measure as they all wished to see carried.

Mr. W. B. BEACH, M.P., regretted that there should be any discussion with regard to the comparative merits of Government action. The present Government had shown a disposition to deal with that question; but, as Mr. Keir had well reminded them, the reform of local taxation necessarily included administrative reform, and they must be dealt with at the same time. He thought the amendment very fairly embodied the general feeling on that subject.

Mr. MUNZIE did not think they had much to be thankful for as regarded either of the Governments that had been referred to. It was, he thought, reasonable that local taxation reformers should express their opinions in a very decided manner, if they wished to produce an impression on the Government.

After a few words from Mr. Walker in reply, the question was put from the chair; and the result was that the resolution was carried by 19 votes against 15.

Mr. C. S. READ, M.P., said it was the last time that Lord Hampton would occupy the chair, he wished to propose that they should give him a warm and hearty vote of thanks for the able, courageous, and independent manner in which he had presided, and for the courtesy which he had uniformly displayed towards the members' speakers.

The motion having been seconded by Mr. Rosson, and carried by acclamation,

Lord HAMPTON, in thanking the meeting for its vote, said he had always endeavored to act fairly and impartially as chair, and congratulated the Chamber that he was to be succeeded by a gentleman (Mr. W. B. Beach, M.P.) who was so fully competent to fulfil the duties of that office.

The meeting then separated.

## THE ROYAL DUBLIN SOCIETY

### FAT-STOCK SHOW.

If any stranger had dropped into the Agricultural Hall of the Royal Dublin Society during the course of this week, he would have gone away not very favourably impressed with the capabilities of Ireland as a meat-producing country. The show very inadequately represented the resources of the country in that respect. The entries were few in number, and after the prize stock had been selected, those left were generally of an ordinary description, such as may be seen at any time in the Dublin cattle market, with a few so indifferent in point of quality and breeding as to render it somewhat difficult to understand the reason why their owners thought them fit for exhibition in a show of fat stock. There is no doubt that the prevalence of foot-and-mouth disease had much to do with the small show of stock at this time; and the unthrifty appearance of some of the animals exhibited afforded sufficient evidence that they had passed through the disease, and had not recovered their bloom. These remarks apply also to the sheep classes, which were also poorly filled; while eleven animals were all that could be mustered in the class of fat pigs. The poultry formed the redeeming feature of the show, there being not only a large supply, but also much merit in various sections of this department. The show of roots and other kinds of farm produce was scarcely an average; while some of the best lots were, unfortunately, excluded from competition. The outside public did not appear to take much interest in the show, and the attendance was chiefly confined to persons drawn thither by business. In this respect Dublin differs

much from other places where shows of a similar nature are held at this season. Except to those who have a special interest in the matter, there is, perhaps not much to admire in fat bullocks; but poultry and pigs usually attract visitors, and the almost deserted state of the galleries in which the fowl were exhibited was disheartening. There were altogether 51 entries of cattle. The first three classes in the catalogue were made up of cattle which have been finished in the house. Of these the first section was two-year-old oxen, and in this section there were just two entries. Of oxen a year or two years old there were eight entries. Lord Hamilton's ox had been fed on soil, clover, hay, cabbage, Indian meal, and molasses; quantities not stated. The silver cup presented by Mr. Naper to the Society for the best ox in the show was awarded to this animal. In the class of fat cows there were four entries. Major Burton took both first and second prizes. The section of two-year-old fat heifers was a blank, but there were four entries in that of heifers over two years old, and that section included what we are inclined to regard as the cream of the show—namely, two Hereford heifers belonging to and bred by Mr. R. S. Pether (Lough, Backview). Taking them altogether, they might have been exhibited with credit at any show in the United Kingdom. In the out-bred class, the first section in the class being that of "two oxen of any age or breed," the first prize was awarded to a pair of good and large-sized bullocks, four and a half years old, belonging to Mr. Thomas St. George Pepper, Ballygarth Castle, Meath.

These bullocks were solely grass-fed, without the aid of artificial food or hay, and their condition testified plainly to the superior nature of their pasture. Mr. J. A. Farrell's pair of oxen, which got the second prize, had been worked as plough bullocks up to the 12th of March. They were eight years old, and of immense size. The first prize for a single out-fed heifer was awarded to a Shorthorn belonging to Mr. Richard Walsh, fed on huseed-cake, bruised oats, and boiled Indian meal; quantities not stated. The silver cup presented by Mr. J. L. Naper for the best cow or heifer in the show was awarded to Mr. R. Walsh's heifer. Five entries made up the section of long-wooled shearing wethers each pen containing three sheep. Mr. Naper's shearing Shropshire wethers, which got the first and second prizes in their section, were very superior animals, well covered on the back, and mutton to the locks. No aged short-wooled wethers were exhibited. Mr. C. W. Hamilton took the two prizes in the ewe section with very

stylish and well-fed specimens of his well-known flock. In the "all sorts" class, which includes "sheep of any age or breed, not qualified to compete in the foregoing classes," shown in pens of three, there were some entries which should have appeared in other classes, and those were properly passed over. It is difficult to understand why an exhibitor should enter a lot of sheep in one class and another lot of precisely the same description in another class, as not being qualified to compete in that in which the others are entered. We have seen this done before, and prizes awarded to both; but this irregularity was not sanctioned by the stewards and judges at this time. The best pigs exhibited were the York and Cumberland, bred and fed by the Earl of Clonmel and by Mr. J. L. Naper, and Mr. Reynell's Berkshires. The Guardians of the North Dublin Union showed three pigs, a "cross between the Irish and large Berkshire," about seventeen months old.—Abridged from *The Irish Farmer's Gazette*.

## THE IMPORTATION OF FOREIGN CATTLE.

A deputation from the London Trades' Council waited, by appointment, on the Right Hon. W. E. Forster, M.P., in Eccleston-square, for the purpose of obtaining information on the causes contributing to the enhanced price of meat, the restrictions of the Privy Council on foreign importation, and generally to elicit his views and support on the subject of the cattle trade.

Mr. SHIFFTON proceeded to say that the deputation represented thirty and sixty societies and organisations, with many thousand members, who, being greatly irritated by these questions, had requested their Council to take the matter up, so that they might get information on the restrictions imposed on the importation of cattle. They could say positively that the present restrictions on the importation of foreign cattle with regard to the foot-and-mouth disease were entirely futile, and only raised the price of meat in English markets, and gave opportunities to the home producer of increasing the price to the public. They wanted Mr. Forster to help them in understanding the law bearing upon these subjects, after eliciting which, they thought of evoking public opinion with the view of getting the law altered, the restrictions removed, and practical suggestions made to the Government. They thought that importers of foreign cattle would bring an immense number of cattle to this country but for the restrictions, which were, that when one or two cattle were affected in a cargo with the foot-and-mouth disease the whole were condemned for immediate slaughter, thus causing them to send their supplies to other countries and limiting that sent to England; whereas, in the case of cattle from Ireland, if one was found diseased, that one only was slaughtered, and the rest sent abroad to breed contagion among English cattle. There were as many as 100,000 sheep sent to this country from Schleswig-Holstein in one season, so he was informed by a large importer, and the restriction in question retarded importation and limited the supply. In a cargo of 1,000 head of cattle, in one case, one or two were found affected by foot-and-mouth disease, and all the cargo had to be slaughtered, entailing thereby a loss of £3,000 upon the importer.

Mr. FORSTER asked why they considered that that entailed a loss of £3,000? He asked the question because the sheep that came over were no doubt intended for speedy slaughter; they were not for store purposes, and were slaughtered at the Deptford Market rather than at different private places for the purpose in several parts of the Metropolis, and probably as they were nearer the Metropolitan Meat Market.

Mr. ODGER remarked that the animals cost 4s a head more to be slaughtered at Deptford than they otherwise would.

Mr. FORSTER said his impression was that there was exaggeration. He did not say there was not some loss, but Deptford was made with every convenience for slaughtering animals, both in situation and population. He thought that the loss might have arisen from the uncertainty of the market. They were expected to be taken to one market, and were taken to Deptford instead.

Mr. SHIFFTON said the loss arose from the fact that the cargo had to be slaughtered at once, and none but the very largest buyers could compete for their purchase. Those, then, were the men who controlled the market at Deptford. The smaller

buyers were beaten out of the field. The larger buyer put his own price upon them, whereby the public was not benefited and the importer was made a loser.

Mr. FORSTER said the law was at present this: It was in the power of the Privy Council Office to make such regulations with regard to the slaughter of foreign cattle as they thought fit, provided they were either affected with the disease or came in cargoes in which there was disease; therefore there was no doubt whatever that this rule of which they complained was according to the law as contained in the bill which he brought in. Now they came to the policy of the matter. For a time there was a considerable effort to stop the foot-and-mouth disease, altogether in the country. Certain provisions in the act were made which affected animals found travelling with the foot-and-mouth disease, and power was given to the Privy Council to issue further regulations. The result of the investigations of the Committee, of which he was chairman, was, as regarded any home action with the foot-and-mouth disease, that it was no use to let one county do it and another county not do it; and, secondly, that the only measures that would be really effectual would be such an interference with trade and a stoppage of affairs in the market that the remedy would be considerably worse than the disease; in fact, it could not be stamped out without almost as much interference as was done in the case of the cattle plague. And it was felt that the producers of cattle food would not think that worth while. Consequently the recommendation of that Committee was that there should be no attempt to interfere with the disease amongst the home or English cattle except if they were found travelling; and if a man was known to take them to a market with the disease, and carry them along the public highway with the disease, he ought to be fined for it. The Committee did not propose any change with regard to the foreign importation, and he remembered very seriously considering the question in his own mind whether, as they had so much diminished the regulations for home disease, they could not relax the provision with regard to foreign importation, and especially that provision of which the deputation complained. Although it was quite clear that they were treating the foreign importers with much more severity than the home or Irish breeders, yet he could not forget these two facts—first, that every animal with the disease was a centre of infection, and it was undesirable to get more centres of infection brought in from abroad than could be helped; secondly, that unless there was a very stringent Act with regard to animals that came in from the Continent, there was a strong temptation on the part of the foreign producer to ship off his diseased animals. Those were the two feelings which induced him not to propose to the Committee to relax the restrictions, nor did he do so; and there was very little evidence before the Committee on the part of the foreign importers requiring its relaxation. Since that time he was told that the matter had been brought very much before the consumer by the importer, and also before the Government, as to whether the restriction ought to continue or not. They must allow him not to give an opinion on that subject then, for he did not feel that he could thoroughly make up his mind, as he should wish to find out what had been done since he left office before he could give an opinion. He should like

It clearly understood that he was quite of opinion that, in the case of pleuro-pneumonia and sheep-pox, if one animal was affected the whole should be slaughtered. He believed that would be in the interest of the consumer as well as producer in two ways. First, it went to check the disease; and, secondly, induced greater care on the part of foreign importers; and that was the only point on which he had a doubt as to whether he would not maintain the present regulations for the foot-and-mouth disease, it being very desirable to have a great incentive upon the foreign importer to take care.

Mr. SUTTON said they had a thorough belief in the Act, but if it could be shown to be oppressive, he had no doubt Mr. Forster would at some future time be prepared to remove any restrictions.

Mr. FORSTER replied that he would go so far as to say that if the difference in the treatment of the seller of foreign cattle and the seller of home cattle was so very great that it threw the burden of proof upon the foreign importer too much, the

present provisions could not be kept up. He might say that he was not at all surprised at their seeking that in review, considering the present high price of meat, but he did not believe that any one of those restrictions upon the foreign importation had as much to do with it as was generally supposed, nor did he think the partial restriction of slaughtering at Deptford had as much to do with the rise of the price of meat as was imagined. It was rather a remarkable fact that, judging from what had happened of late years, the restrictions did not appear to have diminished the importations in any way. Some interference seemed to be necessary to preserve the country from the effects of disease, but he thought they ought not to interfere one bit more than was necessary; and if those restrictions should turn out to be unnecessary, he would do all he could in Parliament to get them withdrawn.

The deputation thanked the right hon. gentlemen and retired.

## THE LORD PRESIDENT OF THE COUNCIL ON CATTLE DISEASES.

On Wednesday the Duke of Richmond presided at the annual dinner of the West Sussex and Chichester Agricultural Association, held in Chichester city. A command to attend the Queen at Windsor prevented Lord Henry Lennox from being present. The numerous company assembled drank to His Grace the President with much enthusiasm and three times three.

The Duke of RICHMOND, in returning thanks, said there are one or two topics, the avoidance of which by one in my position would naturally excite some surprise on your part, and as they are non-political, there is no reason why I should refrain from advertizing to them in presence of an assembly such as this. The first of them is the Agricultural Holdings Act, to which reference has been made. Now, I shall always look back with satisfaction on the part I was able to take in assisting to pass that Act through Parliament. I was, indeed, very anxious that such a measure should be brought in and carried to a successful issue. And I can assure you that those who are practically unacquainted with such matters know little of the labour, time, and anxiety necessary to be devoted to such a measure before it is fit to be presented to the Legislature. Allusion has been made to the number of amendments in the bill before it passed through the House of Commons. I never was surprised that it was subjected to considerable amendments in the House of Commons; but I am proud that in the House of Lords—an assembly composed principally, it not entirely, of landlords—there should have been such unanimity in favour of such a measure. On both sides of the House of Lords only one feeling was shown, and that was a desire to make the bill as perfect as possible, though it was one not in the interests of the landlords, but that in the tenantry of the country. I have said that it was not surprising to me that amendments should have been made in the House of Commons and for this reason—that the House of Commons is composed of members representing all the different views and multiform agricultural customs that prevail from Northumberland to the Land's End; and, of course, there is scarcely a member in it who does not think that on such a subject he knows something which is not known to his neighbour. Accordingly, there were proposed amendments without end to the Agricultural Holdings Bill—some good and some bad. The Government accepted those which we believed would effect improvements in the bill, but rejected those which, on the contrary, we regarded as bad. The bill came back to the House of Lords amended—very much amended—from the shape in which it had left us; but its principle remained the same, and therefore we are satisfied. The principle of the bill was thus—to establish, and for the first time, a presumption of law in favour of the tenant. That presumption is now law, and what is its effect? That if a tenant lays out money on his holding, and if he ceases to occupy that holding before he has recouped himself for the cost of real improvements effected by him upon it, he is entitled to claim from his landlord compensation for that improvement. To such compensation he had no legal claim before the passing of the Agricultural Holdings Act. That is a great advance in favour of the tenant, and I

rejoice at it. But it has been said to me, by some seriously and by others I hope not seriously, that I may be content, with the change, because all my property is let on lease, and property so let is excepted from the operation of the Act. Now, in the first place, it is not true that all my property is let on lease. I see here present some of my friends who hold from me by lease, and some who have no lease, and who prefer not to hold by lease. For my part I am in favour of leases. I think they are good things, and I have asked those landlords who objected to them what they were afraid of. A lease gives the landlord as well as the tenant security for a given number of years. "But," it may be objected, "I should be afraid of getting a bad tenant." To that my rejoinder is, "Don't take a tenant of whom you are afraid. That is the first thing." There are bad tenants and there are bad landlords, though I hope both are equally scarce in this part of the country. But, if you have a good tenant endeavour to keep him, and the best way to keep him is to give him a lease. If you do so, you give him additional security for the money he lays out on the farm. This additional security is valuable to others as well as to himself, because if he dies, before the expiration of his lease, his widow and children will have a home while the lease lasts, to say the least. Therefore, I say, I am in favour of these leases, and for my part I am prepared to see the clause of the Act which exempts land let on lease expunged from the Statute Book, so far as my personal interests are concerned. I am prepared, if my tenants wish for it, that the whole of my property should be brought within the purview of the Act. This is not the place to make agreements with my tenants; but I should be ashamed of myself if I assisted to pass an Act through Parliament and was not willing to have it applied to every portion of my property in the country. I now come to the cattle diseases, and I may at once say that I do not propose to address you on this subject as the Lord President of the Council, under whose especial care all matters connected with measures against such diseases are now placed; I wish to speak of it rather in my position of a man engaged in the agricultural business of this neighbourhood. If any one should say to me that I regard the question only from the view of a President of the Council, I may, in reply, refer to one or two facts to show that I have a strong personal interest in the extinction of cattle disease, whether the latter be foot-and-mouth disease, pleuro-pneumonia, or that rinderpest which, happily I hope, may now be said to be almost extinguished in this country. I find that in the month of July I had no fewer than 2,397 sheep, which were either down then or had been down with the disease. Fortunately, the disease was not of a bad type, for of that number of sheep I lost only one prize ewe. I had 61 Scotch bullocks affected, and of 57 Alderney stock, 22 which cows were attacked, and of my pigs, 80 failed to escape. I have said that I rather wished to address you as one who had practical experience; but, of course, as Lord President of the Council, I have felt it my duty to take an impartial view of the subject—I mean to look on it as it affects not this or any other locality in particular, but as it affects the whole of the country. Happily, the great mass of the inhabitants of this country are now consumers of

meat; and, in dealing with cattle disease, the consumers must be considered as well as the producers of meat. It is natural, no doubt, that in respect to a matter of this kind there should be great diversity of opinion; and I think I may confidently state that, as regards this question, there is only one single point on which all parties are agreed, and that is that disease exists; but, when you come to inquire as to their views as to the cause of the disease, or the means of checking it, you find the widest divergence of opinion. I am now speaking of the foot-and-mouth disease, and not of pleuro-pneumonia. My hon. and gallant friend (Colonel Barttelot) rather mixed them up, but the two complaints are quite different in their progress and in their results. Well, now, with regard to foot-and-mouth disease, some persons will tell you that the loss caused by it may be estimated to amount to millions sterling, while others assert that the loss caused by it is so trifling as not to be appreciable. The former class of persons are in favour of the most stringent restrictions. Nothing will satisfy them but such restrictions as were in force at the time of the cattle plague; while the latter class argue that there should be no restrictions whatever. There are other persons who hold that the disease is one of foreign importation, and that all animals brought into this country should be slaughtered at the port of debarkation; and others, again, declare that the disease has appeared on farms where foreign cattle never could have come. Then there are those who say that the disease comes from Ireland. I have heard it said that Ireland is the hot-bed of the disease; but when I make inquiries in Ireland, I am informed that there were never so few diseased animals there as at present, and that there is very much more of the disease in this country. It is difficult to come to sound conclusions amid all those conflicting opinions; and it will not do to rush rashly at conclusions which will increase the price of meat and be felt by the consumers all over the country. Each party contends that this will be the effect of adopting the measures which they oppose. I am anxious that the difficulties of the question should be known and appreciated, but, at the same time, I have no wish whatever to shirk the responsibility which attaches to me as the head of the Privy Council Department of the Government. I can say that since the month of February, 1874, when I was called to the office I now hold, the question has been constantly before me, and I have given it my best attention, with the view of adopting a remedy, or the best means of alleviation. The subject has been before me publicly and privately; I have received deputations of all kinds. Indeed, the matter is one to which I have given my most earnest and serious attention. I do not know whether all those who are now present may recollect that a Committee of the House of Commons on this question of cattle disease sat two years ago, before the present Government came into office. It was a Committee of great power, and it was presided over by one of the best men of business in the late Government—Mr. Forster. That committee came to the conclusion that there should be no restriction whatever in respect of foot-and-mouth disease, for that the loss from foot-and-mouth disease was not sufficient to warrant restrictions; so that when I came into office there were no restrictions. I received deputations from Somersetshire, Wiltshire, and, I think, Dorsetshire. They pointed out that the disease existed, and advocated measures for repressing it; but I pointed out the difficulty there would be in carrying out their views, after the report which had been made to the House of Commons, those views being in favour of the reimposition of restrictions which had been taken off. I told them that I could not do that; but they brought to my mind such cogent reasons for some action, that it appeared to me, after giving the subject the best consideration in my power, that the only way out of the difficulty was by an Order in Council enabling local authorities to reimpose such restrictions as might appear to them advisable in their own neighbourhoods. I felt sure that local authorities would not be in favour of restriction unless it were absolutely necessary. I go into these details because it has been stated publicly that the Government have betrayed the trust reposed in them by the agricultural community, and have done nothing to alleviate the effects of the disease. Under the Order in Council, issued in June, 1874, the local authorities were enabled to put in force very strong powers. By Section 57 of the Act their inspectors, or any officer authorised by them, may seize affected animals that are exposed in a market, or fair, or other public place where horses

or animals are commonly exposed for sale, or in any sale-yard, whether public or private, or that are placed in a fair or other place adjacent to or connected with a market or fair; or where animals are commonly placed before exposure for sale, or that are being carried on a railway, or on a canal, river, or other inland navigation, or on a coasting vessel, or that are carried, led, or driven on a highway or thoroughfare; and may remove them to some convenient and isolated place, and may keep them there for such time as the local authority think expedient, and may recover the expenses; and by Article 36 of the Order may prohibit or regulate their movement generally. By Article 36 of the Order they may make regulations to prohibit or regulate the movement out of premises in which the disease has been found to exist, or from any land or building contiguous thereto in the same occupation, of animals that have been in contact with diseased animals, or in the same field, shed, or other premises. They may authorise the movement of diseased animals becoming affected while exposed, &c., as in Section 57 of the Act is mentioned, by licence, either for slaughtering or for feeding, or watering, &c. They may prohibit or regulate the movement on, to, from, and through commons and wastes. They may prevent persons from allowing animals to be driven or to stray into enclosed fields or places without consent of the occupier. They may make regulations to prevent the spreading by means of dogs. They may prohibit or regulate the removal of hay, straw, dung, &c., that has been with an affected animal. They may order the cleansing and disinfection of places used by affected animals. They may require places used for markets, fairs, exhibitions, or sales of animals, or for the lirage of animals, to be cleaned and disinfected at owner's expense. They may prohibit or regulate the removal of carcasses of animals that have died of the disease, and make regulations to secure their burial. I think you will agree with me that those are very strong powers to be possessed by local authorities. I know a case in which a gentleman could not take his dogs out with him when he wanted them for sporting purposes because they had been kept in a place where there was a cow which had been attacked with the foot-and-mouth disease. But in consequence of the representations made to me that a considerable number of diseased cattle were brought over from Ireland, I thought it would be desirable to have a better inspection of cattle vessels trading from that country; and I determined that, in addition to the ordinary inspectors, there should be a travelling inspector, whose duty it should be to go about to inspect lairs, pens, and trucks, and cattle-carrying ships. Such an inspector was appointed, and what has been the result? I have instituted several prosecutions—some of them against great railway companies—for not carrying out, or rather for acting in contravention of the provisions of the Act; and I am happy to say that in no instance in which I have instituted a prosecution have I failed in obtaining a verdict, with costs. One of these prosecutions was against the Great Western, and another against the London and North-Western Company. The latter had to pay a penalty of upwards of £100, besides costs; but I am told it is not the payment of a money penalty, but the being brought under the notice of the public for contravention of the Act, which is felt by railway companies, and the existence of this feeling will go far to secure an observance of the provisions of the Statute. The advantages of those inspections are not to be measured even by all the results they may be expected to have in the case of the particular companies against which verdicts have been obtained. The effect on other companies will prove most salutary in promoting the cleansing of trucks and pens. For instance, I advised the South-Western Company that if, within a given time, they did not comply with the requirements of the Act, I should take proceedings; and in the case of that company and the London and Brighton Company the inspector found everything to be as he could have wished when he visited their premises a second time. Therefore, without ascribing too much to myself, I think that in this matter of additional inspection I adopted a very practical mode of checking the progress of the disease. I doubt very much whether the country would stand what are called "very severe restrictions," for though the disease exists, and everybody wishes to get rid of it, the percentage of deaths is very small. There has been a proposal that we should stop the fairs and markets of the country; but I confess that the Lord President who would attempt that must be a bolder man than I can claim to be. And if I were bold enough to attempt it, I think

my doing so would very much detract from whatever opinion you may entertain of my practical knowledge. Again, I want to know whether, if you stopped all the fairs and markets of the country, you would thereby stamp out the disease. You must remember that when you get those animals to the fairs and markets you have them inspected; but if you stop the fairs and markets you are not going to stop all the selling and buying throughout the country, and animals bought on the premises of owners may be driven away without inspection and disseminate disease in ways which it would be difficult to detect. Another suggested remedy is the slaughter of all imported animals at the port of debarkation. Nothing easier than that. All you require is a body of slaughterers at each port to which cattle are brought; but I would ask those who propose this remedy, "Are you going to slaughter all the store animals which come from abroad as well as the fat ones?" If so, what are our graziers to do? Nobody will get up and assert that we are not in some measure depending on foreign supplies for our stock of store animals. Therefore, I say that a proposition to slaughter at the port of debarkation all animals coming from abroad is one to prohibit the bringing into this country of animals for grazing purposes. But there is another point, and one which much concerns the consumer. I shall not bind myself to exact figures, but I am told that of all the animals brought into London not more than one-half are for London consumption. The remainder are sent to the manufacturing districts, whose productions form the staple trade of this country. I ask, then, would it be possible to slaughter the animals in London, and send their meat to these districts? In warm weather it would be impossible, and therefore the proposition involves a very serious consideration for large masses of the population of this country. But there is a fact in connection with the foot-and-mouth disease which, from what I read, I think must have escaped the notice of many persons. It is this—that if, say, 500 animals landed in this country the disease is found to exist in any one of them, the whole must be slaughtered at the port of debarkation. That appears to me to be a severe restriction—so severe that foreign importers have come to me and asked to have their cattle dealt with in the same way as cattle coming from Ireland. Another proposal which has been made to me is that every animal sent to a market should be there and then slaughtered, so that no animal should go to a second market. Now, I do not think the farmers of this country are prepared to be told that having once sent their animals to market, they must sell them for whatever they may bring, though it may be below the lowest price which they had fixed. The result of all this must, I think, be to show you how very difficult it is to deal with this foot-and-mouth disease, and that the country is not prepared for more restrictive measures than are now in operation. I believe that better inspection, better cleansing, and better disinfection are about the best means of putting an end to the disease. As I have already mentioned, the travelling inspector whom I appointed last year did a great deal of good; and that being so, I thought that if I could have four travelling inspectors, I might, at least, quadruple the good effected by one. I went to the Chancellor of the Exchequer, and I suppose my experience was not peculiar when I found that a demand for money was received by my right hon. friend with a very long face; but he allowed me to appoint the additional inspectors, of whom two have already been appointed. Now, as to pleuro-pneumonia—which I have long regarded as much more serious than foot-and-mouth disease—I think things are more hopeful than they were. It is obvious that I cannot yet obtain the returns for the last quarter of the present year; but the number of cattle returned as having been attacked by the disease in each quarter of the year, 1873, 1874 and 1875 in Great Britain is: 1873—first quarter, 1,280; second, 1,235; third, 1,915; fourth, 2,357. 1874—first quarter, 1,808; second, 2,149; third, 2,402; fourth, 1,381. 1875—first quarter, 1,123; second, 1,353; third, 1,784. With reference to the regulations for meeting the disease, the Committee of the House of Commons recommended the slaughter of all animals attacked with pleuro-pneumonia, and that compensation should be given to the owners. Well, the local authorities were empowered to award to the owner of an animal so slaughtered £20, or one-half the value of the animal; but when revising the orders last summer I thought it necessary to make an alteration, increasing the compensation to £30, or a sum not exceeding three-fourths of the value of the animal, instead of one-half, and I think that was a step

in the right direction. I now come to my last point—the Irish difficulty. As regards the foot-and-mouth disease, we always have been in the habit of treating Ireland as a part of the United Kingdom; but compulsory slaughter is in force in this country, while compulsory slaughter is not in force in Ireland. There are difficulties in the way of enforcing compulsory slaughter in Ireland, and this is not the first occasion on which I have said so, because I referred to these difficulties in my place in Parliament, when replying to a question on the subject put by Lord Kimberley; but I by no means say that those difficulties are insurmountable. I am not forgetful of a saying of my friend the late Mr. Brunel, that difficulties were made only to be surmounted. I must, however, observe that the Orders in Council applying to Ireland are not under my direction, and neither is the Irish Privy Council. The Irish Orders and the Irish Privy Council are under the Irish Government, and there is this difficulty also, that in Ireland there is only one local authority—namely, the Government in Dublin, while in England there are over 400 local authorities. In Ireland the persons who carry out the Act are not gentlemen selected for the duty in consequence of their veterinary knowledge, but policemen. The Irish policeman is the authority who gives the order for an animal to be slaughtered, and the compensation for all animals slaughtered by order of the policeman comes, not out of a local, but out of a general, rate. I hear from persons well acquainted with the country that no great injustice is done to those who contribute to that rate, because some one in the neighbourhood would be sure to make discovery if animals were unduly or improperly slaughtered; but you will readily perceive that the want of a local authority gives rise to difficulties in Ireland which have not to be encountered in carrying out the Act in this country. There are difficulties in Ireland in the way of dealing with compulsory slaughter which do not exist in England; but I quite agree with my hon. and gallant friend (Colonel Barttelot) that this is a state of things which ought not to be allowed to continue. I have been in communication with the Irish Government on this and other points, and have been pointing out the anomaly which exists, in the hope that means may be found for surmounting what I think is a difficulty which ought to be dealt with. I have thought it right to say so much on a subject which I know causes much anxiety in the country, and which, I can assure you, has never ceased to engage the attention, not only of my own department, but of all my colleagues in the Government.

## THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

The monthly meeting of the directors was held at George IV. Bridge, Edinburgh. Present—the Hon. G. R. Vernon; Sir Thomas Buchan Hepburn, Bart.; Sir George Macpherson Grant, Bart.; Professor Balfour, Mr. Erskine, Mr. Gillon, Mr. Milne Home, Mr. Howatson, Mr. Hunter, Mr. Hutchinson, Mr. Irvine, Mr. Johnstone, Mr. Small Keir, Mr. Mackenzie, Mr. Kenneth Mackenzie, C. A.; Mr. Martin, Mr. Munro, Mr. Murray, Mr. Stevenson, Mr. Swinton, Captain Tod, Mr. Walker, Mr. Pettigrew Wilson, Professor Wilson—Mr. Small Keir in the chair.

It was remitted to a committee—consisting of Sir Thomas Buchan Hepburn, Bart., convener; Mr. Pettigrew Wilson, of Polquhairn; Mr. Swinton, of Holywell; and Mr. Walker, of Bowland—to draw up a report for the consideration of the next meeting of the board with reference to the remit from the general meeting in June on the establishment of agricultural experimental stations.

The SECRETARY, in submitting a statement of the funds at the close of the financial year on the 30th November, reported that the books and vouchers had of that date been placed in the hands of Mr. Kenneth Mackenzie, C. A., the Society's auditor.

The report by the committee on office-bearers for 1876 was given in, and the secretary was instructed to communicate with the noblemen and gentlemen suggested to fill the vacancies, which occur in January next, before publishing their names.

The examination of candidates for the bursaries recently established by the Society was held on the 16th November,

when Mr. Alexander Sutherland, Public School, Gersay, Watten, Golspie, passed for a bursary of £20. By the regulations Mr. Sutherland requires to take the classes in the Edinburgh University necessary to qualify for the Society's certificate or diploma. The examiners were Professor Wilson, Professor Balfour, and Dr. William Stirling, of the Edinburgh University.

At the last meeting of the board it was remitted to the committee on general shows to consider and arrange

the premiums to be offered next year at Aberdeen. The committee held its meeting on the 17th November. The list was approved, and will be submitted to a meeting of members to be held in Aberdeen on Friday, December 17th.

The reports by the committees on district shows and on cottages and gardens, detailing the awards at the various competitions held during 1875, and suggesting the districts for 1876, were submitted and approved.

### EAST ABERDEENSHIRE ELECTION.

To the discredit of the tenant-farmers of East Aberdeenshire Mr. George Hope has been defeated by a majority of 345, and Lieutenant-General Sir Alexander Gordon has been sent to Parliament instead. We say to the discredit of the tenant-farmers of that county, because at least two-thirds of the electors are tenant-farmers. What can be done for such men? When they have the best possible opportunity they will not help themselves. There was Mr. Hope, the very man to represent their views in Parliament, and to join Mr. Read, although from the opposite side of the House, in removing the abuses which stand in the way of agricultural progress and prosperity; yet they have rejected him, and have chosen in his stead a gentleman who, for aught we know, may be a very worthy representative of landlords, but who can hardly represent Scottish tenants as Mr. Hope would have represented them. And why? As far as we can yet tell, because Scotch bigotry came in as a disturbing influence, and voters, who had only to consider which of the two candidates before them was the better representative of their political views, imagined that they were members of a Presbytery engaged in a trial of the orthodoxy of two candidates for the ministry of their parish kirk. Mr. Hope, it appears, is not "sound" in his theological opinions—that is, he differs somewhat from the majority of Scotch Calvinists—and so they, with more zeal than logic, have rejected him as their Parliamentary representative. Another reason given for the defeat we cannot place much stress upon. It is that the Liberals engaged no conveyances to take voters to the poll, whilst the

Conservatives hired a great many. Now we know that hundreds of voters in every constituency will not take the least trouble to exercise the privilege of the franchise; but farmers have their own conveyances, and cannot require hired carriages to take them to vote for the man of their choice. Then, as the farmers constitute two-thirds of the voters, we cannot attribute Mr. Hope's failure to the want of hired conveyances, because if the farmers had been wise and courageous he would have had an easy victory without the votes of the poorer classes of electors who require to be driven to the poll. Mr. Hope, no doubt, made a great blunder when he promised to vote for the omission of the clause in the Coronation Oath which binds our Sovereigns to the profession and maintenance of the Protestant religion; but, as that is not in the least likely to be a question of serious debate in Parliament, the electors could have afforded to smile at this fad of their candidate's.

We shall no doubt hear more in explanation of this defeat by-and-by. Perhaps it may turn out that landlordism joined with bigotry in depriving the tenants of East Aberdeenshire of one of the best Members that an agricultural constituency has ever had the chance of electing. We shall look to some other Scotch county to redeem the disgrace that has fallen upon East Aberdeenshire, when an opportunity occurs; but we do not the less feel a sense of humiliation in recording one more wretched blunder on the part of those whose interests we advocate and whose welfare we desire.

### THE DIFFICULTIES OF MODERN FARMING.

It is all very well for farmers of land suitable to permanent pasture to say, when they contemplate the present gloomy prospects of farming as a means of livelihood, "to grass we must go;" but it must not be forgotten that on an immense area of land in this country permanent pasture would hardly pay rent, tithes, and taxes, as at present levied. As a general rule permanent pasture pays only on a rich soil, on low-lying land, or in a moist climate. Now over a large proportion of the land in England, including some of the best wheat-growing districts, not one of these conditions will apply. It is true that good wheat-growing soils are rich in the constituents which produce the cereals, but in many instances they would never make rich pastures. Take the county of Essex for an instance. Some of the land in that county produces as much wheat per acre as is grown anywhere in the country; but look at the pastures. It would probably be difficult to find an acre of meadow land in the county that could fatten a bullock. No doubt Essexmen farm their pastures very badly; but there is some reason, if not excuse, for this. The heavy land will not bear stock for much more than half the year, and the climate of Essex is so dry that no dependence can be placed upon a crop of grass on the light soils. Grass on the clays

might be greatly benefited by draining and heavy manuring, but in a dry summer there would never be a heavy cut. Land that would grow five or six quarters of wheat per acre would not yield half a ton of hay in a season like that of 1868 and two or three similar years of recent experience. In a wet year, when but little corn is produced on these heavy soils, the crop of grass may be bulky, but the quality is generally very inferior. It may be objected that the advice to lay down permanent pasture was never intended to apply to the Eastern Counties, and especially not to Essex, and that farmers who can grow five or six quarters of wheat per acre can have no need to think of any change in their system of farming. In reply to this the heavy-land eastern farmer would say, in the first place, that he only grows good crops of corn in dry summers, and in the second, that his expenses are uncommonly heavy, and their modern increase proportionately so. There is no one who is more tried than he is by the increase of the working expenses of farming, and if he cannot profitably lay his land down to grass, what is he to do? His crops are not much, if any heavier than they were twenty years ago, and prices are lower; whereas his expenses have enormously increased. He only got a fair living then, so he must

obtain something less than a fair one now. For the last ten years at least, the average profits of corn-farming have been exceedingly small, even where there has not been actual loss, and prospects are blacker than ever. Such land as we are referring to is not suitable for stock breeding on an extensive scale, and grazing, as a rule, does not pay. To what quarter, then, should the tenant look for relief? The reply seems obvious—to his landlord. The land is worth less than it was to farm, and rents should come down. Even under the most favourable conditions the conversion of arable land into permanent pasture could seldom be recommended on any other ground than that of a reduction of expenses. The returns would almost invariably be much less, at any rate for many years to come, and for that time, at least, the rent should be reduced. A farmer would think he had done wonders if he succeeded in reducing his working expenses to the extent of a pound an acre over his whole farm; but a very slight alteration in the cropping of his land might result in the reduction of his returns to more than that amount.

There is another way of bringing down the expenses of farming that is far more likely to commend itself to the approval of the farmers of clay land than an attempt to grow grass under unfavourable conditions, and that is a return to the old system of bare fallows. Under that system not only is the cost of labour very much less, but there is less need to spend money in manures. But here, again, we get to smaller returns, and there is still

the question whether the reduction in these would not be proportionately greater than the decrease in the working expenses. In short, a resort to old-fashioned farming, whether in the form of grass-growing instead of corn-culture, or in that of long fallowing in the place of continuous cropping, irresistibly suggests a return to old-fashioned rents.

Of course landlords will be very unwilling to submit to a reduction in rents; and, happily for them, there are other ways of helping many of the tenants out of the difficulties that press upon them, which landlords will find it worth while to consider. It must not be forgotten that a large proportion of the tenant-farmers of this country have never had the chance of making the best of their business. Insecurity of capital, restrictions of cropping and selling, and the devastations of game, have tied the hands and restrained the enterprise of the tenant-farmer. It has not yet been proved that, with a fair field, he cannot meet the increasing expenses of cultivating the land, and, with a manifest decrease in the demand for farms, landlords must be blind if they do not see the prudence of removing the obstructions that they have hampered him with. Parliament, too, can follow up the Agricultural Holdings Act with other reforms that will relieve farmers of many unfair burdens, and so enable them to keep up with the progress of the age in paying their workmen better, and in sustaining the rest of the ever-increasing calls which the conditions of modern life make upon their resources.

### THE TESTIMONIAL TO MR. C. S. READ, M.P.

A meeting of friends and admirers of Mr. Clare Sewell Read, M.P., was held on Monday afternoon, December 22nd, at two o'clock, at the Salisbury Hotel, Fleet-street for the purpose of taking steps towards the presentation of a testimonial to him on account of his services to the agricultural body and the public. The attendance was small, the proceedings being at once of a preliminary and a business character.

On the motion of Mr H. TRETHERY, seconded by Mr. T. HOBLEY, Chairman of the Farmers' Club for 1876, Mr. James Howard was called to the chair.

The CHAIRMAN, in opening the proceedings, said he had great pleasure in accepting that position, and he wished briefly to explain how he came to occupy it. During the cattle show week a number of gentlemen, who met to talk over the matter, unanimously fixed upon himself [Mr. Howard was not present] as the proper person to inaugurate that movement; fully sympathising in the object, he cordially assented to their request, and had taken upon himself to draw up the paragraph which had appeared in the agricultural newspapers. Beyond that, nothing had been done to get up the meeting, because he felt quite sure that nothing was required; the proposal was one which would commend itself to the whole of the agricultural public of England (cheers); therefore, no invitation had been issued to any member either of the House of Commons or of the agricultural body, and perhaps that fact accounted for the attendance not being larger. The promoters of the movement desired, at the outset, to announce that it had no political significance (cheers). Everybody who had watched Mr. Read's career must have been convinced that the time must arrive when his public services would meet with some suitable recognition (Hear, hear). Perhaps the fact of his having retired from the Government in the way that he had done had hastened such a recognition, and he had no doubt that many persons had then begun to ask themselves the question why it had not been done before. He wished it to be understood that they were not commencing this movement simply because Mr. Read had retired from the Government upon a question on which he, in common with agriculturists throughout the kingdom, felt keenly, but because they felt the great value of other services which he had rendered to the public. It would be recollected that it was owing to Mr. Read's public services before

he entered Parliament that the constituency of Norfolk fixed upon him as a suitable man to represent them in the House of Commons; and while he had been in Parliament he had to the utmost of his ability endeavoured to serve the cause of agriculture. Therefore, while they did not wish to dissociate that movement altogether from Mr. Read's retirement from the Government, they wanted it to go forth that the main object of it was to recognise Mr. Read's great public services to agriculture. No doubt there were many men in the House of Commons who could fill Mr. Read's place at the Local Government Board—perhaps, as well as he did; but there were few men who could represent as worthily and as fully as he had done the agriculturists of this country; and, as a coadjutor of his during his (the chairman's) career in Parliament, he could not but rejoice that his friend was now free from the trammels of office (cheers). Having made these few remarks, he would now call upon Mr. Fowler to propose the first resolution.

Mr. J. K. FOWLER, of the Prebendal Farm, Aylesbury, moved the following: "That this meeting recognises the eminent services of Mr. Clare Sewell Read, both in and out of Parliament, and pledges itself to support the movement for presenting him with a suitable acknowledgment of those services." He said he did not know why he had been selected to propose the first resolution, unless it were that he knew Mr. Read for many years before he entered Parliament, and before he became a leading public man; and he was sure he expressed the feeling of everyone in that room when he said that no one scarcely had so well represented the views of the farmers of England (cheers). Mr. Read had, indeed, thoroughly identified himself with agriculture in all its branches; he was eminently a representative man; and how well he represented what was, perhaps, the first agricultural county in the kingdom—he meant Norfolk—was shown by the fact that at the last General Election he was at the head of the poll, while there could be little doubt that the farmers there endorsed the opinion of the great bulk of the farmers of England, by placing him in that proud position (cheers). He agreed with Mr. Howard that the question before the meeting ought not to be regarded as a political one (Hear, hear). They had come there to testify their sense of the great public services rendered by Mr. Read, and at the same time to show that, in their opinion, he still enjoyed the confidence of the agriculturists of this country

(cheers). There could be no doubt that Mr. Read had felt himself very much confined by the channels of office, and that he would now be very much more free to do what he considered best for the interests of the cause which he had so long and so faithfully served (cheers).

Mr. T. HORLEY said he had very great pleasure in seconding the resolution. He believed that movement would prove one of the most popular movements ever set on foot in England in connection with agriculture. From what he knew of the farmers of England, he felt sure that throughout the length and breadth of the land there would be manifested a cordial desire to express admiration of the public conduct of Mr. Read, as exhibited for many years past; and he earnestly hoped that they would be enabled to present him with a testimonial which would not only be intrinsically valuable, but valuable also on account of the great number of names associated with it, and as showing that he still enjoyed the confidence of the farmers of this country.

The resolution was then adopted.

Mr. T. CONGREVE proposed that a committee should be at once formed for the purpose of carrying out the object of the meeting, and added that he was quite sure that the movement would be supported enthusiastically, and be carried to a most successful issue.

Mr. MAJOR-LUCAS, in seconding the motion, said though nothing from him could add to the laurels which Mr. Read had already gained, he could not help bearing his humble testimony to the excellent and efficient manner in which that gentleman had always performed his Parliamentary duties, and remarked that he had retired from the Government honourably and gracefully (cheers).

The motion having been put and carried,

Mr. WISE (Warwickshire) moved that the gentlemen present should form the committee, and should have power to add to their number. He said he felt the highest admiration for Mr. Read, and for his noble and disinterested conduct in retiring from the Government, adding that justice required that, in reference to the conduct of the Government on the question at which he was at issue with them, they should not forget the maxim "*Audi alteram partem.*"

Dr. ADAMS (Suffolk), in seconding the motion, expressed his admiration of Mr. Read's honour and integrity as a politician, and said his practical knowledge of agriculture was such as almost any farmer might envy.

Mr. HAYWARD (also from Suffolk), in supporting the motion, said he considered Mr. Read a man of whom agriculturists might all well be proud. In politics he differed from him entirely, but in that case they had nothing to do with politics—(Hear, hear)—and, highly respecting Mr. Read in other points of view, he felt great pleasure in taking part in that movement (cheers).

The motion was then agreed to.

Mr. H. CHEFFINS, after saying that he had known Mr. Read for many years, and that he highly esteemed him in his public as well as his private capacity, moved that Mr. James Odams should be treasurer of the fund, and said he was sure that in his hands the duties of that office would be well discharged.

Mr. H. TRETHERY, in seconding the motion, observed that Mr. Odams was a gentleman who was so well-known to agriculturists that the bare mention of his name was quite sufficient in connection with such a proposal (Hear, hear).

The motion having been adopted,

Mr. J. ODAMS, in accepting the office of treasurer, expressed his deep regret at the circumstances which had induced Mr. Read to leave the Government, and his cordial concurrence in the object of the meeting.

The CHAIRMAN explained that it had not been sought to place a noble lord or a large landed proprietor at the head of that movement, because it was felt that it would be more pleasant and agreeable to Mr. Read for the movement to be inaugurated by his brother farmers. But at the same time he said it should be remembered that Mr. Read's efforts as a public man had not been confined to the promotion of the interests of tenant-farmers, but that the advancement and the general welfare of agriculture had been his ruling principle throughout his public career (Hear, hear). They all knew that he had rendered eminent services, not only in Parliament, but also at important discussions at meetings of the Chambers of Agriculture in London and the provinces, and that he had told some good plain truths when he was on the Council of the

Royal Agricultural Society; and those present who belonged to the Farmers' Club knew also how valuable were his contributions on subjects connected with practical agriculture, and that not the least valuable were his criticisms on the papers of others. It was on such grounds certainly, not on account of Mr. Read's political opinions (laughter), that he had thrown himself so thoroughly into that movement; he would merely add that, having watched his friend's course most narrowly, he could say of him that he had always been an Agriculturist first and a Conservative after (cheers).

Mr. GRIMMER (Norfolk) said he had taken upon himself the responsibility of convening a meeting in Norfolk in support of that object. Having had the honour of nominating Mr. Read when he was first sent to Parliament as a Norfolk member, he had naturally watched his subsequent conduct with great interest, and he was extremely gratified at the manner in which he had endeavoured to promote the interests of agriculture.

Dr. ADAMS said, having been present at the meeting in Norfolk just referred to, he wished to observe that those who took a leading part in it had no wish for isolated action, their desire being that the testimonial should be of a national character.

Mr. J. K. FOWLER concurred in this view, and hoped that sub-committees would be formed in every county in England, and that the farmers of Scotland would also join in the movement.

The CHAIRMAN also expressed an earnest hope that the movement would be general, and that Norfolk would not act alone, adding that Mr. Read ought not to be looked upon merely as a Norfolk man.

It was then stated that letters expressing approval of the object had been received from Mr. A. Pell, M.P., Mr. Henry Corbet, Mr. J. A. Clarke, Mr. G. F. Muntz, Mr. C. M. Calvecot, Mr. Wakefield, Mr. E. Scriven, Mr. Finby Dun, Mr. R. Robbins, and Mr. Ford, Warwickshire; Mr. Charles Howard, Biddenham, Bedfordshire; Mr. W. D. Everington, Norfolk; Mr. J. Bowen Jones and Mr. Nevet, Shropshire; Mr. S. Beveridge, Oxfordshire; Mr. R. H. MacKen, Staffordshire; Mr. Bryan and Mr. Wortley, Rutlandshire; Mr. Walter Farthing, Devonshire; Mr. Whitaker Wilson, Mr. Joseph Wilson, Mr. Russon, and Mr. T. Boulbee, Worcestershire, and Mr. Stratton, Wiltshire, &c., the last-named gentleman having forwarded a cheque for £25.

On the motion of Mr. T. HORLEY, a cordial vote of thanks was given to Mr. James Howard for pro. seding.

Immediately after the termination of this meeting a committee meeting was held in furtherance of the object.

## CLARE SEWELL READ TESTIMONIAL FUND.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—The committee of this fund, of which Mr. James Howard, of Clapham-park, Bedfordshire, is Chairman, and Mr. James Odams, of the Grange, Bishop Stortford, is Treasurer, have appointed myself as Honorary Secretary, and we have an office at the Salisbury Hotel. The prospectus, together with collecting-cards, will be issued in a day or two; and subscriptions received by the Chairman, Treasurer, or the Honorary Secretary will be acknowledged by letter or by advertisement in the agricultural papers.

Collectors are being appointed in all the counties of England and in Wales, Scotland, and Ireland; and it is believed that a sum of money will be raised worthy of the agriculturists of the kingdom.

May I notify through your columns that I shall be glad to receive prompt communications from gentlemen willing to collect subscriptions in their respective neighbourhoods? It is proposed to complete the fund, if possible, by the end of January.

I have the honour to be, your obedient servant,

JOHN ALGERNON CLARKE, Hon. Sec.

Salisbury Hotel, Fleet-street, London, Dec. 24, 1875.



## REVIEW OF THE CORN TRADE DURING THE PAST MONTH.

November closed with some snow and a wintry aspect, which was soon followed up with unusual severity, till we had fourteen degrees of frost and an unusual covering of snow throughout the country, which, coming at so early a period of the season, appeared like an earnest of the smart winters of former times; but, after one week had passed, these formidable threatenings gave place to a thaw, which gradually became more decided, till the weather was thoroughly open, and the little, but sharp, winter seemed a thing of the past. We are glad to find no harm was done by the recent visit; but as to the sowings in arrears, they seem indefinitely postponed, though we still hope for a better opportunity to get the seed-wheat into the ground. There will be less temptation to plant barley in their stead, from the fact that its price has given way, from its generally stained and inferior quality. No chance has yet been presented for the revival of the wheat trade, though the general deliveries of home produce have been much below last year's, for imports 50 per cent. beyond it have taken place, and filled the London granaries almost to overflowing, and the thaw has not been without its influence, with its damp, and the idea it suggested of further imports before we should be ready for them. Yet, on looking to our averages, the change in prices has been trivial, those of London only giving way 2s. per qr. in the four weeks, while the general averages only a decline of 5d. per qr. In fact, the rates are too low to make holders anxious, while money is so abundant and farmers show so little power to overcharge the markets. It is left, therefore, to time and ordinary consumption to do their gradual work and harden prices as the season advances. Two things are certain; we have had a bad yield and autumnal seed-time, and should there be an unfavourable spring prices must advance, for we have no right to expect our imports will remain on the same scale. There is no superabundance either in Europe or America, but rather a deficiency, and the only country where it exists appears to be South Australia, where the power of export to all places is not expected to exceed one million quarters. With the approach of Christmas and return of mild weather, foreign markets have generally been in sympathy with our own, Odessa excepted, where confidence still exists for the future; and when we consider the high price of meat and low rates for bread, it is evident that a rise of 10s. per qr. would not be enough to make it dear. The following prices have been recently paid at the several places named: The best white wheat at Paris 51s. per qr., at Bordeaux 47s.; Berdianski at Marseilles 49s. 7d.; top price at Bruges 46s.; at Liege the same; at Verviers 48s.; at Brussels 50s.; at Maestricht 47s.; wheat for Mareh at Amsterdam 46s.; at Hambro', c. f. i., 51s.; old at Danzig, c. f. i., 58s., new 55s., c. f. i.; red at Berlin 43s. 6d.; at Cologne 44s. 6d.; at Petersburg 43s. 3d.; at Vienna 44s.; at Stettin 43s.; at Breslau 42s.; Bessarabian at Odessa 44s. 2d., Polish the same, also Sandomirka; at Adelaide 38s., at New York 38s. per 480lbs.

The last Monday in November not being included in previous review, it becomes the first market of the present four weeks. The morning opened on short supplies of English wheat, but with heavy arrivals of foreign—say 67,000 qrs., two-thirds of which were from America and Russia in about equal proportions, and a fair quantity from the Baltic. The weather having become more

frosty the short morning's supply was in rather improved condition, and so made fully the previous rates; but second-rate parcels were not in demand. The foreign trade evinced more activity, and some holders of red were able to obtain a slight advance on previous quotations, but it was grudgingly paid. With but few cargoes off the coast prices were unaltered. The country trade this week evinced more firmness from the improved condition of samples, and several places noted an improvement of 1s. per qr., as Manchester, Newbury, and Louth. Liverpool, though firmer on Tuesday, with a quiet trade, became dull on Friday. Though wheat at Edinburgh was rather against sellers, Glasgow noted increased firmness. At Dublin no change was noted.

On the second Monday there was another short supply of home growth, while the foreign arrivals fell off fully two-thirds. But few fresh samples came from the near counties during the morning, the condition being but moderate. The short supply of fine lots went off at previous Monday's rates, but inferior sorts were difficult to place. In foreign the business was limited, but holders fully maintained quotations. In floating cargoes there was no change. Sharp frost having set in the country markets showed a hardening tendency, and some of them were again 1s. per qr. dearer, though but few, and the business done was not extensive. Wheat on Tuesday at Liverpool brought previous prices, but on Friday it was 1d. to 2d. per cental lower. Edinburgh this week was 1s. dearer, and Glasgow 6d. cheaper; while at Aberdeen there was no change. The Dublin trade was steady, at previous prices.

On the third Monday the English supply was moderate, and the foreign, compared with late imports, much reduced. But few fresh samples appeared on the Essex and Kentish stands, and the condition was deteriorated by the thaw. Even picked lots went off with difficulty at former prices, and in some cases were rather cheaper, the remainder being of irregular value. The foreign trade also, notwithstanding the diminished arrivals, was exceedingly slow, and somewhat lower, where sales were pressed. With many arrivals off the coast, buyers were hoping to buy at some decline. The dull reports from London and very mild damp weather being much against samples, the business in the country was slow, and prices tending downwards, several places noting a decline of 1s. per qr., as Norwich, Halesworth, Great Yarmouth, Birmingham, and Bristol. Liverpool, on Tuesday, was 1d. to 2d. cheaper per cental, and on Friday a like decline was reported. Edinburgh and Leith were without change, but Glasgow was down about 1s. per qr. Dublin was dull on Tuesday, and 6d. cheaper on Friday's market.

On the fourth Monday the English supplies were moderate, while the foreign were considerably increased; India importing most, and America the next largest quantity. The morning's supplies from Essex and Kent were very scanty, and the condition damaged by the damp mild weather, but there was too little on show for factors to lower the rates, though business was very slow, even in the best samples. The foreign trade seemed in suspense, no one pressing sales, and scarcely any buyers making inquiry. Cargoes afloat were unaltered.

The arrivals in London for four weeks were, in English wheat, 21,493 qrs., in foreign 154,106 qrs., against 28,501 qrs. English, 63,376 qrs., foreign for the same time last year. The imports into the kingdom for four weeks,

ending Dec. 11th were 4,334,023 cwt. wheat, 417,581 cwt. flour, against 2,174,109 cwt. wheat, 390,719 cwt. flour in 1874. The London exports for four weeks were 1,889 qrs. The London averages commenced at 47s. 9d., and closed at 47s. 7d. The general averages opened at 47s., and finished at 46s. 7d. per qr.

The flour trade during the month has been very dull, but prices have kept nominally at the former range, Norfolks made of old wheat still being held at 34s. per sack, and the higher grades in proportion, and town millers keeping the top price at 47s.; while in Paris they have been selling their best marks at about 38s.; but we grant the flour there has much less strength than our own. As to American barrels it is the same as with our own samples—fine qualities, made of last year's wheat, being readily saleable at 26s., but inferior new were difficult to place at 1s. to 2s. less. The late change to muggy mild weather has added to the difficulty of sales, none but the best being likely to keep in condition. The month's arrivals were, in country sorts, 87,090 sacks, in foreign 7,793 sacks 20,837 barrels, against 77,151 sacks country, 12,474 sacks 24,550 barrels foreign in 1874.

With only moderate arrivals of British Barley, prices have all through the month been declining, most of the samples being discolored as compared with former years, so that secondary sorts have declined 2s. to 3s. per qr., and have become quite of uncertain value, and in France rates have given way, but their best samples have become only worth 34s. free on board, and were difficult to place; but anything really fine does not wait long for a customer, and grinding qualities, with moderate exports, have scarcely given way at all, being relatively cheaper than oats—say 25s. to 26s. per qr. for 50 lbs. weight per bushel, while malting sorts keep inferior; we do not expect they can rally. The imports into London were 15,248 qrs. British, 39,127 qrs. foreign, against 3,112 qrs. British, 55,741 qrs. foreign in 1874.

The malt trade, in sympathy with barley, has been languid, with prices somewhat easier, say 66s. for the best new, and 69s. for fine old; with stocks increasing, and more anxiety to sell, we seem likely to be yet cheaper.

Maize at the commencement of the month, from short supplies, advanced for two successive markets, but eventually nearly lost as much, having round sorts worth 33s. to 34s., and flat 32s. to 33s. 6d. It may be that the largeness of the new crop has thus pressed on prices, and prevented any advance on old, while grinding barley remained cheap. The London imports for the month were 14,728 qrs., against 15,856 qrs. for the same time last year.

The oat trade has continued to fluctuate with the state of the weather and the supplies. At the beginning of the month, with sharp frost, though the arrivals were considerable, prices were moving upwards, say 6d. per qr.; but on the third Monday, with a change to mild weather, and larger quantity on offer, rates gave way 6d. on Russian qualities, and 1s. on new Swedes. This reduction, however, brought so many buyers to market that new sorts nearly recovered their position, 38 lbs. weight per bushel being worth 22s. 6d. to 23s., and 40 lbs. 25s.; and Russian sorts, though not dearer, kept their value pretty well, as but few more were expected. The imports into London for four weeks were in English sorts 3,118 qrs., Scotch 669 qrs., Irish 25 qrs., foreign 255,737 qrs. against 1,565 qrs. Irish, 231,417 qrs. foreign last year.

English Beans have been only in moderate supply, but foreign arrivals have been good; yet this corn has been singularly firm, and rather dearer, while everything else has been dull and declining. The chief reason seems to have been the extent of a country demand during the

frost; but now this has gone prices have been fairly maintained. Fine old small English are worth 54s. to 56s., Mazagans 46s., fine Harrows 50s., Egyptian 43s., Italian 47s. Should cold weather return, as stocks are only moderate, prices may yet harden. The imports into London for the four weeks were in English 4,371 qrs., in foreign 13,535 qrs., against 5,025 qrs. English, 1,825 qrs. foreign in 1874.

As to peas, the crop of which was decidedly short and of inferior quality, the supplies have been less than those of beans, and consisted mostly of hog-feeding sorts, which were held high—say 42s. per qr., and the best white boilers to 45s. The frost did not last long enough to stimulate the demand for such, but as good Canadian have been offering at 42s. and 43s., they would of course come first into request, and may yet be wanted before winter is over, which would cause an advance. The imports into London for four weeks were 3,612 qrs. English, 14,076 qrs. foreign, against 3,380 qrs. English, 9,197 qrs. foreign for the same period last year.

Linseed has been advancing, and obtained 1s. more money, but lately unusual imports from India have about brought it to its former level, though stocks having long been short the arrivals were wanted, and their temporary pressure must soon disappear. The imports into London were 63,294 qrs., against 14,581 qrs. in 1874.

The cloverseed trade has been steadily improving as to red sorts for some time, the foreign arrivals consisting chiefly of fine French and a little German, the value of which from the first quotations has been raised 10s. per cwt., with a firmness at the close, from the non-appearance of English samples and unfavourable advices from America as to the crop, so that but little is now expected from that quarter.

Foreign spring tares have been advancing here and in Hambro', and though Christmas and mild weather have slackened the demand, we expect in the spring they will be dear.

LONDON AVERAGES.

Wheat.....	2,333 qrs.	48s.	7d.
Barley.....	1,155 "	37s.	6d.
Oats.....	—	—s.	0d.

COMPARATIVE AVERAGES.

Years.	WHEAT.			BARLEY.			OATS.		
	Qrs.	s.	d.	Qrs.	s.	d.	Qrs.	s.	d.
1871...	69,214½	55	8	87,623½	36	9	6,612½	23	0
1872...	63,274½	56	3	71,277½	41	2	5,750½	23	2
1873...	56,610½	61	7	83,744½	44	7	3,642½	26	3
1874...	66,345½	45	1	97,830½	44	7	4,076½	29	8
1875...	50,736	46	7	76,467½	35	4	4,580½	24	10

FLUCTUATIONS in the AVERAGE PRICE of WHEAT

PRICE.	Nov. 13.	Nov. 20.	Nov. 27.	Dec. 4.	Dec. 11.	Dec. 18.
47s. 8d.	...	...	...	...	...	...
47s. 0d.	...	...	...	...	...	...
46s. 8d.	...	...	...	...	...	...
46s. 7d.	...	...	...	...	...	...
46s. 1d.	...	...	...	...	...	...

FOREIGN GRAIN ENTERED FOR HOME CONSUMPTION DURING THE WEEK ENDING DEC 18.

Wheat.....	cwts. 220136	Peas.....	cwts. 655 <sup>3</sup>
Barley.....	" 23280	Maize.....	" 5065 <sup>3</sup>
Oats.....	" 224185	Flour.....	" 2203 <sup>3</sup>
Beans.....	" 5296		

# THE FARMER'S MAGAZINE.

VOLUME THE FORTY-EIGHTH.

THIRD SERIES.

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No. 2, Vol. XLVIII.]

FEBRUARY, 1876.

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AND

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OF

THE AGRICULTURAL INTEREST.

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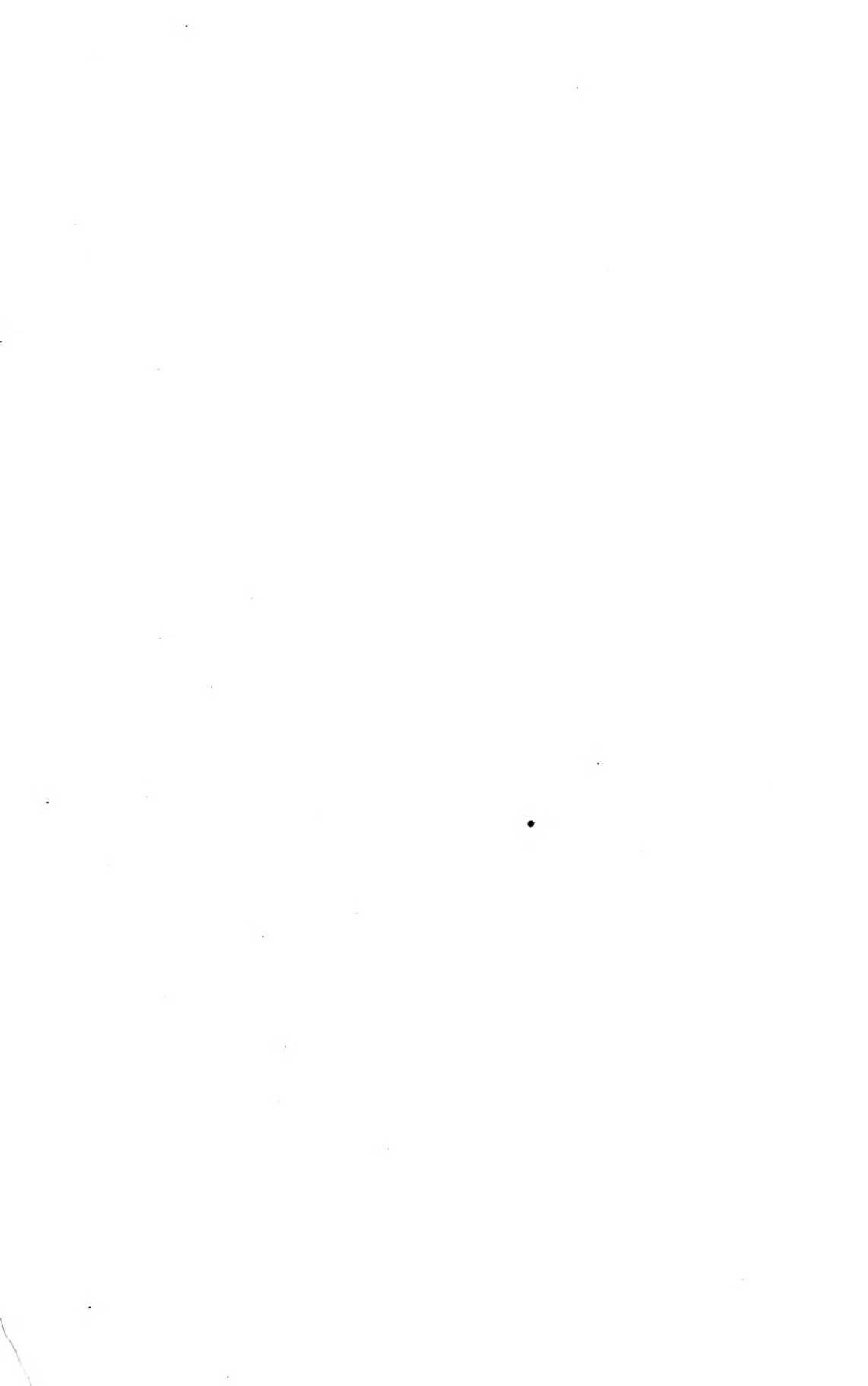
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*Master, Red*

# THE FARMER'S MAGAZINE.

FEBRUARY, 1876.

PLATE.

MASTER ROBIN: A ROYAL PRIZE DEVON BULL.

THE PROPERTY OF MR. WALTER FARTHING, OF STOWEY COURT, BRIDGWATER, SOMERSET.

## BENEFIT SOCIETIES.

The discussion which followed the reading of a paper on Benefit Societies by Mr. James Round, M.P., at the last meeting of the Essex Chamber of Agriculture, reported in our last number, turned chiefly upon the question of the establishment of a National Society, with funds guaranteed by Government, and under State control. The views of those who advocated the formation of such a society were summarised in the following resolution, moved as an amendment to a resolution proposed by the reader of the paper: "That a National Benefit Society be established under Government authority, whereby all may make provision against old age or sickness, with a certainty of enjoying what they make provision for; thereby enabling the Poor-law to be more strictly enforced, and out-door relief to a great extent abolished." This amendment was carried; but upon being afterwards put as a substantive resolution it was lost, owing to the fact that many of its supporters had left the room. Now we cannot suppose that many of those who supported this amendment had sufficiently studied the subject with which it dealt, so as to have become acquainted with the objections and difficulties which stand in the way of the adoption of the proposed plan. These obstacles were briefly stated by Colonel Brise and Mr. Round, who referred their hearers to the Fourth Report of the Friendly Societies' Commission, published in 1875, for a more complete statement of the arguments against the establishment of a National Society. It was upon this Report that the Friendly Societies Act passed last Session was chiefly based; and those who are interested in the subject, and do not object to the hard labour of wading through a Blue-book of portentous dimensions, will find that it contains an immense amount of valuable information. The objections to a National Society under the control of the Government are, however, very briefly given; and a more complete statement of them must be looked for in the evidence given before the Commission. It will be seen that they

OLD SERIES.

are chiefly raised against the undertaking by Government of what is termed the "sick business" of a benefit society and that the Commissioners expressed themselves strongly in favour of an extension of the system of Government life assurance and deferred annuities already established in connection with the Post-office, but, unfortunately, little known and used. It is said that if the Government undertook to administer sickness-relief to members of a National Society, it would be impossible to prevent imposition. It is further objected that the great object of fostering a spirit of independence amongst the people would be endangered by removing all responsibility as to the provisions which they take for securing relief in sickness by subscribing to societies of their own choosing. Lastly, the Commissioners urge that "it would be difficult, if not impossible, at present to organise any system of Government sick assurance which would not carry with it something of the appearance of a relief system;" and they believe that, "while this would render it distasteful to many most deserving classes, it would rather tend to familiarise another class with the idea of looking to the State for support in time of need, and thus to break down the barrier of honourable pride which now deters many from claiming assistance from the poor-rates."

Now it appears to us that only the first of the above objections to Government assurance for sickness-relief possesses any force, nor are we sure that even that is sufficient to outweigh the advantages of such a system. The difficulty of preventing shamming would, no doubt, be great, just as it is for the existing benefit societies. When it is said that the officers of district clubs dwell amongst and know the members, and are, therefore, in a better position for detecting imposition, it should not be forgotten that these officers are often on friendly terms with the members, or, if not intimate with them, are yet indisposed to be over-strict with neighbours. As for the larger associations, such as the Odd Fellows and the

Foresters, they are in much the same position with respect to the detection of fraud as the Government officials would be in it a National Society were established. There is no doubt that benefit societies are defrauded to an immense extent by the "maingerins" of unprincipled members. But in one respect we think that a National Society would be in a better position for checking this abuse than the private societies now occupy. Many of the smaller clubs have no medical officers, and those that have them exercise hardly any control over their discretionary powers. But, under a State institution, paid officers would be appointed; and it might be made a condition of accepting the post of medical officer that all members in receipt of sick-pay should be visited twice a week, and that an officer should be liable to a fine for any flagrant case of neglect or of a certificate of inability to work wrongly given.

With respect to the second objection of the Commissioners, above quoted, we entirely fail to see how it can make any difference to the feeling of independence in a man whether he assures against sickness in a State society or in a private one, especially as in most of the existing clubs there are many honorary members, whose subscriptions are simply charitable contributions. A similar reply might be made to the third objection of the Commissioners. They have, however, on their side the opinions of many gentlemen whose wide experience gives authority to their judgment—such as Mr. Stansfeld, Mr. Sendamore, Mr. Sotherton-Esteourt, Mr. E. Rendle, and Mr. W. Travers.

On the other hand, the advocates of a Government Society have at least an equal array of high authorities in their favour. A memorial in favour of the extension of the Government annuity system, addressed to the Commissioners, was signed by the Archbishops of Canterbury and York, six bishops, seventeen peers, thirty-five members of Parliament, thirty-seven chairmen and eight deputy-chairmen of Boards of Guardians, fifty two justices of the peace, about ninety clergymen not included in previous categories, and by other gentlemen, and some ladies who take a great interest in public affairs and the welfare of the poorer classes. Such names as those of Lord Lyttelton, Lord Shaftesbury, Sir Baldwin Leighton, Sir Charles Trevelyan, Sir James Hannan, Mr. Cowper-Temple, Mr. H. S. Trevelyan, Mr. Gathorn Hardy, Mr. Slater Booth, Mr. Thomas Hughes, Mr. James Howard, Mr. Mundella, Mr. T. B. L. Baker, the Rev. Brooke Lambert, the Rev. J. Y. Stratton, the Rev. G. R. Portal, Miss Martineau, and Miss Emily Faithfull will alone be considered sufficient to give countenance to any new scheme. The memorial which they signed, after briefly setting forth the desirability of the plan advocated, expresses the opinion that the alleged difficulties relating to sickness-pay will be found to have been exaggerated. Amongst the advantages of a National Society enumerated in the evidence given before the Commissioners are these: "The greatly-enlarged basis would give a more certain average. The disturbing influence of unhealthy trades and unhealthy neighbourhoods would be less felt. Members moving from one district to another would be able without inconvenience to keep up their insurances." But by far the most important benefit of such a society would be its perfect security. There is nothing so discouraging to providence on the part of the poor as the want of confidence in the security of the benefit clubs produced by the failure of so many of them in the past. No doubt the strict regulations to which registered societies are now subjected will do a great deal to keep them in a sound financial position, but nothing can give adequate security to a large number of societies competing one against the other. With the best of rules, any of them

may be brought to grief by the falling-off of new members, by inefficient superintendence or want of zeal on the part of the officers. When it is seriously proposed by influential members of both Houses of Parliament, supported by an increasing number of the outside public, that out-door relief shall before long be put an end to, the necessity of providing perfect security, if possible, for those who will thus be thrown upon their own resources is obvious. It is true that there are some who say that it is best to leave people to take care of themselves, and to use their own discretion in the choice of a means of investment for their savings; but, after inculcating the lesson of dependence upon the poor-rate for so many generations, it would be cruel to cast the poor suddenly adrift, and say, "Look out for yourselves, or expect nothing but the workhouse." Those who advocate such a plan must be perfectly well aware that the poor do not know how to take care of themselves in the selection of an insurance society, and also that if they make what at the time is considered a wise choice, their confidence may turn out to have been misplaced when the time comes for availing themselves of the benefit of their providence. Nothing has been shown more clearly during the last few years than the fact that educated people and men of the world make the most absurd mistakes in the investment of their savings; and what, then, can we look for amongst ignorant men totally unacquainted with commercial concerns, and not even able to understand a balance-sheet, still less a table of calculations as to reserved capital and liabilities? The abolition of out-door relief—perhaps of our Poor-law system in its entirety—is only a question of time; and when the time comes, if the poor have not been prepared for it by having been offered the means of securely insuring themselves against destitution in sickness and old age, a vast and deplorable amount of hardship will be inflicted, and a reaction will, in all probability, follow which will put off the effectual reform of our system of poor relief for another generation. We are of opinion, then, that the plan of a National Benefit Society, under Government authority, and consequently with a State guarantee, deserves a greater amount of consideration than it has yet received. The difficulties which are opposed to it may be great, but we have not yet had sufficient reasons brought before us to lead us to admit that they are insuperable. If the plan should be more generally discussed, as we think it probably will be during the present year, more light may be thrown upon the subject, and public opinion may thus be able to pronounce decisively upon a question with respect to which our political and social doctors at present disagree. We venture to suggest that Farmers' Clubs, Chambers of Agriculture, and Boards of Guardians can scarcely find a more useful and interesting subject for their deliberations.

#### STAFFORDSHIRE CHAMBER OF AGRICULTURE.—

The annual meeting was held at Stafford, on the 15th inst., Mr. R. H. Masfen, the vice-president, in the chair. The annual report of the committee lamented the small attendance of members at the meetings held during the past year, at which very important matters had been under discussion. The members were urged to give more personal attention to the business of the Chamber, because "as long as those who profess belief in the efficacy of such institutions exhibit indifference to their operations, it would be difficult to convince outsiders of the value of such an organisation." The finances of the Chamber were in a satisfactory condition, there being a balance of £107 5s. 9d. in the hands of the treasurer, and subscriptions due £33 15s. The Chamber now consisted of 345 members. The Chairman said persons who declined to come forward and assist such associations as theirs with an



annual payment of 5s. should not forget the result of their agitation on the question of local taxation, which had resulted in the Government assisting the local rates to the extent of two millions annually. He regretted that the attendance was not so good at the meetings as it ought to be. He was afraid tenant-farmers had not sufficient confidence in themselves. The Chairman proposed that Mr. J. Brawn be president and Mr. W. T. Carrington vice-president. The proposition was carried. The Chairman referred to the Clare Sewell Read testimonial and remarked that Mr. Read's successor in office was present

at that meeting. He was sorry that Mr. Read should have found it necessary to tender his resignation to the Government. He had no doubt that the courage which had visited the cattle during the past autumn had induced Mr. Read to put more pressure on Mr. Disraeli than he liked. He trusted that Mr. Salt would be that, if pressure was necessary, he had an additional weapon placed in his hands which Mr. Read did not possess. Subscriptions of £12 and £10 were voted to the Central Chamber and the Local Taxation Committee.

## THE RELIEF OF THE POOR IN RUSSIA.

In order to form any correct notion of the measures taken for the relief of the poor in Russia, it is necessary to consider, not only the character of the population, but its economical condition, compared with that of the lower classes of other countries. The empire in Europe is roughly estimated to number seventy-two million persons, and between the inhabitants of the rural and urban districts there exists a marked difference. The population of the towns may be set down at eight and a-half millions, or, more correctly, at six, if one excepts those towns that have less than ten thousand persons, which are, in fact, nothing but large villages dignified, for administrative purposes, by the name of "towns." A very large proportion in the chief cities, more especially St. Petersburg and Moscow, have only a temporary domicile in them; and these chiefly consist of peasants who have migrated from the country, and who, having left their families there, repair to the towns in order to seek employment.

Absolute pauperism among the peasants, who constitute the great bulk of the Russian population, is to a great extent obviated by the communal system of land tenure, the ease with which work can be obtained, and the great extent of unoccupied Crown land. The standard of comfort is, however, exceedingly low, and the inhabitants of country villages, who are able only to eke out a bare subsistence when the harvest is good, are obliged to throw themselves on the charity of neighbouring districts. When the harvest fails the younger men of the villages are sent off to distances in order to find work, and a few become beggars on the high-road, and appeal to the charity of the more fortunate in parts where the crops may not have suffered. Over-population is another cause of destitution; and in such cases the Government steps forward and, by offering uncultivated Crown lands for colonisation, relieves the plethora, and restores the village to a normal condition.

Prior to the emancipation of the serfs, the landlord was bound to feed them. Besides this, from the year 1775 to 1864, there existed in the chief town of every province a society for the relief of the poor, composed of representatives of the three classes of nobles, townsmen, and villagers, and administering a funded capital which was originally supplied from private gifts and Imperial subsidies, and from certain privileges conferred on them by the Government. They were thus enabled to build orphan and lunatic asylums, hospitals, almshouses, and prisons. Most of them were erected in the provincial towns, for, curiously enough, the Russian peasant revolted against availing himself of the proceeds of public charity, preferring to live and die, under any circumstances, in his natal spot. In 1864 a new system of local government was introduced, and representative assemblies, called "zemstvos," composed of landowners and holders of land under the communal institutions, were established. To them all funds and establishments for the relief of the poor were confided; and they were empowered to levy various taxes. They act quite independently of one another, and

in accordance with local exigencies only. "It would be difficult," says Mr. Ford, in his contribution to these inquiries about the pauperism of other countries, "to state precisely what the result has been of the new system, or to enumerate the benefits that have been derived by handing over to the 'zemstvos' the charge of the poor of the country. Suffice it to say, that the different 'zemstvos' throughout Russia act quite independently one of the other, and consult only the best means of meeting local exigencies. Within the last few years, thanks to that great social reform the emancipation of the serf, the general prosperity of the country is believed to have increased."

The peasants in Russia flock periodically to the towns in search of employment, leaving their families in the country, but rejoining them after a few months' residence in the towns. Certainly one-half of the population of St. Petersburg is recruited from the adjoining provinces, the amount of the floating population being principally determined by the state of the labour market. When the harvest is bad and provisions scarce in the provinces, the peasants flock to St. Petersburg; and so great is the demand for hands that employment is generally found for them all. For the relief and classification of beggars a society exists, the members being for the most part nominated by Government, and the institution is entirely under Government control. They investigate the cases of persons charged with begging by the police, and either send them back to their communes, relieve them in almshouses, or hand them over to the magistrates. The Government also partially controls the Grand Philanthropic Society, which is under the direction of the metropolitan of St. Petersburg. The members of the Council are selected from the great dignitaries of the empire, and the number of persons taking part in the working of the institution amounts to 1,000. Branch Committees for the relief of the poor sit in seven towns. This Society supports almshouses and schools, and grants medicines to the poor. Of late years parochial charities have been established by voluntary agency to provide for cases which could not be met by the Imperial Society. These charities grant relief in money and kind, schooling, and maintenance in almshouses. The parishes are divided into districts, under the care of guardians, who visit and report on the cases of all applicants for relief to the working Committees. These parochial societies appear to work independently of one another, and depend entirely on private subscriptions.

In Odessa the relief of the poor is left almost entirely to private charity; but the municipality have under their charge a hospital for the insane, blind, and crippled, an orphanage, and an establishment for deserted children. In the Baltic provinces a general Poor-law exists only in rural parishes, the inhabitants of each town being allowed to frame their own regulations for the relief of the poor. Every rural parish is bound to provide for the support and medical assistance of every destitute person who has been resident in the parish for fifteen years, and whose relations are

unable to maintain him. It must also provide for lunatics, but some assistance is given by the Provincial Government when the number of this class is excessive. In the town of Riga unpaid officers are chosen from time to time for the care and maintenance of the poor. These officers are supplied with money to pay the paupers who receive regular relief; and may relieve cases of urgent necessity, reporting the fact to the Central Committee. The ministers of the several churches also bring cases of destitution under the notice of the Committee. A tax for the relief of the poor is annually imposed by an alderman, who is charged with the duty, on all owners of property within the city limits, and on all burghers. The mendicancy of the country has decreased of late years, and no

deaths from famine have been reported; but the present system enables great numbers of people who are not in want to share the relief meant for the destitute. Each community of taxpayers is bound to support its own poor, and the relations of paupers are liable for the expense of their maintenance. An Ecclesiastical Board also administers relief, principally to members of the Evangelical and Lutheran bodies, but not entirely excluding members of other denominations.

The writer of the report remarks that free gifts to the poor have been found not to be beneficial, and recourse has, therefore, been had more and more to national means of support, such as improved dwellings, gifts of medicine, and assistance in working.

## LARGE AND SMALL FARMS.

The current number of the *Fortnightly Review* contains an interesting paper on "The Channel Islands and Land Tenure," from the pen of the Rev. F. Barham Zincke, a writer who has previously published a valuable work on Switzerland. The article is a notable contribution to the much-debated controversy on the comparative advantages of the large and small-farm systems. Mr. Zincke has been spending a month in the Channel Islands, and during that time he has traversed them for the most part on foot, with a view to making observations upon and inquiry into the condition, mode of life, and industry of the inhabitants. The result of his survey is a very favourable impression of the prosperity of these islands, and of the farm system under which they live. He found hardly any pauperism, and remarks upon the fact that a police-force was not required to keep the people in order, and to protect property, although the lower requirements of labour are to a great extent supplied by emigration from Ireland, England, and France. These undoubted advantages, Mr. Zincke thinks, are mainly attributable to the extensive distribution of property, and to the habits of order and economy thereby fostered. He says: "Where all may hope, and this cannot be unless the land be accessible to all, industry and thrift will be general; and they go a long way towards preventing pauperism and diminishing crime, which is, in many cases, the direct result of hereditary hopeless poverty." We shall presently show that, in our opinion, Mr. Zincke attributes the exceptional prosperity of these people too much to their system of land tenure, and too little to the great natural advantages of their soil and climate, to the fact of the islands being a resort for holiday visitors and a dwelling-place for numbers of persons of independent property, and to the constitutional thrift of the inhabitants.

Mr. Zincke begins by comparing the Channel Islands with the Isle of Wight, which he thinks is somewhat similar in soil and climate. The area of the Channel Islands is 48,038 acres, and the population in 1871 was returned at 89,504; whilst the Isle of Wight, with an area of 86,810 acres, contained at the same period only 66,219 persons. In comparing these figures, attention is called to the fact that a considerable portion of the land in the islands is quite irreclaimable; but we should suppose that at least an equal portion of the Isle of Wight is occupied by the towns and other pleasure resorts. Mr. Zincke, however, admits that mere density of population is no advantage, because it may result from a contented habitation to a poor mode of life in respect of food, clothing, fuel, and housing; but of this, he says, there is no indication in the Channel Islands, all that one sees of them speaking of "sufficiency, ease, and prosperity throughout all classes." We may here, however, call attention to the well-known fact that in com-

paring the condition of any of the Continental peasantry with that of our own labourers, appearances are somewhat misleading, as one of the former will make a much better show of being well-to-do than one of the latter, although his earnings may be much less; and we should have been glad if Mr. Zincke could have given us some information as to the income of the Channel Islands. We admit that mere money receipts are not the best criterion of the prosperity of a people; but they are, to say the least, a very important consideration in a comparison of the economic advantages of different systems of land tenure. If we go further, and allow for the sake of argument that the peasant-farmers of the Channel Islands are much better off than the labourers of the Isle of Wight, it by no means follows that the inequality would be equalised, or even altered, by giving the latter, as far as possible, the same opportunities as the former possess. There are so many things which have to do with being well-off, that nothing but experience in a given country and with a given people can afford satisfactory evidence of the advantages of a particular system of land tenure and culture. We must also further make the still more important objection that the comparison of the Isle of Wight with the Channel Islands is not well chosen. Our English island is one of the most delightful pleasure resorts and sanitariums for our teeming population; and to turn it into market-gardens would be simply a barbarism. Besides this, we are not by any means prepared to admit that either in soil or climate the Isle of Wight has equal advantages with the Channel Islands. A much more fair comparison might be made between the Islands and some parts of Devonshire; and in that case we believe Mr. Zincke would have arrived at a very different conclusion. The soil and climate of some parts of Devonshire, like those of the Channel Islands, are admirably suited to the growth of early vegetables and fruit, and we know, from the fact that as much as £14 per acre are paid as rent in some instances, that the land must be very highly cultivated and the produce enormous.

Mr. Zincke dwells at some length, and with somewhat disproportionate emphasis, we think, upon the existence of markets for the sale of vegetables, fruit, poultry, eggs, milk, and butter in every locality of the islands and generally throughout the Continent; whereas in England these general markets, even in our towns, have, to a great extent, fallen into disuse. Surely Mr. Zincke does not maintain that markets create the demand for commodities, instead of demand creating the markets. The fact that these markets once existed in our towns, and have since fallen into disuse, seems to show that they were not sufficiently supported, the chief reason of which, we believe, is that most of the market-gardeners have shops for the sale of their produce, and customers find it more

convenient to go the nearest shop than to a central market. Mr. Zincke says that we can have no good general markets in our towns now, "because the peasant-proprietors have been extinguished;" but if the few peasant-properties which have been absorbed in large farms failed to hold their own, is it reasonable to suppose that the many would succeed? It is true that many small properties in the suburbs of our towns have been sold for building purposes, and that the difficulty of purchasing more land in the neighbourhood is in many cases severely felt. It is no part of our object to uphold the evils which belong to our system of landowning, and as far as the difficulty of obtaining land where its want is felt goes, we are quite with Mr. Zincke in his desire for a reform of our land system; but if he supposes that, if the sale and transfer of land were as free and cheap here as it is in most other countries, a multitude of peasant-farmers would find as ready a market for their garden produce, their poultry, eggs, pork, milk, and butter, we must join issue with him. Of milk, butter, and eggs there is no doubt a scarcity, which we should be glad to see supplied; but neither pork, poultry, nor vegetables pay their producers very handsomely, and an increased supply would soon render them a drug on the market. The mere increase of supplies would not make the English a vegetable-eating people; and if minute farms were common in this country, the cultivators would have to rely mainly upon the production of corn and meat for their subsistence, and these can be much more economically produced under the large-farm system. In our villages nearly all the inhabitants grow their own vegetables and fruit, and any attempt to maintain general markets in even the largest of them would be a dead failure. The scarcity of milk and fresh butter, especially of the former, is no doubt a serious inconvenience in our arable districts. For this reason we would gladly see a few small farms dotted here and there all over the country. To the peasant-farmer, whose wife would be dairy-maid and poultry-keeper, it would pay very well to sell milk, butter, and eggs, and even poultry. The man could devote himself to the production of vegetables, fruit, and food for his cows and pigs, and the two together would be able, under existing circumstances, to make a fair living; but it is obvious that only a limited number of such producers would find a paying market for their wares. England is not, like the Channel Islands, a great pleasure resort and dwelling-place for a large proportion of people who are consumers only, nor are many parts of it anything like as well suited for this kind of husbandry. In market-gardening it is the early bird that picks up the worm, and the farmers of our Eastern and Northern Counties would in vain endeavour to compete with Devonshire or Jersey. The very unsuitability of the land and climate of this country for the early production of vegetables and poultry, and for the perfect ripening of the more delicate kinds of fruit, is one of the chief causes of the exceptional prosperity of the Channel-Island farmers.

We cannot, then, agree to take England and the Channel Islands as instances of the comparative advantages of the large and small-farm systems. The comparisons that have previously been drawn between this country and France, Holland, and Belgium, are more to the purpose; and we believe that in all the inquiries that have been made by competent persons it has been found that, both in regard to gross produce and to the earnings of the peasantry, England compares favourably with these and all other continental countries. In a careful and elaborate paper on "The Large and Small Farm System," read by Mr. H. M. Jenkins before the Farmers' Club three years ago, it was conclusively shown that more food per acre was produced in Great Britain than in either France, Holland, or Belgium. As to the earnings of the cultivators of the land, Mr. James Howard, in his

"Continental Farming and Peasantry," has shown that in nearly all parts of the Continent of Europe the wages of farm-labourers are lower than in this country; and he came to the conclusion that a considerable proportion of the peasant-proprietors earn less than an average British labourer, although at certain seasons they may almost be said to work night and day.

We cannot on the present occasion enter more in detail into this question. We are with Mr. Zincke when he advocates the removal of all artificial obstructions to the easy sale and cheap transfer of land. By all means let the large and small-farm systems have a fair field and no favour, and we have no fear that our large agricultural factories will have to make way for little workshops. We go even thus far with Mr. Zincke—that we would gladly see a limited number of small farms distributed over the country—say two or three in a parish of average size, because these would not only be profitable to the cultivators and useful to the community as sources of supply for milk, butter, eggs, poultry, vegetables, and fruit, but they would also be stepping-stones of advancement in life for the more prudent and industrious of the labourers. But the *petite culture* will never be general in this country, simply because it would not pay as well as our present system with all its imperfections. Let us only have security of capital and freedom of cultivation for the farmers of this country, and our large-farm system, with the aid of improved machinery, will show itself to be capable of results that have never yet been attained in any country under the sun.

**SHORTHORN SALES**—Shorthorn sales are becoming almost as "sensational" as those of thoroughbred yearlings were a short time since, and it is no uncommon thing for an animal of the Bates or Booth blood, each of which strains has its respective admirers and even champions, to be sold for a price equal to that which a Derby winner would have realised a few years ago. From comparative tables of the results of these sales during the past year in Great Britain and America, which are published in the abstract of the *Agricultural Gazette*, it appears that the total amounts realised at these sales were almost the same for both countries. The returns refer only to the sales of "pedigree Shorthorns"—that is to say, of animals inscribed in the Herd-book, which is for cattle what the Stud-book is for the turf; and from them we learn that, while the 65 sales held in Great Britain yielded a total of £228,985 16s. 6d., the 57 sales in America amounted to £204,799 6s. 10d. Each of the American sales amounted, upon an average, to £3,593, as against £3,599 for each of the English sales; but the advantage does not, in reality, remain with American breeders, for though right fewer sales were held there, the number of animals disposed of was within ten of those sold at home. The 2,549 Shorthorns sold in America averaged £79 each, and the 2,599 sold in Great Britain £87 each. The largest total realised at any one sale was £12,919 16s., for which 84 animals belonging to the late Mr. Torr, a Lincolnshire farmer, were disposed of in September. The highest price given at this sale was 2,160 guineas, and the average for the whole lot was 4510 lbs. Still more remarkable was a sale held in Scotland a week previously, when 39 animals, the property of Lord Dunmore, fetched £26,223 15s. This gives an average of £672 8s. for each animal, one of which went for 4,500 guineas. At a third sale 34 animals fetched more than £10,000, and there were several others at which the total was over £7,000, and the average over £200. The most successful sale held in America was that at which 33 Shorthorns fetched £18,531 15s. 5d., with an average of £402 19s. 0d. for the whole number, one of them reaching £3,225. At two other sales in America totals of rather more than £10,000 were obtained for 35 and for 33 lots, the average in the two cases being slightly over and under £300. These figures may be left to speak for themselves; but it is impossible to avoid the suspicion that purchasers will not, in the long run, get the best of the bargain.—*Fall Mall Gazette*.

## THE ITALIAN THEORY OF RELIEF OF THE POOR.

In Italy there is no legal provision for the support of the poor. The obligation to maintain a person is declared by the Civil Code to rest, first, on the husband or wife; in the second place, on the descendants, in the order in which they would inherit from the person to be maintained; then, again, on the ascendants, and, lastly, on the brothers or sisters. The support to be furnished must be in proportion to the need of the person claiming it, and to the wealth of the person who is bound to give it. Every province is bound to provide for the care and maintenance of pauper lunatics, and to share with the several communes belonging to it the expense of supporting foundlings, in proportion varying according to local circumstances. In some parts of Italy, however, by custom or by virtue of regulations made by former governments, communes still bear certain other charges. In Lombardy, for instance, they defray the expense, either wholly or in part, of maintaining incurable patients in hospitals or at home. In Tuscany deficiencies of hospital revenues are, as a rule, made up by contributions from the different communes, in proportion to the number of patients sent by each to be treated in the hospitals. The contributions of the communes towards the maintenance of foundlings amounted, in 1869, to 4,168,333 francs and in 1870 to 4,137,649 francs.

In Rome, under the late Pontifical Government, there existed a general system of poor relief, introduced not long after the restoration of Pius VII., and subsequently modified by Leo XII. The administration was confided to a commission composed of a Cardinal-president and fifteen members, the Treasurer-General of the Chamber, the Pope's Almoner, and twelve deputies appointed for a term of six years. The city was divided into twelve regions, each region into parishes, and presided over by local boards who served gratuitously. An annual sum of 1,350,135 francs was placed at the disposal of the Relief Commission, which also received about 58,600 francs derived from duties, in grants, from bequests, theatrical benefits, police fines, alms collected in churches, and contributions from newly-created cardinals. Employment, for the most part nominal, in public works, was another mode in which assistance was given to the indigent. In the Pontificate of Leo XII. each person so employed received 20 bajocchi—equivalent to about 10d.—a day, besides a loaf of bread, and on festivals double that amount, with a proportion of meat and bread. Pius VIII. allotted for this object 500 scudi a week. Gregory XVI. increased this expenditure until it reached the amount of 52,000 scudi, or not quite 270,000 francs, annually. In 1868 it was 196,165 francs. Originally, a recommendation from the president of the relief board to the region to which an applicant belonged was sufficient to enable him to obtain assistance in this way, but the number of persons employed became at last so large that it was found necessary to adopt some restrictive rules for admission.

Large provision is made in many parts of Italy for the support of the poor by charitable foundations, some of which are very old. The oldest of these foundations, of which the dates are known, are—in Piedmont, five of the thirteenth century; in Lombardy, one of the eleventh; in Liguria, one of the fourteenth; in Venetia, three of the thirteenth; in Umbria and the Marches, one of the thirteenth; in Emilia, one of the twelfth; in the Abruzzi and Molise, one of the thirteenth; in Campania, two of the twelfth; in Basilicata, two of the sixteenth; in Calabria, five of the sixteenth; in Sardinia, five of the

seventeenth century. Another very common form of charity deserves notice. Foundations, the sole and primary purpose of which is to provide what are called "marriage-fortunes" for poor girls, are very numerous. The sums so given are usually small.

It is calculated that there are about 800 hospitals in the kingdom of Italy. Except in the southern provinces, where extensive districts are entirely unprovided with them, hospitals are to be found in almost all the chief towns of provinces and districts, and in a great many places of minor importance. The comparative scarcity of almshouses, workhouses for mendicants, and the like, is attributed to the abundance of the endowments for the relief of the poor at home. Within the last few years, however, almshouses for old people have been founded in many places either by voluntary contributions or by grants from provinces and communes. The numbers of orphan asylums and charitable institutions for the care of girls are thus stated: 43 in Piedmont, 3 in Sardinia, 61 in Lombardy, 36 in Venetia, 9 in Emilia, 105 in Umbria and the Marches, 27 in Tuscany, 136 in Campania, 8 in the Abruzzi and Molise, 10 in Calabria, 10 in Basilicata, 81 in Sicily. There are besides in existence various asylums for the blind, deaf and dumb, &c., &c., and other charitable institutions of different kinds.

In Rome, where charitable relief has been carried to its *ne plus ultra*, we are enabled to learn the practical effect of its working upon the people. Cardinal Morichini records a series of ineffectual endeavours to repress mendicancy in that city which were made by several popes since the middle of the sixteenth century. Pius V. issued a bull prohibiting begging in churches under the severest penalties. Gregory XIII. charged the arch-confraternity of the Holy Trinity with the duty of clearing Rome of beggars. The measures adopted proved quite inefficacious, as appears from a bull in which, a few years later, Sixtus V. declared that the public places, private houses, and churches were filled with unfortunate and clamorous beggars, who wandered about the city without having any fixed abode, without religious instruction, and seeking nothing but food. The desired result, however, was far from being obtained. The strongest regulations against mendicancy, and the edicts of Pius VII. and Leo XII., were as fruitless as those of former popes. A singular old custom still existed in 1870, whereby a chosen band of forty beggars received special licence to take post outside the doors of churches during the solemnity called "The Forty Hours," and the devout had to pass on every such occasion between two long rows of vociferous mendicants, whose clamour even disturbed the prayers of the congregation within. Sir A. Paget quotes from a work by Mr. Fane, one of the highest authorities on matters relating to the condition of the poorer classes in Italy. This writer, describing the squalor and destitution of a large proportion of the peasantry and artisan population, says: "But if we ought to make war implacably upon idleness and ignorance, because with us, as in all other nations, they are the first and chief causes of misery, the growth of that misery in our country is in a great measure due to those very institutions which were created for its suppression—the magnificent palaces which rise up on all sides in our cities to give refuge to suffering humanity. The result of this individual charity is that the property devoted to the relief of the poor amounts in every town to enormous sums, which are swallowed up without profit, even if they do not produce injury and shame. In Italy there

are 1,365,341 indigent persons; but no system of legal charity exists. But the multitude of charitable institutions, their mode of administration, their great wealth, and the imprudent manner in which their funds are frequently applied, are vices which have for us the same effects as those of legal charity, if not worse. One of the evils in which there is the greatest abundance of wretches who live upon charity, is our future capital."

The theory here advanced that the profession of public charity is one of the principal causes of pauperism, does not, however, appear to hold good. Subsequent statistics show that, in 1861, the means provided for the relief of want and suffering of all kinds were

smallest in those parts of Italy where the misery of the population has always, in modern times, been greatest; while usually the most prosperous regions possessed the largest endowments, not only absolutely, but relatively to the number of inhabitants. A general concurrence of testimony seems to establish the fact that distress is greatest amongst the peasantry in most parts; and it is certain that the rural districts throughout the country are those in which the provision for the assistance of the poor is least. In very many of them, indeed, there is none whatever, and in those where public charity in any form is exercised, it is frequently confined to the distribution of the most paltry doles.

## THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

At the last monthly meeting of the directors of this society, held in their chambers, 3, George IV. Bridge, Mr. Small Keir, of Kintreagan, in the chair,

The SECRETARY stated that, as instructed at the last meeting of the board, he had written to the Foreign Office on the subject of the prices charged by the Peruvian Government for guano in this country and in the United States, and that he had received the following answer:

Foreign Office, December 10, 1875.

Sir,—I am directed by the Earl of Derby to acknowledge the receipt of your letter of the 2nd inst., relative to the prices charged by the Peruvian Government on guano exported to Great Britain and the United States, and I am, in reply, to acquaint you that it appears, from a report on the subject by her Majesty's Minister at Lima, that the apparently favourable conditions under which guano has hitherto been supplied to the United States by the company which formerly had the exclusive sale of that manure in North America, were granted for the purpose of enabling the company to clear off their stocks rapidly, and thus permit the Peruvian Government to commence open sales of guano; those conditions were, moreover, accorded on account of the heavy advances made by the company to the Peruvian Government. I am to add that her Majesty's Minister has been instructed to take steps with a view of securing to Great Britain the treatment of the most favoured nation in this matter. I am, sir, your most obedient humble servant,

T. V. LISTER.

### The Secretary of the Highland and Agricultural Society.

The following are the names of the noblemen and gentlemen to be proposed by the directors at the general meeting on the 19th inst., to fill the vacancies in the list for 1876: Vice-Presidents: Earl of Strathmore; Earl of Kintyre; Earl of Aberdeen; Earl of Fife. K.T. Ordinary Directors: Sir John M. Joribanks, of Less, Bart.; James Cochrane, Little Haddo, Aberdeen; Robert Coglesrud, Mill of Ardlehen, Ellon; Thomas Ferguson, Kinlochtry, Coupar-Angus; Andrew Gilson, Wallhouse; Alexander Forbes Irvine, Drum; James Townsend Oswald, Dunnickier; Adam Smith, Stevenson Mains, Haddington. Extraordinary Directors: The Lord Provost of Aberdeen; Sir James Horn Barneit, Bart., Leys; Sir John Ogilby, Bart., Invercherry; Sir William Forbes, Bart., Craigievar; Sir James Dalrymple Horn Elphinstone, Bart., M.P., Horne and Logie Elphinstone; Sir Thomas Gladstone, Bart., Fasque; Robert William Duff, M.P., Peterhead; Lieutenant Colonel George Ferguson, Pitouir; John Gordon, Cluny; Lieutenant-Colonel William M'Inroy, The Burn.

Mr. HOWATSON of Dornel gave notice, in accordance with his intimation to last meeting of directors, and in terms of the bye laws, that he would make the following motion at the general meeting on the 19th current:—"That the recommendation by the directors in their report on the chemical department and agricultural education to the general meeting in January last relating to the discontinuance of the free issue of the Transactions to members be rescinded, and that the gratis issue to members on application be continued."

The SECRETARY read the report of the committee, which narrated (1) what took place at former meetings on this subject, including the resolution by the general meeting on the 21st January, 1874, approving of the proceedings, and

authorising the directors to take the necessary steps for selling the present property on George IV. Bridge, and acquiring premises in the New Town; (2) that an offer had been made of an house in George-street, which the committee were unanimously of opinion would be an eligible site for a hall for the society, and recommending the same to the directors for their favourable consideration.

On the motion of Mr. WALKER of Bowland, seconded by Mr. STEWART of Inghinston, the board approved of the report of the committee, and remitted to the general meeting to decide whether the proposed purchase shall be made or not, with an expression of opinion on the part of the directors that the site of the house in George-street is desirable, and the price fair; and that if the society's chambers are to be moved to a suitable position in the New Town, the expense of making the change will in all probability be increased by further delay.

The programme of business to be brought before the anniversary general meeting on Wednesday the 19th current was arranged as follows:—Election of members; election of office-bearers; accounts of the society for 1874-75; accounts of the Argyll Naval Fund for 1874-75; hall and chambers; thanks to be voted to local committee, &c., of the late show at Glasgow; arrangements for the Aberdeen show in 1876; requisition from Edinburgh district for show in 1877; district competitions; cottage competitions; motion by Mr. Howatson of Dornel as to free issue of Transactions; contents of volume 8 chemical department; agricultural education veterinary department; agricultural reports; forestry department; ordnance survey; foot-and-mouth disease.

The list of candidates for admission as members at the general meeting was submitted; and the secretary stated that additional names could be received up to the morning of the 19th.

Abstracts of the accounts for 1871-75 were submitted and signed, in terms of the bye-laws, by two members of the Finance Committee and by the auditor.

The following report by the Special Committee was read:—*Remit to Committee.*—"It was remitted to a committee—consisting of Sir Thomas Buchan Hepburn, Bart., convener; Mr. Pettigrew Wilson of Polquhairs; Mr. Saffron, Holywell Bank; and Mr. Walker of Bowland—to draw up a report for the consideration of the next meeting of the Board with reference to the resolution by the general meeting in June on the establishment of agricultural experimental stations."

*Documents Submitted to Committee.*—1. Report to General Meeting, 16th June 1875. 2. Resolution by General Meeting. 3. Proposals by Colonel Innes of Learney. 4. Letter from Mr. Macdonald, Cluny Castle. 5. Proceedings of the Aberdeenshire Agricultural Association.

*Report by Committee.*—In terms of the above remit, your committee met on the 22nd of December, when the various documents were taken up *seriatim*, and received the most careful consideration.

Your committee find that the report to the general meeting was in the following terms: "The report by the directors on the chemical department made to the general meeting on the 20th of January last having been remitted back to the board for further consideration, with instructions to bring a report in June, the directors, at their first meeting in 1876—namely, on 3rd February—referred the subject to a special committee to make suggestions. That committee, after several

meetings, made a report to the board. On the 7th of April the directors ordered the report to be printed and circulated among them, previous to its being brought up for consideration at their meeting on the 5th of May. On that day the directors resumed consideration of the remit from the general meeting with the suggestions from the special committee. They now beg to recommend as follows: That, considering the advantages which have already been derived from chemistry in its application to agriculture, it is expedient to reorganise a chemical department under the cognisance of the Society, for the purpose of conducting investigations on all subjects relating to agriculture. That, in connection therewith, a series of carefully-conducted experiments in the open ground be instituted. That for these purposes a chemist, who shall reside in Edinburgh, and an agricultural inspector be appointed at fixed salaries. That the chemical department be under the control of the directors and the chemist. That the duties of the chemist shall be: To conduct investigations, researches, and experiments on such subjects connected with agricultural chemistry which may be necessary, and prepare an annual report of the same for the 'Society's Transactions.' To institute a series of carefully-conducted field experiments. To make all the necessary analyses required for such experiments. To examine the records or reports of the field experiments kept by the agricultural inspector, draw conclusions from them, taking into consideration the meteorological condition of the station, and prepare them for publication in the 'Society's Transactions.' To report the work done in the laboratory to the half-yearly general meetings of the Society, and, in analysing for members of the Society, to report any cases of gross adulterations of manures or feeding-stuffs that may have come under his notice. That the field experiments, or open-ground practical work, be under the inspection of the agricultural inspector, whose duties shall be: To superintend and conduct all field experiments undertaken by the society. To be responsible for the proper cultivation of the land, and see that when experiments are alike, uniformly, as far as possible, be observed at all the stations. To keep complete records of the experiments during their progress and to their completion, noting the peculiarities of soil, climate, altitude, and rainfall, and the mode in which the land has been worked. To furnish the chemist from time to time with copies of these records. The directors find that the society has at its disposal for the purposes chemical department and field experiments a sum of £700, which they recommend should be set aside for a period of seven years. In carrying out this recommendation they suggest that the £700 should be expended as follow—

Chemist's salary .....	£300	0	0
Agricultural inspector's salary .....	150	0	0
Travelling expenses of inspector.....	50	0	3
Amount for stations—say four of about five acres each .....	200	0	0
	£700	0	0

After appointing a qualified chemist and an agricultural inspector competent to institute and carry on such experimental stations, it will be the first duty of the directors to make the necessary arrangements with proprietors or tenants for the use of suitable land in different districts of Scotland for a term of years, and for the services of the workpeople and horses on the farms for the proper cultivation of the land, providing all manures, seeds, &c., required for experiment. It will afterwards be the duty of the chemist and the agricultural inspector to frame and complete a detailed scheme on the methods of conducting stations fitted to the different localities where they are to be placed, and on the objects which should first be made subjects of research, and submit the same to the directors. The memorial adopted at the general meeting in January last to the President of the Board of Trade, urging on the Government the expediency of establishing agricultural experimental stations in different districts of Scotland, was duly forwarded, but the directors at their meeting in February resolved to ask the Board of Trade to delay submitting it for the consideration of her Majesty's Government, as they were then preparing the scheme now suggested, and which they thought should accompany the memorial. To this request the Board of Trade readily complied. The directors now consider that it would be advisable that a deputation from the society should wait on Government to submit this scheme and explain their views in greater detail than was done in the memorial.

They trust, from the great value and importance of the subject, that Government will be disposed to provide for the scheme the same sum as the society, or a larger amount, in which case the society would be enabled to have a greater number of experimental stations, and on a more extended scale." To the above report your committee can see no possible objection, though no doubt there are details which the directors may find it necessary to rearrange; but at present they do not see any reason to alter it.

The resolution passed by the general meeting on 16th June was in the following terms: "The meeting having had submitted to it by the directors a report on the chemical department, approves of the arrangements, in so far as explained in the report, for organising and carrying on experimental stations of the kind described in the Society's memorial to the Board of Trade, and for a period of seven years, if the directors and Society see fit; but disapproves of the proposal contained in the report to appoint a chemist for the Society it being understood that whenever chemical analyses are required, or chemical advice wished for in connection with the experimental stations or otherwise, the directors are empowered to employ or consult qualified agricultural chemists practising in any part of the country." Your committee are glad that the general meeting approved of the organization and carrying on of agricultural experimental stations. They cannot, however, help expressing their regret at the result of the vote taken at the general meeting, whereby it was resolved by the small majority of three to discontinue the services of a permanent chemist attached to the Society—an office which had existed for twenty-eight years. Your committee would add that the resolution had been in substance previously moved at a meeting of directors, and negatived by all the members except the mover. No doubt the resolution gives the directors power to employ the services of chemists resident in any part of the country when required. But your committee cannot recommend the adoption of these experimental stations without in the first place selecting a chemist thoroughly trained in scientific research, whose duties it shall be, along with the agricultural inspector, to confer with the directors, or a committee of them appointed for the purpose, in drawing up the regulations and conditions under which these stations are to be conducted, and who, from being an officer of the Society, would take a deep and lively interest in their success. By the resolution which approves of part of the directors' report, they are required to institute a system of experimental investigations at several stations to be selected by them, with the view of testing the relative values of different climates, soils, and modes of cultivation, manuring, cropping, &c. This was precisely what the directors proposed to do, guided and aided by a scientific chemist in whom they would have confidence, but the resolution referred to debars them from engaging the continuous services of such an officer. Now, both at the very outset and throughout the whole of their proceedings in this matter, it appears to your committee that the board requires the constant advice of a chemist who shall be responsible for the scientific conduct and results of the experiments to be undertaken. Such an officer would be required to ascertain among other facts—(1) the constituents of the soil of the several stations; (2) the constituents of the manures intended to be applied to each particular crop; and (3) he will afterwards have to ascertain what portion of each manure the particular crop has taken up, what remains in the ground after the crop is removed, how much of the manure has been carried off by drainage or other causes, and if any of the manures combining chemically with other substances have become unavailable for the food of plants. Your committee would repeat that it is their opinion that the directors cannot proceed to establish experimental stations without the assistance of a chemist carrying on the arrangements from the beginning to their termination, and this can only be practically carried out by a chemist on whose services the Society could continuously depend. It would be merely wasting the funds placed at their disposal were the directors to proceed further without such professional aid. It therefore appears to the committee that the directors should invite the general meeting to reconsider the resolution disapproving of the appointment of a permanent chemist, and request authority to secure the services of a gentleman thoroughly qualified.

Your Committee find that the chief points embraced in Col. Innes' proposals were: (1) That an invitation should be given to district societies and to individuals disposed to co-operate in

the formation of an association by means of which experimental stations may be conducted on a uniform plan to communicate with the secretary; (2) that the organisation and management of such an association would furnish adequate employment for the society's agricultural inspector; (3) that the society might provide for the chemical analysis required for such experiments by the employment of a salaried chemist or otherwise; and (4) that any funds available after providing for these objects might be offered as grants in aid of the working expenses of the several associated experimental stations. Under this head your Committee have to report that the plan suggested has been published in the Society's Premium Book since 1873, when the assistant chemist was appointed, whose chief duty was to be the inspector of agricultural experiments, conducted by a local committee of members who made application for them, and who were to receive assistance from the Society. No application, however, was ever made for assistance under this arrangement.

In Mr. Macdonald's letter it was intimated that upwards of £500 had been subscribed towards the establishment and maintenance for three years of three agricultural experimental stations in the north-east of Aberdeenshire, and the hope of the Committee, on behalf of which Mr. Macdonald wrote, was expressed that a grant in aid of at least one-third of the sum subscribed would be given by the Society for three years, it not being considered necessary to make provisions in the meantime for continuing the experimental stations longer, as it was hoped the expediency of establishing such stations would be undertaken by Government. On this communication your Committee feel that they cannot offer an opinion until the arrangements in regard to the appointment of a chemist has been settled, as according to the proposed scheme the whole available funds of the Society would be required for conducting their own experiments.

Under this head your Committee need only remark that the association has fixed on five stations, and that before entering on their experiments has appointed a committee to look out for a chemist to take charge of them.

On the motion of Colonel INNES, of Learney, the Board unanimously approved of the report, and resolved to recommend the general meeting to authorise the directors to organise such experimental stations as they may find practicable with the funds at their disposal, and to contribute in aid of experimental stations established by local associations on such conditions as the directors may consider necessary, and for these purposes to appoint a properly-qualified chemist as an officer of the Society.

The report of the meeting of members held at Aberdeen on the 17th of December, when the premium list and regulations for the general show to be held there this year were submitted and approved of, subject to the following suggestions for the consideration of the Board: (1), That instead of two premiums of £6 and £3 and £5 and £2, there should be three of 8, £4 and £2, and £6, £3, and £1 respectively, for cross oxen and heifers. (2), That fat stock should be disqualified, unless the breeders' names were given. (3), That there should be a premium for leaping over hurdles. (4), That goats be admitted to the showyard. The Board agreed to (1) increase the premiums for cross oxen and heifers, and to offer premiums for leaping as recommended. (2), That every endeavour should be made to obtain accurate information as to the breeders of all animals. (3), That it is quite in accordance with the rules to admit goats into the showyard as extra stock. The Board then took into consideration letters from Mr. Jenkins, secretary of the Royal Agricultural Society of England, as to the date of the show at Birmingham—which has been fixed to be held from the 19th to the 24th of July, both inclusive—when, after careful deliberation, the directors resolved to adhere to date fixed on for the Aberdeen show—namely, from the 25th to 28th of July, both inclusive—believing that any alteration to a later date would not be advisable.

The SECRETARY reported that a meeting of members connected with the district was held in the Society's hall, 3, Gerge IV. Bridge, on the 15th of December, when the classes of stock as arranged by the directors were approved of, subject to the suggestion that there should be two sections for yeld mares or geldings, suitable for field, foaled before January 1st, 1873—one for heavy and one for light weights. The Board approved of the suggestion, and agreed to add a class for leaping.

Various awards were made for reports lodged in competition, both in the agricultural and forestry departments, and the names of the successful competitors will be announced at the general meeting. Several subjects were deleted and new ones added to the list for 1876.

On the motion of Colonel INNES, of Learney, the secretary was instructed again to communicate with the Science and Art Department in reference to the Society's memorial, dated July 14, 1874, to the Lords of the Committee of Council on Education praying that the science of agriculture should be included in the list of subjects towards instruction in which aid is granted by the Science and Art Department.

**DEAD MEAT FROM AMERICA.**—Considerable interest is being manifested in an experiment, which seems to be attended with success, for the preservation, in a fresh state, of meat during transit from New York to London. Several cargoes of beef so imported have been readily disposed of in the London market, and it is intimated that the traffic is to be developed as far as possible. Should a large and constant supply of American meat be thrown into the Metropolitan market, there is every likelihood that it will affect prices to some extent. The prices presently realised for the imported meat are equal to the quotations for secondary qualities. The imported meat does not directly compete with prima quality of beef, such as is fed and sent from the northern counties of Scotland. The success of the trade just commenced with America is liable to be affected by many drawbacks. It has been begun in the winter season, which is of course the most favourable period of the year for the traffic. Home-killed meat, at this period of the year, without any special treatment, will keep for a considerable number of days in a marketable state. The success of the experiment now being made cannot be assured until it has been conducted during the summer season. The practicability of the trade being continued depends, however, mainly upon the state of the markets. A rise of prices in America, an advance in the rate of freight, or a fall in the London market, would equally prove an obstruction. The seat of enterprise is at New York, the consignments being made to an agent in the central meat market, London. The carcasses at present being sent weigh 750lbs to 850lbs. The cattle are mostly obtained from the Western States of America, and are slaughtered at New York. Immediately after killing, the beef is chilled by being placed in a prepared cold room, and is sent on board the vessel next day. In the vessel, between decks, a huge room or box is fitted; in this room a fan is worked by the same steam power that propels the vessel. The ice needed for cooling purposes is placed in an outer compartment, and matters are so arranged that a constant supply of cold, dry air, at a temperature of from 30 to 40 degs., circulates through the room, being again and again drawn off, and passed in fresh over the ice in the outer compartment. The meat is carefully stitiched in canvas, and is hung on hooks from the ceiling of the room. In ten days after being slaughtered, the meat reaches Liverpool, and on the next day it reaches London, being conveyed from Liverpool to London in the ordinary meat trucks. As the room in which the meat is kept on the voyage is not a fixture, the space is available for cargo during the return voyage.—*Buffshire Journal.*

**THE IMPORTATION OF FOREIGN CATTLE.**—The London Trades Council have issued a circular to the trades societies, other organised bodies, and the public generally, in which they state that in accordance with a resolution passed at a delegate meeting of the trades societies, calling upon the council to obtain the best information possible relating to the restrictions on the importation of foreign cattle and sheep, and how far they affected the present high price of meat, a sub-committee had been appointed to give the public such information from time to time as might be essential to create a sound opinion in the country regarding it. The committee had waited on several of the large dealers and butchers, and found a very strong opinion prevailing in favour of the restrictions on animals affected with rinderpest, lung disease, or sheep-pox being continued; but the slaughtering of all cattle and sheep not affected with foot-and-mouth disease, merely because they had come in contact with other animals so affected, was con-

deemed as prejudicial to the supply to the English market, as throwing the trade into the hands of large capitalists, to the exclusion of the small ones, and as thereby upholding a monopoly in the price have to pay for heavily in the purchase of their meat. On these grounds the committee asked that the restrictions on foreign-meat disease should be entirely and speedily removed. The committee had consulted Mr. W. E. Foster, M.P., who had charge of the bill during its passage

through the House in 1869, and who was chairman of a committee of the House on the subject in 1873, and had received valuable information from him. It is proposed that a deputation should wait on the Duke of Richmond to urge upon the Government the increasing necessity for removing such restrictions, and that a meeting be held at Exeter Hall on the 2nd road to elicit the opinions of the public on the subject.—*Standard.*

## NOTTS CHAMBER OF AGRICULTURE. ANNUAL MEETING AND DINNER.

On Saturday, Jan. 22, the annual general meeting of the Notts Chamber of Agriculture was held in the Town Hall, Nottingham, Mr. Storer, M.P., in the chair.

The minutes of the last meeting were read by the secretary (Mr. E. Browne), and passed.

The SECRETARY then read the annual report, and the cash account, which was considered satisfactory.

Mr. HEMSLEY said he begged to move that the report, as it was read, and the cash account, be adopted, and, together with the list of members, be printed for circulation. He thought the report contained a fair epitome of the proceedings of the Chamber during the last year, therefore there was no need why it should not be adopted entirely. He thought the time had quite gone past when it was necessary to say anything about such institutions as chambers of agriculture. The importance of these institutions had been brought to his mind by the great number of references which had been made to them in both Houses of Parliament. There was hardly an instance in the county which had been referred to so frequently in the Legislature as chambers of agriculture. He did not wish to go into any long hinded remarks, but there was one point to which he wished to allude. They were not led away by political feelings, but he thought that the country party, as it was called, had always been more loyal to the Conservative party than to the Liberal, and so they had naturally looked for support from the Conservative party more than from the Liberal. He thought if they just recollected for a moment how matters stood at the last election, undoubtedly there had taken place a great change in the feeling of the country, for to his mind it was the great influence of the country constituencies that placed the Conservative Government in office with such a large majority. They therefore looked to the party for more support, and he must say, as far as his opinion went, he was not satisfied with the action of the Government, or rather inaction. Allusion had been made to the Agricultural Holdings Bill. As far as he could see, they would have to watch for some little time until they saw the working of the Act, but he thought in the meantime that it gave better security to farmers for their capital invested in their land. The report, he thought, rather carefully alluded to the question of local taxation. These burdens bore upon them more and more heavily as they became in a less prosperous condition. He did not think a proper interest in them had been shown by the Government respecting the highways and great roads of the country. In the matter of the cat and dog diseases he did not feel satisfied with the inaction of the Government. He would not enter into that, but he did think that they might have looked to the present Government for a little more attention to their interest, as forming the country party. The question of education was slightly touched upon in the report; now, that was a point he should just like to allude to for one moment. A great many who occupied a good position in life were in favour of educating those not in such a good position. This was all very well, but he did not think that they were dealt with fairly when they were called upon to educate children in agricultural districts for the requirements of service in manufacturing districts and mercantile and Government service. He thought they were unfairly dealt with if a standard of education was placed so high as to suit the interest of those parties and not their own. They were prepared to go as far in a standard of education as would fit those children for the highest position in agricultural service, but no further. He had known instances where the cost of children's education in agricultural districts had run as high as £5 per annum per head. In some small districts they had to build schools, and keep efficient teachers to educate the children up to a certain standard, and then to send them

these children were withdrawn as soon as they were ready to enter town service. He wished, for one, to make his protest against any advance in the standard of education for agricultural children which was in contemplation. He thought this was a most important time for discussing their position in a pecuniary sense. He thought the cultivation of the land for its own profit had already begun to wane. There were unmitigable facts before their eyes of a practical nature, that such was about to take place if these present days were going to remain with them. Whether it was the duty of the Government to look after one section of the nation in preference to others, perhaps he was not able to form an opinion, but certainly he must repeat, as belonging to a part of the community, which he again said were the support of the present Government, that he was not satisfied with the inaction of the present Government. He concluded by moving the adoption of the report and cash account.

Mr. WALKER seconded the motion.

Mr. GOSBIE, in supporting the motion, said he believed there was some little misunderstanding as to the organisation of chambers of agriculture. There were three classes which he was sure it was the object of these chambers to benefit, and whose good it was their object to advance: these were the landowners, the tenant-farmers, and the labourers. There seemed to be an impression abroad, particularly in this county, that chambers of agriculture were merely to represent tenant-farmers. Now this was a great mistake. It was the interest of the agricultural industry, embracing the owner, occupier, and labourer, that these chambers of agriculture sought to advance, and to protect them from unjust and undue burdens. They had only a few members in the House of Commons who represented the tenant-farmers, but these few, such as Mr. Read, Mr. Pell, and Mr. Storer, were indefatigable in their efforts, not only to protect tenant-farmers, but to protect agricultural interests in general. He had great pleasure in supporting the report, as he thought it was a very sensible one.

The CHAIRMAN said he did not wish the subject to pass away without two or three remarks. He did not see in the report that the members of the chamber were increasing, but he had the authority of the secretary for saying that that was so, and that was a matter for congratulation. He wished to endorse entirely what had fallen from Mr. Hemsley as to the character of that chamber. They had endeavoured by every means in their power to get the great landowners of the county on their side, and he was thankful that a great many of them supported them by subscriptions. They did regret, however, that they had not the advantage of their personal presence on these occasions. In other counties, particularly in the South of England, this was the case, and he did not see why Notts should be conspicuous in this respect. They knew perfectly well that agricultural interests were not for one class, but they were entirely bound up together with all others. If one fell, particularly the interest which was intermediate between the three interests in agriculture, then the other two must necessarily suffer. It was as much the interest of a landlord to have a good tenant as it was of a tenant to have a good landlord. On that ground he agreed more particularly with the remarks which had fallen from Mr. Hemsley as to the Conservative party, who had always been regarded as the farmers' friends more particularly than any other party. They certainly had not received that attention with regard to the importation of cattle from foreign countries, nor with regard to the exclusion of cattle disease, which they might have expected from the present Government. For his own part, he could not but say, and all the papers were agreed, that it was a very great misfortune that Mr. Clare Sewell Read



had been compelled to leave the Government on a question on which he was right, and on which the Government was as surely wrong. It was as necessary both for the interests of the farmers of this country and the consumers of the country that cattle disease should be suppressed as was any other question before it. He wished to make one remark with regard to the Agricultural Education Act. He fully agreed with what had fallen from Mr. Henley upon the subject, and he hoped that something might be done as far as possible to diminish the very great difficulties which the Agricultural Education Act threw in the way of tenant-farmers. Those who were acquainted with these Acts knew what a great deal of difficulty had been placed by them in the way of the education of agricultural children. He did hope that the standard of such education would not be extended, and that the system of having police supervision over the education of agricultural children—in fact, making them public prosecutors—would not be generally confirmed. He was sorry to say that in several counties police were being so employed, and this was to be condemned, as it must lead to a great deal of espionage, which must create a great deal of ill-feeling between farmers and labourers. He was glad to find that Mr. Disraeli had voted in opposition to an extension of the standard. He had also to thank Mr. Godber for the very handsome manner in which he had spoken of the tenant-farmer members of Parliament. They had no wish to support the interests of tenant-farmers in opposition to those of any other class of the community, but they would all agree that the great interests of agriculture should be supported. He regretted to say that the interests of trade were much more considered in the present House of Commons than those of agriculture; but if Chambers of Agriculture were better supported, this would not be the case. He had just one more point to refer to, and that was the Malt-tax. So long as there were so many brewers, and those interested in the liquor traffic, in the House of Commons as there were at present, there was not a chance of the Malt-tax being even considered. As to the Agricultural Holdings Bill, it was an experiment which would be fairly tried; it was certainly a permissive Act, as every tenant or landlord could exempt themselves from its provisions if they so chose. He had to ask them to pass the report.

The report was adopted unanimously.

Mr. ALLSERROOKE moved "That this chamber desires to record its hearty approval of the course taken by Mr. Clare Sewell Read, M.P., in withdrawing from the Cabinet, and to express its sympathy with him in his unsuccessful attempts to persuade the Privy Council to take reasonable and just measures to prevent the introduction and spread of contagious diseases among English cattle." In moving the resolution, he said that when Mr. Read had found that he could not serve the interests of agriculture in office as out of it, he took the manly course of resigning. He had been rebuffed for what he had done, but he upheld his independence, which was more to him than the £1,500 a year which he received in office, and he remained to this day what he had been before, their champion. They had believed in Mr. Read in the past, and they believed in him yet; they were his debtors, and he was worthy of all the admiration they could give him. He begged to move the resolution he had read.

Mr. BEARDALL seconded the motion, expressing a hope that the various chambers of the country would support Mr. Read.

The CHAIRMAN said he could testify to what Mr. Read had done in the interests of agriculture, for he was one of a deputation to the Duke of Richmond, which deputation was one of the first subjects for which Mr. Read received censure. The speaker, in referring to what Mr. Read had shown in the matter of the spread of pleuro-pneumonia, said he hoped to be able to lay before the chamber statistics as to the state of that disease in this country. There was likely to be a testimonial got up by the country to Mr. Read, and he hoped the farmers of the county of Notts would subscribe to it.

The motion was unanimously carried.

The dinner took place at the Maypole Hotel. His Grace the Duke of St. Albans occupied the chair, supported by Mr. G. Storer, M.P.

After the usual loyal toasts had been given, the noble CHAIRMAN proposed the toast of the evening. He said: Gentlemen, in rising to propose success to the Notts Chamber of Agriculture, I must congratulate you on the report of the

council, which will shortly be in your hands. It will show you that the work of the last year has included several important meetings, and the members are on the increase. At the same time, I must remark that they are only five hundred, and I would impress upon the agriculturists of Nottinghamshire to be united, in case of any great question pertaining to agriculture coming before Parliament and the Government. I think that we may safely, on this occasion, consider what has been the result of the last year, and what we may usefully promote during the coming session. I am afraid that many of the expectations which were formed last year by my friend Mr. Storer have been disappointed; I am afraid that the Malt-tax still presses heavily upon the country. I am afraid his wishes as regards local taxation have not been realised, while the Minister of Agriculture has still no place in the Cabinet. Well, I think that a great many of these things agriculturists made up their minds for, yet upon certain matters such as local taxation I believe the chambers of agriculture are united, and it will be well for the chambers of agriculture as far as possible to represent the commerce of the different counties in that respect. I therefore hope that the members will use their best endeavours to bring the matter before their friends, and that at the next meeting we may still have to note an increased number of members. As regards last session, we have the Agricultural Holdings Bill. It was, I need not say, introduced into the House of Lords by the Duke of Richmond, and the speech that he made was to an assembly of landowners, which was somewhat of an apology for introducing it at all. There were many who disliked the bill being introduced, and the Duke of Richmond's speech reminded us rather of that story which is told of the gun case, when the invalid refused to have it introduced into her room. She was told there was nothing in the gun, but the invalid replied, "Perhaps there may be nothing in it, but it had better not be introduced at all." But the bill went to the House of Commons, and, as was naturally supposed, great alterations were made in it. I think we may look upon it as useful in this way, that commercial transactions as regards the land have begun to attract the attention of Parliament and of the Government of the country at large. Then we have had before us lately another and very important question—that of the present cattle diseases—and we have heard a great deal of agitation about the introduction of cattle from Ireland. I think we shall be almost grateful to the President of the Council, the Duke of Richmond, if he is able to bring about changed relations as regards Irish cattle, which should be put upon the same footing as the English. I have talked during the month I lately spent in Ireland with some of the most intelligent of the breeders of cattle in the South, and I believe it is their opinion that part or most of the disease might be easily remedied. I believe that the English farmers have no disease from which Ireland does not suffer, but I believe they suffer for the want of enterprise of the different railway companies and steamboat companies. I believe it is the opinion of the Irish farmers that a great improvement would take place by having a good system of meat trains and meat boats, so that meat might be slaughtered in Ireland and brought over in proper boats to the London market. A great improvement would be effected over the present system when beasts are slaughtered in steamboats, and they all knew how horrible a sea passage it was. I think that this question and the regulations as regards cattle will early attract the attention of Parliament, and I think that we shall all in this room be glad that the agricultural interests will be represented by Mr. Clare Read. I feel certain that when that gentleman undertook Government office he did it with every wish to benefit his constituents, yet none who have held office can be ignorant that it necessarily puts a gag on the mouths of individuals. Looked upon, as Mr. Read is, as the representative of the tenant farmers generally, we may all rejoice that he has taken an independent position. I think that this chamber may usefully use its influence upon the subjects. But, of course, as I have often said, we farmers must look rather to our own exertions than to Parliamentary assistance. Crops and flocks are not to be made by Acts of Parliament, and I feel that, while recommending strongly to the agriculturists of Nottinghamshire that they should have machinery such as this Chamber presents of bringing their wishes before their representatives, I must say they would do well to know that their own energies are the best foundation on which to stand. I felt pleasure the other day, in a small society we have at

Bestwood when the son of one of the large farmers had entered for the prize for ploughing, and had obtained it over the agricultural labourers. His name was Mr. Potter. I feel certain that it will be the best way for agriculturists to succeed. Yet there are assistances which we may rightly expect from Parliament and Her Majesty's Government, and I think on that account we may all wish success to the Notts Chamber of Agriculture. I have to couple with this toast the name of Mr. Storer, member for South Nottinghamshire. We all know that he has never spared his own convenience in doing the work of this Chamber, either in the Chamber or in his place in the House of Commons.

Mr. STORER, M.P., in returning thanks, said he had first to thank His Grace for the able manner in which he had proposed the toast of "Success to the Notts Chamber of Agriculture," and for the kind manner in which he had coupled his name with that toast. He was quite sure they all felt the debt they owed to His Grace for the manner in which he had always supported that Chamber. Connected as he was with that Chamber, he was delighted to endorse several opinions which His Grace had given utterance to, more particularly in that one where he expressed his hope that all the farmers of this country would support chambers of agriculture. It was only by their individual exertions that they could forward their interests. They would all remember the fable of the bundle of sticks. Individual exertion was of little use compared with the collective exertion which would keep the bundle together, while the absence of a single stick would break it. Collected they had great influence; isolated they had none. That was the ground on which he had always urged the support of institutions of that nature, because he was convinced that their interest lay in having these combinations—not combinations for any wrong or improper purpose, but merely combinations to support in a proper manner those institutions which they had as owners of the soil and labourers upon the soil. He did not consider that that Chamber or those Chambers were elected for any one class in particular, but were for all, whether they were landowners, tenant-farmers, or labourers. This was a point which that Chamber of Nottinghamshire had stuck to from its very beginning. They only wished to protect their own interests, therefore he need not only urge those who were present, but he would urge those who were absent, who could only hear his voice through the medium of the press, to a little more action with regard to these chambers of agriculture. Already they were a great power in the land, but their influence would be ten times greater if they were supported in the manner in which they ought to be. They had certainly the intelligence of the country on their side, and although the landowners of the country did not follow the example which His Grace had set, he had no doubt they were with them in heart, and had a feeling of interest in the cause which they advocated. He only wished they could see more of them present at these meetings. They knew perfectly well that the Legislature of this country had not of late years shown itself so inclined to support their various proposals as they could possibly have wished. His Grace had well said, perhaps a little alluding to himself, that his expectations had not been altogether realised. He did not profess to be in the secrets of the Government of the day when he spoke last year. If he thought they should have had more attention paid to local taxation, it was because the party now in power while out of it made great professions with regard to that subject, and when they came into office he did not think they would altogether run away from their theories. Yet, although he was disappointed as regarded that question, he was not without hope that the Government would do something in that way in the next session—in fact, rumours were already spreading about that that would be one of the subjects brought before the House in the ensuing session. He begged to remind his hearers that the Government did go a step in the right direction when they made a provision of a million and a half for the maintenance of the police and lunatics, which was more than any other Government had done. He was desired by the Central Chamber to take action with regard to certain proposals of the Minister of Agriculture, and they could not have supposed that, on so short a notice, the Government would have been so inclined to jump at their theories at once. If anything could have given rise to the opinion that the Government had not attended fully to their interests, it was the manner in which the question of cattle disease had been

treated. With regard to Mr. Clare Sewell Reid, he had shown the highest honour in resigning his office because he could not agree with his colleagues. He thought that every agriculturist they met thought Mr. Clare Sewell Reid was in the right and the Government in the wrong. Why should there be restrictions put upon cattle imported into England, when cattle were sent through Ireland to England without supervision? He certainly thought that such questions as these were questions which they, as chambers of agriculture, ought to consider. He should be very sorry to endorse every act of the Government which he had the honour to support, because he was aware that when they returned him to Parliament they did not expect him to give a blind adhesion to every act of the Government. What he understood was that he was to pay attention to their interests. Many objects had not been accomplished as he could have wished, especially might he mention the working of the Education Act as regarded agriculturists. Certainly he could not think that the Agricultural Children's Act was one of unlimited blessing to the farmers of the country. They knew that, to a great extent, it withdrew children from agricultural pursuits. It was so framed that they knew many cases where very high taxes were paid in order that children should be educated to a pitch which was hardly necessary for them as pursuing agriculture, and which, instead of being a boon to them, was a burden to the tax payer. The Act was on its trial now, and in some places it was in contemplation to employ police to see that children went to school. This was a system of espionage, and they objected to espionage. A very high state of education was desirable and requisite, but those who got the benefit of it ought to pay for it. They were educating these children not for the country but for the town. They were not educating them for agricultural pursuits, but in a manner to make them go as clerks and into other pursuits entirely foreign to agriculture. As to the Employers' and Workmen's Act, it might not be generally known at present, but it would be soon known, that it was a very hard one on the agriculturists of this country, particularly as regarded domestic servants in husbandry. Supposing servants absconded now they could not take them before a magistrate; they were left a remedy which was no remedy at all, while the farmer remained bound to them in the same fines and imprisonment which he was before. With regard to the Rating Act, a great omission had been proved before the Marquis of Salisbury the other day, on the Hatfield bench, where an appeal was shown against a rating of some timber land at 15s. per acre, which, under the new Act, could not be made to pay. The long and short of the Act was that it excluded the whole of the timber as property from rating, at which the Marquis of Salisbury certainly did not hide his surprise. These were things which he (the speaker) thought called for amendment, and which he hoped and trusted they would be enabled to attend to, and now that Mr. Reid was out of the ties and shackles of the Ministry, he might help them. As to the future questions which had been alluded to by His Grace, he would make no attempt at a prophetic vision, as he had failed upon a previous occasion. But there were a great many questions which ought to be brought up relating to agriculture, and although he did not see yet that the Malt-tax would be shortly repealed, yet he was convinced that it ought to be repealed, and that it was an unjust and immoderate tax. He hoped these chambers would continue to exist, if only to impress their views upon the Government of the day. They had little idea what weight forty or fifty of such chambers must bring to bear upon the Government of the day. Every piece of legislation that came before the House of Commons connected with agriculture or with the landed interest was systematically neglected; trade and commerce were the only things thought of; and he begged leave to think that that was an act of the deepest and gravest impolicy, because, if their trade flourished without the basis of agriculture to support it, it flourished on a rotten and unsound basis. If they discarded agriculture, and lent all their legislation to trade, in the day of their calamity they would find out their mistake. He hoped and trusted that the day would be long distant when the trade and commerce of the country would flourish at the expense of agriculture.

Mr. GODBER proposed "The Health of his Grace the Duke of St. Albans," and in doing so he said the noble duke had stood by them through good and evil report, and had never deserted them. Although he had sometimes advanced opinions which perhaps were not in accordance with those of the

majority of the Chamber, they could not but admire the courage of the noble duke for the way in which he brought forward and supported his own opinions.

The noble CHAIRMAN said, before proceeding to reply, he had to challenge an observation which was made in the course of the able speech made by Mr. Storer. It would be rather a dangerous doctrine that they should ever call upon the towns to contribute to the education of the agricultural children, because they must all see that if they called upon towns to contribute to the education of the agricultural children, towns might call upon them (the agriculturists) to contribute to the education of the town children, and in that case they would have the worst of it.

Mr. STORER, M.P., in rising to a point of explanation, said that what he meant to say was that he did not consider the Agricultural Children's Act a proper one, as all descriptions of property should bear their fair share of burdens.

The noble CHAIRMAN, in continuing, said he felt certain, as regards the Agricultural Children's Act, that whatever might be its final results, the farmer in the long run would not look upon it with disfavour. With regard to his own health, he must thank them most sincerely for the kind way in which it had been responded to. Since he had held the presidency of the society he had done everything he could to support its

usefulness. He was glad to find that Mr. Hillyard had consented to be their president, and although he (the Duke of St. Albans) should cease to hold that honour, he should not cease to feel an interest in their association. Of course it was a difficult matter to propose the same toast every year, and in dealing with the many subjects connected with the Chamber it was difficult to avoid touching upon political subjects. He had on all occasions endeavoured to avoid politics in his connection with the Association, and he felt certain from the liberality of Mr. Hillyard that he would do the same. He felt sure that in Mr. Hillyard the Chamber would have an officer of great talent and tact; and he (the Duke of St. Albans) sincerely hoped that under Mr. Hillyard's presidency the Chamber might prosper. He had only, in concluding, to thank the members of the Chamber for the courtesy which had been shown him during the time he had held office. He would also express his sense of satisfaction for the manner in which the council had performed their duties. He would also say one word for the secretary (Mr. Browne). On all occasions he was most active and attentive in the discharge of his duties, and he also performed them well. He begged to return them his best thanks.

The company shortly afterwards broke up.

## METEOROLOGICAL NOTES.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—It appears that at Moseley, near Birmingham, the rainfall for the year 1875 was as follows—viz., in January 3.52 inches, February 1.40, March 0.76, April 1.33, May 2.82, June 3.61, July 6.97, August 2.08, September 3.64, October 6.96, November 3.52, December 1.41—total, 38.02 inches. In the six months ending 30th November the depth of Moseley rainfall was 26.78 inches, being the greatest amount of rainfall there recorded in any six months consecutively. At Ashley Down Station, near Bristol, Mr. Denning recorded this year's rainfall to be 43.148 inches, the annual average being 32.048 inches. The rainfall during 16 months, ending November, 1875, was 63.221 inches, the average amount of this period being 44.275 inches. Average daily fall of rain during this period, 0.086 inches. The mean daily excess on 518 days was 0.036 inches. The excess in 1875 was immense. The amount for nine weeks, ending 7th October, 1874, was 13.521 inches, and for nine weeks, ending 20th November, 1875, 15.942 inches. At the London Regent's Park Observatory, the January rainfall was 3.43 inches on 23 days, February 1.16 inches on 13 days, March 0.72 inches on 9 days, April 1.63 inches on 10 days, May 1.78 inches on 11 days, June 2.26 inches on 15 days, July 4.57 inches on 17 days, August 1.30 inches on 11 days, September 2.77 inches on 17 days, October 4.48 inches on 19 days, November 3.30 inches on 20 days, December 1.56 inches on 17 days; that is, 29.08 inches on 182 days. At Camden-square, London, the rainfall in November, 1874, was, on 15 days, 2.27 inches, being 0.20 inches below average; in December, on eight days, it was 1.58 inches, being 0.08 inches above average; in January, 1875, rainfall there amounted to 3.32 inches, being above the average of the years 1860-65 by 1.27 inches; February rainfall, on 16 days, 1.06 inches, below the said average by 0.16 inches; March rainfall, on 11 days, 0.69 inches, below average by 1.39 inches; April, 10 days, 1.53 inches, above average 0.40 inches; May, 13 days, 1.69 inches, below average 0.79 inches; June, 15 days, 2.41 inches, above average 0.64 inches; July, 17 days, 4.64 inches, above average 2.85 inches; August, 12 days, 1.79 inches, below average 0.85 inches; September, 15 days, 2.86 inches, above average 0.60 inches; October, 18 days, 4.35 inches, above average 1.76 inches. At Frant the 1875 rainfall was in excess, being 33.77

inches—viz., January 4.37 inches, February 1.34, March 1.21, April 1.10, May 1.66, June 2.45, July 5.52, August 1.89, September 1.94, October 5.42, November 4.74, December 2.13 inches; the mean average for 31 years being 24.78 inches—thus, for the twelve respective months, 1.68, 1.58, 1.61, 1.73, 1.96, 1.83, 2.40, 2.40, 2.67, 2.53, and 2.02 inches. The 1875 rainfall at Cuxhaven was 17.55 inches, at Stornoway 38.88, Thurso 35.13, Wick 25.58, Aberdeen 34.57, Leith 23.96, Yarmouth 27.69, Ardrossan 39.87, Greenacres 39.39, Donaghadee 33.67, Kingstown 31.23, Holyhead 31.36, Valentia 51.46, Roche's Point, 52.96, Liverpool 30.44, Pembroke 44.95, North Shields 25.88, Scarborough 32.08, Nottingham 34.48, Portishead 43.55, Plymouth 42.15, Hurst Castle 30.87, Dover 31.16, London 27.33, Oxford 33.10, and Cambridge 27.08. From January to April, there was a general prevalence of dry weather, except over some of the midland counties of England. In July, October, and November, there was an excess of rainfall in England, producing heavy floods. The difference from the average rainfall was minus at Stornoway 3.72 inches, at Valentia 2.31, Pembroke 2.29, and at Yarmouth 2.12 inches; but the excess of average rainfall amounted at Thurso, in Scotland, to 4.72 inches, Wick 11.46, Aberdeen 15.61, Leith 14.12, North Shields 10.62, Scarborough 14.41, Nottingham 18.88, Greenacres 10.05, Kingstown 13.78, Holyhead 10.23, Liverpool 13.82, Roche's Point 16.06, Plymouth 13.20, Dover 10.88, London 12.83, Oxford 15.83, Cambridge 15.67 inches. One inch of rain means a gallon of water over a surface of nearly two square feet, or a fall of 100 tons per acre.

At Frant, Sussex, Mr. Alnatt noted the commencement of January calm and cold, with 19 degs. of frost. The temperature was in excess on 28 days, and the month's rainfall 2.69 inches above the average. Destructive gales submerged the lower lands of England. Much ozone was observed. The range of pressure was from 28.80 to 30.20 inches. The ultimate range of thermometer was 18.7 degrees.

In February much frost and snow, with unusual cold, prevailed. Temperature below average on five days during the first week; on 8th east wind, much cold; temperature on 8th, 9th, 10th, below average; on 12th rain occurred, and temperature rose 9 degs.,

Frost disappeared; on 20th snow was on the ground one inch deep; on 23rd temperature 13 degs. below the average; dark and gloomy on 26th, 27th, and 28th; barometer, 29.90 to 30.10 inches; on 28th mean temperature was deficient 9 degs. 3 min. Azone deficient. Rainfall, 0.24 inch below average.

March was notable for N.E. wind and frost; low thermal conditions; snow 3 inches deep. Gales were experienced on the 7th, with temperature 9 degs. above average; much damage in the North of England; 16th, gale, doing much marine injury; from 11th to 24th temperature below the mean. Winds easterly and semi-polar. Rainfall deficient.

April commenced with temperature 3 degs. above the average; from the 5th to the 16th it was below the average, rising from 17th to 20th; on 22nd it fell 12.3 degs., being a range of 25.7 degs. in a few hours. From the 1st to 30th the temperature was above average on 16 days, and below it on 14 days. Winds chiefly semi-equatorial and semi-polar. The 21st was hot and rainy. Winds E.N.E. until the 25th. Rain 0.63 inch below average.

May was preternaturally hot at Frant. During the first moiety of the month the mean temperature was above average, except once. "A consecutive run of excessive thermal conditions seemed to extend daily from the first to the 26th, inclusive, yielding a quotient of 13 degs. above the acknowledged mean average." Abrupt oscillations occurred from the 21st to the 31st: five days were in excess and six days were deficient in temperature. The coldest night was that of the 30th-31st; on 30th and 31st diurnal means were 7.2 and 7.1 degs. below average. In North America summer weather occurred on the 20th, after a cold and backward spring. At New York, on the 23rd, the thermometer reached, in the shade, 77 degs.; on the 24th, 86 degs., a nimbus or rain-cloud on 17 days; little ozone, and south winds frequent. Rainfall 0.33 inch below average.

June: In France many inundations; in England much thunder and lightning. Rain at Frant on ten days; monthly fall 2.45 inches. Winds equatorial; gales on the 6th, 12th, and 16th, with much thunder, &c., at Frant. Range of atmospheric pressure 29.15 to 29.85 inches.

July: Mean temperature was in excess on 17 days; ozone deficient. Calm and sunny from 21st to 31st; much elemental perturbation prevailed, and electrical storms in Europe; from 1st to 20th Frant rainfall was 5.22 inches, 3 inches in excess; from 13th to 20th, 2.55 inches; at Dover 2.85 inches, and at Worthing 2.50 inches fell during the middle period of this month. Excessive rainfall in the East of England and North of Scotland; growing crops and human lives destroyed; low-lying lands submerged by the floods. Many thunder-storms and lightning deaths in Yorkshire, Suffolk, and elsewhere in England. This month was remarkable for an excess of moisture almost beyond parallel in England.

August: Thunderstorms in England on the 7th, 9th, 10th, 12th, and 13th. At Enfield, on the 10th, 2.75 inches of rain fell in one hour. Little ozone, atmospheric pressure equable, and the range only half an inch; from 6th to 31st, temperature in excess.

September was hot and sunny at Frant and elsewhere; night temperature 46 to 64 degs., morning temperature 53 to 69 degs., mid-day temperature 58 to 72 degs., aggregate mean monthly temperature 60.5 degs., being 3.9 degs., above average. Migratory birds departed early. Gale on the 13th and 26th in England, Scotland, and Ireland. The month's rainfall, 0.46 inch below average. In Sussex a large meteor was visible on the 14th, and aurora on the 17th. Floods and storms from the 15th to the 30th of this month.

October was squally and much rain prevailed; on the

3rd day tempest, and squalls occurred on the 10th, 14th, 21st, and 22nd days; floods on the 23rd to the end. Month's rainfall, 5.42 inches, being 2.75 inches in excess. Ozone in excess on five days. Range of temperature, 28.75 inches to 32 inches.

November: Temperature below average on 20 days. Much wind and rain during this month. On the 8th, temperature 8.6 degs. below average; from 26th to 30th, temperature 10.5, 9.4, 9.7, 10.8, and 13.1 below average respectively; hard frost and snow; on 19 days nimbus or rain-clouds prevailed, but the frost did not penetrate deeply, it being warmer several feet below the earth than on the surface.

The December rainfall was recorded as follows—viz., at Cuxhaven 0.76 inches on eight days, Stornoway 4.53 on 26 days, Thurso 3.65 on 24 days, Wick 1.73 on 20 days, Nairn 1.72 on 20 days, Aberdeen 1.65 on 18 days, Leith 1.74 on 12 days, North Shields 1.45 on 18 days, York 0.80 on 16 days, Scarborough 1.78 on 17 days, Nottingham 1.23 on 18 days, Ardrossan 2.92 on 18 days, Greenacres 3.44 on 18 days, Donaghadee 1.73 on 14 days, Kingstown 2.09 on 16 days, Holyhead 2.26 on 21 days, Liverpool 0.96 on 12 days, Valentia 3.30 on 19 days, Roche's Point 3.85 on 16 days, Pembroke 3.25 on 11 days, Portishead 1.33 on 12 days, Plymouth 1.51 on 14 days, Hurst Castle 1.10 on 17 days, Dover 1.38 on 14 days, Oxford 0.81 on 11 days, Cambridge 0.65 on 15 days, Yarmouth 2.02 on 20 days. London December rainfall, 1.10 inches on 13 days.

These notes I hope may be found interesting and useful.

Yours, faithfully,

CHRISTOPHER COOKE.

*Swallcliffe, Oxon, Jan. 12, 1876.*

P.S.—Mr. G. Symons, of 52, Camden-square, London (N.E.), requires meteorological observers.

SPRING FLOWERS.—Some interesting observations on the flowering of spring plants were made at the meeting of the Edinburgh Botanical Society a few evenings ago by the Vice-President, Mr. Buehan, who, with a view of discovering what lessons may be learned from the budding, leafing, and flowering of plants and trees, has collected much curious information on the subject. It appears from the result of noting the average dates of flowering of 32 species at the Royal Botanical Gardens during 26 years that the six latest springs were—1855, when the flowering was 30 days later than the average; 1870, when flowering was 16 days; 1853, 14 days; 1856, 13 days; 1857 and 1865, each 12 days later. The five earliest springs were 1874, when flowering was 23 days earlier than the average date; 1869, when it was 19 days; 1851, 13 days; and 1855 and 1866, each 11 days earlier. The two extremes show a difference between the dates of flowering in different years of 53 days. The longest deviations from the average were before the equinox. As to the relations which these effects have to temperature, it was found that the mean temperature of Edinburgh fell to its lowest on the 11th of January, when it was 34.8 deg., and from this point it may be assumed that meteorological conditions commence which result in giving vegetation a start. Another question of great interest is the relation of the colour of flowers to their date of flowering. Taking 809 species of British flora, 257 were found to have white flowers, 238 yellow, 144 red, 94 purple, 87 blue, the remainder being green and other colours. Of the blue flowers 16 per cent. bloomed in April; 14 per cent. of the white flowers bloomed in that month, but only 9 per cent. of the reds, the yellows being very close to the latter. It thus appeared that the blues were far ahead of the reds and yellows, the whites being intermediate, and the purples and greens came in between the blues and the reds. This indicates the existence of some general law which arranges the flowering of plants in the British flora according to the colours in the spectrum.—*Pall Mall Gazette.*

## DORCHESTER FARMERS' CLUB.

The monthly meeting of the members of this Club was held at the Astorpe Hotel, under the presidency of Mr. R. Genge. Mr. G. Homer occupied the vice chair, and there were also present Mr. Hawkins, Mr. T. Chick, Mr. Oakley Saunders, Mr. H. W. Hawkins, Mr. T. Sykes, Mr. H. Taylor, Mr. Trod, Mr. G. Keats, Mr. Loader, Mr. F. Sykes, Mr. R. Darnen, Mr. C. Saunders, and Mr. A. Pope. Two new members were proposed and accepted. The CHAIRMAN announced that Mr. A. Pope had kindly consented to introduce for discussion at the February meeting the question of "The Agricultural Holdings Bill." The subject for the consideration of the meeting was "Nitrate of Soda," which was brought forward by Mr. S. Osmer, of Eling, Southampton, who treated it in a most able, comprehensive, and exhaustive manner.

Mr. SPOONER said when their chairman asked him to introduce the present subject before the Club a thought struck him whether it could be made sufficiently interesting or exciting to call gentlemen together, or at any rate to send them away pleased with what they had heard. He thought it was very doubtful, nitrate of soda being an article which had been known and used by them for many years, whether he could say anything more upon the subject than was already known. That possibly might be the case to a certain extent, but there were many erroneous ideas entertained with regard not only to the fact of its composition, but also as to the results of trials of this salt. A short time ago—at any rate within the last few months—he had seen a circular from a Liverpool broker, in which it was stated a correspondent had been successful in using nitrate of soda, and that he intended to put 2½ cwt. in his wheat crop during the autumn. The broker especially desired parties to communicate with him, and say if they had ever done such a thing, and if so, with what result. That showed there must be very great ignorance entertained on the subject, for to apply such a large quantity of extremely soluble manure before the autumn rains showed so much "unwisdom" that he thought whatever information could be relied upon as to its use, should be brought forward. Nitrate of soda had been known for the last 100 years, but had not been used for agriculture until within the last 30 or 40, soon after, if not at the same time, as Peruvian guano; but there was this great difference—that the latter answered at once, and people were satisfied with it, whereas the first cargo of nitrate of soda brought into this country was returned because it could not be sold. A cargo the second time was thrown into the water in consequence of the very high duty imposed upon it; but he believed the third time it was introduced it sold for £35 a ton. After this it was some little time before it made its way, and no doubt the cause had been because people had applied it injudiciously, and in too large quantities. Nitrate of potash and sulphate had been known for a considerably longer period, the latter being most exclusively confined to the manufacture of gunpowder. Nitrate of soda was now largely used for chemical purposes. Its production took place in a rainless district, and that was the reason why it was not present in many parts of the world. It was almost exclusively confined to the western coast of America, and near the tropical regions. It was found in a rainless district, because it was so exceedingly soluble that if it absorbed any rain it would be washed into the sea. The facts with regard to these rainless districts were very curious. People had lived on the coast of Peru for years who had not witnessed above one shower in seven or eight years. That was the reason why guano, particularly the old sorts from the China Islands, contained such a large quantity of ammonia, whilst in other places, such as Patagonia and Ithaboo, the quality was washed out. Nitrate of soda was found in kind of quarries exuding from the soil; in fact the soil was imregnated with it to a vast extent. Its origin was involved in much obscurity, but it was thought it formed the bottom of the sea; there was no doubt the land had been raised to a considerable extent, and that this nitrate of soda was once the salt at the bottom of the sea. Even that supposition did not get over the difficulty in the matter, because, although nitrate of soda was found in connection with salt, yet, like salt, it was soluble, and why it should take the form of nitrate of soda, salt being chloride of soda, it was

difficult to understand. Whether it was owing to the volatiles which there existed he could not tell, but nitrate of soda, which was composed of nitric acid and soda, was found to a very great extent. The production of this salt was for the most part confined to the province of Tarapaca, in Peru, but principally to the Punta of Tamarugal, running north and south a considerable distance, about seventy or eighty miles, and being some twelve miles distant from the western shore. For many years after the salt was discovered it was brought to the east on the backs of mules, but as there were no good roads this was a very expensive process. The district where the salt was found rose to 3,000 feet above the sea, but towards the east there were almost the loftiest mountains in the world—the Andes—rising from 17,000 to 20,000 feet above the sea level, and the cause of the dryness of the air where this salt was found was considered by some to be owing to the trade winds constantly shifting from east to west, and being then carried over the mountains the effect was to rob the air of its moisture. Some years ago, as he had said, there were nothing but mule-tracks by which to convey nitrate of soda to the coast, but since Mr. Pewsey had written upon its value a railway had been opened. There was a considerable trade now done in the article, but, like everything else in Peru, it had shown an unfortunate tendency. He unhappily was a shareholder in the company, and, within the last week or two, had received information that there were no dividends. The shareholders must, however, hope for the best, and as the soil was impregnated with nitrate of soda to a very large extent in a pure state there was no doubt its production would outlast the find of guano. Nitrate of soda contained about 13 per cent of nitrogen. It was a curious fact that in the composition of nitric acid the very same gases were formed as composed those of the atmosphere. The atmosphere was composed almost entirely of one-fifth of oxygen and four-fifths of nitrogen. The latter, which was so valuable and powerful an agency in food in making flesh and muscle, served the purpose of diluting the oxygen. Oxygen by itself would burn up the world unless it was diluted by nitrogen. Nitrate of soda, as he had said, contained 13 per cent. of nitrogen, which was equal to 16 or 17 per cent. of ammonia, combining all the constituents of the best Peruvian guano, yet it was a curious fact that for some years the price of nitrate of soda was considerably more than that of Peruvian guano, but now if the latter could be brought over of the same value and richness as the former it would command a higher price. Many successful experiments had been made with nitrate of soda, but it had often got into disgrace on account of people employing it injudiciously, and had been considered to produce blight in corn. It was thought, because it was known to produce such great effects, the more that could be used the better, as it supplied almost everything which was wanted. That was a mistake; it supplied only one thing—nitrogen contained in nitric acid. It required great judgment in its use, and was more successful upon cool well-manured land than upon poor land, where it was injudicious to apply it unless connected with other manures. As an instance of the most successful use of nitrate of soda, Mr. Spooner said an experiment was made upon a large field of barley by Mr. Lewsey. The crop was sown in February, and at a time when things were yellow with frost. He used 42lb. of nitrate of soda with 84lb. of salt, the result being he had 47 bushels of barley per acre, whilst in an undressed piece of ground the yield was only 40; whilst a neighbour who used the best Peruvian guano received no benefit at all, but this was, perhaps, owing to the season being dry. Mr. Spooner quoted many statistics showing the value of nitrate of soda when judiciously applied, especially to barley, saying its use with other phosphates not only gave extra quantity, but improved quality.

Discussion having been invited, Mr. CHAPMAN SAUNDERS said they were much obliged to Mr. Spooner for his lecture, because he was to a very great extent a scientific man, and by his knowledge and acquaintance with agriculture knew pretty well what he was talking about. He (Mr. Saunders) thought nitrate of soda was a very useful article, but its effects depended much upon the soil to which it was applied, and also upon the seasons. Upon poor land he thought something was required

to go with it in the shape of phosphates either soluble or otherwise. Upon better land it might be used alone. He considered nitrate of soda could be used with advantage at its present price. It differed, however, a great deal from Peruvian guano, as it contained nothing to support a crop, so that it was desirable upon certain lands to mix some kind of phosphate with it to support and stimulate. His opinion of nitrate of soda was that it answered better in a moderately wet season than in a dry period.

Mr. DAMEN asked Mr. Spooner what he thought of using a small quantity of stable dung with nitrate of soda upon poor soils; whether nitrate of soda was cheaper than Peruvian guano, provided the latter could be had containing 14 per cent. of ammonia, at their relative prices, and further, what did Mr. Spooner think of the system pursued on a farm in Hampshire, where corn was grown year after year with only nitrate of soda—what would be the ultimate effect on the land; whether it would be deteriorated or not?

The VICE-CHAIRMAN had had very great pleasure in listening to the interesting lecture Mr. Spooner had given. He thought they had all been interested and learnt a great deal. It was undoubtedly necessary to keep land well manured to produce good results. It appeared to him there were four kinds of manure they were able to put upon their land. The first was that from the farmyard; secondly, that made from sheep feeding on the land; thirdly, artificial manures; and fourthly, that derived from the subsoil by deep cultivation. The farmyard manure, although the most useful of all, was too bulky, and therefore not fit to carry to the farther parts of a farm. It was very well for use near the homesteads, but if they calculated the value of their horse labour they would find it would cost them 1s. or 1s. 6d. a load for carrying the manure to the farther end of the farm, so he did not think that could be profitably employed. It was well known in light soils much could not be obtained from the subsoil, and then it was only of one quality, so that they were dependent in that respect upon artificial manures. He thought the best was that produced from sheep, especially when they had been fed upon cake and corn, but artificial manures, such as nitrate of soda and superphosphates, might well be of use as a sort of rake in aid to other manures. The question resolved itself into one of pounds, shillings, and pence, for if it was found 15s. expended in nitrate of soda would produce 20s. worth of corn it would probably just pay expense, but if it was found to produce a profit still larger, then of course there was a profit upon the transaction. At the present price of corn the use of much artificial manure was not desirable, but nevertheless upon some land they knew a very poor crop would be produced without its use. From experiments he had made he did not think a farmer could use a better manure than a mixture of nitrate of soda with some of the best phosphates which could be obtained. He, however, believed where there was any material in the subsoil that was the cheapest manure which could be used. He believed 5s. per acre laid out in deep ploughing would be much more useful in the next crop of corn than 20s. laid out in artificial manures. He thought upon most heavy soils the cultivation was not deep enough. Ploughmen were satisfied by turning up a furrow of 3½ inches deep, when the land ought to be ploughed to a depth of 8 inches. If it was ploughed like this once a year and thrown open to the influence of sun and frost, those natural workers, he believed, would produce better manure than could be put into the land in the shape of artificial productions. He had used nitrate of soda for many years, and was of opinion there was a small profit from it if used properly. He had used about five tons a year for the last two or three years, applying it to barley after wheat mixed with some kind of superphosphate.

Mr. T. CHICK asked if Mr. Spooner recommended the use of nitrate of soda upon thin chalky soils?

Mr. HAWKINS wished to be told in plain English provided he manured a piece of land for wheat in the spring, and the plants grew up weakly, how much nitrate of soda ought to be put upon the land to put the crop in a proper condition to make another quarter per acre?

The CHAIRMAN said he had used nitrate of soda, but only to a small extent in conjunction with other manures. His usual dressing was ½wt. of soda, ½wt. of bone superphosphate, and 1wt. of salt, which he had seen answer well for wheat,

but where he had sown manure in the spring but dressed it in for barley, oats, and peas, he had never seen any good results at all.

Mr. SPOONER briefly replied to the questions raised. With regard to Mr. Damen's first inquiry as to using a small quantity of farm manure with nitrate of soda, the lecturer said the principle was quite right. It was quite right to use dung where nitrate of soda was used, but not desirable to have both together. It was far better to mix guano with dung than nitrate of soda. As to the relative prices of Peruvian guano which contained 14 per cent. of ammonia, as compared with nitrate of soda, he should think the former would come to less money. Answering Mr. Damen's other question as to what the effect of growing corn year after year with only the aid of nitrate of soda, Mr. Spooner said that would do no harm as long as the minerals were supplied. The farm which Mr. Damen had in view was situated at the foot of a chalk hill, and the custom there had been to use a great part of the soil from the city. He attributed Mr. Geuge's failure in the application of nitrate of soda to barley, peas, and oats to the fact he had not selected a suitable time for top dressing, as frost was very prejudicial to the application of manure. Speaking of deep ploughing, he said deep ploughing upon land rich in minerals was of very great effect. Many years ago there was quite a flourish of trumpets, as it was thought deep ploughing was going to do everything. Mr. Prout and Mr. Middlemarsh had exceedingly good crops it was said from this course, but as they sold them off at once no one knew what was obtained; but acre for acre they were the largest users of artificial manures in England, which if their theory was right ought not to have been the case.

The CHAIRMAN: Fifty shillings per acre over the whole farm.

Mr. SPOONER, in answer to Mr. Hawkins, recommended salt and phosphorus on lightly farmed soils for keeping the straw stiff, and in replying to Mr. Chick's question as to whether he could recommend nitrate of soda upon poor chalk lands, said a moderate quantity, something like 42lb. per acre, could not hurt any soil. Replying to a question from Mr. Chick, the lecturer said nitrate of soda forced too much green for potatoes, and in answering another put by the same gentleman as to its effect upon grass lands, old pastures, and new grasses, Mr. Spooner observed the effect of nitrate of soda would be to stimulate the coarser grasses, but not to encourage the growth of clover. Rye grass was stimulated by its use, and if they used nitrate of soda with some other superphosphates that encouraged both.

A vote of thanks, proposed by the CHAIRMAN, and seconded by Mr. C. SAUNDERS, was accorded to Mr. Spooner for his able lecture.

NITRATE OF SODA.—In your report of the proceedings of the Dorchester Farmers' Club in your last paper an error occurs which is of some little importance, and which perhaps you will kindly correct. The Chairman, relating his experience, said when he had used nitrate of soda with superphosphate and salt in the spring at the time of sowing barley or oats he could not discern the result, whilst the application of the same a month afterwards to the growing crop as a top-dressing was always successful. This he asked the lecturer to explain, which I did in my reply by saying I could readily understand the application in the first instance would be much less discernible, as it would be slower in its action and buried much deeper and applied in colder weather, whereas in the latter case the application of a very soluble manure in warmer and probably showery weather was carried at once to the roots of the plants, which were at once fed and invigorated. In the one case the rootlets had to seek for the manure; in the other the manure sought the plants, and very soon found them.—W. C. SPOONER, Ealing House, near Southampton, Jan. 15, 1876.—*Dorset Chronicle*.

## FERTILISERS.

BY THE NORTHERN FARMER.

*(Conclusion.)*

As a fertiliser, quick in action, and productive of considerable results, at a minimum of expenditure of labour and but moderate outlay for the article itself, nitrate of soda takes a prominent position amongst the best artificial as a dressing for one crop, and particularly on light land. Wheat responds almost immediately to its application, coming away with a rush, and speedily outstripping any portion of the field which may, for the sake of experiment, be left undressed. With this cereal the extra quantity of straw should in every case pay for the expense incurred by top-dressing, the very high rates ruling for straw of late years rendering this comparatively easy of accomplishment; while the increased number of bushels to the acre grown by its aid constitute the farmers' profit on the outlay and trouble. It will almost invariably be found that, when nitrate of soda has been used with good effect, that the grain is less plump, coarser in the skin, and lighter to the bushel, than it is when growing side by side on the same land, prepared in every way the same; but, undressed, even guano in its best days, when it easily averaged 17 per cent. of ammonia, and had necessarily an enormous forcing effect, gave grain of a much finer quality—silkier in the skin, and heavier to the bushel. The rank growth caused by the application of a fertiliser so rich in nitrogenous matter as nitrate of soda would readily indicate to the observant farmer the propriety of checking its stimulative powers by mixing with a phosphatic manure, for which purpose nothing could be got better than dissolved bones. While the former implants strength to the young plant, or, when laid on at a more advanced stage, as, for instance, in spring or autumn sown wheat, quickly restoring the weather-beaten and struggling plants to the bright hue of healthy vigour, giving them strength to tiller out and cover the surface, and inducing a luxuriant growth of straw, the latter feeds the ear, increasing the yield of grain and most decidedly improving its quality. The good effect of top-dressing corn crops is most clearly discernible when the land is in rather poor manurial condition, the crop being then susceptible of improvement; and, while responding to the quickening influence of the artificial manure, there is no danger of injury or loss from excessive luxuriance. In exact contrast with the root crops, which are benefited by a dressing of ammoniacal manure, however rich may be the land on which they are grown, or however great the quantity of bulky manure given, cereal crops require no assistance from top-dressings when grown on rich land, their application nearly always resulting in positive loss by the great length and softness of the straw, causing the crop to lodge long before the period of maturity. On such soils the simple dressing of a few cwt. of common salt to the acre will often pay for itself over and over again, by improving the quality of the grain and imparting strength and stiffness to the straw, thereby enabling it to stand a great deal of trying weather without sustaining the slightest injury. As a source of ammonia, as previously noticed, nitrate of soda has of late years come very much into use in the growth of the various root crops, and, mixed with dissolved bones, or bone superphosphate, either by itself or in conjunction with guano, has given highly satisfactory results. As a top-dressing for meadow and pasture land nitrate of soda has been long and popularly known, scarcely ever failing, when it has the right varieties of grass to act

upon, to give a very large increase of fodder, whether eaten down by cattle or made into hay. When used for this purpose, however, it is open to the very serious objection of being exhaustive, the field scarcely recovering itself until either broken up in the ordinary rotation of the farm, or again dressed with a manure which will exercise a recuperative influence on the exhausted roots and coarse herbage by gradually yielding for the service of the plants the nourishment which it contains, bones either chemically or mechanically reduced being a very familiar example of a manure which possesses this renovating influence. As a top-dressing for pasture or meadow, town manure compares favourably with nitrate of soda, as, although the latter gives a heavy crop of hay, the after-grass is apt to be stably and innutritious, and the pasturage, in consequence, considerably reduced in value. Although a fair covering of the former will cost double the money, it is cheaper and greatly more beneficial in the end, as, with an equal crop of hay, the pasture which succeeds is vastly superior, and every acre which has had the benefit of such an application will be worth not less than twenty shillings per annum additional while it remains in grass. This result is obtained by the manure, through the process of natural decay, and the action of the atmosphere, becoming resolved into an exceedingly fine and fertile earth, a portion of which, being washed by every shower down to the roots of the grasses, imparts strength, vigour of growth, and succulence to the herbage for a succession of years. When broken up for corn, it still marks its presence by a friability in the newly turned-up furrow, and a weight of crop, both in straw and grain, altogether unattainable when the cultivator has omitted to top-dress, or confined himself to the use of easily-applied and quick-acting stimulants. Before passing from the subject of artificial or concentrated manures, it may be interesting to trace the progress from the first start to the period of final maturity of a field of roots—say of mangolds—that has been properly worked and prepared for its reception, and highly manured with dung and artificials, contrasting it with the crop growing on a field which has been treated with only ordinary care. The mangold, being a gross feeder of remarkably sound growth, bears with impunity any amount of forcing, this feature of its character rendering it of the utmost importance in agriculture, as, with liberal treatment, an enormous weight of highly nutritive food can be obtained from a comparatively circumscribed area. When there is the intention of permanently improving the soil, as well as a desire to grow a heavy crop for the time being, it will pay to lay on 35 tons of well rotted dung to the imperial acre, with the addition of 3 cwt. half-inch bones, 5 cwt. pure dissolved bones, and 3 cwt. Peruvian guano; or, if preferred, nitrate of soda may be substituted for a portion of the latter, the whole costing a trifle under £6. With the preparation of the land, and the dressing of bulky and portable manures, as above indicated, it may be fairly assumed that the plants will make a quick and even start, passing rapidly over the intermediate stages of growth, and becoming fit to thin at five weeks from the date of sowing. Spaced out to a distance of from twelve to eighteen inches, according to the nature and capability of the soil, the plants, finding abundant nourishment will speedily expand under its forcing influence, the leaves becoming thick and juicy and shining with metallic



lustre, bending over into a half-circle with their own weight in less than a month after the operation of thinning has been completed. Grown on badly-prepared land, with but a moderate dressing of the different manures, this crop comes away very irregularly, many blanks—often, too, of great extent—appearing in the drills, a failure invariably attributed to bad seed or a faulty machine, when very probably neither the one nor the other had anything to do with the matter, but simply careless cultivation. The mangold-seed being enclosed in a hard dry husk, it will not vegetate unless surrounded with very fine, powdery earth, which is able to attract and retain moisture; and hence the numerous blanks which occur when the necessary conditions for success are unfulfilled. Badly nourished plants are long in coming to the hoe; and, even when well advanced, the treatment they have received is easily discernible by their spare habit and the leaves tucked up tight together, not being possessed of sufficient succulence to give them weight enough to spread out and fall over. The mangold being a plant that, under ordinarily favourable circumstances as to soil and climate, gratefully responds to good cultivation, it naturally follows that lifting a poor crop is a very miserable and undesirable occupation for both man and master, showing no return for the labour expended, and affording a truly wretched prospect for spring feeding. Turnips, in like manner, in nearly every instance owe their success to the first start, and, if this is weak or protracted, no after-effort the crop may be enabled to make by the influence of favourable weather or autumnal or early winter growth, which in certain seasons amounts to something, can bring it beyond mediocrity. To effect a good start, therefore, an artificial fertiliser, rich in ammonia, becomes absolutely indispensable, however well the soil may have been otherwise treated. A crop which has been quickly forced beyond the reach of the fly, and got a good hold of the soil before evaporation has taken place to such an excessive extent as to injuriously affect the well-doing of the plants, having every chance in its favour of reaching a heavy weight to the acre. On land where turnips of all varieties are apt to decay—and in special seasons this is liable to happen on the very soundest turnip soils—the artificials are blamed at once as the cause of all such loss and injury, when, if, for experiments' sake, a number of drills had been left undressed, which should always be done, it would be found that the quantity of decayed bulbs bore the same proportion to the sound ones as in the drills that had received the artificials. The working of the soil and the period of sowing has much to do with the ultimate success of the crop and its freedom from premature decay, the latter varying so much, according to the nature of the soil, sub-soil, and locality, that it would be utterly preposterous for any one, even after the experience of a life-time, to attempt laying down a hard-and-fast rule for the seed time of swedes, or any variety of turnips, which will be equally applicable to every locality. The Northern farmer must sow early in May; possibly, if he can manage it, in April. Otherwise, he risks the loss of half or more of his most valuable feeding crop—mangolds, with his climate being inadmissible. On the other hand, the Southern farmer, by sowing thus early, may find by the time of harvest, what was a few weeks before a highly-promising and luxuriant crop, covered with mildew, and by the first month of winter half or more of the bulbs destroyed by dry-rot. With his genial climate, and more particularly on light, friable, or brashy land, the latter finds the month of June by far the safest time to sow his general crop. By the time the plants are up the days are on the turn, and, under the strengthening influence of a soil thoroughly warmed by the sun's rays and a copious deposition of dew, they make rapid progress, and soon get over the dangerous period of their

existence. In certain seasons he may even extend his sowings of swedes into the first week of July, and still have a presentable crop of the soundest bulbs. Land badly prepared, or worked when in an unfit state, is extremely inimical to the success of this crop, and, besides causing an uncertain and exceedingly irregular bit of plants in the first instance, brings on dry rot, and nearly every disease to which it is subject, in the more advanced stages of its growth—finger-and-toe not excepted. It is highly necessary therefore to inquire very closely into every phase of culture and general treatment, when a crop has become either a partial or total failure from unsoundness of bulk, before making the sweeping assertion that it was caused by the application of too heavy a dose of artificial manure—a statement too often made without having the slightest shadow of foundation. The facility with which roots can be grown, when manured with artificial fertilisers only, on well-prepared, though it may be, poor land, has conferred advantages of enormous value on the modern farmer, as it has secured to him the means of bringing the soil by which he must gain his living into high manurial condition, and, what is of quite as much importance, of sustaining its fertility. By an eminently useful combination of root-culture on the one hand, and sheep-feeding on the other, a highly-intelligent system of fertilisation, which embraces every element of good husbandry, has become inaugurated, and become a permanent institution in every district, and nearly on all soils. By the extremely simple arrangement of eating off the crop where it grew, the animals being confined in a moderate sized space until all that grew on that part is consumed, the whole of the manure, both liquid and solid, which the crop is capable of converting, is returned in an exceedingly comminuted form and with the utmost regularity to the land, for the growth and sustenance of future crops of corn and grass. On soils favourably situated for the growth of roots, and when liberally treated with bone phosphates to aid the succeeding crops, the whole of the turnips need not be eaten on the ground, a successful crop frequently permitting, with no apparent injury, half of its bulk to be drawn for consumption in the yards, there to take its part in the manufacture of farmyard manure. To further assist in enriching the soil, and increasing the profit derivable from the sheep by hastening the fattening process, each animal may be supplied daily with a portion of cake and corn, varying from a half to two pounds, according to their size and condition and the quality of the article given, and as much sweet clover-hay as they will eat without waste. On all light land—uplands, and slopes—this mode of fertilising the soil forms the very perfection of modern husbandry, the soil being kept in high manurial condition with the least possible expenditure of labour, even the consolidation effected by the treading of the animals being a mechanical operation of great value, proving highly beneficial to the barley crop which follows. Wherever carting is difficult or impossible this is the only course open to the farmer; and either as a breeder or feeder of sheep, or both combined, he is able, by judicious and intelligent management, to make a comfortable and respectable living in, what would appear to the ordinary observer, the most unpromising situations. This article, however, is not written for the purpose of advocating sheep-farming either as the sole or leading source of fertilising the soil, but rather as a valuable aid to the general farmer in enabling him to get quickly over an impoverished farm, to annually assist and supplement the supply of farmyard manure, and thus permit him to grow, with a reasonable prospect of success, every acre of corn which his rotation allows. Roots are not the only crops available for sheep-feeding, rape and tares being also



extremely useful for this purpose; and in some ways they afford economic facilities to the extensive stockowner, which prove of very great value. Sown in the latter case, or transplanted, as in the case of the former, when the cereal crops have been removed, they come in for use in spring, when the turnips are finished, and are cleared off in ample time to give full justice to the turnips, thus only occupying the land when it would have been lying idle. If dung can be used for these crops so much the better; but, as a rich growth can be obtained by the application of a nitrogenous manure, such as nitrate of soda, these crops can themselves be used as agents for fertilising soil. Penned up in the same way as on the turnips, care being taken that they do not trample the luxuriant vegetation on which they are placed to feed, and supplied with cake and corn as before, sheep do admirably, putting on condition fast, and at the same time greatly enriching the land. Again, sheep may be netted over grass-land, and, while paying for rent and labour by the improvement they make in their own condition and consequent values, they at the same time permanently improve the soil to an extent seldom equalled, and probably not exceeded, by any known mode of fertilisation. The improvement is more substantial and lasting when carried out on a newly-laid-down field, the quick-growing succulent grasses giving a larger supply of food than pasture several years old, and the soil underneath, being soft and porous from recent stirring, quickly absorbs the whole of the solid and liquid excretions. A hill-side field, uneven and difficult to work, a park or portion of a domain that has been turned up to undergo a process of renovation, or any field, however situated, that it is desirable to lay down permanently in good heart, can be enormously improved in its future grass-growing and stock-carrying capabilities by omitting the corn crop, and eating off the first year's growth of the clovers and grasses, in exactly the same manner as is done with the turnips, by netting the sheep in successive squares, and giving a liberal allowance of cake and corn. If previously put out of lands in good heart, either with dung and bones, or by eating the turnips by sheep, the grass may, in ordinarily favourable seasons, be eaten over three times before the close of the year in which it was sown, easily paying, by the improvement of the sheep, all that could possibly be made by anything but an unusually fine corn crop, after seed and labour of all kinds has been deducted. In thus laying down land to grass without a white crop the mixture should include every variety of herbage and forage plants suited to the geological formation, so as to prove as far as possible acceptable to the animals, by affording a variety of palatable and nourishing food. There is no way rape can be sown to better advantage than by mixing a few pounds to the statute acre with the grasses and clovers, when laid down in this way, as the plants, having abundant room, spread out, and afford a large supply of food, in its nature evidently grateful and agreeable to the animals, as however rich may be the herbage, the rape plants are the first stripped, the sheep nibbling at them as long as a leaf remains. The improvement in the manurial condition of the field thus treated will be so great as to be visible for many years, both as to the intensely green shade which the herbage retains throughout the whole year, the quality of the grasses, and the number of stock which it is able to sustain. The leading fertilisers which are available to the farmer, as substitutes, in whole or in part, for farmyard manure in the field, and aiding its production in the yards, by largely increasing the bulk of the material from which it is formed, having now been received, it just remains to briefly glance at its collection and management, as no farmer can, even with safety to his pecuniary interests, lose sight of it as his leading idea. To obtain the

bulk of farmyard dung necessary to cover a considerable extent of surface, straw of the cereal and leguminous crops must be used in the most liberal manner, no substitute for this article having yet been, or is at all likely to be, devised which could satisfactorily take its place. Straw in the most admirable manner fulfils a double purpose, as it not only gives the animals a comfortable bed when confined to the stalls, but at the same time, by its power as an absorbent, affords an excellent medium for taking up and preserving in a portable form the whole of the solid; and, if proper arrangements are made, the greater portion of the liquid excretion of the animals. Thus the growth of corn must go hand in hand with the breeding, rearing, and feeding of live stock. The former cannot be sustained without the latter, as if this department is attempted to be omitted or badly managed, cropping ceases to be profitable, the source of fertility being cut off. Stock-farming, without a proportionate breadth of corn to the number of animals kept, implies a scarcity of food and litter during the winter and spring cold lying, discomfort, semi-starvation, and misery, wastes of condition—in extreme cases to real emaciation—and the loss of half the next season's grass, before the condition can be restored. Mere bulk, however, is not the only desirable feature in the manufacture of farmyard dung, as, however necessary it may be to have it in the greatest possible quantity, the quality of the manure is the real test of its value as a fertiliser. On certain heavy clays, straw, decomposed by the treading of cattle, which have no choice of food but that afforded by the freshest and softest portions of the article which they are kept to break down, will often act so beneficially as to pay for the expense of application, and a moderate sum per ton for all that may have been thus eaten and trodden down, but the influence such dung exercises is purely mechanical, the texture of the soil being altered and rendered so porous and friable as to freely admit air, rain, and heat, but adding scarcely any element of fertility, or perceptible amount of plant-food. Clearly, then, the quality of the manure, and its power of building up and nourishing a healthy organism to maturity, must altogether depend upon that of the food with which the animal is supplied, time and money being lost in holding poorly-fed stock, as they are equally incapable of returning a profit by an increase in their own value, or by the manure which they make. A plentiful supply of juicy and nutritious food from early youth, until the day of final disposal is therefore the only profitable course open to the owner of cattle, and the sole mode of treatment by which he can hope to secure farmyard manure of first-rate quality. Roots in abundance, during six months of the year, is the first and most essential element in the collection of manure, its quality being enriched by a daily allowance to each animal of cake, corn, grains, or other artificial and highly concentrated food, the expenditure for which should by good management be in every case repaid by the increased value of the animals, the actual profit being in the superior value of the manure thus made and the greatly augmented productiveness of the land which results from its application. Some practical men go so far as to say that dung is of scarcely any value as a fertiliser unless the animals have got a mixture of foods as here indicated. This, however, is carrying a good principle rather far, but it shows in no small degree the importance of using all such aids to fertility, when men who annually spend hundreds of pounds on these substances place such a high value on the manure alone. No man, whose management is erratic in regard to high feeding of either land or cattle, is capable of giving an opinion as to its merits; no system of modern farming, requiring to be kept up with such laborious and unflagging regularity as this, is

resources only becoming fully developed after several years' continuance. About the fourth year it places its mark very decidedly on land, crops, and cattle, the improvement attracting the attention and provoking the remarks of not only the residents in the neighbourhood, but the most casual passer-by. The land assumes and retains an intensely green colour when in grass, keeps more stock of all kinds, and the individual animals grow to a larger size, and lay on condition quicker, and finish better than before. The cereal crops grow much sounder and healthier straw than heretofore, with a greatly enlarged, better filled head and sounder grain, with a largely increased weight to the acre of marketable corn.

Green crops also partake largely of the general improvement, showing it by the size of the bulbs and the immensely increased bulk and weight obtainable from an acre. The improved condition of land liberally treated for a number of years is sometimes illustrated by a reactionary process, when a thoroughgoing man, by some unforeseen and exceptional circumstance, happens to be succeeded in his occupancy by one whose opinions are rather more moderate in degree. Such a man may, for the first couple of years, reap one hundred bushels of oats to the imperial acre with no more trouble than he gets by turning the soil upside down, and although a fair farmer may never again in the whole course of a lengthened tenancy touch sixty bushels to the same area. Although the first step in the right direction for the protection of the farmer, and encouragement of an enlightened and liberal system of husbandry has now been taken, some extensions are still required before every section of British farmers can feel the beneficial influence of the action recently taken by the Legislature. It has been at all times a singularly anomalous and short-sighted policy on the part of the highest and most independent class in

these realms, which compelled a man, when leaving his farm, to work out the last fraction's worth his lease permitted him so as to come by his own, fearing too often, with ample grounds for doing so, that whatever remainder of what was judiciously and honestly his at the expiration of his term, would, to use a very mild term, be forfeited. The effect of this peculiar system of managing the landed property of Great Britain is instructively exemplified in the case, it may very easily be, of two adjoining farms, the tenant, on the one hand, leaving his farm, and the other having but recently taken possession. During the last years of his term the former spends literally nothing on fertilisers that are of a permanent character, simply contenting himself with the manure he makes in a moderate way on the farm. During the same period he turns up the last furrow which the restrictions of his covenants permit, leaving the land as poor as he dare make it; and if he continues on, which he can do by becoming the highest bidder, he has all his work to do over again, the land scarcely attaining in seven years the condition it was in five years before. A new tenant, if a pushing, energetic man, possessed of sufficient capital for the business he has undertaken, may always be known by his conduct and management. By the force of circumstances he is compelled to purchase dung when and wherever he can get it, drawing it home often at an enormous expenditure of labour, besides having his home arrangements so conducted as to assist as far as possible in the manufacture of this most valuable and indispensable fertiliser. With plenty of money at command, he does eventually succeed in placing himself in a position to command a return; but, if cash or credit fail him when only half way, he must be a good manager indeed if he ever succeeds in extricating himself.

## H E X H A M F A R M E R S ' C L U B .

### THE AGRICULTURAL HOLDINGS ACT.

Mr. C. H. Meldon, M.P. for Kildare, read a paper on this question. He interspersed his paper with many racy observations, taking his text from the clauses of the English bill, and comparing them with the clauses of the Irish bill; and he went so thoroughly into the matter that little time was left to discuss the question. Major Nicholson (president) occupied the chair.

Mr. MELDON said the bill was based upon two principles, both of which had been adhered to in the statute as law. The first was that compensation for improvements should be based on the increased letting value of the holdings. The next and most important was that the bill should be permissive in its character, and what is called "freedom of contract" should not be interfered with. Now it is perfectly manifest that any legislation based on this principle must necessarily fail in satisfying the claims of the tenant-farmers in England, or in securing to them the capital which they invest in their holdings. The arguments used by persons in favour of what they call "freedom of contract" rest upon several grounds. In the first place they say that any infringement on the rights of contract is wrong and repugnant to the feelings of Englishmen, and that there must always be perfect freedom of contract. This argument is equally absurd and opposed to the principle of legislation in this country. Legislation interferes every day with this so-called "freedom of contract." It interferes with it by the operation of the Truck Acts, where employers deal with men and women of full age, who, perfectly free to contract as they like, are prevented paying wages except in money. It interferes where pawnbrokers are prevented taking interest except at a certain rate, and, in my opinion, there is as much possibility of oppression of the poor in the office of a law agent as in a pawnbroker's shop. It interferes when it makes void a contract between a person of full age and a money-lender, where contracts entered into with such

persons when they are under age are sought to be set up under a new promise. The law also interferes in the case of employers of workpeople in factories and in mines; it also interferes where landowners are compelled by law to give up their property for the purpose of making railways and such other works; in fact, the number of cases in which the law interferes with "freedom of contract" is too large to enumerate. In the case of the Irish Land Act, vast majorities of English representatives affirmed the principle over and over again that interference with what they called "freedom of contract" is, when necessary, one of the fundamental principles of legislation in these countries. Therefore I say that this argument put forward by the opponents of the interests of English tenant-farmers is idle and absurd. Besides, I cannot admit that there is any "freedom of contract" where one party is in a position to dictate terms, and the other side is unable to defend himself from oppression and imposition. Take the case of a farmer holding fifty or sixty acres of land, held probably by many generations of his family. He has a large family supported by him out of the profits of the farm. All the capital which he or his ancestors were possessed of has been sunk in improving his farm. The landlord serves him with notice to quit; there is not any other farm in the neighbourhood which he can rent. Can any one seriously maintain that in such a case as this there is anything like "freedom of contract"? The landlord demands an exorbitant rent. If this is not paid, the poor tenant is driven on the world with all his family, without any means of support; the entire of the property sunk by him and his predecessors is confiscated to the landlord. Is this not a case which calls for the interference of the Legislature? But I am told, by the noble Duke who introduced the Agricultural Holdings Bill, that legislation is not wanted for such cases as this. I am perfectly free to admit that a large farmer, about to negotiate for the first time

with a landlord for the letting of a farm, may be perfectly competent to box his own corner, and to enter into a contract with his landlord, and, if possible, if he is a good tenant, almost to dictate terms; but let even a man of the class get into possession, let him outlay a large amount on his holding without any security therefore, and if his landlord should seek to demand an exorbitant rent (knowing that he has the power of confiscating his tenant's property), can it be said that the landlord and tenant meet on equal terms, and that there is any real "freedom of contract"? I maintain that the necessity for legislation does not exist in cases where landlord and tenant are on perfect equality, and where there really is freedom of contract. The law is not meant for good landlords. Protection to tenants is required against bad and greedy landlords; and it cannot for one moment be argued that such men as these will voluntarily place themselves under restrictive legislation. The real protection is wanted for the small farmers. The men who cultivate their thirty or forty acres of land are men who require the assistance of the law much more than those large men who can compete on equal terms with the landlords. What is the meaning, may I ask, of the statement by the Duke of Richmond that the Agricultural Holdings Bill was not wanted for small men? If it is not so wanted, and if the persons for whose protection legislation is required can deal with landlords independently of legislation, what was the meaning of introducing the bill with such a flourish of trumpets? His arguments carry with them their own refutation, and nothing more than his speech is necessary to prove that the real intention of the Government in introducing this bill was merely to delude such of the tenant-farmers as at the last election thought fit to support the Government. But another point has been made, and it is one to which I wish to direct your special attention. It has been said over and over again in both Houses of Parliament—and apparently with some force—that the majority of English tenant-farmers are in favour of this so-called "freedom of contract." Mr. Rodwell (the member for Cambridgeshire), who, as I understand, was elected representative of the tenant-farmers, stated that the tenant-farmers do not want or wish to interfere with this principle. I believe, and I hope that my experience this day will confirm me in my belief, that any man who is of opinion that there is any necessity for legislation to give security to the tenant for the capital he has invested in the soil, must also be of opinion that any legislation to secure that end must be compulsory. I noted, at the time of the introduction of this bill into the House of Lords, that between thirty and forty Chambers of Agriculture in England passed resolutions most strongly condemnatory to its permissive character. It appears perfectly clear to my mind that where the Legislature admits the existence of a grievance, and suggests a remedy, it should also be prepared to enforce its suggestions. I do not consider it necessary to enter more fully into the arguments on this point, because I know full well that this question is more thoroughly understood by many here present, and has been already very fully discussed; but I will pass on to show the state in which the bill was when it passed through the House of Commons. From the moment the bill left the House of Lords it was exposed to every possible attack from landlords in the House of Commons. The bill, as originally introduced and read in conjunction with the speech of the Duke of Richmond, certainly appeared to lay down a general principle that the tenant was entitled to security for the capital he invested in improvements, and I must admit that, save so far as this principle was interfered with by the permissive clause, the bill left the House of Lords unrestricted in its operation; but from the moment it entered the House of Commons until it was read there a third time nothing was thought of by its promoters but to curtail and restrict its very feeble operation. What the Government gave with one hand it instantly took back with the other. Every possible attempt to widen its operation or extend its utility was stifled by the overwhelming force of a tyrant majority. A proposition to extend the period for improvements of the second class from seven to ten years was rejected. An amendment, with the object of allowing compensation for improvements of the third class for two years, was met by increasing the severity of the restriction, and by making the taxing of a crop of corn, potatoes, hay, seeds, or other exhausting crop a bar to obtaining compensation. I myself moved an amendment that compensation for improvements should be allowed, unless prohibited by notice from the landlord, or made in contravention of contract instead of

throwing upon the tenant to obtain consent of his landlord, in writing, to make a drain or a fence, or to lay down permanent pasture, or to improve a road. Such a proposition, I need scarcely say, was met with most vigorous opposition, and was unsuccessful. I will call attention now as succinctly as possible to the provisions of the Irish Land Act, passed in the year 1870. Previous to the passing of that measure, the great grievance in Ireland was not so much that the tenant had no security for his capital invested in the soil, but that the tenant farmers and peasantry in Ireland were being capriciously evicted to such an extent as to amount almost to extermination by the landlords. For many years the landlords in Ireland had been waging war against their tenants; entire villages were being destroyed; large agricultural districts were being swept of the peasantry of the entire land by the capricious acts of landlords. Tillage farms, occupied by a host of cultivators of the soil, were being turned into large grazing farms, intended for occupation either by landlords or by strangers brought into the country. Unless, therefore, the Legislature was content to see the Irish peasantry almost exterminated, it became necessary to pass some protective measure; and the plan adopted was to make provision for the payment by the landlord of a certain sum of money for each capricious eviction. The first section of the Act, therefore, provided for such compensation. By the 3rd section of the Act, any tenant disturbed by a landlord shall be entitled to compensation on the following scale:

In cases of holdings valued at an annual rent of £10 and under a sum not exceeding seven years' rent.  
 Above £10 and not exceeding £30 a sum not exceeding five years' rent.  
 Above £30 and not exceeding £40 a sum not exceeding four years' rent.  
 Above £40 and not exceeding £50 a sum not exceeding three years' rent.  
 Above £50 and not exceeding £100 a sum not exceeding two years' rent.  
 Above £100 a sum not exceeding one year's rent.

And in no case more than £250, subject, however, to certain restrictions not necessary to refer to. This section also renders absolutely void, subject to certain limitations, all contracts made by a tenant to forego his claim for disturbance. I have called attention to these provisions merely for the purpose of showing that the Legislature has already recognised the principle of interference with the freedom of contract between landlord and tenant. The next portion of the Irish Land Act refers more particularly to the subject matter now before the meeting. It makes provisions for compensation to tenants in respect of improvements. On quitting his holding a tenant under the Act is entitled to compensation in respect of improvements made by him or his predecessors in title—subject to certain limitations not necessary to refer to—the principle of such limitation being to prevent tenants obtaining compensation for improvements calculated to diminish the value of the landlord's estate, or prohibited in writing by him, or what the landlord himself undertakes to make. It is, however, provided that any contract between a landlord and a tenant, whereby the tenant is prohibited from making such improvements as may be required for the suitable occupation of his holding and its due cultivation, shall be absolutely void. There is no consent of any kind required from the landlord to the making of improvements, nor is it necessary to give or serve any notices whatever. The principle of the Act is that the tenant shall not be prevented from the proper cultivation of his holding, and absolute indemnity is given him against loss by reason of being turned out of his holding while any of his improvements remain unexhausted. The Act also gives compensation for improvements which were made previous to the passing of the Act. It was not found necessary or desirable to set forth in the Act of Parliament what was to be considered "improvements," so that a tenant can exercise his own discretion as to the reclamation of waste lands, the use of manures, the draining of his lands, and other matters which he considers necessary or proper for the due cultivation of his holding, subject to certain limitations. The presumption of law in respect of improvements is always in favour of the tenant; so that if it can be proved that land was drained, or that waste lands were reclaimed, or that any other improvement had been made, the tenant is entitled to the presumption that such improvements were made by him. The next section of the Act provides that, at any time the

landlord or tenant can have improvements registered, so that, hereafter, at the termination of the tenancy, there can be no dispute as to what improvements have been theretofore made. Compensation is also allowed in respect of any payment made by a tenant or his predecessors, in title with the expressed or implied consent of the landlord, on account of his coming into the holding. The amount of compensation to or paid to the tenant must be determined, either by a court of arbitration (if the parties can agree upon some), or else by the Judge of the Civil Bill Court. This Act has now been upon its trial since the year 1870; and so far as the clauses awarding compensation for improvements are concerned, it is working to the satisfaction of every person. The only failure there has been in the working of this portion of the Act, is in consequence of the clauses allowing tenants, whose holdings are valued for £50, to contract themselves out of the operation of the Act, and the mode or manner in which the amount of the compensation is to be determined. The result of giving the tenants power to contract themselves out of the operation of the Act has been to cause the landlords to assist, in the majority of cases, upon making tenants so contract. I need not go into details in this matter, but I will only mention that in the county which I have the honour to represent the hardship and injustice of this provision has been severely felt. One of the largest landholders in the county has, I regret to say, been successful in forcing upon his tenants leases and agreements, depriving them of the benefit of the Land Act. Wherever a letting is made to a tenant upon that estate the value of whose holding exceeds £50 a year, such letting is made subject to an agreement that the Land Act shall have no application. We have in Ireland experienced that even the best landlords think that it is right and lawful to deprive their tenants, where they possibly can, of what the Legislature, after mature consideration, has thought it necessary to impose. The result of this system has been that, practically speaking, the Irish Land Act is a failure, and I should have expected that the Legislature, when passing a Tenant-Right Bill for England, would have taken the advantage of the experience of the working of the Irish Land Act, and would have remedied the most serious defect in this Act. The other defect to which I would direct your attention is the mode and manner of assessing compensation. No doubt there are provisions for referring disputes to arbitration, but these unfortunately have seldom been adopted by the landlords. They prefer going to a court of law, where, with the command of wealth, they find they can best deal with their poor tenants, who cannot carry on litigation with the same advantage as their rich landlords. Another great evil of this system is that the judge of the civil bill court, not being practical agriculturists, are really totally incompetent to deal with these agricultural matters. The great divergence of opinion with these judges also renders the working of the Act much less beneficial than it would be if persons who understood the matters in dispute between the parties were appointed judges of what compensation should be allowed. I am glad to say that to a great extent this evil is remedied in the English Act. Is there any reason why the provisions of the Irish Act, so far as regards compensation for improvements, should not be extended to England, taking care, of course, to remedy the defects which have appeared in the working of the Irish Land Act.

The Rev. Mr. FOLEY said that Mr. Dodds had been obliged to go away during Mr. Meldon's speech, but Mr. Dodds had expressed to him his opinion against the somewhat severe strictures of Mr. Meldon against the bill. Mr. Dodds thought the bill was not a sham, but was in the right direction.

Mr. W. TROTTER, the secretary, moved that the thanks of the Club should be given to Mr. Meldon. He thought the bill was useless in its present state, but that it was a great step gained in the recognition of a tenant to have a claim for compensation for unexhausted improvements.

Mr. JOHN HOPE, Jun., seconded the motion. He said that we were going on at the rate of importing 20 millions worth of corn per annum which he thought was injurious to the country, as we had to pay for it in cash. This state of things might be remedied if the land was better cultivated, but the land could not be better cultivated until farmers had security for the capital invested in the soil. He could mention several instances in which farmers had left their capital behind them on leaving their farms. The Agricultural Holdings' Bill did not give farmers this security. It did no good

to tenants and no harm to landlords. It was a milk-and-water piece of legislation, and was practically useless.

Mr. MELDON returned thanks, and said the question was not a party question, as both political parties had pledged themselves to Tenant Right.

Mr. ROWELL thought the permissive nature of the measure made it a sham, and that it would prove an abortion. Landlords had the whip-hand, and they could do as they liked. The measure would not be acted upon, and landlords were quite satisfied with things as they are, and they would manage to contract themselves out of the Act.

Mr. DRYDEN concurred in what Mr. Meldon had said with the exception that the tenant should not make permanent improvements without the consent of his landlord.

Mr. MELDON replied that the Irish Land Bill stipulated for suitable improvements; but if these were not suitable the landlord should have the right to prohibit them. On this part of the bill he had moved some amendments, but he was only laughed at.

Mr. TAYLOR, in supporting the motion, went into some details as to the general character of the measure, especially with regard to the clauses relating to improvements.

Mr. J. W. WILKINSON moved that it be an expression of the Hexham Farmers' Club that no bill will be satisfactory unless it be made compulsory throughout England. He did not agree on some points with Mr. Meldon, as the circumstances between England and Ireland were different. Labour in England had risen considerably in price, and manufacturing towns absorbed a good deal of it, and he thought that farmers ought to do their best to keep labour on the farm.

Mr. DRYDEN seconded the motion.

The CHAIRMAN said at this time of day the meeting had become rather small, and that so important a resolution should be submitted to a full meeting; but if the mover and seconder thought it should be put he would gladly do it.

The motion was then put, and nine hands were held up for it.

Mr. TROTTER moved a vote of thanks to the Chairman, and said that if a tenant wanted more buildings for his cattle he could not see why he should be prevented from erecting them without the consent of his landlord, and to be compensated at the end of his term by the award of arbitrators.

The motion was seconded by Mr. TAYLOR. The CHAIRMAN briefly replied, and the proceedings terminated.

GLANDERS AMONG IMPORTED HORSES.—It will be well if, in the excitement of the foot-and-mouth disease controversy, we do not altogether lose sight of matters affecting live stock other than cattle and sheep. It seems that we are subject, at any time, to a visitation of glanders among horses, from the fact that no inspection is made of horses landing at our ports. If this be so, and considering that an actual case of glanders among imported horses was lately discovered, the Privy Council will, no doubt, see the advantage of instituting some kind of inspection of the equine species landing on our shores from foreign countries. The case referred to occurred early in September last, when three horses affected with glanders were landed at Southampton from Jersey. They were ultimately destroyed, and the owner, a horse-dealer, summoned for exposing them in a public place. After a lengthened trial, a fine of £15, with costs, or six weeks' imprisonment, was inflicted. The *Veterinary Journal* informs us that "unfortunately there was an absence of unanimity in professional opinion" when the case came on for trial, and if such (as but too often happens in veterinary circles), was the case, then we have only the consolation left us, should the Privy Council arrange for a system of inspection of imported horses, that glanders will, one of these days, be as fertile a bone of contention among "vets" as are foot-and-mouth and pluro-pneumonia. The fact, however, notwithstanding a much-to-be-regretted diversity of professional opinion as to what glanders really is, remains the same. At any moment a cargo of glandered horses may land in this country, and sow the terrible disease broadcast. We ourselves are aware that weekly a considerable number of horses are imported into this country from France, and they are allowed to be landed at London Bridge, without the slightest inspection as to their healthiness.—*Live Stock Journal*.

## THE NORFOLK AGRICULTURAL ASSOCIATION.—PRIZE ESSAY ON AGRICULTURE.

BY ALFRED J. SMITH.

## TWENTY YEARS AGO.

I must remind the reader at the outset that twenty years ago it took almost a fortnight longer to secure the harvest than it does in the present day: in our operations for each successive year we were, therefore, a fortnight behind our present starting point. And what an important fortnight! to my mind, by far the most valuable in the whole year. On the first month or two after harvest how much depends! We were not only a fortnight behind, but when we had finished harvest we had not cleared our land: it had again to be gone over, to be hauled, or to get the stubble together: we had reaped the wheat, but left the straw. Twenty years ago perhaps, reaping was giving way to bagging or mowing, but in my district, and in many others, we continued to reap until 1856 or 1857; consequently our horse power, or the whole of our cavalry force, was misapplied from the very start: as the straw or haulm was still on the land, we could not get at our wheat stubbles on light soils to kill the twitch and sow our spring feed: and our heavy lands could not get that ploughing during or directly after harvest, which is now the very groundwork of all successful farming. My father recognised this, but could not in his day, for the above reasons, do more: he has told me many a time "to be sure and get a good start after harvest, and then always keep ahead of your work: never let the work on a farm *drive* you!"—good advice even now-a-days. What a train of ills followed this first wrong step, and how surely it left its mark all through the following year, even up to the next harvest! a mark that told of much labour, and loss of yield in the corn crops, and, therefore, loss of revenue to the farmer. There was the ploughing for, and sowing or drilling the wheat: if the muck was on, and some of the land ploughed up before the rain set in, a good part had still to be got in late, and what with land clung, and in bad order from rain and frost, the wonder was how it was put in at all: in fact, a great deal had to be left until the spring which ought to have been sown in the autumn. I myself have been obliged to sow broadcast, because the land was in such a state that the drill could not work, and then all the harrowing in the world would not bury the seed. The water-furrows and headlands resembled thin batter pudding. Add to this exposure during the whole winter to rooks and other birds. How could a crop be expected? The root crop, sown late, was not ripe, and could not be drawn until late in the season, and in carting it off, land was ruined for the succeeding barley crop, to say nothing of the extra amount of horse labour required. From the same false start the preparation for the root crop of the following year was delayed until the spring, or what was worse, attempted in the winter; and with what consequences? Stubbles turned in after the dry time was over, ploughed up whole, and clung, and were thus worked a-out until the first week in May, when if rain, and a lot too, did not come, the mangolds were put in on heavy, stiff lands, among plenty of crows, and very little moisture. If rain followed they came up, but in many seasons they never vegetated; if, luckily, they grew, the crop averaged about half the weight it does in the present day. One of our old farming authors, writing of the latter part of September, says, "Now if you have leisure, let your ploughs turn up all sorts of stubbles." I should say if you mean to farm you *must* have leisure, or at any rate the ploughing must be done. I often heard something like this from my foreman when I ask him, "Have you done so and so yet?" which, perhaps, I pointed out a few days before: he answers, "Well no, I ain't had no opportunity; I think I may to-morrow." I almost invariably say, "Opportunity, or no opportunity, it *must* be done: if an opportunity don't come to you, you must find one and get it done." I feel persuaded that here lies a vast deal of the improvement in farming. Twenty years back we waited for an opportunity: now, we are awake to the fact that we must find one, or at any rate every operation must be carried on in its proper season. Thus twenty years ago farmers found themselves at the end of November with a good part of their wheat still not planted, their mangold very likely still

on the land, and consequently their root lands to plough for barley, and their barley stubbles for beans and peas; all to be done in the wet season—slow and hard work for both man and beast, and the soil stamped and plastered greatly to the injury of the succeeding crops. And, moreover, none of their stubbles touched in preparation for the next year's root crop. This must always have been the case, unless it happened to be a very forward and favourable season for both light and heavy lands. I remember it used to be said that the wheat should all be up by Christmas, but I also remember drilling wheat on New Year's day. Now let us look for improvement. During the last twenty years farmers have learnt, and will learn still further, that all lands, heavy lands especially, must be ploughed and worked only when dry. If horses will not do it, steam must and can: in fact, that the work hitherto extended over the autumn months and all through the winter, must be done quickly, and at once, before lands become sodden with rain or snow. As it is estimated that we now have reaping machines sufficient to reap our wheat in about six days, so we *must* have ploughing power sufficient to plough our lands in about six weeks. I can now point to our most successful heavy-land farmers, who directly after, or even during harvest, are busy breaking up their stubbles. Some even ploughing for wheat when land is so hard and dry that twenty years ago they would have said the same land could not be ploughed, and would have waited for rain and an opportunity. Now, they know that land thus broken up will be in good condition for the drill, and will be comparatively clean all summer, and will also grow a good crop. Such men have also, of late years, managed to make the best of failures between harvest and Michaelmas and by the end of November, or before their wheat is all in and up, their roots all stored, and their ploughing all done, with the exception of a single ploughing or so in March or April for the mangold crop, which is thus deposited in land as fine as a garden. For this improved system of cultivation we may, in a great measure thank the reaping machines, helping us quickly through harvest, and so cutting our corn that no stubble shall remain to hinder us from going to work directly with our ploughs, steam or otherwise.

A NEW IMPLEMENT WANTED.—Draining forms a good part of the work on heavy lands at this season, but I think we have made as little progress in this as in any one part of our expensive cultivation. The manufacturer has scarcely helped us at all; 'tis true we can mole plough by horses or by steam, and some progress has been made in deep spring draining on boggy soils, but a good deal of the regular draining land, by reason of sandballs, &c., is better done by hand. Our friends the manufacturers must turn their attention to this, and come to our help: with the present state of the labour market we cannot keep the country drained without their assistance. Perhaps they aspire at too much when they attempt to dig the drains and lay the pipes in as well; it is only the hard work of digging the drain out that we require of them; surely we can find labour to lay the pipes in and fill the drains up: let them, and I feel sure they can, find a machine to dig or turn the soil out at any reasonable depth according to soils, &c., and I am convinced it will answer the purpose of both inventor and employer.

THE OLD AND NEW TREATMENT OF CATTLE.—Let us just look back twenty years, and see how we went on. The cattle in most cases were brought into open yards, exposed to all the inclemency of the winter months, with as much flesh on their loins as the pastures, without much assistance from cake, and the flies, allowed them to gain during the summer, and they were expected to fatten on the few roots grown on the farm, very imperfectly prepared, and straw, or at best hay, with comparatively little cake or artificial food. The result was, they were a long time getting fit for the butcher, and the manure from them, after being roused by the winter's rains, was of little value. The wonder is that they ever did get fat. Of course there were men twenty years back who were in

advance of their time, and whose stock was treated better than that of their neighbours, but I am writing of the generality of farmers who kept stock in the Eastern counties. I look back now with wonder, and see how they were treated. The roots were cut, if cut at all, with a large knife fixed on a stool, and were cut into slices somewhat like rounds of bread, and if the cutting was not performed very carefully, all sorts of three-cornered pieces were presented to the beast. The oil-cake was very likely broken with a hammer into pieces of a similar shape, but mind, seldom more than four pounds of this was given. Well, the end of this preparation of the food was, that the feeder often had recourse to his master with "Please, sir, that there white bullock is choked," and sure enough the white bullock would be choked—he had one of the many three-cornered pieces of root fast in his throat. But never despair—the remedy was at hand: just on the beam was the choking-rope. I always thought it ought to be the unchoking-rope, but, as I remember, it was a very thick, stiff, big rope, nicely unravelled at the ends, and only wanted well greasing; and then the bullock's head and neck were pulled straight out, and down his throat went this rope. If the operation was skillfully performed, the piece of root went with it into the stomach of the bullock, to be digested as best it could; the bullock lived, but he lived with a sore throat, which made him dainty how he swallowed for days after, and by the time he recovered the chances were he would have to go through the same process again. If he did get through the swallowing part successfully, the large pieces swallowed would most likely cause indigestion and wind; when away went the feeder with "Please, sir, that there red-and-white bullock is blown;" then a pint and a-half of linseed oil was the remedy, and this was no help to the fattening process for the next few days. What with exposure to weather, choking, and blowing, the making a bullock fat was a very slow affair. Now, thanks to Gardner's cutters, all sorts of papers and mincers and cake-breakers, we hear very little of choking or blowing, and the ropes have disappeared from among the necessary articles of a farm household. As to improvements, first of all we come to our breed of cattle—that is, the general run of cattle. The vast sums spent by our great Short-horn breeders have not been all thrown away, and we find, to start with, that we can purchase an animal that will fatten, and one that has size, shape, and make to lay fat upon. We have found, too, that we are well repaid for the cost of housing our cattle from the variations of our fickle climate; that we must keep them in one uniform, comfortable heat; and that they must, under no circumstances, be allowed to stand still in the fattening process, either from weather or from want of proper food. In place of open yards, we have generally come to boxes or stalls, or, perhaps, even better, covered yards; or, at any rate, we have good sheds; and if a landlord has provided good, wide sheds, many, and I among them, have found it an easy and inexpensive matter to divide such sheds into boxes, the posts supporting the plates of the shed acting also as posts for the rails or boarded divisions; thus one large ox, or two small ones, may be comfortably housed in every twelve feet of shedding. Thus far we have improved in guarding against the effects of the weather; have recognised the necessity of protecting our cattle; and tenants generally are doing their best to get their landlords to help them in providing covered yards and stalls. Now we come to the feeding part of the subject, and here we have unloosed our purse-strings: in rooms of the old slices of root, sometimes only half grown and wholly frozen, care is now taken that our roots should be ripe, well stored, well kept, and properly prepared for our beasts; the old four-pound linseed-cake dose is now made into one of from seven to fourteen, and often to this an addition of meal is made. I am now giving my own beasts, although not large ones, fourteen pounds of cake and corn mixed, and many of my friends are giving older beasts fourteen pounds of cake, and a half-peck of meal; this may be too much, but I think it depends on the relative price of cake and beef. Beef is now dear (January, 1875), and I feel that the sooner the beef is made, the better chance I stand of making a good price; moreover, I have already sold several, and am well satisfied; in fact, I am feeding my beasts no higher than I have done for the last five or six years. The introduction of cotton cake has helped us, all experiments that I have seen bear testimony to its usefulness. I have one now before me, where a lot of cattle fed with cotton cake alone were tried against a lot with linseed cake, another lot with bean meal, and a fourth lot with a mixture. The cotton cake comes

well to the front, and is the only lot where making beef pays the grazier. Cotton cake at £6 per ton, and linseed cake at £12 per ton. I can understand this with mangolds, but experiments, if not carefully looked into, often mislead, and the case might perhaps be reversed with swedes.

IMPROVEMENT IN THE BREEDING AND MANAGEMENT OF SHEEP.—If we have improved in the management of our cattle and the manure made from them, we have also devoted more attention to our sheep. We no longer see the long, thin, narrow sheep, of which the old horned Norfolk was a specimen, and which were supposed to travel any distance in a day, live on any herbage, however scanty, and perhaps go on to any age without getting fat, or even fit to be killed. A great difference is surely to be seen between the shoulders and legs of mutton of to-day and those of twenty years since. On a shoulder meat is to be found now, and the legs are well fleshed up to the little end, sound, plump, and nice, fit both to look at and to eat. We have crossed the Norfolk with the Southdown, and their produce according to their soils for which they are intended; again with the Lincoln, Leicester, and Hampshires Down, till even our cross-bred animals are square, slightly creatures, capable of being made fat at comparatively short notice. We found that we required the travelling qualities less, and the disposition to fatten more; and when obtained, we did our best to develop that disposition by greater attention, protecting our roots from the frost, cutting them, and adding to them a much larger allowance of corn and cake. Why, twenty years ago we made lambs, big ones perhaps, but not over square and very poor, and were content to sell them at 20s. each in August, and the grazier, if he happened to be a good one, was content to get rid of them at about twenty months old, and would think them a good lot of sheep if they weighed from 18 to 20 pounds per quarter. Now, many men get their lambs out before they are twelve months old at a greater weight. I have sold my own in February to a butcher by weight, and the lot of three hundred has averaged 21 pounds per quarter. We have gone with the times and put the steam on: instead of only roots, and perhaps half a pound of cake to finish them up with, we have gone to cake as soon as the lambs could eat, and increased the quantity to as much as they could bear, or perhaps even more. Be this as it may, many farmers have nearly doubled their produce of mutton, and if we receive no direct profit from this high feeding, we are enriching our soil, and our barley crop comes to our aid. In order to ascertain how much cake, &c., might be given per day, I selected 18 sheep, divided them into six lots, and put them upon trial. After attending to them myself for sixty days, I found that it is quite possible to feed too high, that cotton cake is of far greater value than generally supposed. I think we have sometimes made our sheep too fat and too big. I have noticed that a medium-sized sheep, say 18 pounds per quarter, makes more money per pound than those larger; and when selling a lot of sheep, I have often been told they were too fat and too big. Gentlemen on heavy land have considerably helped to increase the supply of mutton. Their land drained, and with artificial manure at hand, they have been enabled to grow more roots, and have consequently kept more sheep as well as more cattle, producing also more corn, *provided always* that such stock are on the land in dry weather only. What a difference between standing clay land when wet or when dry! one goes to the bad, and the other to the good. Get the dust to blow well on heavy land from trampling of sheep or cattle, and you may rest confident of a crop; but get the slush to fly, and you are sure of but little straw. More attention has also been paid to the flocks of ewes, and also to the management of our young sheep. Flockmasters have come to know that they may, with care and judgment, almost ensure a crop of lambs. As they expect but a small crop of corn unless their land is previously supplied with suitable manure, so they likewise know that a small crop of lambs will be the result if their ewes are neglected and out of condition in the autumn; the better they live then in moderation, the greater the produce, and if through dry summers or other causes they are poor and low, an allowance of artificial food in September is well spent to get them into a *thriving* condition. The management of our young store sheep is also more liberal. More care and trouble have been spent in tracing out the many different causes of abortion and death. It is all very well for the shepherd to tell us morning after morning that his ewes are losing their lambs, or that another hogget has dropped; we find to our cost that the lambs are lost, and that we have

dropped the morny value of the hoggats; but there is always a cause, and in many cases it can with care and trouble be traced, and a remedy found. We are still behind in this: it is still a disgrace to both master and shepherd that many a sheep dies without either of them knowing the actual cause of death. With patience I have traced out the evil in many cases, but still lose now and then one that puzzles us. We

ought almost to be able, if necessary, to produce a certificate of the cause of death of each individual sheep, and be satisfied in our own mind that such certificate is true and correct. I have tried to do this, but must confess I have not always succeeded; however, I have learnt out many a danger, and marked them down as quicksands to be avoided in the discreet and successful management of a flock. \* \* \* \* \*

## TEVIOTDALE FARMERS ON THE UTILISATION OF TOWN SEWAGE.

At the last meeting of the Teviotdale Farmers' Club, held in the Tower Hotel, Hawick,

Mr. HADDON read a paper on "The Irrigation of Land by Town Sewage, the Loss sustained to the Community at large, and the Injuries suffered by the present Mode of disposing of it, and generally to consider how the Sewage could be best and most profitably applied to the Land." He said: I have undertaken to introduce this question, but the very short time I have had to obtain information on the subject has convinced me of my inability to do justice to it, or even to point out the best known means for the purification and utilisation of sewage, with the slightest degree of confidence, so confining is all the information I can obtain on the question. Firstly, however, let us take it up in a sanitary point of view. It is clear, altogether apart from threatened prohibitions by the Board of Supervision or the lauded proprietors, that the streams of our district should not be made, what at present they are, the common sewers of the towns on their banks, that all animal life in their once-limpid waters should be destroyed, and, apart altogether from the question of the spread of disease, their use rendered unfit for man or beast. It is very justly said that the enterprise which affords the means of existence to our rapidly-increasing population is entitled to great consideration in the adoption of any measures which are likely to interfere with it; but surely, when we see how profitable the extraction of oil, &c., is from what was formerly one of the sources of pollution, another stride might be made by our municipal and manufacturing authorities and firms, to perhaps bring profit to themselves, and at least benefit the community at large. Medical authority seems to be dead against water-closets in dwelling-houses, connected, as they generally are, to foul drains, as the origin of fever and diphtheria; but excrement is so much easier removed by means of water than by the ashes or dry earth system, that I fear, although much more highly spoken of, they will hardly supplant the water-closet system, although the principle for utilisation is surely better not to dilute the substance with water, which it is so difficult again to remove from it. Dr. Egeling's description of the pneumatic system is as follows: "In a suitable part of the town a building is erected for the motive power for conveying (literally for sucking towards it) all the fecal matter from all the houses, as to one common centre. This motive power is created by air-pump engines, making a vacuum in large tanks beneath the building itself. These tanks stand by means of pipes in communication with other sub-tanks or reservoirs placed under the street, at suitable places all over the town; and so arranged that the vacuum in the central tanks can at will be extended to any given street reservoir. Each of these street reservoirs is the centre of a small drainage system of houses (100 to 600 houses, according to local circumstances), independent of all others, and the matter out of those houses is drawn into it by means of the vacuum created in the manner described, after which the matter is at once despatched to the main building by means of the same pipe that first conveyed the air." The advantages of the pneumatic system Dr. Egeling sums up as follows: "*Sanitary*.—The excreta are, from the moment the closets are emptied to the moment when the process is finished and they are converted into dry powder, absolutely deprived of all chance of doing harm, being locked up from first to last in air-tight vessels. The powder itself is harmless, because fermentation in a dry state is impossible. The water of the excreta has also become harmless, because, being driven out by evaporation and condensed again (the vapour passes through an ordinary condenser), it returns to the public streams as distilled, and consequently pure, water, and the gaseous products of the evaporation, perhaps still containing germs of diseases, are blown by the air-pump engine, with the rest of the air sucked

up out of the tubes and pipes, into the fireplace of the boiler, and there are completely burned. No matter, the more, however infectious the excreta may have been, their power to work evil is stopped for ever. *Financial*.—The value of the product is increased by its ten times greater transportability (ten pounds of refuse make one pound of *product*), and by the greater market-value of a manure not requiring immediate consumption. The combined effect is, according to dealers in artificial manure who have been consulted upon this point, a three times greater agricultural value." Mr. Haddon continued: Then there is the precipitation of the sewage by chemical action in tanks, advocated by Mr. Stevens, of Chirside. He says that his "patent is a very inexpensive one in working, as it is carried out by the cheapest materials, and all of value to the agriculturist. Where the works can be carried out by gravitation—that is to say, where no pumping is required—the maintenance of plant becomes very small." Again, there is the irrigation system, which, so far as I can judge, if a proper system of drainage is gone into, and enough land in the neighbourhood of a town can be got, so that the sewage can there be discharged by gravitation, is the best and simplest means of purifying the sewage, and yielding a moderate amount of return for capital. But in this case, as in all other systems, chemicals or other refuse of works, hurtful to vegetable life, must be purified before being allowed to enter the sewage system. I have thus briefly gone over the drainage system, and now come to what is of much importance to us as agriculturists, and to the nation at large—viz., the great loss by the sewage being allowed to flow into our rivers without being used as a manure. The highest scientific authorities aver that, by a proper utilisation of the sewage of towns, a revenue of from 8s. to 10s. a head of the population can be derived. Surely this would amply repay municipal bodies the outlay incurred in such works. With all our boasted superiority, intelligence, enterprise, and mechanical appliances, I fear we are much behind the ancients, or even Continental nations, in the utilisation of the valuable constituents of manures within our reach, and give to other countries the capital we might with great profit and advantage employ at home. I find that the import of foreign manures into the country is between three and four millions sterling. Now, with the increasing price of guano and its doubtful permanent supply, does it not appear absolutely necessary that we should look to the resources at home, and so utilise them that our capital may find profitable investment, and a great sanitary improvement result, that may be the means of banishing many of the diseases so prevalent among us, and promoting health and comfort to our teeming population. These crude remarks, gentlemen, I have brought before you to draw attention to the subject; and I am sure few higher or more important matters could occupy the attention of the Government than this, that so intimately concerns the life, comfort, and well-being of the whole community.

Mr. NICCOL believed that the pneumatic principle, coupled with the ordinary system of drainage, would be found to be the best, the only drawback being its expensiveness. He then explained its operation, but added that that alone would not drain any town, and ultimately irrigation would be found to be the most satisfactory method. He believed, however, that down the Teviot they could not find any place so distant from the residences of lauded proprietors as that no objection would be taken to them for deteriorating the amenity of their properties. A clay soil was better than a gravel one for utilising sewage; and where suitable land could be got, with deep drains and a proper distribution of them, the system of irrigating land with the sewage would, he believed, be found to be the best. Perhaps, too, there might be a difficulty in



(disposing of the crop thus raised in the immediate neighbourhood, as, if it had to be conveyed to a distance, this would be found to be an objection.

Mr. HOBKIRK said: The profitable application of sewage to the land as a fertiliser has engaged the attention of practical and scientific men for many years. The local circumstances connected with the point of view from which the subject has been looked at have doubtless had considerable weight in the formation of the opinions arrived at, and, as might have been expected, the conclusions are various. If any general principle can be said to be settled on the subject, it is that every case must be considered and determined by itself, and in connection with its own peculiar surrounding circumstances. The question, therefore, is, Can the sewage of Hawick be profitably applied to the land? and by the word profitable it must be understood—Can it be so applied as to lessen the cost to the municipality of getting quit of it? All are agreed that ordinary sewage contains a considerable quantity of manurial elements of great value. These, unfortunately, are mixed up with an enormous proportion of water, sand, and other substances, which are of little value to the farmer; but, on the other hand, the water serves the purpose of a carrying apparatus for conveying itself and what it contains to the fields, and when advantage can be taken of the law of gravitation for this purpose, and other circumstances are favourable, there is no doubt but that its application to the land will result in profit to all concerned. Ordinary sewage, such as that produced in Hawick, contains on an average, it is said, about  $7\frac{1}{2}$  grams of ammonia to the gallon, and as it has been estimated that the amount produced per annum per head of the population varies from 55 up to 100 tons, rainfall and other things considered, it is plain that the sewage of a town like Hawick contains a source of manurial supply, the waste of which can only be justified where stern necessity forbids its utilisation. Mr. Hobkirk then went on to say that the town of Hawick was going to spend a large amount of money for drainage. It was proposed to utilise sewage by means of precipitation. It would be filtered somewhat, and the water would then be returned to the river. But it must not be supposed that sewage would thus be wholly purified. He then referred to the works carried on at the South Bank of Canongate, Edinburgh, where sewage was turned into manure by a series of tanks, and sold for £1 a ton. He had got a ton of this by way of experiment, but with very little result. He considered that £1 worth of guano would have raised a better crop. He had no doubt that an 18-inch earthenware pipe could convey the sewage of Hawick to Ashybank, Honeyburn, and Eastcote; it could be used to irrigate the meadows there, and raise as good crops as were raised round about Edinburgh. Mr. Hobkirk next referred to the West Meadows of Edinburgh, where a gentleman he knew produced a great quantity of grass by means of town's sewage. No doubt the sewage would run perfectly well down to the places he had indicated. He thought it would be a very foolish step for the town of Hawick to have a engine to pump and raise the sewage from tank to tank, for they would get a very insufficient result in the end.

Mr. AMOS, Earlside, agreed with a good deal that had been said. If the sewage was worth, as had been said, from 8s. to 10s. a head of the population per annum, that amounted to a very considerable sum of money. The great value of land irrigated about Edinburgh served to show that this method of utilising the sewage was worthy of consideration. He was astonished that the authorities of Hawick had not taken the very highest advice on the subject the country could afford before going on with any scheme.

Mr. FRASER thought the subject had been very well exhausted, and the opinions expressed did not appear to be at all conflicting. He could only say this, as an old official of Hawick—that the subject had in the past caused them great anxiety. When the Royal Commission appeared here, they thought all difficulties were at an end; but the Royal Commission, like all other commissions of the same kind, had far more red tape and money expended on them than anything else. The Royal Commission promised they would secure powers to take land for the purposes of irrigation. Their report was issued, yet they were just in the same position now as formerly. He did not see any reason why, with the enterprise they had among them, they could not make the meadows in the district flourish like those of Powderhall, by the utilisation of sewage.

The CHAIRMAN said they were very much indebted to Mr. [Name] for his valuable paper. He was in the habit of visit-

ing Harrowgate once a-year, and had taken notice of their works, which were on the gravitation system. They took the solid matter out of the sewage, and grew a vast amount of grass with it. He did not see why the sewage of Hawick should not be utilised in the same way.

Mr. JAS. OLIVER said that the great difficulty in the case of Hawick was the want of legislative powers to carry out sewage. The scheme the Council propounded at present seemed the only practical one, and should therefore, he thought, be adopted. Although it would be an expensive one, they must not weigh the expense against the public health.

Mr. BROWN (Edinburgh) said he had listened with pleasure to the remarks of the former speakers. He would only say that he had a decided preference for manufactured manures, and the less they said about the other the better.

Mr. HADDON, in reply to the various speakers, said he did not wish to have "Othello's occupation gone," in the case of the manure-merchants. His view was to increase and multiply the means of producing a home-made article, instead of going to the South Sea Islands for it. Mr. Hobkirk had kindly offered to give him all the assistance he could, and, from his scientific turn of mind, he had no doubt he would amply fulfil his pledge; and now he must compliment Mr. Hobkirk on the exhibition he had made, for he had given them a vast deal of information. Still he could not agree with the idea of taking the sewage so far down as Ashybank and Honeyburn, however great an advantage it might be to those farms, owing to the great cost of piping which would be entailed on the municipality. He believed that much less ground would be sufficient for the purpose than Mr. Hobkirk supposed. He hoped they would get the six, eight, or ten acres of land required near the town from the landed proprietors, whatever scheme they might adopt. He further went on to state that where the irrigation system had been adopted the rate of mortality from diseases generally supposed to be caused by sewage had rather decreased than increased. Mr. Haddon concluded by saying, if any observation that had been made at the Club helped in any way to facilitate the operations of the Town Council in respect to the drainage scheme, it would afford him great pleasure.

This closed the discussion.

**IMPORTANT DECISION CONCERNING DISEASED CATTLE.**—A question of considerable interest to graziers and dealers in cattle has just been decided in the County Court of Buton, Lincolnshire, before the presiding judge (J. Stephen, Esq., LL.D.). Mr. Stephenson, a person of property and a large dealer in cattle in the county, sued Mr. Liversidge, a gentleman residing at Winterton, for the value of a beast which he had sold him on the 15th of June last. Mr. Mason, for the plaintiff, called several witnesses, chiefly graziers, to show that the contract had been duly entered into at a corn market on that date, and a veterinary surgeon who was in the habit of attending the cattle of Mr. Stephenson deposed to the fact of the animal having been without any illness, save a slight attack of diarrhoea, during the two preceding years. Mr. Sherstone, barrister, who specially attended for the defence, urged that the contract was void *ab initio*, for that the animal had become ill, and was obliged to be slaughtered by the servants of Mr. Liversidge within a few days after the purchase, showing thereby that the animal was ill when the contract was made. The learned counsel further submitted that Mr. Stephenson had warranted the soundness of the animal; secondly, that he had been guilty of deceit at common law in selling an animal which he knew to be ill; and thirdly, that the animal was suffering from pleuro-pneumonia, and that the plaintiff had violated the 57th section of the Contagious Diseases Act (Animals), 1869, in sending a diseased animal to the defendant. Witnesses having been called to substantiate these facts, the judge decided in favour of the defendant on the second point raised by the defence, as he did not consider that the warranty had been proved, nor that the knowledge that the animal suffered from pleuro-pneumonia had been brought home to the plaintiff. This decision, which shows that the illness of an animal need not be one of those mentioned in the Contagious Diseases Act in order to vitiate a contract for the sale of the same, has created great local excitement amongst graziers and others concerned in cattle-dealing transactions.



PROFESSOR BALDWIN ON SCIENTIFIC AGRICULTURE  
AND SCOTCH FIELD EXPERIMENTS.

Professor BALDWIN (of Glasnevin College, Ireland) in a contribution to the columns of *Nature*, after alluding to Mr. J. B. Lawes' experiments, says: "It is notorious that the agriculture of Scotland has made great progress within the past one hundred years. The improvement of agriculture within that period has been greater in parts of Scotland than in any part of England. Yet the demand for means of effecting further progress is greater among the most advanced farmers of Scotland than amongst the most advanced English farmers. There is no man in Scotland who has come forward, or offers to come forward, to do for Scotland, what Mr. Lawes has done and offers to do for England. The friends of agricultural progress in Scotland are endeavouring to effect, by co-operation, what the private enterprise of Mr. Lawes is doing for England. The subject has been discussed in English agricultural classes, more or less, for several years. The discussion has during the past few weeks assumed a practical shape to which it may be useful to refer. A member of the Council of the Royal Agricultural Society of England, Mr. Randell, desires to 'prove,' by a series of experiments, under every variety of soil and circumstances, how far the accuracy of the estimated value of manures obtained by the consumption of different articles of food as given by Mr. Lawes, is confirmed by practical results." Mr. Randell was supported by the Earl of Lichfield and Lord Vernon, and the matter was referred to the Chemical Committee of the Society. Mr. Randell has so far confined himself to one point, which has been suggested to his mind by the passing of the Agricultural Holdings Act of 1875. "If one or more stations be established, the experiments would of course cover a wider field. The question arises at once, how are the experiments to be directed? Could Mr. Lawes be induced to act as Director-General? He could be assisted by a representative council. In due time the best man to succeed him would appear. In Scotland the movement has of late been agitated with energy and intelligence. The Royal Agricultural Society of that country, better known as the Highland Society, has a large surplus fund, and contains among its members the leading gentry, many enlightened professional men, and a great array of intelligent farmers. It has been suggested that some of this fund should be applied to the maintenance of experimental stations. Several reports and suggestions have been made. It is said that a sum of £700 a year, and no more, is available for the purpose. One of the reports goes on to state that, 'considering the advantages which had already been derived from chemistry in its application to agriculture, it was expedient to re-organise a chemical department under the cognisance of the Society, for the purpose of conducting investigations on all subjects relating to agriculture, and that in connection therewith a series of carefully-conducted experiments in the open ground be instituted.' The directors found that the Society had at its disposal, for the purpose of the chemical department and field experiments, a sum of £700, which they recommended should be set aside for a period of seven years. In carrying out these recommendations they suggested that the £700 should be expended as follows: 'Chemist's salary, £300; agricultural inspector's salary, £150,' &c.

The report must render it plain to any one who has had experience in experimental work of the kind that this part of the recommendation is based on imperfect knowledge. What evidence is there in the history of the Society or elsewhere which goes to show that the best man to initiate and conduct investigations on all subjects relating to agriculture should be a professional chemist? Such a man should have a good general knowledge of all the sciences relating to agriculture. He should be well known as a man of broad views and great grasp of mind. He should, moreover, be thoroughly conversant with the details of modern agriculture. He should have given evidence of being imbued with an ardent desire to elicit truth as well as of his taste and fitness for conducting experiments. We submit that a really good chemist, possessing all these qualifications, can seldom be found. If he exists in Scotland, let him be the man to be selected for the purpose of the

stations; not, however, because he is a chemist, but because he is the best man. There are many chemists who would doubtless be glad to accept such an appointment, and who would be as unfit for it as for the direction of the Channel fleet. It seems incredible that any body of thoughtful men would propose to trust the initiation and direction of experiments on crops and animals to a man who would not necessarily know anything of the habits of either. A most peculiar part of the report of the committee to which the Highland Society referred the consideration of this question is the remuneration (£150 a year) they propose for an agricultural inspector. If the views of the committee were acted on, the *bona fide* value of the experiments would depend on this officer. He should be an accomplished agriculturist. He should possess great intelligence, the highest personal character, and the most rigid love of truth, as well as the sternest sense of duty. He would be expected to initiate experiments from which results of national importance would flow. And this is the man for whom the minimum sum of £150 a year may be a fair sum to cover traveling and other expenses. But if a competent man is to be employed who cannot afford to work gratuitously, a salary equal to that of the average of intelligent professional men must be offered. This part of the report has been already denounced in strong and emphatic language; and we understand it has been opposed by leading members of the Society who value science and appreciate the work to be done. The action of the committee has been openly exposed by Mr. David Milne Home, an ardent advocate of the application of science to agriculture, and by Mr. John Wilson, of Edington Mans, a truly enlightened farmer. These gentlemen contend that the directing head or body should have the power to call in the professional aid of the best chemist or chemists, and such other experts as may be needed. This view is based on common sense. If they prevail in the councils of the Society, we may expect to see ere long in Scotland agricultural stations, which in all human probability will give a new stimulus to agricultural progress. If they fail, and the work is entrusted to men who are not in every way equal to it, we may get an annual crop of worthless or misleading results, like those which have formed so large a portion of our agricultural literature.

While the Royal Agricultural Society of Scotland is discussing these matters, a local Agricultural Association formed in Aberdeenshire has actually fixed sites for five stations, at which experiments will be conducted for three years. The Marquis of Huntly is President of the Society, and Mr. Barclay, M.P., is among the active members. A sum exceeding £1,000 has been already subscribed. For the present the experiments will be confined to the determination of the best states in which to apply phosphates and nitrogen. Each plot is to be 1 1/2th part of an acre. It is to be regretted that potash and one or two other constituents of plants will not be tried. In some respects the scheme devised by the association corresponds with that which I have carried out at Glasnevin for several years, and the results of which I have not, owing to the pressure of other work, been able to publish. In the Glasnevin experimental ground the several crops are crossed by the manures; and thus we bring out the results in a striking way, and guard against inequalities in the soil. We also raised three consecutive grain crops without manure before commencing the experiments.—*North British Agriculturist*.

THE CROPS IN THE UNITED STATES.—From the last monthly report of the U. S. Department of Agriculture we learn that the corn crop of 1875 has been one of the largest ever grown in the country—a general increase on last year's crop all over the country of from 10 to 60 per cent. The quality of the crop was not so good as that of 1874. The potato crop has been extraordinary, both in quality and quantity—fully 25 per cent. above that of last year, in some cases nearly 400 bushels to the acre; selling in many places at 15 to 20 cents a bushel. Cotton.—About 4,000,000 bales. Tobacco.—Seventy-four per cent. over that of last year. Fruits.—(Continued on page 102.)

## PRESERVED FOODS.

BY DR. CRESPI.

The actual amount of material available for food, produced in this country, has of late years largely increased. This has been in part due to more land being brought under cultivation, in part to the average yield per acre becoming rapidly larger as improved methods of agriculture have been more generally adopted. The population has, in the meantime, not remained stationary, and the home-raised supplies of many kinds of food are now altogether insufficient. It has consequently become necessary to import immense quantities of food from foreign countries. Some foods, such as wheat and rice, will keep for many years without deterioration, and are not injured by a long sea voyage. There are others which will not keep, unless special precautions are adopted for preventing the decomposition to which they soon become liable. It is of the latter alone that I shall treat in this article. It is of vital importance, if its prosperity is to be preserved, that under these peculiar circumstances this country should receive abundance of cheap and wholesome food from abroad. As living animals and fr vegetables can seldom be imported, it is necessary to do something to preserve the more perishable articles of food, animal and vegetable, to enable them to reach this country fresh and good. Fortunately for him man, unlike many other animals, is not absolutely dependent on one kind of food. He needs variety not less than sufficiency. Wherever it can be cheaply and conveniently obtained, a reasonable allowance of animal food is a general favourite, especially with men who labour hard. Unless they can obtain plenty of flesh-forming food—meat, however, though perhaps one of the best, is not the only nor is it the cheapest food of the kind—their health suffers, and the amount of work they are able to do rapidly diminishes. As soon, therefore, as it became evident, many years ago, that the demand for meat was, in this country, increasing far more rapidly than the supply, attempts were made to import animal food from those parts of the Continent sufficiently near for the purpose. It must have been felt that this was only a temporary expedient, and could never keep pace with the demand. There was reason to fear that, unless there was an immediate addition to the home produce there would be a serious falling off in the health and strength of the working classes. So Englishmen naturally turned their eyes to those fortunate parts of the world that abound in cattle, and began to devise plans for importing food from the very ends of the earth. It was known that the colonies would gladly send some of their superabundant meat in return for manufactured goods, and that thus both the mother-country and the colonies would be gainers by the exchange. Could not something be done to render the supply equal to the rapidly increasing home demand? On a small scale the preservation of food is as old as the Deluge. In tropical climates the heat of the sun has long been used to dry meat, and answers fairly well. Froissart, in his famous "Chronicles," mentions the stores of preserved food the King of France prepared, in 1386, for the maintenance of his troops during the proposed invasion of England—an invasion which never took place. In all parts of the world, for many centuries, fish has been salted and dried, and has thus been admirably preserved. After all, something more was required than any plan already in use. It was evident that foreign supplies of food to be of material service as articles of general consumption would have to be preserved in such a manner that their flavour and nutritive value should not be materially diminished. Finding that the health of their men greatly suffered from the long-continued use of salt junk, the naval authorities of this country offered every encouragement to scientific men to supply the want that was beginning to be felt. The Arctic expeditions also acted usefully in stimulating the labours of the persons who were working in this field of science. At first the object of preservers was not to supply the inhabitants of this country with meat and fruits, but to meet the demands of the navy and of the expeditions which, in such large numbers, earlier in this century, set out for the polar regions. Great success was soon the reward. For these purposes good preserved foods began to be abundantly supplied many years ago. To show the perfection early

attained it is enough for me to mention that, in 1824, Messrs. Doukin and Gamble supplied tins of preserved mutton to the exploring ship *Fury*. In the following year this vessel was lost in Prince Regent's Inlet, and the cases of meat were landed and left on the beach. In August, 1833, Sir John Ross found that the meat was as good and as fresh as ever. In a letter he wrote to Mr. Gamble, he mentioned that "the provisions were still in a perfect state of preservation, although annually exposed to a temperature of 92° F. below and 80° F. above zero." Sixteen years later Captain Sir James Ross, of the *Investigator*, stopped at the same place. He found that "the provisions were still in excellent condition, after having been upon the beach, exposed to the action of the sun and all kinds of weather, for a period of nearly a quarter of a century." Probably meat that has been properly preserved would keep for a century, and would then be as good as the day the tins were sealed up. Indeed as long as the tins remained air-tight, so long would the meat be eatable and wholesome. It will be sufficient to mention that scores of patents have been worked in this country and in the colonies. Very few co-operatively have been distinguished by any special merit. Of late, however, there has been marked improvement, both as regards price and quality. Some admirable methods are now in use, and the success of one or two is wonderful and encouraging. There continues a constant room for improvement, it is true, although some of the meat imported from Australia is nearly as palatable as if freshly cooked. The meat preserver has to guard against three sources of danger—the decomposition of this perishable food from the presence of moisture, or from access of atmospheric air, or from exposure to a temperature ranging from 40° to 200° F. Meat will not necessarily be injured if two only of these conditions are present. Successful attempts have been made to preserve meat by keeping it dry, by keeping it cold, by shutting it off from atmospheric air. The favourite and perhaps best process, known from its inventor as Appert's, is to place the meat in a tin, the lid of which is then soldered on, a pinhole being then left in it. The tin is next placed in a bath containing a mixture of water and chloride of calcium, and the temperature of the mixture is gradually raised 260° F. While steam is freely coming out of the vent-hole the latter is stopped with a drop of solder. As soon as the contents of the tin are cooked the latter is removed from the bath, and, after undergoing some finishing processes, is sent to England. The amount of meat received in this form is rapidly increasing. The value of the meat imported in 1866 was only £320. In 1870 it was £204,000. It is probable that in the course of this year, 1876, it will considerably exceed £3,000,000. The importance of the trade is rapidly becoming greater. It will ultimately be in this way that the English market will receive its chief supplies of foreign meat. The objections made to preserved meat are in the majority of cases the result of absurd prejudices, and ought to be banished from the mind of every intelligent person. The cattle used by the meat preservers are the finest and best, and would in this country be four or six times as valuable as in the colonies. The flavour of the tinned meat, moreover, is only slightly inferior to that of a fresh cooked English joint, while its nutritive value is not at all smaller. The difference in price is enough to make the use of preserved Australian mutton and beef very economical, and in moderation the latter do not pall on the palate. Unfortunately, the retail price is so rapidly rising that the advantages which imported had over English meat are considerably less than they were a few years ago. As a wholesome article of food and a valuable addition to the national dietary there can be no doubt that the poorer classes, more particularly will be great gainers by the use of these cheap and admirably preserved meats in place of fresh joints. The advantages of preserving such food as milk for ordinary home consumption are certainly not great. Unless it were ultimately found possible to import large quantities of condensed milk at such a price that it would be cheaper than that obtainable in this country in the fresh state, a very large trade could hardly be expected. This is not at present the case. Almost all descriptions of preserved food, except meat and fruits, are

decidedly dearer than the fresh articles. The greater cost of the former is well shown in the case of preserved milk. The composition of average condensed and that of average new milk are placed side by side in the following table. The percentage proportions of the different constituents of the two are as follows:

	CONDENSED MILK.	NEW MILK.
Caseine .....	17	3. 64
Butter .....	12. 50	3. 55
Sugar .....	46.	4. 7
Salts .....	2. 50	0. 81
Total solids .....	78. 0	12. 7
Water .....	23. 0	87. 3
	100. 0	100. 0

Preserved milk is thus seen to be about four times as rich in caseine, butter, and salts as new milk, but it contains ten times as much sugar. The last ingredient is in excess in consequence of one-third of its weight of sugar being added to the milk before it is condensed. Perhaps three times as much water added to the milk will make a mixture not greatly unlike new milk in strength and quality. Considering the retail price of the two, the former, in spite of being four times as rich as the latter, cannot be recommended for general use on the score of economy. For some culinary purposes in the kitchens of the wealthy it is occasionally a great convenience. Vegetable substances, especially fruits, are always in demand, as they are agreeable to the palate and very wholesome. Were it only possible to import from warmer climates immense quantities of ripe, delicious fruit, at reasonable prices, what a boon it would be to this country! It has long been the custom to preserve fruit in large quantities, and in various ways, for winter consumption. Many of the recipes used for that purpose are defective. Air must be expelled from the vessel in which the preserved fruit is placed—more especially when little or no sugar is used—or it will not keep. When fruit has been well boiled with abundance of sugar, as, for instance, three quarters of a pound or a pound to a pound of fruit, the jars will keep in a warm, dry cupboard, and only need to be covered with thick or gummed paper. Fruit is unquestionably the most wholesome of all foods, and certainly there is none for which young and old have instinctively a greater craving. Unfortunately good fruit is in England extremely expensive and scarce. The Society of Arts, nearly seventy years ago, awarded Mr. Saddington a prize for his admirable and ingenious recipe for preserving ripe fruit without sugar. The fruit is to be gathered just before it is ripe. It is then directly to be put into clean bottles; the latter should be filled up to the neck with it. The bottles are next placed in a saucpan full of cold water. The temperature of the water is gradually raised to 160 degs. F., and is to be kept at this for half an hour. The bottles are, in the next place, taken out of the saucpan and filled with boiling water, and firmly corked. His very simple but beautiful process is then completed. In spite of its obvious merits it is practically ignored, and certainly comparatively few families practise it. The object of Mr. Saddington's recipe of applying heat to the fruit is not merely to expel the air in the bottle and in the fruit itself, but to coagulate the vegetable albumen in the latter. It is generally found advisable to add a little alum to the water which is to be poured into the bottles. Alum hardens the skin of the fruit, and thus renders it less likely that contact with boiling water will burst it. A good deal of fruit is prepared in this way in the establishments of food preservers, but it ought to be in use in every better-class family as well. If care is taken to properly carry out the various steps—and surely they are easy enough—and if the bottles are sufficiently strong, no plan is more generally serviceable and successful. Another good way is to nearly fill bottles with fruit, gathered just before it is ripe, and then to pour in boiling syrup. The latter should rise to within an inch of the cork. As soon as the syrup is added the bottle should be firmly corked; the contents will generally keep for a year or more. Boiling water, without any addition except perhaps a little alum, is occasionally used to preserve fruit. The other steps in the process are precisely the same as when boiling syrup is used. Hot water alone will preserve the firmer fruits, such as damsons and gooseberries, very well indeed for a few months. Large stone or earthenware jars, like those in which vinegar is kept, would answer very well for storing away fruit

preserved by the addition of syrup or boiling water. Still better, and probably in the long run far cheaper, large tin bottles, holding three or four quarts apiece, could be made; twenty or thirty of them, full of delicious, wholesome plums, gooseberries, and damsons, would be a treasure few sensible house-wives would despise. What we need even more than the importation of wholesome meat or good cheap fruit is to be able to grow, in our southern counties, abundance of fruit. It is scarcely necessary to refer to the means adopted for the preservation for winter consumption of peas, vegetables, and other succulent articles of food. They can with a little care, all be preserved, and are in some cases fully as palatable as the fresh articles. As luxuries for the tables of the rich, the more expensive kinds hold a deservedly high place; but their cost places them altogether out of the reach of the poor. It is quite possible, no doubt, to import, from countries where they are more plentiful or cheaper than here, many kinds of preserved vegetable substances, which have been prepared in such a way that they are nutritious, wholesome, and economical. Unfortunately, however, it can seldom be said that they are palatable; or at least, their flavour is so much inferior to that of the fresh article, that even the poor cannot be prevailed upon to them, while the rich do not hesitate to express their dislike of them. This is of course an insuperable drawback to their general introduction into the national dietaries. No one, whatever his poverty, will take food, however cheap it may be, which offends his prejudices or is disagreeable to his palate. As long as that continues the case, cheap compressed vegetables will not be general favourites. Perhaps in this, as in other branches of the food-preserving art, success will one day reward those enterprising, practical men, who have persevered, in spite of many failures, in their attempts to find out cheaper and better ways of preserving vegetables and fruits. Then preserved vegetables, as palatable as they are cheap and nutritious, will come into common use. Unfortunately that time seems far distant.—*The Sanitary Review* for January.

EXPERIENCE WITH THE STEAM PLOUGH, so far as my knowledge goes, may be useful to those who are about to try it on the contract system. My practice is to steam plough first, and then steam cultivate crossways, which brings the clods to the surface, and allows the finer particles to fall below. On our stiff yellow plastic clays, which are like bird-lime in winter and cast-iron in summer, these clods after steam ploughing in dry weather, are of very large size, often weighing from 20 to 50 lb. So they remain, hard and dry, until the rains come. The water which they absorb expands them, and they split or tumble to pieces with a slight kick, although when dry a heavy hammer would scarcely affect them. The main point is to hrow or roll these clods before they get dry again, and then we have a nice crumbly surface. It is a mistake to put horses on these rough ploughed lands, at the risk of injuring them, until the rain has softened the sharp hard clods. In the meantime, every weed perishes by atmospheric exposure. Last year I ploughed 6 inches deep, this year 8 inches, but these depths must not be compared with horse ploughing, for I venture to say very much more earth is removed and intermixed at these depths by the steam plough than with the horse plough at the same depth, for, in dry weather, the irresistible steam plough, if it cannot penetrate a stubborn clod, lifts it bodily out of its bed in many instances to the depth of several inches, and rolls it over like a 4 lb. loaf. The powerful and rapid action of the steam plough, with its long and twisted breasts (nearly 5 feet long) breaks and intermixes the soil in a very superior manner to the common plough. It would be very dangerous to use the steam plough on poor thin skinned lands which had never been cultivated deeper than 3 or 4 inches, because the good top soil would be then buried under a mass of unworked, and, perhaps, injurious soil. In this case the steam cultivator is preferable, because it breaks the subsoil, and leaves the top soil comparatively in its old position on the surface. In my case, having greatly deepened my staple by deep cultivation and subsoiling during 30 years, I can take a liberty and not fear a moderate admixture of the inferior subsoil because, by drainage, the water from the surface has filtered through and improved the subsoil. A hole in the great agricultural plant pot is as essential as in the greenhouse pot. If

you doubt, put a cork in the hole of the latter. The powerful steam plough (I use Carey's 14-horse power Fowler's worked at 120 lb. to the inch) does the pioneer or hard work, which would otherwise strain and exhaust our horses, and renders future cultivation comparatively easy. I paid £61 last year for steam ploughing, and in consequence saved purchasing a £70 horse, and keeping him a year at a cost of about £50. On Sept. 19 this year I had 60 acres of clean fallow after crops, every weed perished, and my horses were free for other purposes. In fact my expenses for horse keep are very considerably diminished. On a little farm of 170 acres it is a convenient thing to be able to obtain the use of a pair of engines costing £2,000, which, if purchased on that farm, would alone involve a capital of £11 10s. per acre. Besides, with a single set of engines of one's own, there will occur breakages and delays most inconvenient, especially in a neighbourhood distant from an engineering establishment.

All this proves to me that on a small or moderate farm, if we are to have the use of powerful engines such as are required on heavy soils, we should contract with an individual or company possessed of many sets of such engines, and they should be made acquainted with our uniform periodical requirements. Breakages must be frequent in steam cultivating strong clays in dry weather. This question of breakages must be to the owner of a single set, a serious danger and dilatory, affecting the getting in of his crop at the proper time, and rendering it undesirable to depend upon a single engine, unless with ready means for repairs. If we are to obtain for our land the full benefits of aeration (which science has taught us are very great, owing to the affinity of the gases for the soil), it must be by steam ploughing, which, unlike horses, leaves the land open, light, and untrdden.—J. J. MECHI, Oct.

## THE ADVANTAGES OF CHANGING FARM SEEDS.

Though some of its members occasionally show a little capriciousness on such matters as to whether an unseconded motion should be recorded; whether the Game-laws should be publicly blamed for increasing the wood pigeon nuisance; or whether foot-and-mouth disease is of foreign origin, it must be admitted that the East Lothian Agricultural Club have many ably conducted and very interesting discussions. As a rule, practical agricultural subjects are best handled, but for many years the Club have very properly been in the habit of going now and again beyond the range of merely practical questions. At last meeting a question was discussed of much interest to every practical farmer. It was "the advantages of a change of farm seeds." Not very long ago some queries were sent to us on this very question, and we have reason to know that a considerable number of farmers have more faith in a frequent but judicious change of seed than they had not very many years ago. The elucidation which the subject received at Haddington two weeks ago, therefore, cannot be regarded as untimely. No doubt the arguments in favour of or against a change of seed applicable to East Lothian may not have a similar bearing on other counties, because local and varying circumstances affect this as well as many other questions; but we know of no district in which the advantages arising from a regular and careful change of seed are not more or less perceptible. The substance of the discussion at Haddington (and there was a wonderful degree of unanimity), was that wheat should be changed pretty frequently; the change, if possible, being from an earlier and finer climate; that barley should be occasionally changed; that oats should be very frequently changed from different soils and climates; that potatoes should be changed every two, or at most three years, the change being from a later and colder climate; and that turnip seed should be got from well-developed transplanted bulbs. Regarding potatoes, the chairman (Mr. Gaukroger) said he "planted a few acres of the finest regents from the west district, which produced a good crop the first year. He took seed from these and planted again, and in his experience the second planting produced both better quality and a heavier crop than the first. When he took seed a third year from these, however, the crop was not of such good quality or so heavy." This view was substantially corroborated by the other speakers. In many parts of this country, especially the northern counties, potato seed is not nearly so systematically changed as this, or as it should. We know of some farms where the same seed has been planted nine or ten years in succession. To be sure, on these potato-growing is not very extensively carried on. But all growers aim at a good crop both as regards quantity and quality. The arguments therefore in favour of a change of seed in large potato-growing districts apply, though in a less degree, to all parts of the country. Every potato-grower, whether to a large or small extent, should remember that he will be the gainer by the introduction of fresh seed every second or third year. Speaking of potatoes, Mr. S. D. Shirreff, Salcoats, who is a very successful grower, said: "Change of seed at least every second year is absolutely necessary in order to grow a full crop. In this respect potatoes are quite the reverse of wheat, and should invariably be changed from a later and poorer to an earlier and richer

district. I made three large experiments in order to test this in 1850. There was £3 per acre difference, according to a dealer's estimate, between the crops grown from the seed from a better soil and district than my own, and the seed I had from a poorer soil and later climate." In reference to turnips, we formerly advised farmers to grow as much as possible of the necessary seed supply on their own farms. We did so, and we repeat the advice, not so much on account of the cost, but because such an arrangement would secure better and more reliable seed than in too many instances the farmers at present obtain. They could, by raising the seed themselves, not only have the bulbs transplanted, but could make a better selection of the roots than we fear is generally done. We do not mean to say that in every case the turnip seed should be produced on the farm. But a good deal more could be advantageously produced under the farmer's own eye. When the seed has to be bought more care should be bestowed in selecting, though it cost a little more money, the finer samples, and in patronising merchants of the best reputation, who can give a guarantee that the seed has been grown from transplanted bulbs, and is pure of its variety. We heartily agree with the following remarks made by Mr. Samuel D. Shirreff at Haddington: "In regard to turnip seed, I do not think there is sufficient care and attention paid by farmers to the selection of the best varieties. It is a false economy to grudge 4d. or even 6d. per lb. for seed which can be guaranteed to be grown from fully developed or transplanted bulbs." The best change of wheat seed to East Lothian, as a rule, is from the earlier counties in England. The East Lothian wheat, on the other hand, is the most suitable change to the Morayshire farmers, for instance. The changing of barley from various soils and climates has its advantages, though many of these are not so appreciable as in the cases of wheat, oats, and potatoes. It is generally advisable to get seed oats from parts of the country where oats are necessarily one of the principal cereals, or perhaps the most extensive grown. Not that one cannot rely on the purity of many oat samples, produced in districts more extensively devoted to the growth of wheat and barley. It is well known that some of the finest and purest samples of oat seed emanate from the Lothians, but it is also true there are in such districts as these more mixed or impure samples of oats than are to be found in higher and later localities. The chances, therefore, of getting a genuine sample in districts peculiarly adapted to the growth of oats are greater than where other varieties of grain predominate. There are many parts of the country which benefit even more than East Lothian by a change of seed. Increased quantity and improved quality are not the only results of new seed. The crop frequently comes nearly a week earlier to the reaper. This may not be a very material consideration in a county favoured with such a fine climate as East Lothian, but it is a matter of great importance in late districts, where winter sometimes comes on before the fields can be cleared. To the occupants of farms in high districts a frequent introduction of seed from earlier climates has thus much to recommend it, and ought to be more carefully attended to than has hitherto been the case. Mr. Shirreff informed the Haddington meeting that, in 1873, he had one quarter per acre more from barley seed brought from Wiltshire than he reaped from good Chevalier

seed grown on his own farm. This is no isolated case, and should not be lost sight of, especially in these days when it is of more importance than ever that the maximum produce should be gathered from the soil. Not a few farms could be mentioned on which the same grain has been grown successfully for the better part of twenty years. This fact, however, scarcely affects the general question of the advisability of changing seed, because the exceptional farms usually contain various kinds of soil which afford a partial change for the seed. Besides it will be found that where the same grain has been long and successfully grown on one holding, the tenant thereof generally has a particular taste for the cultivation of fine samples. In such circumstances more attention is bestowed on the preservation

of select varieties by changing the soil instead of the seed, by careful harvesting and superior dressing, than can ever be expected on the generality of farms. It is a safe practice to stick by a good thing so long as it sticks to you, especially if you do not see your way clearly to get a better. With grain, just as with pure-bred live stock, one may work for a time within himself if he has got very good material. That is to say, he may go on growing fine grain of marked uniformity from his own seed, and producing excellent cattle and sheep from animals bred in his herd or flock. But this involves such a variety of soil and so great care, skill, and judgment, that only a few can do it with safety and success.—*North British Agriculturist.*

## NORTH AND SOUTH COUNTRY FARMING COMPARED.

A meeting of the members of Maidstone Farmers' Club was held at the Star Hotel, when Professor WRIGHTSON delivered a lecture "On the Contrast between North and South Country Farming." Mr. A. Chittenden, president of the club, occupied the chair; Mr. H. Statham in the vice-chair, and among the members present were Messrs. T. Chambers, C. Chambers, P. Rutley, J. Hodgson, S. B. Rutley, B. Binkhorn, T. Ongley, L. Jarrett, J. Fauchon, sen., E. Butcher, E. Beard, T. Reeves, R. Waterman, F. W. Day, G. Eimett, E. Pine, J. R. Hammond, P. J. Harris, R. Troutbeck, J. H. Hills, A. T. Killick, G. Blackett, sen., &c.

Professor WRIGHTSON commenced his address by remarking that he felt a considerable amount of diffidence in appearing as a lecturer before an audience composed of members of the Maidstone Farmers' Club, which deservedly enjoyed so high a reputation throughout the country, and most of whom were well-versed in the details of agricultural practice. He also found from a perusal of the newspapers, that they had had before them men of the first rank in agricultural knowledge, including such names as Professor Vuelcker, Mr. Lawes, of Rothamstead, and others of nearly as great repute. He trusted, however, they would extend their usual indulgence to him while he endeavoured, as briefly and as clearly as he could, to call their attention to some points of contrast between the north and south system of farming. A great deal of agitation has been going on of late in the agricultural world, and the landlords, tenants, and labourers of Kent had been much influenced by it, and the attention of the whole country had been directed to the county of Kent to a remarkable degree. The north country had been used to high rents and high wages, with poor lands, and the reverse had been the case in the south. He thought, in the first place, that many of the differences which were observable in the farming of both districts were due to soil and climate, but the chief cause of the differences to which he would call their attention was the cost of labour, including that of horses as well as men, and in the north they had an impression that in both these respects there was a great deal of waste among the farmers of the south. The labour question was undoubtedly the most pressing of all. In South Northumberland and in North Durham the wages were higher per man and lower per acre than they were in the south. He then referred to a series of returns which had been made by north-country statisticians which showed that the average rate of wages of good labourers in the north was from 28s. to 30s. a week, and remarked that a great saving was effected in the north by their system of horse labour. One of the best and most practical farmers in the county of Kent—Mr. Robert Russell, of Farningham—had told him four horses were necessary to plough his land, but he was surprised to see four horses used on the light lands in the neighbourhood of Deal. He did not believe, if they were to introduce them into Northumberland, the four-horse ploughs would long survive in that county. The high wages which were paid for men, and the lowness of the bill for wages formed a striking feature in the north-country farming. The north-country labourers were the children of a well-paid and well-fed race, while in the south they were often brought up in poverty and hunger. Then, there was a much greater amount of supervision kept over their workmen by farmers in the north than in the south; the men were never left to themselves, and were never allowed to work singly, except on rare occasions. He might mention as an instance the practice of the country in gathering pota-

toes. The field was marked off into four equal portions, the divisions being marked off by boughs or something of that kind, and to each section was appointed three women and one man, and a strict supervision was kept over their work. Another marked contrast in the practice of the north and south was the absence in the former of the pernicious system of beer drinking, except as a reward and stimulant for extra exertions on rare occasions. The wages paid on the Tyneside were from 28s. to 30s. a week, and to women about 1s. 4d. a day, and from 2s. 6d. to 3s. a day in harvest time. To those who lodged in the house, and who lived almost as well as their masters, the wages averaged £40 or £50 a year, and to boys from £15 to £20 a year. Then, as to the amount of work done, he would take those kinds of labour in which comparison could be best made. If they took harrowing, he found from numerous answers to inquiries which he had made that a man and four horses could harrow from 12 to 15 acres in a day; and if they took sowing, a man could sow broadcast from 15 to 18 acres a day. (In answer to an inquiry the Professor said the corn principally sown was oats.) Then, if they took dung-filling he found that the returns varied very much, some farmers stating the average amount of work done by each of their men as low as 15 tons and some as high as 30 in a day. In pitching wheat in the harvest field he found that the average amount done was from 30 to 35 cart loads. There a team of two horses and a ploughman with no driver could plough an acre in a day, but in this county he found four horses to a plough was the rule, and two horses the exception. In a farm of 400 acres, partly arable and partly pasture, they usually had nine horses, four ploughs, a shepherd, a cattleman, and an old man, with, in harvest, seven or eight women and three extra men. They required two horses and one man to every 50 acres of arable land, with a four-course sliitt, and an extra man to every 100 acres, with the same number of women. Of course the cost of manual labour per acre depended upon the relative quantity of pasture and arable land. Some estimate their cost for labour as high as 40s. per acre; but, taking the average it ran to about 30s. per acre, on many of the farms the expense on this head not being more than from 15s. to 25s. per acre. He should like to know how it was that in Kent, with a four-horse team, they were not able to get over more than six acres of harrowing a day, and eight acres was considered a good day's work in corn-drilling. This was not half what was done in Northumberland, and in Scotland they did from 12 to 15 acres a day. He believed that it was to the superior skill, energy, and strength of the north countrymen over the south, and the systematic supervision and marshalling of the labour that is the cause of the great difference in the cost of labour between the north and the south. Then the system of cropping in the north was different to what it was in the south, and much more simple. It was not at all an uncommon thing in the north to grow from 20 to 30 tons of swedes per acre, but 20 tons in the south was considered a large crop. There the land was ploughed deep and the soil thoroughly mixed, and manuring was carried out to a very large extent, both stable dung, guano, and crushed bones being used very largely. The use of guano for swedes and turnips was a feature in north country farming; and he would recommend to southern farmers a more thorough cultivation of root crops and more attention to these crops. Then as to live stock, the north farmers had made rapid strides in this matter, and the improvements which had been effected of late

years in the breed of the Shorthorn had been brought about in the north. The Longhorn and Sussex breeds were scarcely ever seen in the northern counties, and the sheep which they bred were mostly Leicesters. In the south the palper and the chaff-cutter were very generally used; but in the north country they considered, in consequence of the high price of labour now-a-days, such a practice was not profitable, and they had gone back to the old system of giving the cattle the roots whole, with hay and straw, sometimes with a little cake and corn. He could not help remarking that his observations had impressed him with the conviction that southern farmers were very extravagant with their hay, and in this item a great deal of economy might take place, for there was scarcely a farm but they might see an enormous quantity of hay every year scattered about to waste. Teds would fatten well without it; and, if they were to give them good straw, it would do equally well, and they might save their hay. Great value was attached to oat-straw in the north, and he thought in the substitution to a large extent of straw for hay very large saving might be effected. The lecturer then concluded, amid applause, by thanking the meeting for the attention which they had paid to his remarks, and for the cordial reception which they had given him.

The CHAIRMAN having invited remarks,

Mr. STONHAM said he thought it would be found generally impracticable to apply to one country the practice of another; and all such attempts had, according to his experience, generally resulted in miserable failures. The late Lord Romney introduced a new kind of plough, which he thought might advantageously be used in place of the old Kentish plough; but after having been tried for some time, it was found not to answer, and it often had occurred within his own observation, that new-fashioned implements which had been introduced, after a year or two's trial, were found rusting and rotting under a hedge. The land in Kent was very different to that in the north; and in Aberdeenshire, where he had been on a visit lately, it would be perfectly absurd to set four horses to plough land which was of such a character that it acted like sandpaper, and always kept the iron of the ploughs clean. Here, however, the land was heavier, and of quite a different description, and the light two-horse ploughs were quite unsuited for it. Then, as to root-growing, the climate was an insuperable difficulty in the way of their growing turnips like they did in the north. He knew many farms in Kent where the greatest care was bestowed upon root cultivation; but intense heat came on, sometimes for a few days, and the roots were immediately driven into mildew, and presented a most miserable appearance. He was so convinced of the futility of attempting to grow turnips in Kent that he intended to give up turnip-growing, and grow cabbages and mangolds instead. With reference to women being employed in feeding cattle and that kind of thing, he thought that was going rather out of the way to get cheap labour, and he hoped in Kent they would be able to do without their help in the cattle-yard. In the north there was not the slightest doubt that the roots had much more fattening properties than those grown in the south, and while in Aberdeenshire cattle became fat on roots alone; by their use in the south, with straw also, they were only able just to keep stock alive.

Mr. WATERMAN thought, perhaps, the reason why Kentish farmers only did half the work that was done in the north was because they went over the ground twice. In Kent, instead of paying £1 a week to men living in the house they used to pay £16 to £20, and even then they found they could not put up with men living in the house, and it would be difficult to find any farmer in Kent now who had any of his men living in the house. Professor Wrightson had spoken of the cost of labour on farms in the north being about 25s. an acre, but he could not imagine how they managed it. He paid £1,000 a year in wages on about 100 acres of land, or at the rate of about £10 an acre, besides what he paid for hop picking. His friend near him had just told him that the labour on his farm cost him £3 an acre, instead of and he had no hops. With rents getting up as well as the other expenditure connected with farming pursuits, he had no doubt they all ought to try their utmost to economise their labour bills, for if they did not they would have to give up farming.

Mr. TROUTBECK said the lecturer, in stating that the labourers in the north did double the amount of work to those in the south for the same money, had omitted to tell them what were the hours that the labourers worked. Some

twenty years ago he had the management of a farm in the north, and then the practice was to work the horses from half-past six to 12 o'clock, and from one to six. The production of roots was, no doubt, the staple of the farming in the north of England, and this, with their large pastures, enabled them to carry out the system which had become so celebrated. In Kent, however, the principal cultivation was that of hops and fruit, and there was not so much attention given to roots and grass. One cause of the diminished cost of labour was the extensive employment of women; and, if they could get women to do their work for 1s. 4d. a day, they would not employ men at 4s. 6d. a day. It was also quite true that, try what they would, they could not get the roots of such good quality in the south as they did in the north, and cattle in the north would do as well on roots alone as they would in the south on roots with the addition of cake and hay.

Mr. S. RUTTLEY said no doubt proper management and supervision of the labourers had a great deal to do with the economy of farm labour. The more practical the farmer, the closer he looks after his men, and the more he does this, and the greater attention that he pays to the work of systematising the labour the more he will get done. He believed that the payments for labour in the county of Kent would contrast favourably with the wages in the north, except in the matter of the unusually high wages paid to men who live in the house. In the south they found that young men did not like the confinement and control inseparable from living in the house as they did in the north. The kind of cropping depends very much upon the soil and the climate; and, if a man goes from one country to another, however high his character might be as a scientific and practical farmer, it would be his duty to study well the practice of his neighbours, and leave behind him the prejudices and many of the practices which he had learned in the place he came from. He thought much might be said in favour of the four-horse Kentish plough. A labourer in Durham required two horses to plough 50 acres, they were told; and as a team of four horses were generally allotted in Kent to 100 acres, he did not see there was any difference in that matter. Besides this, he believed that the land could be kept clean with the four-horse Kentish plough better and more easily than with the light and more modern implements. He thought there was much for a work suitable for the employment of women, and his experience was that women so employed attended to their household duties at least quite as well as women who were not so employed.

The CHAIRMAN said the questions of what they do for their men, and what their men do for them, would provide them subjects for much thought. He thought even in money payments in the south they might fairly contrast with those in the north. There was no doubt, whatever might be the cause, that the turnips grown in the north were much better than those of the south, just as the Cumberland and Westmoreland men had more bone and muscle than the men of the south, and they would not be doing justice to their own young men if they expected as much work from them as from Cumberland or Westmoreland men. He believed the two-horse ploughs were the right thing to use in the northern counties, just as he believed the four horse plough was best suited to Kentish soil. The northern labourer, no doubt, did more work on the average than the men of the south, but he hoped what the latter did not give in muscle work they gave in skill. In the north they had on a farm a few leading men, and the rest of the labour required was provided by the employment of women at 1s. 4d. a day, and these, under the superintendence of a man who was constantly on the look out to keep them up to their work, did as much work as a moderate man. He quite endorsed what had been said by Mr. Ruttley about outdoor labour, for he thought much of it might be done by women, but he should look upon it as a great calamity if the custom should be introduced of putting them to look after cattle. Then, the difference of time which it took to plough, or to harrow, or to drill corn, depended very much indeed upon the nature of the soil, and he believed that the north country system of cropping was not at all adapted to this country. No doubt the farmers of the north had made rapid strides in the improvement of stock, and what they had done in this direction demanded their admiration, and called upon them for imitation. From what had been said with regard to labour, they would go home with the idea that if they want a certain amount of work done by their labourers they must have the work set out properly for them, and see that they

carried out. He thought that in this part of the country they had met the labour question fairly, and should have no difficulty in obtaining an adequate supply. If, however, such a thing should occur, he thought they would be able to adapt themselves to any changes that might occur. The Kentish farmers had always shown a proper appreciation of deep cultivation, and he believed there was no part of the country in which the soil was more deeply moved than in the county of Kent. He thought they were not so satisfied with what they did that they did not think their system could be improved upon, but he thought, in copying others, they should carefully study what was recommended, and avoid too suddenly adopting changes. The two-horse plough had been tried here, but those who farm well kept to the four-horse plough, and those who farm better use the steam plough.

Professor WRIGHTSON, in reply, said he could not see how a man could pay £3 an acre for labour, with rent, taxes, and other expenses, as had been said by a gentleman present, and make a profit out of farming. He thought when this statement reached the north-country farmers, they would think it a very difficult thing to do. He quite concurred in the opinion that great attention should be paid to local customs, and at Cirencester, after inculcating general rules as to agriculture, he always impressed upon them whom he was instructing the great importance of studying well and adapting themselves to the customs of the place where they commenced

farming. The southern climate was, no doubt, against the cultivation of turnips, and it would be well if they were to substitute for them mangold wurzel and kohl rabi. He did not recommend the employment of women in heavy labour, but he mentioned it for the purpose of showing that where they employed high-priced labour, they ought to try to equalise it by the employment of low-priced labour also in those cases where it could be applied. The hours of labour in the north were, for men, from six to six, with two hours for rest, and for women, from eight to six, with a-hour-and-a-half at dinner and half an hour at ten and four o'clock. The teams were out from eight to six, a period of ten hours, instead of eight hours, as was the custom in this country. As Mr. Rattley had remarked, in considering the questions which they were discussing, the great difficulty was to place themselves in one another's position; if they were to do that and take into consideration all the circumstances, it would, probably, be found that there was not so much difference, after all, as some of them were disposed to believe. The important point, however, in the economy of labour, was the proper supervision of the men, and that constituted the chief cause of the difference in the cost of labour. The lecturer concluded by thanking the company for the manner in which he had been received, and on the motion of the Chairman, a vote of thanks was accorded to him for his interesting and instructive lecture.

## THE WHEAT TRADE.

### CARR'S ANNUAL REPORT.

I now beg, as usual, to wait upon you with my annual Harvest Report, and trust that the same may be of service and interest to you in contributing to the general stock of information regarding the harvest produce this year, thereby possibly enabling you to better form an opinion upon the probable supplies of food until next harvest. The contents form a summary of information received through the medium of my numerous kind and valued friends and correspondents, adding my N.B.'s as usual, upon which my humble opinion as to the PAST, PRESENT, and PROBABLE FUTURE state of the trade has been founded. Regarding the PAST, I have great satisfaction in referring to my last annual Harvest Report of the 3rd December last year, and to my weekly statement of the markets contained in J. E. Beerbohm's and Dornbusch's Daily Lists. The opinions I there ventured to express have been most singularly realised, and I am happy to think (as already stated above) that those who did me the honour of following my advice, and trusted their interests to my care, have done well; and should I be as fortunate this campaign, I shall deem myself amply repaid for the great trouble and expense entailed in procuring my information, printing expenses, &c. As to the PRESENT, in another part of this report I have stated that "the grain trade has often been and will often be sick, but it will never die;" as to the truth of that we have at present a proof, as the wheat trade is as sick as possible, and no wonder at it when one sees and hears of its stomach being overdone and loaded to an abnormal extent, which surfeit is likely to continue for some length of time to come, as the quantity of wheat afloat is exorbitant—viz., 2 million quarters; *ergo*, supply has overtaken the demand; and when this takes place in the absence of speculation prices must fall, and though the average price at present is 2s. to 3s. per qr. higher than last year, yet it is about 13s. 3d. below the average of 1873, 9s. 3d. in 1872, and 9s. 7d. in 1871. Taking the average of five years the present average price is 5s. 6d. per qr. lower. In fact, prices have only been lower than at present in the years 1849, 1850, 1851, 1852, 1864, and 1865, as present prices in the U.K. leave no margin for importation from any part of the world, and thus one might

reasonably expect a cessation of supplies; but such is the state of the money market in Russia and Hungary that one finds that the said countries, in spite of their complaining of deficient crops, are doing their utmost to get rid of their stuff; and I hear that in Southern Russia the landed proprietors and farmers are even pledging their growing crops to get money, in spite of the large stock of wheat of last and this year's growth in store at Odessa. "It is an ill wind that blows nobody any good," says the old English proverb; and the truth of this is proved by the fact that, although it is to be deeply regretted that things are so bad in Russia, Hungary, &c., on the other hand it is fortunate for those countries which are in need of grain, and which perhaps they would not have received but for the cramped financial state of said countries. The price of grain now-a-days does not depend so much upon what is grown in the U.K. as upon what quantity the rest of the world can spare, and the wants of other countries, and the state of their finances. Last autumn was as favourable as this has been unfavourable for getting the seed well into the soil. Owing to the heavy downfall of rain, it is a question whether more than one-half to three-fourths of the land has been sown with wheat, and, from what one reads in the various agricultural and other reports, a large portion of that sown is covered with water, and rotting, as it were, or entirely washed out. We all know how little one can rely upon spring wheat, and how indifferent spring wheat turns out, both in quantity and quality, even if the sowing may go off favourably. Owing to the rainy period in July very large speculations were entered into in grain, speculators forgetting the large stocks as surplus of 1875 (it being a fact that a surplus of a crop generally rules the prices during the following campaign), consequently several of the consuming markets have been glutted, and on this account the unfavourable result of the late harvest would, so far, not have any influence as yet. By degrees, however, the consumptive demand and the falling-off of the foreign imports and home supplies is beginning to show itself and gaining strength at the greatly reduced prices; so that, to all appearances, we may see an improvement in prices with the turn of the year,



December and March being proverbially dull months, and January and February, particularly the former, are on the average months when prices get better. I think that rye cannot go much lower, as prices are low, and I do not believe it likely that stuff on the spot will improve much, for although stocks are not large the consumptive demand is not pressing.

**PROBABLE FUTURE.**—Confirming the above remarks, I beg to refer you to my N.B. under Great Britain and Ireland, where you will find I put down the probable wants of the United Kingdom at  $7\frac{1}{2}$  million qrs. wheat and flour for the already-entered-upon campaign, commencing on the 1st September, 1875, and ending 31st August, 1876. Of course I have put the quantity down at  $7\frac{1}{2}$  million qrs. as the quantity with which, in need, the U.K. may reach next harvest; but in order to do so, and have a sufficient stock in store equal to that of 1873—say  $1\frac{1}{2}$ , or that of 1874—say 4 million qrs., then the imports must be accordingly 9 and  $11\frac{1}{2}$  million qrs. From my N.B.'s under the various countries enumerated, you will find that the following countries are able to spare (provided holders will part with their property at the prices current) about  $16\frac{1}{2}$  million qrs. wheat and flour, and still be able to supply the wants of Belgium, Holland, Switzerland, and the other countries requiring aid—namely, the Atlantic States of America in conjunction with Canada, California, Oregon, Chili, and Australia,  $6\frac{1}{2}$  million qrs. wheat and flour; Russia, 3 million qrs. wheat; Austria and her provinces,  $1\frac{1}{2}$  million qrs. wheat and flour; France, 4 million qrs. wheat and flour in all (we will say 3 million for the U.K., and 1 million for other countries); Germany 1 million qrs. wheat and flour; Turkey and the Danubian Principalities,  $\frac{3}{4}$  million qrs. wheat; Egypt,  $\frac{1}{4}$  million; India,  $\frac{1}{4}$  million qrt. wheat; Scandinavia,  $\frac{1}{4}$  million qrs. wheat and flour—total,  $16\frac{1}{2}$  million qrs. wheat and flour, of which the U.K. imported from the 1st September to the 5th December 17,329,411 cwt., against 11,517,035 cwt. in 1874, and 11,499,273 cwt. in 1873; of home produce farmers delivered only 2,627,512 qrs., against 3,416,444 qrs. in 1874. The quantity of wheat reported on passage at present to the U.K. is 1,816,100 qrs. wheat, against 1,571,150 qrs. last year. Thus, taking into account the quantity arrived and afloat, the U.K. will have received by the 1st January above half or very nearly three-quarters of her requirements. Possibly (though I do not expect such) momentary wants caused by periodical cessation of supplies may cause a spurt, but unless something very extraordinary happens, I do not expect to see more than moderate prices; at least, there is no reason to suppose that prices can go very high; but there seem good grounds for the impression that the value will be somewhat higher than at present. There is no doubt the large stocks in granary and large quantities afloat—further, that the present dearthness of money, coupled with the depressed state of the commercial middle class and the manufacturing districts, which checks consumption—tend to keep down prices; but with the turn of the year, and particularly towards spring, I look for a revival of trade in general, and by that time (spring) the weight of the present large stocks and arrivals will have either entirely disappeared or nearly so. The fact must not be lost sight of, that the cause of there having been less land sown with wheat in 1874 exists to a greater extent this autumn seed-time—namely, low prices—though I shall not be astonished to hear, when the official notice is issued, that, in comparison to the year 1873, 10 to 12 per cent. less land has been ploughed and prepared for autumn sowing, without taking into consideration that one-fourth to three-eighths of the land intended for autumn wheat has not been sown, for reasons stated in another part of this report. This fact may tempt holders of grain at home and abroad to hold

on till the last moment, and as long as their finances will permit, in the hope that any probable or actual mishap to the growing crops might cause a speculative demand, *alias* a rise in prices, after such a lengthened period of stagnation in business in general. From the above you will find that, though I do not look for an advance to any very great extent, prices may go up and down till early in January, when they are likely to become firm and keep so, or, at least, not go back to any extent till spring, but then on the first impulse (such as a poor seed-time, or reports of damage having been done to the crops during the winter, &c.), go steadily ahead, and continue doing so until the result of the next crop be known. Last year at this time in my report I stated that, "Good prospects, and, of course, still more, a good crop in point of quantity and quality, would still put down prices 10s. per qr. below present rates, than poor crops would possibly put them up a few shilling, being of opinion that the importing and exporting countries would carry over large stocks into next harvest." This has been verified to the letter this campaign. I think that the prospects of a good harvest in 1876 might cause a drop of a few shillings, whereas the prospects of a poor crop would send them up several shillings, prices being low; and though money is dear and scarce still, yet it is thought it will become easier as the season advances, so that the farmers in Russia, Hungary, &c., need not be driven to sell at any price, as in 1874-5, and the way matters stand, I think there is a much greater chance of a profit at about present rates than a loss, prospects for the crop of 1876 not being very bright.

THOMAS CARR.

**ENGLAND.**—Breadth of land under wheat, 3,342,338 acres, or 7.9 per cent. less than in 1874, and smaller than any year since the agricultural returns were taken; yield per acre and quality decidedly under an average, light in weight, but condition good. Barley 2,509,538 acres, or 9.7 per cent. more sown, large yield, quality and weight various, middling and inferior predominating. Oats 2,604,048 acres, or 2.6 per cent. more sown; below an average. Beans and Peas about an average. Potatoes 522,634 acres, or 4 per cent. more; crop good, though here and there disease prevalent. Hay first cut quality injured, some entirely spoiled; second cut abundant, fully compensating for the deficiency of the first cut.

**SCOTLAND.**—Wheat, less breadth sown; poor in quantity and quality; weight 56lbs. to 61lbs. Barley, larger breadth sown; full average per acre; quality much discoloured; weight from 59lbs. to 57lbs. Oats full crop, of good quality; weight 46lbs. to 43lbs. Beans good crop. Peas little sown. Potatoes large crop; good quality, but more or less diseased; but the extra breadth will make up for this. Turnips good crop.

**IRELAND.**—Wheat, 14 per cent. less breadth sown, owing to the unremunerative price at time of sowing; yield per acre and quality excellent. Oats one of the finest crops ever known in Ireland; weight varies from 36lbs. to 42lbs. Potatoes good crop in every respect. Barley only moderately grown in Ireland; yield per acre and quality superior to the growth of late years. Turnips and mangolds good.

**N.B.**—Taking the less breadth sown, the deficiency being chiefly owing to less wheat being sown in spring, and, further, the less flour-producing properties, and the short yield at 29 per cent. below an average, I estimate the yield at equal to 12 million qrs. Taking the population of Great Britain and Ireland, including the Isle of Wight, at 32 millions,  $5\frac{1}{2}$  bushels wheat per head, adding 2 per cent. for extra consumption, owing to cheap prices, makes, in round numbers 224 million qrs., and 1 million qrs. for seed makes 234 million qrs.; therefore, without taking into consideration that this year's harvest has been about fourteen days later than usual (harvest operations commenced on the 10th of August); further, that the consumption of bread-stuffs will be lessened by the good and cheap pot-to-crop, and the increased consumption, owing to the dearthness of butcher's meat, I put down the probable requirements of the U.K. at 114 million qrs. wheat and flour, less 4 million for stocks in hand. I may here mention that this year or campaign none of the crop is likely to be required for cattle-feeding, as maize and thin barley will be abundant and moderate in price, I fancy. Last campaign (1874-5) I put down the probable require-



ments of the U.K. as 9 million qrs.; the quantity actually imported for the twelve months has been 11½ millions—*viz.*, 2½ million qrs. more than I expected; but as the stocks in the hands of the trade on the 1st September this year were about 2½ million qrs. more than last September (I estimate them at about 4 million qrs.), my calculation has turned out about correct.

**FRANCE.**—Larger breadth of land sown with wheat; crop much inferior to last year's, being considerably under an average yield; quality pretty good in the South and in the Centre, a little inferior in the western districts, and much so in the North-west and the North; weight 74 kilos, and colour rather brown. Rye an average crop, but the quality suffered from rain end of June and the greater part of July; colour dark. Barley unsatisfactory in quantity and quality. Oats, maize, and potatoes good crops.

**N.B.**—When such celebrated authorities as MM. J. A. Barret, Barthémy Estienne, C. Rigel, i.e. *Lebo Agricole*, *Journal de l'Agriculture*, and M. Waldmeier, one and all differ in opinion as to the yield or result of this year's wheat-crop in France (though they are unanimous in their opinion as to the stock of old wheat on the 1st September being considerable, one feels rather dilident in giving an opinion; taking, however, into consideration the larger breadth of land—*viz.*, 6,823,631 hectares (the breadth of land sown with wheat varies from 6,500,000 to 6,900,000 hectares, consequently the last year's breadth is nearly equal to the largest of the two, which, in my opinion, is equal to 5 million hectolitres), the very large stock left over from the crop of 1874—*further*, that the harvest has been fourteen days later than usual (which is equal to 3½ million hectolitres), and the yield has been a full average in the regions that produce about 70 per cent. of the whole produce in France, I think I shall not be going far wrong when I estimate the probable total exporting power of France this campaign at about equal to London qrs. wheat and flour, of which, of course, the U.K. will get the lion's share. I may here add that, according to statistics, a bad crop in France yields 10 hec. per hectare, and a splendid one 17 hec. per hectare; further, that the difference in the yearly consumption in a bad and good year is in the former one and a half, and in the latter two and one-tenth—*viz.*, a difference of ten to twelve million hectolitres.

**HOLLAND.**—Wheat: 10 to 15 per cent. more land sown than last year; yield about an average; good quality, and condition and colour satisfactory, also weight. Rye: 10 to 15 per cent. less land sown; yield 6 per cent. below an average; quality, condition, weight, and colour satisfactory. Barley: More sown (owing to rapeseed being ploughed up, having suffered during the winter), and a large and excellent crop. Oats about an average. Buckwheat a short crop. This cereal is being yearly less cultivated, as it is cultivated only on sandy soil, which so soon as improved is taken for other purposes. On the other hand, flax and potato cultivation is on the increase yearly. Potatoes a good crop. Rape all but a total failure; this is particularly the case in the Groningen districts, where the produce is only 200 to 300 lasts, whereas an average crop is 11,000 to 12,000 lasts. Peas and beans short, particularly the former. Hay and grass very deficient, scarce, and dear.

**N.B.**—Holland will require about the same imports of cereals as last year, but considerably more of rape and Rubsen.

**BELGIUM.**—Rather less land sown with cereals. One calculates in Belgium that, owing to the continued increase of population (consequently change in the area of land) a yearly reduction of 3 to 4 per cent. takes place in the breadth of land sown with cereal produce. Wheat, 20 per cent. less yield than last year; quality various; weight 60 lbs. to 6½ lbs. per bush. Rye a small average; quality satisfactory. Oats satisfactory. Barley short crop; quality various. Malting barley scarce.

**N.B.**—Belgium will require about 10 per cent. more foreign aid than last year.

**SWITZERLAND.**—Crops under an average in quantity and quality; this is particularly the case in the Northern districts. Hay is about the best crop of the season.

**N.B.**—Switzerland requires, even in average years, an import of 1¼ million cwt. of grain; this year, owing to the short yield of potatoes, Switzerland will require 6 million cwt. of grain from abroad.

**GERMANY: BAVARIA AND SOUTHERN DISTRICTS.**—With the exception of Bavaria, where the cereal crops in general are very satisfactory in every respect, the harvest in Southern Germany, as far as regards wheat, rye, and barley, is defective

in quantity and quality (suffered from rain and smut); oats good; maize moderate; potatoes more or less defective. The stocks of old grain on the 1st September, being large (for instance, in Wurtemberg equal to three months' consumption), will, however, fully compensate for the deficient yield. **SAXONY AND THURINGIA (CENTRAL GERMANY).**—Wheat about 20 per cent. less than last year's abundant crop, and yet there will be some wheat to spare for export. Rye, barley, and oats good in quantity and quality, so that of rye less will be required to be imported. Potatoes tolerably good. **BERLIN DISTRICTS.**—Wheat 78 per cent.; rye 73; barley 80; oats 90; potatoes 80; mixed corn an average. Forage stuffs, such as hay, clover, &c., 30 per cent. of an average; quality various. **KONIGSBERG DISTRICTS.**—With the exception of oilseeds, which are very deficient, the crops in general are good in every respect. **DANZIG DISTRICTS.**—Wheat, quantity tolerably satisfactory; quality leaves much to be wished for, rust being very prevalent, but the colour and condition mostly good; weight 56 to 66 lb. Rye middling quantity, quality good, and weight 56 to 58 lb. Peas and barley small crop; barley good colour, weight 45 to 50 lb. per bushel. Hay and straw nearly a failure, so that the farmers are obliged to buy such for their cattle, and they are selling those they can spare. Maize is being imported from Hungary, and the prices of oats, hay, and straw have risen correspondingly, whereas the prices of horses and oxen have fallen. Oats ½ yield. **POSSA OR PRUSSIAN POLAND DISTRICTS.**—Wheat 62 per cent. in yield; quality tolerably good. Rye 60 per cent., quality also good; barley 64; oats 63 per cent., quality not so good. Potatoes very good crop. **SILESIA.**—Wheat under an average in yield; quality various; fine quality rarely. Rye good average. Barley also under an average, and quality various; fine malting scarce; common grades are mixed with smut and smut. Oats good yield, but quality middling, being smutty. Potatoes tolerably good. Rapeseed good quality, but yield deficient. **UPPER POMERANIA AND STETTIN DISTRICTS.**—Wheat in Pomerania and Uckermark very various, in quality mostly middling, whereas really fine quality is scarce; average weight 80 to 81 lb. per wispel; quantity 25 per cent. below an average, or 50 per cent. less than last year. In the Oderbruch the quality is even worse, and condition soft; yield 25 per cent. below average; *viz.*, the Oderbruch districts will not have wheat for export this campaign. Rye in all districts about the same as wheat in yield, but quality satisfactory, and average weight 80 to 81 lbs. per wispel. Barley good crop in Pomerania and Uckermark, good quality, average weight 70 lbs. per wispel. Oderbruch barley, rain did great harm to the quality, colour, and berry, weight 68 lbs. per wispel, and quantity 25 per cent. short of an average. Peas 25 per cent. less than in 1874, quality satisfactory. Oats 15 per cent. below an average, middling quality, weight 48 to 49 lbs. per wispel. **LOWER POMERANIA (ANGELN, WOLGAST, GRIETSWOLD, DEMMIN, ISLAND OF RUGEN, STRALSUND, AND BARTH DISTRICTS).**—Wheat about 30 per cent. less than last year, or about 20 per cent. below an average; quality, condition, and colour satisfactory, weight 78 to 80 lbs. per wispel. Rye 16 per cent. below average, condition and quality good, weight 80 to 84 lbs. per wispel. Barley better than in 1874, and about 90 per cent. of an average, quality good, weight 70 to 76 lbs. per wispel. Oats 20 per cent. below average, quality good, weight 44 to 53 lbs. per wispel. Peas 85 per cent. yield, quality satisfactory. Tares 65 per cent. of an average, quality good. Potatoes about an average, although some few complaints as to quality. Hay and clover—Hay 83 per cent., clover 55 per cent., short, good quality. **KOSRUCK AND WISMAR DISTRICTS.**—About the usual breadth of wheat sown—suffered much from rust, and is therefore very defective; this applies chiefly to the autumn-sown, whereas the spring-sown (which is, however, only a very small breadth) is better. Rye 10 per cent. below an average; both wheat and rye short in the straw. Oats and barley good average, also peas and potatoes. Meadows and clover short; oilseed short; quality of wheat various; condition of all cereals good; average weight of wheat 61 lbs., rye 37 lbs., oats 37 lb., barley 52 lbs. per bush. Turnips and beetroot satisfactory. **LUBECK DISTRICTS.**—Wheat in quantity and quality scarce an average. Rye about an average, quality good; oats average crop; barley large crop and fine quality. **HAMBURG DISTRICTS.**—Wheat little grown, but yield a full average. Rye very good. Oats moderate average, one-third less than last year. Potatoes

abundant, and good quality. Clover and hay rather short. Quality and condition of all grain good. HOEFTEN AND SCHLESWIG DISTRICTS.—Wheat, quantity and quality satisfactory, though, of course, not equal to 1874. Rye, quantity satisfactory, quality excellent. Barley and oats good in every respect. Oilseeds small in comparison to last year, but quality satisfactory. Potatoes moderate. BREMEN AND OLDENBURG DISTRICTS.—Crop on the whole an average yield, of good average quality, and the same may be said of potatoes and pulse. Straw here and there short. EMDEN AND LEER DISTRICTS.—The same as in Bremen and Oldenburg. WESTPHALIAN DISTRICTS.—Crops on the whole satisfactory. HANOVER AND BLUNSWICK DISTRICTS.—With the exception of hay and clover, which are very short, so that feeding-stuffs, such as maize, will be required, the crops are most satisfactory in every respect, and though wheat is not equal to the brilliant crop of 1874, yet there will be some to spare for export. RHINE DISTRICTS.—Wheat a moderate average. Rye short up. Barley little grown; but, like oats, is very satisfactory. Rapesed very deficient, having been nearly all ploughed up. Potatoes suffered from heat and wet in July, and are therefore more or less deficient. ALSACE AND LORRAINE DISTRICTS.—On the whole tolerably satisfactory, the previous splendid hopes and the later-on-expressed fears being equally divided.

N.B.—Though the crop of wheat in Germany is not by far equal to that of last year, which was an exceptionally brilliant one, yet I think the consuming countries may reckon upon getting nearly as much as last campaign on the average, and I think, provided prices suit, that the U.K. may safely reckon upon one million quarters of wheat and flour.

SCANDINAVIA, PARTICULARLY DENMARK. — The crops of cereals are very satisfactory in every respect, even Sweden (that is the southern district), will this year have wheat to spare. Hay poorish crop. Feeding-stuffs will keep proportionately high, owing to the increase of cattle in Denmark. Oats not much cultivated, and only one-half the yield of 1874.

N.B.—I consider the crops in Scandinavia on the whole not far short of last year, and fancy that the exports of wheat to the U.K. will amount to 250,000 qrs. wheat and flour.

RUSSIA.—Crops, on the whole, suffered more or less from drought and the rain. In the south and south-western provinces (the grain chambers, as it were, of Russia) wheat is in some districts partly middling, in some partly insufficient, and in others partly a failure. Rye only middling. Barley and oats tolerably good crops in quantity and quality. Hay very poor yield; thus cattle food is very scarce and dear, and farmers have had to part with their cattle to a certain extent, so that during the three months ending September the price of cattle fell 20 per cent. South-eastern provinces: Crops of wheat various in quantity and quality. Rye, on the whole, satisfactory, and large export expected. Pulse a good crop; oats ditto, particularly in quality. Western provinces tolerably good. Central various, mostly satisfactory, but in some districts must be a failure. North: Rye an average crop, weight 56lb. per bushel. Wheat and oats not very satisfactory. North-eastern and North-western provinces tolerably fair.

N.B.—The official report of the harvest states: In the north and north-eastern and Baltic provinces yield not quite a moderate average. Russian Poland, with few exceptions, not enough for home use. The frost in spring and hail in summer did harm in the provinces on the Weichsel to the extent of 1½ million roubles. In the Central Governments only an average on the whole. The wheat in the South and South-west was at one time considered lost, but the rain which fell later on greatly improved the same, so that Odessa and the other parts in the Black Sea will be able to export freely this season. It is true locust did here and there harm. On the whole, the crop of 1875 is a medium one, and, as therefore stated, large exports of wheat, but only a small one of rye and barley, may be safely reckoned upon. From the 1st January to the 13th September the total grain exports from Russia were 16,958,000 chetwerts, against 17,610,000 the same time last year (1874) 3¼ per cent. less wheat is a mere nothing—viz., of wheat 7,003,200 against 3,979,000 chetwerts in 1874, 77½ per cent. more wheat; on the other hand rye 3,812,000 against 17,396,000 chetwerts, 77½ per cent. less; oats 11 per cent. more; other grain less. According to a St. Petersburg report, the export from Russia depends less on the yield than on the demand from abroad. To what extent the export is dependent on the crop the following will show:

	Crop.	Grain Exports.
	Chetwerts.	Chetwerts.
1870 .....	304,894,000	21,083,702
1871 .....	213,570,000	23,732,258
1872 .....	266,534,000	15,648,183
1873 .....	267,990,000	20,704,138
1874 .....	300,318,000	—

The writer calculates, on the basis of the three years' average, that the export of 1875 must amount to 21,625,000, and for the year 1876 there need not be any fear that the export will be so very far short of the five years—that is not below 16 million chetwerts. For my (F. Carr's) own part, taking the country throughout, I consider the wheat crop about 25 per cent. below that of 1874, or 17 to 20 per cent. below an average; rye ½ to ¾ of average. The South-western provinces have suffered most. I confirm, and which has since been fully corroborated, all I stated in my N.B. of last year, "as to the yearly increasing state of agricultural railways, as in Russia, that stocks were large in the Southern districts, even of old wheat, particularly at Odessa, where monetary matters are in a very critical state, and where supplies continue to pour in by land and water; large supplies may therefore be expected from Russia, provided prices keep high enough to pay the transit for the distance. Last (1874) year's experience teaches us that, in spite of partial or even an entire failure in some Governments, there remains always a large surplus, of which a large portion is forwarded by the increased and increasing railways; on the other hand, the Russians have often during cheap years stored up their stocks for years, until they could sell at a profit." I have stated the South-western Governments have come off worst, and from all accounts the prospects for the coming crops in said Governments are very far from cheering. It appears large quantities of locust's eggs, which will of course become locusts in the spring, are lying in the fields in the East of Moldavia and Bessarabia. Measures are of course being taken to destroy this plague, but the result, it is said, appears doubtful, as to obtain the requisite amounters at hand, &c., an immense sum of money is requisite, which in the present very critical state of the Russian money market will be no easy matter to get together. For instance, as in the year 1858, locust eggs were found on only 3,500 dessiatines (1 dessiatine equal to 0.92 hectares). No fewer than 24,000 labourers were employed to destroy the said eggs with 22,000 horses, 2,350 stone-tellers, 2,500 thorn harrows, 5,600 thorn brooms, 2,300 wheelbarrows, 2,600 shovels, and for no less time than a month; 6/10 what must be the trouble and expense of destroying the eggs covering 35,000 dessiatines, which is the quantity said at present to infest the fields on the east of Moldavia and Bessarabia? I put down the exporting power this campaign of Russia to the U.K. at 3 million qrs. wheat.

AUSTRIA AND HER PROVINCES (GALICIA, BOHEMIA, MORAVIA, AND HUNGARY); THE PROVINCES OF UPPER AND LOWER AUSTRIA.—Wheat, barley, and rye about an average in yield, but quality mostly light and shrivelled; the heaviest weight is to be found in the Theiss, the average weight being 57lb. to 60lb. for wheat; rye 57lb.; barley 49lb. to 50lb.; Oats moderate average in yield and quality. GALICIA AND BUCKOWINA: Deficient crop, the result being worse than was expected in August. Wheat, rye, and barley much under an average in yield and quality, and it is thought that the said provinces will not have any of the above cereals to spare, but on the contrary, will require assistance from Hungary, &c. Oats about an average. Maize good yield. Pulse bad. Potatoes rather short, and here and there diseased. BOHEMIA AND MORAVIA: Wheat, rye, and barley about an average. Oats good average. Pulse and rapeseed satisfactory. In wheat smut and rust is more or less prevalent. Barley and oats fair quality. Maize good crop. HUNGARY: Wheat, barley, and oats unsatisfactory in quality and quantity, rust and smut being prevalent in the wheat; weight 80lb. to 86lb. per Lower Austrian metzen. Rye poor yield; quality and colour good. Barley poor in quantity and quality; weight 66lb. to 72lb. Oats deficient and light in weight—35lb. Oilseeds nearly an average yield, and quality good. Official accounts state wheat to have yielded 26,000,000 cwt. to 30,000,000 cwt., rye 20,000,000 cwt., and barley 12,000,000 cwt.; and that Hungary will export more than in 1874-5, stocks of old grain being large at the time of harvest.

N.B.—The crops suffered more or less from drought in April, cold easterly winds and night frosts in May, and then from the excessive heat in June (on the 26th of that month they had in Pesth 26 ders. Reannur in the shade), then again from storms, accompanied by heavy rain and hail. Fine 62lb. qualities of wheat are only to be found in some districts of Slavonia, on the Theiss, and in Oudridills, and of barley in some districts in Bohemia, and oats in Moravia.

Maize is the best crop of the season, being good in the whole of the empire. The fruit crop being abundant, it is said, will reduce the consumption of grain equal to about 20 per cent.; this applies chiefly to Hungary. The following is an extract taken from the report of the committee of the Congress held by the members of the grain trade from all quarters of Europe, in Vienna, on the 26th August last, which is very interesting. "CIS-LEITHANIA: Wheat nearly an average, as the deficiency in the whole of the countries in this part of Austria only gives 200,000 cwt. below an average. The countries under the Hungarian crown are worse, there being a deficiency of two million cwts. The quality in Cis and Trans-Leithania is 4 per cent. below an average, which is equal to 1½ mill. cwt. Thus an export would seem impossible, if we take as a guide the export during the ten years at 5 million cwts., and provided we had twelve months' consumption to cover; but there being only eleven months, as the past month has been covered by old stocks, and there were still stocks on hand then, end of August, the monthly requirements of the Austrian Empire are 4 million cwts. Thus, as we have only eleven months to go, we may be able to export 5½ to 6 million cwts. wheat. Rye is better: the deficiency in Cis-Leithania is 100,000 metzen, and in Trans-Leithania 700,000 metzen; the difference in quality in the two (Cis and Trans-Leithania) is 3 per cent., and taking into consideration old stocks, we may export 2 million cwts. Barley not favourable; the deficiency in Cis 1½ million metzen, and in Trans-Leithania 1½ million metzen; quality greatly under an average; colour defective, also the natural weight. We may export from Cis and Trans-Leithania 1 million metzen only. Oats: Cis, 400,000 metzen above an average; Trans-Leithania a deficiency of 2,400,000 metzen; but owing to large stocks of old we may do without an import, even though the quality is 4 to 5 per cent. below an average. Maize splendid crop. Potatoes satisfactory, though here and there diseased." Taking everything into consideration, I think I shall not be far wrong in estimating the probable exports from the Austro-Hungarian Empire to the United Kingdom at 1½ million quarters of wheat and flour. Within the last few weeks the traffic on the Austrian and other State railways has been so lively that it reminds one of the abundant years 1867 and 1868; about 1,000,000 cwts. of grain daily pass the Austrian frontiers *en route* for Germany, chiefly Saxony, and I hear flour is being freely exported to the United Kingdom. Maize is coming freely per rail to Berlin, Stettin, Danzig, and to Mecklenburg for Austria.

**TURKEY AND DANUBIAN DISTRICTS (MOLDAVIA WALLACHIA).—TURKEY:** Grain crops good. **BULGARIA:** On the average poor crops, owing to much rain. **ROUMELIA:** Excellent crops, and will export very much. **THESSALIA:** Splendid crops. **MOLDAVIA AND WALLACHIA:** The crops in general suffered from heat in June and rains in July and August. Wheat and maize full crop in yield, but the quality inferior to that of former years, particularly wheat, which is poor in quality and condition, in Wallachia and Moldavia. Rye and barley middling on poor soils, owing to the drought. Rapeseed tolerably fair.

**N.B.—**Considering that the yield has been pretty fair, and that stocks of old grain were large at harvest time, further, that the ports along the seaboard, Brail, Galatz, and Giurgevo were said to be glutted with cereal produce, I think the United Kingdom may pretty safely reckon upon receiving from the Turkish and Danubian Principalities three-quarters of a million quarters of wheat.

**EGYPT.—**Wheat an abundant yield.

**N.B.—**Egypt will this campaign contribute largely to the United Kingdom, say to the extent of one-quarter million quarters.

**SPAIN AND MEDITERRANEAN DISTRICTS: SPAIN.—**Crops middling. The same may be said of **PORTUGAL.** **ITALY.—**Upper Italy.—Wheat and rye 15 per cent. below an average; quality and colour leave much to be wished for; wheat weighing 76 to 73 kilos. Oats good crop. Maize tolerably good. Southern Italy.—Wheat 20 per cent. less than an average. Maize 25 to 30 per cent. above an average.

**N.B.—**Spain will export more or less, according to the prices paying. Italy, in spite of the deficient yield, will require less and, the stocks of old grain being large, equal, it is said, to 10 per cent. of the last year's crop; I will therefore class said countries neither under the exporting nor importing countries.

**ALGERIA.—**Crops, with the exception of barley, which is discoloured from heavy rain, satisfactory.

**N.B.—**I put down Algeria as neutral, that is, will neither export nor import, though this campaign I fancy said country can better export than import.

**AMERICAN (ATLANTIC STATES).—**Larger breadth of land sown with wheat, say 8 per cent., some say 1½ million acres.

Owing to abnormal weather a good deal of winter wheat was ploughed up and resown with spring wheat and oats; the yield per acre is about 15 per cent. short of an average, that is winter wheat; spring wheat is about an average, quality and condition various, owing to the storms and continuous rains in July and September, a large percentage is said not to be fit to produce a healthy flour to export. Rye 91 per cent. of an average; quality pretty good. Barley 85 to 90 per cent. of an average; quality tolerably good. Oats a full crop, owing to the extra breadth planted. Buckwheat average in quantity and quality. Potatoes above an average; quality various. Maize, a large breadth sown and the crop is enormous, being estimated grown at no less than eleven hundred million bushels.

**CALIFORNIA.—**Larger breadth under wheat crops—suffered from drought and chinch bug; yield two-thirds of a good average; quality an average. Barley largely grown, and crop good in quantity and quality; some Cheviot samples leave nothing to be wished for, while the bulk of the ordinary barley is excellent. **OREGON.—**Splendid crop from a slightly increased acreage; crop in quantity and quality exceeds expectations.

**CANADA.—**Spring wheat about a fair average, winter wheat deficient, but, taking the two grades together, they give a full average. Oats, barley, and peas bad crops. Maize and potatoes very satisfactory.

**CHILE.—**Crops were short, 25 per cent., but the crops now fast approaching maturity promise well.

**AUSTRALIA.—**The yield and quality were fine, and the crop now about to be cut is said to be one of the best on record.

**N.B.—**In the first place, I respectfully refer to and concur in the remarks I made under my N.B. last year as to the yearly increase of land under cultivation, as thus any slight decrease in yield is fully compensated by the extra breadth planted. This year the deficiency is chiefly in the winter wheat, and applies more to the quality, and still more to the condition, than to the yield per acre. The supplies from the interior were kept longer back than usual, owing to the rains. Many think that if prices recede the farmers will sell slowly, and prefer storing to parting with their property. I have no doubt "the wish as well," may be there, providing the "needful" be, which I fear will not be probable, money being very difficult to obtain for speculative purposes. Bankers are acting in a conservative manner, and encouraging but the narrowest current business, and I hear that drafts for American flour, being so difficult to discount, as high as 27 per cent. has been paid for such drafts. Stocks are also very large at New York, end of November about 5½ million bush., and it was thought that before the close of the navigation the stock would be augmented to 7 millions, against 6 million bush. same time last year, and the visible supply at the various points of accumulation is 2½ million bushels larger than last year. Further, the fact of the prospects for the next crop being favourable, with larger breadth sown, is no great inducement for farmers to hold on. The cultivation of the soil in California will increase rapidly, considering that emigration is pouring into the country, consisting of agriculturists of means anxious to get settlements. Another very important point, not only to America, but to the trade at large, is that the Congress on the 27th May last voted 2½ million dollars to pay for making the mouth of the Mississippi deeper, in order that large ships may pass through loaded. According to my calculation I think the United Kingdom may reckon upon receiving from the Atlantic ports 2½ million quarters wheat and flour; from California 1½ ditto; Oregon ½ ditto; Canada ¾ ditto; Chili ¼ ditto, and Australia 1 million quarters; in all 6½ million quarters wheat and flour.

**INDIA.—**The crops in East India have been so favourable that unaccustomed supplies have been arriving into the United Kingdom.

**N.B.—**I think it probable that the United Kingdom may reckon upon a supply of wheat to the extent of a quarter million qrs. from this our new source for wheat.

**STOCKS.—**On the 1st September in the hands of the farmers, and the trade in general in the United Kingdom I took to be 4 million quarters of wheat and flour, but in the various continental ports they were also very considerably larger than last year at this time. When one reads that the warehouses at the various ports in the United Kingdom are "crammed" full as it were, it brings or reminds one of "other times," when the sliding scale was in force, and speculators were holding on their stuff in the hopes of having it cleared in sooner or later at the lowest duty of 1s. per qr., to obtain

which "consummation devoutly to be wished," the "oracle was worked," that is the averages "rigged," just the same as now prices are often "rigged" in the "term" markets, to the profit or loss and dismay of novices in the trade. Be this as it may, I am glad to find that the British are employing their capital in building warehouses, importing grain for own account, or having them filled with grain on consignment, instead of having their capital locked up in rotten foreign state, or other paper of no value; and I trust my native countrymen, and others residing therein, may go on in that way and prosper, and by so doing raise old England to the standing she ought to hold or occupy—namely, "the grain emporium" for the world at large.

**SEED-TIME.**—With the exception of the United Kingdom and France (where, and particularly in the United Kingdom, the harvest was late, and the seed-time so protracted that many thousand acres intended for wheat must now lay over till spring; the autumn seed-time, therefore, must be considered unfavourable, and spring-sowing is always more precarious even than winter; the foundation for the crop of 1876 is not favourable in the United Kingdom, and not much better in France), the autumn-sowing has been favourably carried on and finished, *ergo*, in said countries where this has been done augurs well for the future.

**FREIGHTS** are likely this campaign to rule about the same as last.

**INSURANCE.**—I refer to and confirm the remarks I made in my reports of last year and 1874.

**MONEY.**—Although at present the market is very unpleasantly stringent, I think, with the new year or towards spring, we shall see a better state of affairs in general, and I hope and believe that the rates of discount will, in 1876, rule lower than in 1875, upon the average. For years past, and long before the "Wolf" appeared, I warned the British not to invest their money in Foreign Bonds, such as the rotten Turkish and the American Railway Bonds, &c., but to invest their money at home or in the British Colonies or possessions; and now that the "Wolf" is there, parties having burnt their fingers in Turkish, Spanish, and repudiated American Bonds, the "great game," such as the *Times*, and other English newspaper writers, are crying "Wolf!" most loudly. If the British will speculate in Foreign Stocks or Shares, then they will find scope enough in Germany, in which case I shall be glad to watch their interests here in Berlin, and other nearer at home countries. If the British keep their money at home, they will do more to keep peace at home and abroad than if the British army and navy be double what they are at present.

**POLITICS.**—The political horizon, though not so satisfactory as last year, as the "Turkish rumpus" has been added to that of the Spanish, yet I think and hope, for humanity's sake, the said rumpus may soon be ended, and that the world at large may be blessed with "peace and plenty." I here repeat for the third time in this report, let England wisely keep her money at home; stop the supplies, and the fighting will soon cease, depend upon it. Should the Oriental affair extend further, so as to cause other forces to join in the bloody chorns, then, of course, the grain trade might be seriously affected; but if reliance can be and is to be placed on the assertions of the Emperors, there appears every chance of peace being soon proclaimed.

**"TERMIN," OR DELIVERY TRADE.**—I can only confirm what I stated in my last year's report, and shall be glad to give my friends any further information they may require in this line of business.

**WHY DON'T YOU SPECULATE?**—On looking over my various books of statistics and other business memoranda, compiled from various sources during the last thirty years, I found an article headed under the above style, concocted by me from some old Amsterdam and other reports, and from a very useful and ably-written treatise, entitled "American Gold Book;" finding that the said article contains many very useful hints to speculators, and likely to be of service to "termin" operators, I most respectfully beg to give a full copy of said article, which I do as follows: "As yet no law or rule has been found by which speculators may be clearly governed or safely guided, and I will therefore only give some of the predominating rules,

&c., to the best of my personal knowledge and experience, aided by the hints given by others. Before all, it must be remarked that fortunate business speculation is, in general, not owing to 'luck,' a party must think and calculate. A block-head will gain by meditation and calculation more than a witty fellow without either. Secondly, it must not be forgotten that there is a wide and vital difference between speculation and genuine legitimate business and trading, only one too often mistakes the one for the other, as well in the theory as in the practical part thereof, for, although the aim of both is 'riches,' yet their ways and means to obtain such are widely different. The legitimate trader goes on by degrees, by hard work and thriftiness. The speculator is quite another being—he goes ahead neck or nothing. The trader depends on his customers; the speculator has none. The trader keeps his eye on a small but sure profit; the speculator looks only for a sudden change upward. One can trade with many things, but the speculator only with some. For instance, one cannot speculate with washing-tubs and mice-catchers, as those things (washing-tubs and mice-catchers) can be got in any quantity when wanted; the same applies to all articles of manufacture. Only with the raw materials, and in those only when the prospect's are not over good, must one operate. The best for speculators are grain, flour, oil, cotton, sugar, tea, coffee, and tobacco; those are articles enough by which a speculator can gain or lose a fortune. A thorough speculator must be versed in statistics, look to great political changes, state of the money market, rates of freight, stocks, and the ups and downs or fluctuation in any important article—for instance, an article of general consumption, such as wheat, or any other grain (or, although the grain trade may be and is often sick, it will never die), and calculate its average for a number of years (excluding the highest and lowest), and when the price falls below the said average, then buy. Granting now that said wheat stands well to-day, and the price be very depressed, and the crop turns out deficient in spite of this (good prospect and depressed prices), then you gain; and even should the crop turn out good, it is not to say that you must lose. Sell, and replace the old store with new, or keep the old in case it will stand the keeping. In case the price continues to fall, then it might be well to act as dealer until the crop's become worse, or the consumption increases; by this means one keeps the same quantity on hand, and so soon as a bad crop sets in, then the speculation is ripe, and one must sell at the profit. What I have said about wheat applies equally to wool, cotton, &c. Two properties the article must have in which a speculator operates: it must fluctuate often up and down to a certain point. In truth speculation is only an exception in business, arising from the fluctuation of trade, or the impossibility to ascertain the exact production in comparison to the required wants. In the meanwhile speculation is useful to trade, as it assists it, as speculation generally helps to balance and bring matters to their proper state, 'to prevent exorbitant, uncalculated prices, and *vice versa* to put a stop to too low prices.' So much is certain, when prices are low much is bought, as there is then a chance of an advance, and prices are generally low, and fall when much produce is in the market. Legitimate trade varies little, whereas speculation raises its head only then, when the opportunity is favourable; this proves that the one (the former) is more sure than the latter. On the other hand, speculation has a wide field, as it seldom or ever happens that some article or other of production is wanting, or at least that it is scarce. As it often requires a long time ere a speculation is ripe, one would do well to operate in various or different articles which are likely to end at different times (in this respect the 'termin trade' offers a good chance or field) so that one can at all times dispose of his capital, by which movement the speculation becomes, as it were, nearly a regular legitimate trade, as it is based on an average chance of profit, free of too much profit and *vice versa* loss. The main thing is to know when the highest and lowest prices take place or have taken place, and where prices have found their lowest or turning point. How is one to know when prices have seen their highest or lowest point? Perhaps when they begin to rise or fall? The best guides are statistics, and taking the average as before stated. When prices are high it is a proof that a great demand exists and business is lively; if they fall, then the demand ceases and the article is flat. The former encourages or provokes the latter, and acts *vice versa* on the nerves. Coolness and courage are highly requisite for a

speculator. A good speculator must go against the stream, buy and sell when no one else will—*ergo*, to buy when prices are low and sell when they are high. On the other hand, the 'temptation' is, then, to buy when prices are high, in the hope of their going still higher; this *may* lead to a profit, but the risk is very large, and one must always turn 'quickly,' either with profit or loss, the latter in order that it may not be greater, which very often brings people to beggary. Three things are requisite to a speculator—time, money, and courage—as speculation swings with the future together. Without money nothing can be done (and too much credit-taking is also not advisable, for, as the old adage runs, 'there are three things which do as much harm as good—namely, fire, water, and banks'); and if the speculator has not nerve to either refrain or stop from speculating, and become a seller of lucifer matches, &c., only not a speculator. The speculator must be strong in belief, and not doubt on things, even though he does not see them. Activity is required in trading, but

patience is the *forte* of the speculator. Do nothing when nothing is likely to be gained is a principle which cannot always be followed in trade; as one cannot lose one's customers, one must always have one's eyes open, and be ready to buy and sell when the opportunity offers. Sitting still is a hard nut for a man of business, and to philosophise about business is to do no business at all; when once an undertaking is entered upon, stick to it until concluded, or after thorough consideration one relinquishes it altogether, but if one keeps on'y steady at the nail, it will at length enter the wood, so that it can be bent and pointed. Speculators must keep as independent of their bankers as possible, for, as above stated, banks are like fire and water, good servants but bad masters, particularly so if the director gets fidgety and puts on the screw, making you perspire your last drop in the 'sweating' (his private) 'room.'

## JUDGING BY POINTS.

We have been requested to publish the following letter by Lord Kinnaid to the editor of the *North British Agriculturist* on a subject of some interest to farmers:

Rossie Priory, Inchture, 3rd January, 1876.

SIR,—In your article on the "Award of the Smithfield Prizes" which appeared in your journal of December 22, 1875, you make some remarks which I consider strengthen materially my argument in favour of "judging by points." You express your admiration of Shorthorns, and then proceed to say: "Most people know that the strongest point of the Shorthorn does not present itself in the pure-bred animal's own carcass in a fat-stock show. Like the Leicester sheep, the great value of the Shorthorn lies in its wonderful facilities of improving other breeds with which it may be crossed. That is to say, crosses from the Shorthorn often carry more and better beef than the pure-bred animal. Now, while in a breeding-stock showyard we could sympathise with judges giving preference to Shorthorn breeding animals over beasts of perhaps any other variety, we cannot say so much in regard to fat-stock exhibitions. In the latter we hold that the individual merits of the respective animals in the race should be the primary consideration, the question of which is the best or most popular breed being chiefly, if not wholly, left to the breeding shows." I quite agree with all this.

You next say that, had such been the case in recent years at the Smithfield Shows, the result of the awards to first-prize animals would have been very different. You then ask, "Why should this be so at such an admirably-conducted meeting as that of the Smithfield Club is well known to be?" The reason is this. It so happened that last two or three years, when the three sets of cattle judges—nine in all—mustered in the main avenue to award the cups to the best male and female animals the Shorthorn interest was greatly the most powerful. There is naturally on such an occasion an effort on the part of every judge to get the animal of the breed to which he devotes his special attention to the front, if the beast is feebly good, as it generally is at Smithfield. It is not difficult to see, then, that the element which can swamp the others on a vote will win. So far as we can recollect, in 1872 there were only six judges of cattle—at least there were not more than two in the enlarged adjudicating body who had any special leaning towards the Shorthorn. And what was the result? Why, though the interest referred to had a more creditable card to play in Sir Wm. de Capell Brookes' three-year-old Shorthorn ox than has since appeared in the male classes of that breed, a Scotch polled ox gained the day, with a Devon for 'reserve number.' . . . Clearly for the satisfaction of the general body of exhibitors some change is necessary. The nature of that change, we think, lies in the direction which in our report of the show this year and last we took the liberty of pointing out—viz., that three men be specially nominated for the selection of the best male, the best female, and the champion beast."

You suggest the reduction of the number of the judges to three, or the same number that is appointed at every show in the kingdom. Surely this will be little improvement, as it is

well known how unsatisfactory in many instances are the decisions of three judges at shows of breeding stock. As I said in my letter of November last on the subject of judging by points, it is easy to foretell, when the number of cattle to be judged were reduced to a few, which would get the prize, by seeing who was the leading or man of strongest will among the judges, and learning his favourite strain of blood.

Judging by points is the only way to arrive at an equitable decision, whether for pure bred or for fat stock. As I have before said, the plan is adopted in Jersey and on the continent of America in judging cattle, and in this country at dog and poultry shows, and in judging implements—the latter most successfully. (See the report on the trials of implements at Taunton in the Society's *Journal*, where the system is extolled and the scale of points given.) Mr. Howard, of Bedford, advises me to persevere in advocating the system, but at my time of life it is not very encouraging, as he says that it is fourteen years since he wrote a pamphlet on the prize system of the R.A.S.E., in which he advocated a scale of points for judging implements; and, though it was ridiculed at the time, and said to be impossible, yet now we see the satisfactory result of the system at Taunton. If agricultural journals will only take the matter up and expose, as you do, the unfairness, not to say the absurdity, of the present system of judging, there will be some chance of my living to see the prejudice against adopting the system of judging cattle by points overcome—a system which has been in other cases and other countries so successful.

Yours,  
KINNAID.

DEATH OF MR. OUTHWAITE'S VIVANDIERE.—Mr. John Outhwaite, the well-known Yorkshire Shorthorn breeder, has sustained a very serious loss by the death of his celebrated prize cow Vivandière, in calving. To particularise her honours would be rather a difficult task. Suffice it to say that she was never beaten from winning at the Royal at Bedford in the 1874 season, and only on two or three occasions between 1874 and 1870, in which year she commenced her show career, and was once or twice placed second. In this year she won £35, and in 1871, when three years old, she began her cycle of victories by netting £211. In 1872 her winnings were £80; in 1873, £235; 1874, £234; and in 1875, £215; or a total up to the time of her death of £1,060. On three successive occasions Vivandière carried off the chief laurels at the Royal Show. She began to breed in 1871 as a three-year-old, and up to the time of her death had five calves. They, however, were most unfortunate. The two-year-old son—Prince of Bainesse, by Royal Windsor—won his spurs the first time he was exhibited, and high hopes for the future were centred in him. He was considered by his owner to be a trump card for the showyards, but unluckily succumbed to the effects of foot-and-mouth disease. Vivandière was bred by and the property of Mr. John Outhwaite, Bainesse, Catterick, near Richmond, Yorkshire, and was by Messrs. Booth's Brigade Major (21312), dam Rosamond by Apollo (9899), g.d. Ruth by Albert (7763), g.g.d. Rachel by Noble (4579), g.g.g.d. by Covelli (3181).—*Leeds Mercury*.

## "PREVENTION BETTER THAN CURE."

## FOOT-AND-MOUTH AND OTHER CONTAGIOUS DISEASES AMONGST CATTLE.

The following letter, addressed to His Grace the Duke of Richmond, Lord President of the Privy Council, has been forwarded to us for publication :

TO HIS GRACE THE DUKE OF RICHMOND.

MY LORD DUKE,—In common with the public generally I have read with much interest and satisfaction your remarks on the prevailing cattle diseases, and the measures adopted for their repression. The present system of eradicating such disease, by the destruction of the animal affected, I cannot help thinking is not in harmony with the dictates of science or sound reasoning. If it is true that "prevention is better than cure," and that "cleanliness is godliness," then it would seem the principle of "stamping out" is an inconvenient, wasteful, and extravagant process, and that our efforts should be more directed to disinfection and promoting comfort and cleanliness amongst cattle in transit, whether by rail or by sea.

The promotion of comfort and cleanliness amongst animals is a matter that requires no definition; but the question of disinfection is a matter that must be subject to the laws and experience of science. The public mind is at this moment somewhat puzzled by confounding the terms "disinfectants" and "deodorants" with each other, whereas I believe their functions are quite distinct; the object of the one is to destroy those invisible organic germs which constitute contagious matter, whilst the other is simply by chemical action to decompose or alter the character of a gas, and at the same time change its natural odour or smell: the latter action is explainable by the merest tyro in chemistry, whilst the action of disinfectants is past explanation; all that can be said is that experience teaches that they do destroy or kill the contagious organism. If, then, this definition of disinfectants and deodorants is acceptable as true, it follows that in the matter of contagious disease—whether of man or animals—the two things must not be confounded, and that, however agreeable it may be to be rid of unpleasant smells by the action of oxidising or deodorising agents, we are in no degree by their employment defending ourselves against the deadly attack of the germs of contagion: one is the business of a perfumer—or, more properly, anti-perfumer—whilst the other is a battle of life; it is a test of what Darwin would call the power of the fittest to survive. Who shall say that epidemics and contagion, after all, are only vital storms to blow away feebleness, that health and vigour may have a better and larger field for existence and development. The natural tendency of feebleness without protection is to succumb to disease, and create consequent contagion, whilst the more powerful forces of health and energy act as an invincible armour of defence. How often in the vegetable kingdom, especially observable in agriculture, do we accuse the myriads of insect-life of destroying the plant, when in reality the diseased vegetable is the origin of its own army of scavengers! When our turnip and other crops are eaten up by mildew or green fly, may not the originating cause be a dry and unfavourable season? But from whence do these millions upon millions of germs of insect-life come, if not from the atmosphere, thus showing what powerful—yet invisible and destructive—agents the air we breathe may at all times carry, ready, like the "Constantinople dog," to eat up decay, test the fitness of life, and too often impregnate with the contagion of foot-and-mouth, rinderpest, typhus, small-pox, and other terrible forms of disease and corruption?

It is, then, to wholesome food, ventilation, and *comfort* amongst animals, during transit from place to place, added to cleanliness and disinfection, that we must look for protection against the diseases that human and other flesh is heir to; and until these common laws of nature are truly and duly obeyed we must expect to pay the various penalties imposed by negligence and disobedience.

What would be said of the discipline and management of those splendid forms of charity, our hospitals, infirmaries, &c., if the beds occupied by patients affected with contagious

fevers were never cleansed, disinfected, or removed, but were used for fresh-coming patients with impunity, saturated as they would be with contagious matter? Again, what are we to say of railway, ship, and steam-boat management under similar circumstances? Is it to be expected that healthy cattle are to be crowded and stoved in railway trucks, the holds and decks of ships, that have only a few hours before been tenanted by a mass of diseased animals, and not escape contagion, and thus hand it on to other cargoes, and so on until the whole country becomes infected? These are chief amongst the propagating sources of foot-and-mouth and other contagious diseases, yet how simple and little costly is the *best* remedy: to cleanse is a mere matter of labour, and to disinfect is only a matter of syringing with a common garden-engine, and with a fluid that would not cost more than a penny per truck for railways, and for the holds and decks of ships probably ten shillings or a pound per voyage. Such disinfectants are supplied by science, and may be had in any quantity, and at the cost I have named—they are mostly constituted of the active principles obtained from products known in science as "lars." It is true they have this peculiar yet healthy odour, but such is their nature, and it is probable to this may be attributed in some degree their valuable effect; to change this or to deodorise them would be to destroy their intrinsic character altogether.

I am inclined to think the arrangement most acceptable to importers and exporters, cattle dealers, butchers, farmers and graziers, and the public would be this: All infected stock suitable for human food when found in public places—and this would include roads, markets, fairs, landing places in the case of imported stock, &c.—should be slaughtered and disposed of; all store stock under the same conditions should be taken in charge by an inspector appointed for that purpose, and placed in quarantine, when they would be fed, treated, and disinfected at the owner's cost until a clean bill of health could be given by the inspector; strict adherence to this plan would impose a sufficient penalty on persons negligent or knowingly breaking the law, and at the same time would not vexatiously interfere with the trade in fat and store animals.

My Lord, in conclusion I beg to apologise for constituting myself one of a host that daily attack our Government officers with advice gratis or not, as the case may be, and against whose attacks a disinfectant is probably required even more than for our mute and suffering animals—beast, sheep, &c.—but I have had bitter and costly experience from foot-and-mouth, pleuropneumonia, and rinderpest, and shall be only too glad if I can in any way promote the adoption of the best and most permanent remedy, as I am a firm believer that in all cases of disease "Prevention is better than Cure."

I am, &c.,

W. LITTLE.

The Hall, Heckington, Lincolnshire.

## CAMBRIDGESHIRE CHAMBER OF AGRICULTURE.

—The annual meeting of the Cambridgeshire and Isle of Ely Chamber of agriculture was held at Cambridge. Mr. Hanslip Long presiding. Mr. Charles Ellis, of Meldreth, was appointed chairman for the year, and Mr. O. C. Pell vice-chairman. The chairman, and Messrs. Hicks and Pell were appointed deputed members to the Central Chamber. Mr. Fetch, who was a deputed member last year, complained that the local and Central chambers were so constituted that tenant-farmers had practically no voice or influence in them. Under such circumstances it was not surprising that their finances fell off. The complaint was passed by in silence. The report of the council stated that, owing to the continued unsatisfactory financial position of the chamber, they had been unable to make the usual contributions to the funds of the Local Taxation Committee or to the Cattle Defence Association, which was to be regretted; and they hoped that an effort would be made to meet the strong claims to further support which those two useful bodies had upon the chamber. The Clare Sewell

R ad testimonial Fund was mentioned, but no action was taken thereon. Mr. Hunter Rodwell, Q.C., M.P., had written to say that, unless prevented by weather, he hoped to be present at the meeting, as he should be glad to have an interchange of thought with some of them upon two or three

matters which he hoped would turn up, connected with agricultural questions, when Parliament meets. Mr. Rodwell was not present, but the hon. gentleman and the other county members will be invited to the dinner of the chamber, to be held in the course of a week or two.

## LADY PIGOT AS AN AGRICULTURIST AND SHORTHORN BREEDER.

Under the heading of "Noteworthy Agriculturists," the *Agricultural Gazette* gives a good portrait of Emily Lady Pigot, confronted, however, by a miserable representation of her ladyship's famous prize-winning heifer *Zvesda*. Lady Pigot's Shorthorns have for a considerable number of years been well known to embody the best of Booth blood, and they have been very successful in the showyard. Our contemporary says: Her ladyship has, indeed, long been honourably known in the agricultural world as a successful exhibitor of Shorthorn cattle, and some public notice of her agricultural career was inevitable; but of the many who are already familiar with her achievements on the farm and in the showyard, comparatively few, we dare to say, are equally acquainted with the far more extraordinary illustrations of energy and activity which her life has given in other directions, and in connection with altogether different pursuits. Known among our readers, perhaps only as a lady who has long taken great interest in Shorthorn breeding, she is celebrated in other circles as at once the most cultivated and the most courageous of women. Adventurous traveller, heroic nurse, energetic politician, admirable village philanthropist—known in many a foreign land, on many a battlefield, in many an election fight, in many a school-room and religious meeting—she is at the same time one of the most gifted and accomplished in all that charms the home circle and the drawing-room. We may be permitted to complete the merely personal picture by a quotation from her ladyship's own words, which we have before us: "Altogether, mine has been a curious life, from my spoilt and petted childhood followed by my married life, with its various social and political interests, its wanderings and journeyings—now for months in all the rough simplicity of a Norwegian hut, cooking for myself from sheer necessity—now riding over trackless parts in North Morocco, or painting the fierce camels of Algiers, surrounded by chattering and curious Arab women—again, in Venetian gondolas, where I have idled away the glorious summer nights; or, yet again, exploring wild caves in Corsica, Sardinia, and Hungary—on battlefields, in hospitals—ever restless, ever working; always endeavouring to crowd into the twelve working hours of life's day more than could by most be done in eighteen. Thus have I gone on, with a heart very alive to suffering in man or beast; especially sensitive to the woes of little children, and to the neglect in which so many are reared. Keenly appreciating the beauties of nature, passionately fond of music and the fine arts, rejoicing over all that is good and pure and holy, with a soul full of gratitude to the One above, I have lived, as I believe few do, a life of real enjoyment, because of work, and because I find interest and amusement in almost everything, also because I have never forgotten my own maxim—namely, 'To succeed in life two things are absolutely necessary—to be in earnest about what you are doing, and to persevere in that doing.'" Her ladyship's own words respecting her farming and cattle breeding career are interesting, and are thus appended: "I had been the owner of two or three West Highland kyloes, bought during a summer's residence in Argyleshire; but one day, I think in 1856, some one suggested that I should look at Mr. Jonas Webb's cattle; accordingly Sir Robert and myself went there, and I was so struck with the massive character of the Shorthorn, that I said, 'Here are the sort for me,' and after much consultation, hesitation, and debate, I finally bought a heifer called Happiness for 280 gs. She had only, what I should now call, a very mixed pedigree, but she was a grand animal. I sent her in 1858 to Dublin, where she won the first prize, and the £20 gold medal as best female in the yard; but she died from inflammation caught on her journey home. Mr. Wetherell's sale in 1859 was the first I was ever at, and Stanley Rose the first Shorthorn I bid in person for. Stanley Rose I also sent to Dublin, and again took the same honours; but she too died on her return, through an accident to her truck. And I soon

began to realise the facts that Shorthorn breeding is not all *couleur de rose*, for I am certain that I lost £2,000 by deaths and inexperience during my first three years. In 1860 I undertook what, for a woman, was a large farm—530 acres of heavy land—and being aware that, to be able to approve or find fault in a work, you must know how it should be done yourself, I went through all the operations of the farm under the supervision of my friend, Mr. John B. Booth, of Killerby, where I learnt how to plough and to drain. I had a great desire that all on my farm should be of the very best, and I bought cart mares at over 100 gs. I bought Southdowns from Jonas Webb, but my land was so cold and wet, they soon had foot-rot, and I was compelled to sell them all off. I then went in for Lincoln, and bought rams of the late W. Torr; but their heavy fleeces got clogged with our clay, and they did not thrive. I accordingly sold them off, a great many going to Germany. Mr. Preece and his favourite Shropshires were then brought into sight, and for a time these heavy carcased and thick-wooled sheep did well. I found, however, that it was ruinous to keep a Shorthorn herd where there was so much timber, consequently sour grass, and on such a cold unproductive clay, and so far from a railway station, and so heavily rented as I was. So, in 1870, I gave up my farms, and sent the herd to Wytham-on-the-Hill, and for the first three years my cattle made wonderful improvement; but last summer and winter, owing to the drought and consequent scarcity of fodder, they were starved, and they arrived here in May in a very woe-begone state; and all this summer we have been struggling against want of food, and that pest of Shorthorns—the flies—which are ten times more numerous here than even in the densely wooded park at Branches. My land is poor, and soil light, but we have some good water meadows, and I have just taken an additional farm of 250 acres from the Earl of Lovelace, which has some fair pastures." The herd numbers between 90 and 100 animals, including representatives of the famous Mantalini, Bliss, and Farewell tribes. There are fourteen Mantalina females and four Bliss females. "Except at Aylesby, no such succession of fine Booth sires have ever been in use in any herd."—*The North British Agriculturist*.

A HORSE CENSUS.—According to the last census taken in the whole German Empire, as it is at present constituted, on January 10, 1873, the number of over three-year-old horses amounted to 2,903,829, or 86 per cent. of all the equine quadrupeds. The number of young horses under one year was 152,582, between one and two years 162,548, between two and three years 133,272. There were no less than 108,718 army horses, or 3·2 per cent. of the whole; and 96,286, or 2·9 per cent. of the whole, saddle or light draught horses of civilians, which would become under the compulsory law saleable to the army administration in case of war. The Empire possesses besides 2,347,775 (70 per cent.) agricultural horses, 338,363 for locomotive and industrial purposes, any of which may be also picked out and bought for ready money at prices fixed by experts for purposes of mobilisation of troops. There are in Germany 12,367 entire horses for breeding purposes, and from 1869-72 the average yearly import of foreign horses surpassed the export by nearly 30,000. There was in these four years an average yearly export of 31,518, and an import of 58,215. Prussia possesses 11 Government studs, with 1,639 stallions. There are among those owned by the State 120 thoroughbreds, 204 hunters, 707 for breeding heavy cavalry remounts, 404 for breeding carriage and cart horses, 110 of the Osfriesland and Oldenburger races, 39 Percherons, 17 Suffolks, 4 Pinsquiers (a native German race), and 34 Aydesdaks. Since the prohibitory Imperial ordinance of last year appeared the exportation is jealously watched by the police.



## CONTAGIOUS DISEASES.

At the last meeting of the Boroughbridge Farmers' Club Mr. J. Dent Dent, of Ribston Hall, in the chair, Mr. T. HIGHMOOR read a paper on "The Contagious Diseases (Animals) Act as affecting the Breeding and Feeding of Cattle." He believed the present a very opportune time for considering this subject, as it had lately been brought prominently before the public. They had heard of it at almost every agricultural dinner of late; and there had been the resignation of Mr. Read, which would do more towards the good of the stock in Ireland than anything they could say on this subject. The foot-and-mouth complaint was the most troublesome of all contagious diseases. It seemed to baffle and defy every regulation of the Privy Council and all the skill of veterinary surgeons; whereas pleuro pneumonia, cattle plague, and other diseases, were kept within very small limits by the regulations in force for that purpose. Since its first outbreak, a good many years ago, it had continued more or less in our midst, and was likely to continue, unless it died a natural death, or some more stringent measures were taken for its suppression. Many people were of opinion that the loss through this disease was very small, because the proportion of deaths was only six in 1,000. It was their duty, however, as breeders of stock, to dispel that illusion. The official returns up to June showed that not less than one-sixth of the live stock of this country had been affected during the year, and he thought if they estimated the loss on cattle at £2 per head, and on sheep and pigs at 10s. per head, they would be much below the mark. Speaking next of the question as affected by the regulations at present in force, he said there was a clause in the Act which said that "this Act shall not extend to Ireland." This was one great point which they had to consider. Cattle were imported from Ireland, and were a fruitful source of infection. He saw no use, therefore, in submitting themselves to harassing regulations for the purpose of stopping the spread of disease whilst at the same time they had an ever-recurring source of infection by the importation of Irish cattle. He was convinced that a great deal of disease was spread through the country by the trade in Irish cattle, and therefore they ought to be protected by the extension of the Acts to Ireland, and by a system of inspection at the ports of debarkation. What advantage had they received from the measures as they are now in force? Had they not, as breeders of stock, received the smallest possible advantage coupled with the greatest amount of annoyance and worry? This had been caused to some extent by the divided action of local authorities, for in one county there was a certain set of restrictions, in another a different set, and in several others there were no Orders at all. Referring next to the importation of foreign cattle, Mr. Highmoor quoted the official returns for October, which showed that 263 animals suffering from disease were brought into England from "scheduled" countries, and slaughtered; and through coming into contact with these, 6,286 healthy animals were destroyed under the Orders of the Privy Council. From "unscheduled" countries there were 2,121 imported into England suffering from disease, and slaughtered; and through coming into contact with these, 37,803 healthy animals were destroyed. Now they had no wish to injure the trade, nor to see unnecessary measures put in force, but he thought trade would be carried on with advantage by the establishment of dead-meat markets in London, Hull, and other ports of debarkation. The Irish cattle trade and the importation of foreign cattle were the two most important points to consider, and until they were put on a satisfactory footing, and the slaughter of all foreign animals at the ports of debarkation enforced, they should resist the imposition of any further restrictions on the movement of stock in this country. The stoppage of fairs and markets had not been put in force by the Privy Council, but might be tried in conjunction with the restrictions he had mentioned for a limited period—probably two months.

Mr. BENNETT thought the present regulations were quite ineffectual in checking the spread of the contagious diseases. How they were to be stopped he was not prepared to say, but he did not agree with Mr. Highmoor in thinking that stopping the public markets for a time would do it. He thought, however, that the Act should extend to Ireland, and that all im-

ported animals affected with disease should be slaughtered at the port of debarkation, instead of being allowed to carry disease amongst healthy animals. He did not think that the loss from foot-and-mouth disease could be calculated at so high a figure as £2 per head.

Mr. WALDRAM, whilst in favour of extending the Act to Ireland, thought we could never do without the importation of Irish cattle.

Mr. HARIAND said they must bear in mind, in addition to the immediate loss through disease, the injury done to the breed of cattle. The question of milk was imported also, for when disease affected a herd of cows, their milk must be thrown away, thereby causing considerable loss. With regard to stamping out the disease, he did not think they could go back to the old system, so beneficial in the time of the rinderpest.

Mr. TETLEY said that the present regulations were totally ineffectual in restricting the spread of disease, and though the markets were entirely thrown open, it would not be worse than at present. Unless the restrictions were more effectual, the sooner the markets were thrown open the better it would be. He was surprised that veterinary science had been unable to give them assistance in the matter.

After some remarks from the R. v. C. H. SALW,

The CHAIRMAN said he had had something to do with the passing of the Act of 1869 relating to this subject, and he sat on the Committee appointed in 1873 to inquire into the operation of the Contagious Diseases (Animals) Act. He was then in favour of stringent legislation with respect to pleuro pneumonia and foot-and-mouth disease, as well as to rinderpest; but the result of his observations, both in and out of rinderpest, and that the less legislation the farmers had respecting the other forms of disease the better. He would have the most stringent regulations to exclude rinderpest from the country; and if it did get in, he should deal with it in the most decided manner to stamp it out. With regard to pleuro pneumonia, it did not, he believed, prevail to any great extent, but notwithstanding the regulations in force, there seemed to be no great diminution in the number of animals attacked. He believed, therefore, that it was not in all cases produced by infection, but that, like consumption, it often came spontaneously. This was to some extent proved by the fact that it was found that the disease appeared in the spring after the animals had been turned out early to grass, and in the cold, bleak weather of the North. The question of expenditure had been a very serious one. In the West Riding alone the sum paid as compensation for animals slaughtered from September, 1873, up to the present time amounted to £6,916, in addition to other expenses amounting to over £2,000. He questioned whether the expense at present incurred in slaughtering the animals should be continued, because he found that between 35 and 39 per cent. of the animals attacked recovered, and that about 37 per cent. were killed by the owners. It might therefore be as well, or even better, to leave the farmer to guard and to act for himself. With regard to foot-and-mouth disease, he thought that losses from it were represented to be more than they really are. The disease itself was carried all over the country by the trade in Irish cattle, which were driven up and down great distances, badly fed and badly cared for. He therefore sympathized with Mr. Read in the action he had taken, after being snubbed by Mr. Disraeli; and he was sure the loss was more to the Government than to Mr. Read. It was a disgrace to veterinary science that it knew so little of this disease. By medical examination and research we had learnt to deal with smallpox and with fevers of all kinds in a very different manner from what we used to do, and he was satisfied that further investigation would show us how to deal with this disease. He hoped the Royal Agricultural Society were now in a fair way to make an inquiry of this character. In the meantime he urged that more care might be taken by breeders in the isolation of new stock. In spite of all regulations he found that the practice of buying Irish cattle was more prevalent than ever, which justified the conclusion that the present Act should be repealed, and an Act passed keeping up the machinery to deal with rinderpest whenever it appeared, leaving the farmers to deal with the other diseases themselves.



Mr. SCOTT said he did not know whether the existing regulations were useful or not with respect to pleuro-pneumonia, but as to foot-and-mouth disease they were not.

After some further discussion, a vote of thanks was passed to Mr. Highmoor for his paper. This concluded the business.

### THE AGRICULTURAL CHILDREN ACT.

On Thursday, Jan. 6, at the Norfolk Quarter Sessions, Mr. C. S. Read, M.P., put a question to Colonel Black, the chief constable of the county, with reference to the Agricultural Children Act. The hon. member complained that nothing had practically been done to carry out the Act in the district. He contended that it was the duty of the Government to enforce the measure in the same manner as the Workshops Regulation Act or the Factories Acts, and all other measures relating to the education of the young. As he saw that the Prime Minister had on the preceding day voted against the police being employed to enforce the Agricultural Children Act, he hoped Her Majesty's Government would see fit to appoint general inspectors to carry out the Act throughout the country. He wished to ask Colonel Black whether he saw any objection to the police being employed to enforce the Act. He was aware that the police were primarily employed to protect life and property, but they were also inspectors of weights and measures, and sundry other duties had been recently imposed upon them, which they performed to the satisfaction of the public. Colonel Black said the Court had decided nine months since that the county police should not be employed to carry out the Agricultural Children Act, but he saw no objection to their performing that duty, and he believed that a few examples would suffice. The Earl of Kimberley said it was not creditable that the Act having been passed by Parliament, should be permitted to remain a dead letter. He would rather, however, see it enforced by inspectors, in the same way in which the Factories Acts were, than have recourse to the police. It would be an invidious thing if the police were employed to regulate agricultural labour, and he hoped that steps would be taken for the appointment of special inspectors for the purpose of enforcing the new Act. He hoped the Government would take the whole matter into consideration, and place all laws relating to the regulation of labour upon the same general footing, care being taken to provide for such modifications as might seem expedient in the case of particular trades. The enforcement of laws relating to the regulation of labour was a difficult and delicate matter which required careful handling, and it was important that the Government and Parliament should have accurate information upon it. This information could not be collected without the assistance of inspectors, who were constantly going round the country. If there were no prospect of the Government taking the matter in hand, he should be inclined to have recourse to the police rather than allow the Act to remain a dead letter; but he believed that the matter would be dealt with in the ensuing session of Parliament.

At East Suffolk Quarter Sessions, held at Ipswich on Thursday, a resolution was carried, on the motion of Lord Henniker, that the county police be instructed to prosecute in all cases where it appeared that children were employed in violation of the Agricultural Children Act. Lord Henniker said that in other counties where the police had been similarly instructed it had been necessary in only a very few cases to prosecute, but without this resolution the Act appeared to be inoperative.

At the Northampton Quarter Sessions, on Thursday last, the chief constable reported that, in accordance with the order of the Court at the late October sessions, notices had been given to the fathers and others interested that the police had been instructed to take proceedings under the Act. No proceedings had, however, taken place, as in the few instances where children were employed in contravention of the Act the fathers, on notice being forwarded, at once ceased that employment.

At the Buckinghamshire Quarter Sessions a motion "That the police be instructed to prosecute in all cases in which it appears that children in this county are employed in violation of the Agricultural Children Act," was rejected by 18 votes to 13. The Right Hon. Benjamin Disraeli was amongst

those present, and voted in the majority, although he did not speak on the subject.

TO THE EDITOR OF THE DAILY NEWS.

SIR,—May I venture to call your attention to an error into which you and your correspondents have fallen, in taking us for granted that the farmers of this country are opposed to education? What they do object to is that the burden of educating the rural population should fall so heavily and unfairly upon them. In many parishes the contributions of the squire and clergyman to the school-rate are insignificant compared with those of the farmers. Take my own case as an illustration. Last year our school-rate was a shilling in the pound. On a farm of 500 acres my share of the rate was £32 16s. 8d. Now there are many men in towns whose income is tenfold that of a tenant farmer who do not pay as many shillings as I do pounds. Need it be wondered that there is no desire on the part of farmers to increase this heavy and unfair taxation by compulsory attendance?—I am, Sir, yours, &c.,  
GEORGE STREET.

Maulden, Amptill, Beds, Jan. 6.

### THE FARMERS' CLUB.

At a meeting of the Committee of the Farmers' Club, the following subjects for discussion for the present year were decided upon:

FEBRUARY.—Our Meat Supply. By Mr. James Howard, of Clapham-park, Bedfordshire.

MARCH.—Green Crops for Sheep Feeding. By Mr. Robert Russell, Horton Kirby, Dartford, Kent.

APRIL.—Local Taxation. By Mr. James Trask, of Orcheston, Devises.

MAY.—The Administration of the Poor Law, especially in Reference to Out-door Relief. By Mr. J. K. Fowler, Prebendal Farm, Aylesbury.

NOVEMBER.—Fashion in Breeding. By Mr. Robert Masfen, Pendeford, Wolverhampton.

DECEMBER.—The Agricultural Labourer, his Position and Prospects. By Mr. C. S. Read, M.P., of Hougham Thorpe, Norwich.

The resignation of Mr. Henry Corbet, who had held the position of Secretary to the Club for a period of twenty-nine years, was tendered, the most sincere regret being expressed by the members at the loss of his services. The Chairman, Mr. Horley, was requested to write to Mr. Corbet, expressing the feeling of the committee, and enclosing a cheque for one hundred guineas as a mark of their regard.

JERSEY CATTLE.—If the value of Jersey stock is to rest on colour, deterioration will surely follow of those useful qualities that are far more noticeable in the good old-fashioned parti coloured cow, than that which will be found among the generality of fine, high-bred, whole-coloured fawns, greys, or foxey, so-called Jerseys. I have owned hundreds of acclimatised Jersey stock and have never, as a rule, found the whole-coloured such large producers as many parti-coloured ones; in fact by far the most butter producing cow I have ever possessed was not only parti-coloured, but the most ugly and ungainly beast of the lot, yet her stock have never failed to show their large butter-making qualities. The true type of a Jersey cow is in fact an animal that will not make merit. I do not say that this is not improved upon, by acclimatisation and a slight introduction of a hardier breed, of which what are termed Chichester Jerseys are the best description, neither do I say that Jersey breeders in the Island itself have not in some instances a breed that shows a disposition to make some flesh, and very probably may then be following up the requirements of fashion, yet I maintain that a pure Jersey should throw the bulk of her feeding properties into butter, and with little to flesh. The parti-coloured good cow may have but a

white spot, especially under the belly, but throughout the body the rich yellow skin, under any coloured hair, will be found, black, white, or fawn. I have seen the commencement of a whole-coloured herd, the property of a noble Duke, to obtain which I have seen wealthy and large producing cows sold off to prevent an animal remaining with the slightest stain of other than one colour. I have heard from good authority that usefulness has been sacrificed for fashion in this instance, which, if followed up, as it rapidly is, I have no doubt that the future rich Jersey will be beef, not butter, as it was.—*Dairy, Sussex.*

### TITHE COMMUTATION—SEPTENNIAL AVERAGE.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—As the result of the Corn Averages for the *seven years* to Christmas, 1873, published in the *London Gazette* of January 4—viz.:

	s.	d.	
Wheat .....	6	6 $\frac{3}{4}$	per imperial bushel.
Barley .....	4	10	ditto.
Oats .....	3	2 $\frac{1}{2}$	ditto.

I beg to state that each £100 of the Tithe rent-charge will, for the year 1872, amount to £110 14s. 11d., or nearly 2 per cent. less than last year. The following shows the worth of £100 Tithe rent-charge for the last seven years:

	£	s.	d.
For the year 1870.....	104	1	0 $\frac{1}{4}$
"    1871.....	104	15	1
"    1872.....	108	4	0 $\frac{1}{4}$
"    1873.....	110	15	10 $\frac{1}{4}$
"    1874.....	112	7	3
"    1875.....	112	15	6 $\frac{3}{4}$
"    1876.....	110	14	11

The average value of £100 Tithe rent-charge for the 40 years elapsed since the passing of the Tithe Commutation Act is £102 6s. 4 $\frac{1}{2}$ d.

I am, Sir, your most obedient servant,

MONTAGUE MARRIOTT,

Editor of "Willieb's Tithe Commutation Tables,"  
26, Montpelier Square, London, S.W.,  
Jan. 4th, 1876.

**NOTTS CHAMBER OF AGRICULTURE.**—On Saturday, Jan. 8, the annual meeting of the Nottinghamshire Chamber of Agriculture was held at Nottingham under the presidency of Mr. G. Storer, M.P. The following resolution was passed: "That this Chamber desires to record its hearty approval of the course taken by Mr. Clare Sewell Read in withdrawing from the Government, and expresses its sympathy with him in his unsuccessful attempts to persuade the Privy Council to adopt reasonable and just measures to prevent the spread of infectious diseases amongst English cattle." Subsequently the Duke of St. Albans presided at the annual dinner, and, in proposing the toast of the evening, his grace said he thought they might upon this occasion safely consider what had been the result of the last year with respect to agriculture, and what work they might usefully engage in during the coming session. He was afraid that many of the expectations which had been formed by his friend Mr. Storer had not been realised; he was afraid that the malt-tax still pressed heavily, that his wishes regarding local taxation had not been realised, and that a Minister of Agriculture still had no seat in the Cabinet. He believed agriculturists had not made up their minds upon many of these questions, but upon certain matters, such as local taxation, he believed that chambers of agriculture were united. With regard to last session, they had before them an Agricultural Holdings' Bill which was introduced into the House of Lords by the Duke of Richmond, and the speech he made to an assembly of landlords was somewhat an apology for his introducing it at all. There were many who disliked the bill being introduced, and the speech of the Duke of Richmond reminded us rather of

the story of the invalid who refused to have the gun-case introduced into the room. On being assured that there was nothing in the gun, the invalid replied: "Perhaps there may be nothing in it, but perhaps it had better not be introduced at all." However, the bill went to the House of Commons as it was. A great many alterations were made in it. He thought they might look upon the bill as useful, inasmuch as the commercial transactions regarding land had begun to attract the attention of Parliament and of the country at large. We had heard a great deal lately about the importation of cattle from Ireland, and he had lately spent some time in Ireland. He had talked with some of the most intelligent breeders of cattle, and he believed it was the opinion of the great breeders in that country that, by a good system of boats and trains, meat might be slaughtered in Ireland and brought to English markets in a better condition than at present. He thought this question would occupy the attention of Parliament, and he thought they should be glad that the agricultural interest would be well represented by Mr. Read. He felt certain that when that gentleman undertook a Government office he did it from a wish to benefit his constituents. Yet none who had held office could be ignorant that it necessarily put a gag into the mouths of individuals. Looking upon Mr. Read as the representative of the tenant-farmers they might rejoice that he had taken such an independent step. His grace urged his hearers to look rather to their own exertions than to any parliamentary assistance. Crops and flocks were not to be made by Acts of Parliament, and, whilst recommending agriculturists to have such machinery as these chambers presented to bring their wishes before Parliament, they would do well to remember that it was upon their own energies they had to rely.

**TENANTS' IMPROVEMENTS.**—The establishment of two estates in land—the ownership, the other the use—may be traced to the payment of rent to the Coman commonwealth, for the *ager publicus*. Under the feudal system the rent was of two classes—personal service or money; the latter was considered base tenure. The legislation of the Tudors abolished the payment of rent by personal service, and made all rent payable in money or in kind. The land had been burthened with the sole support of the army. It was then freed from this charge, and a tax was levied upon the community. Some writers have sought to define rent as the difference between fertile lands and those that are so unproductive as barely to pay the cost of tillage. This far-fetched idea is contradicted by the circumstance that for centuries rent was paid by labour—the personal service of the vassal; and it is now part of the annual produce of the soil, inasmuch as land will be unproductive without seed and labour, or being pastured by tame animals, the representative of labour in taming and tending them. Rent is usually the labour or the fruits of the labour of the occupant. In some cases it is income derived from the labours of others. A broad distinction exists between the rent of land, which is a portion of the fruits or its equivalent in money, and that of improvements and houses, which is an exchange of the labour of the occupant given as payment for that employed in effecting improvements or erecting houses. The latter, described as messuages, were valued in 1794 at *six millions* per annum; in 1814 they were nearly *fifteen millions*; now they are valued at *eighty millions*. The increase represents a sum considerably more than double the National Debt of Great Britain, and under the system of leases the improvements will pass from the industrial to the landlord class. It seems to me to be the mistake in legislation to encourage a system by which these two funds merge into one, and that hands the income arising from the expenditure of the working classes over to the tenant's-in-fee without an equivalent. This proceeds from a straining of the maxim that "what is attached to the freehold belongs to the freehold," and was made law when both Houses of Parliament were essentially landlord. That maxim is only partially true: corn is as much attached to the freehold as a tree; yet one is cut without hindrance and the other is prevented. Potatoes, turnips, and such tubers, are only obtained by disturbing the freehold. The maxim was at one time so strained that it applied to fixtures, but recent legislation and modern discussions have limited the rights of the landlord class and been favourable to the occupier, and I look forward to such alterations in our laws as will secure to the man who expends his labour or earnings in improvements an estate *in perpetuo* therein, as I think no length of user of that which is a man's own—his labour or earnings—should hand over his representa-

tive improvements to any other person. I agree with those writers who maintain that it is prejudicial to the State that the rent fund should be enjoyed by a comparatively small number of persons, and think it would be advantageous to distribute it, by increasing the number of tenants-in-fee. Natural laws forbid middlemen, who do nothing to make the land productive, and yet subsist from the labour of the farmer, and receive as rent part of the produce of his toil. The land belongs to the State, and should only be subject to taxes, either by personal service such as serving in the militia or yeomanry, or by money payments to the State."—*Fisher's History of Landholding in England.*

**THE CHEVIOT HILLS.**—The ridge of high ground that separates England from Scotland is not, like many other hilly districts, the beloved of tourists. No guide-book expatiates upon the attractiveness of the Cheviots; no cunningly-worded hotel-puffs lure the unwary vagrant in search of health, or sport, or the picturesque, to the quiet dells and pastoral uplands of the Borders. Since the biographer of Dundie Dinmont, of joyous memory, joined the shades, no magic sentences, either in verse or prose, have turned any appreciable portion of the annual stream of tourists in the direction of the Cheviots. The scenery is not of a nature to satisfy the desires of those who look for something piquant—something "sensational," as it were. It is therefore highly improbable that the primeval repose of these Border uplands will ever be disturbed by hordes of the "travelling public," even should some second Burns arise to render the name of hills and streams as familiar as household words. And yet those who can spare the time to make themselves well acquainted with that region should do so. They will have no reason to regret their visit, but very much the reverse. For the scenery is of a kind which grows upon one. It shows no eminent beauties—you cannot have its charms photographed—the passing stranger may see nothing in it to detain him; but only tarry for a while amongst these green uplands, and you will find a strange attraction in their soft outlines, in their utter quiet and restfulness. For those who are wearied with the crush and din of life, I cannot think of a better retreat. One may wander at will amongst the breezy hills, and inhale the most invigorating air; springs of the coolest and clearest water abound, and there are few of the brooks in their upper reaches which will not furnish natural shower-baths. Did the reader ever indulge in such a mountain-bath? If not, then let him on a summer's day seek out some rocky pool, sheltered from the sun, if possible, by birch and mountain-ash, and creeping in below the stream where it leaps from the ledges above, allow the cool water to break upon the head, and he will confess to having discovered a new aqueous luxury. Then from the slopes and tops of the hills you have some of the finest panoramic views to be seen in this island. Nor are there wanting picturesque nooks and striking rock scenery amongst the hills themselves; the sides of the Cheviots are seamed with some wild, ragged chasms, which are just as weird in their way as many of the rocky ravines that eat into the heart of our Highland mountains. The beauty of the lower reaches of some of the streams that issue from the Cheviots is well-known; and few tourists that enter the vale of the Teviot neglect to make the acquaintance of the sylvan Jed. But other streams, such as the Bowmont, the Kale, the Oxnam, and the Rule, will also well repay a visit. In addition to all these natural charms, the Cheviot district abounds in other attractions. Those who are fond of Border lore, who love to seek out the sites of old forays and battles and romantic incidents, will find much to engage them; for every stream, and almost every hill, is noted in tale and ballad. Or, if the visitor have antiquarian tastes, he may rival old Monkbarus, and do his best to explain the history of the endless camps, ramparts, ditches, and terraces which abound everywhere, especially towards the heads of the valleys. To the geologist the district is not less interesting.—*Good Words* for January.

**THE DIGNITY OF THE FARMER'S LIFE.**—There is a higher dignity than that of poetry or painting that attaches to the farmer's profession—a dignity which should make him walk erect, and look the blue heavens as proudly in the face as any man who treads the earth. No industry to which human hands were set since the first pair were made is deserving of higher estimation than his, for of all the toilers of the earth he stands in the closest co-partnership with Divine Providence in the realm of nature. See now the conditions of this co-partnership, the capital which each invests in one summer's

crop. Here, for example, is a cultivated farm of one hundred acres of land. The Creator might have made that land bear stout crops of wheat and other corn, all of itself, without man's help; but He did not, and would not. He condescended to admit man to a partnership with Him, in variegating the verdure of those acres, in covering them with waving grain and yellow harvests. He would not let nature produce any crops for human sustenance without the co-working of human sinews. The wheel of seasons might turn on for ever, scattering rain, dew, light, and heat, and every germinating influence; but unless it was belted on to man's industry it would not turn out a sheaf or a loaf of bread. But see what comes of the connection when a pair of hands and hoping hearts join their activities to the revolutions of that wheel—generously nature divides with man the honour and joy of the crop! How she works with all the sublime mute economies of the seasons in this partnership of toil! The very shape of the earth's orbit, and all its million-miled many stages around the sun, as well as the dew distillery of the evening's sky, are brought to bear upon the production of the fields. See how the light and heat are graduated to the growth of these acres of Indian corn. See the temperature that nursed it into the blade, then into the stalk, then into the silken setting of the ear. See what purple curtains are hung around the horizon—what drying, jected, full winds blow; what a ruddy-faced hue glows upon the ripening ears, red-leaving them to Indian summer tints, as they peer from the white lace drapery that enfolded them! Look at the sight, and never let a murmur of discontent stir your lips when you talk of merchants, manufacturers, or joint-stock companies, or any occupation or profession whatever. Joint-stock companies, indeed! What company of that sort ever formed on earth can compare with the joint-stock company that carries on the smallest farm? What a diversity of capital is invested in the enterprise! What sympathy and co-working! Where falls one drop from the no-stened brow of the farmer, there fall a thousand of germinating dewdrops from heaven; and the combination touches the life of every plant and blade with a new vitality and verdure.—*Etho Berritt.*

**A GENEROUS LANDLORD.**—Mr. F. J. S. Foljambe, M.P., of Osberton Hall, near Worksop, taking into consideration the unfavourable character of the last season, has instructed his agent to remit to the whole of the tenants on his estate 25 per cent. of their rents. This generous act on the part of Mr. Foljambe has given great satisfaction to the tenants.—*North British Agriculturist.*

**SALE OF THE HUTTON HOUSE SHORTHORNS.**—Mr. John Thornton of London, dispersed the remainder of the small but select herd of Shorthorns, the property of Mr. J. M. Richardson, of Hutton House. The pedigree animals were only nine in number, and they realised in the aggregate 333 guineas. The cow Alexandra Wind-or, by Prince of Wales, was the favourite, and brought the highest price—viz., 62 gs., Mr. Lazonby being the purchaser. Comfort, another thick, good heifer, with grand quality, was bought by Mr. Toppan for 50 gs. One of the bulls brought 42 gs., and the other 26 gs. The company present was not large, but the competition for the cattle was considered good.—*Carlisle Patriot.*

**AYR NEW-YEAR'S-DAY FAIR.**—The most important Horse Fair of the year at Ayr was held on Thursday last. The weather was fine, and there was a large display of good horses. Dear although prices have been for some time, the rates for good young Clydesdales were higher than ever, and dearness was not checking business. There was the usual attendance of dealers, and at noon they had generally sold a large proportion of their lots. A four-year-old colt belonging to Mr. Wilson, Old Mill, attracted attention. The price asked for him was £150, and it was said that an offer of £125 had been refused. He was sold in Ayr Fair a year ago by Messrs. Carslaw at £105. Mr. Wylie, Orchiltree, sold a colt of the same age to-day at £100, and Messrs. Carslaw two powerful five-year-olds for £233. Plain useful horses were changing hands at from £60 to £80, and good colts rising three years at similar figures. Old horses were less in request, and they seemed fewer in number than we have seen at former fairs.—Jan. 10.

## THE CHILIAN INTERNATIONAL EXHIBITION.

A correspondent at Santiago writes, that the Exhibition which was opened by the President of the Republic on the 18th of September last, has been declared open to the public to-day, and from the present date goods not actually within the precincts of the Exhibition, or in the course of discharge from on board ships now in Valparaiso Bay, will be excluded from competition for awards of merit. In connection with this public opening, the commissioners have promoted a *fete* in honour of Belgium and her goods. There was a concert of classical music, followed by performances of promenade bands in the grounds of the Exhibition, and a banquet to the Belgian commissioners and jurors. On Sunday last a *fete* was given in honour of the South American nations contributing to the Exhibition, and a like honour to each nation is to follow, as arrangements can be made. The English *fete* is not yet definitely fixed, but will probably be held in December. Since the opening, much good has been done towards completing the display of foreign goods. The passages made by sailing vessels round the Horn, always uncertain, have latterly very much exceeded the ordinary good passage of 80 to 90 days. Some of the ships bringing goods have been 190 days *en route*. It will easily be imagined that such unlooked-for delay has openly interfered with the speedy adjudication of awards. The Exhibition now opened in the park of the Normal College of Agriculture consists of a central place, surrounded by five annexes and several subsidiary buildings. The palace is handsome; it has an elevation of nearly 60ft.; the facade faces to the north, and has an extension of 300ft., with two end-wards, and a fine portico in the centre. The structure has a depth of about 200ft., and is built round a quadrangle, which is traversed by a central hall some 50ft. high and 60ft. broad, with a gallery running round it supported on twenty-eight pillars. The decorations of the hall are a mixture of Gothic and Arabesque, but the result is not unsuccessful. Two annexes have been erected, to east and west of the central structures, each about 50ft. in length. Between them stands the Southern Annex, immediately to the south of the Exhibition Palace. It is 370ft. across by 170ft. in depth. Again, to the south of this is situated the French Pavilion, a very handsome structure of iron and glass, which stands in a little park of its own, ornamented by a lake, and surrounded by stately and little chalets. Besides these structures there are annexes for carriages, kiosks, and many little buildings, after the fashion of the Vienna Exhibition, and just at present we have a very good show of foreign and native cattle placed in sheds in a fine avenue of pines and cypresses. The grounds cover about 15 acres and are prettily ornamented with flowers and fountains. With the exception of her place in the fine art and machinery departments, Chili modestly occupies only the first floor of her Exhibition Palace. In one of the galleries, under the careful superintendence of Professor Doneyko, she has gathered together a splendid collection of her mineral riches. The display is arranged in geographical sequence of departments. The gallery is 100ft. in length, and the centre has been accorded to other American States exhibiting. The side cases, thirty in number, contained a select collection of the specimens sent to represent the variety and richness of Chilian mining deposits, and the fossils found in searching for them. Atacama sends specimens of silver and silver ores. The curious are diverted by the fantastic shapes and beauty of the crystals of ruby silver; there is also native silver from Chiracillo, which projects from the rocky matrix in the most extraordinary forms. Samples of horn silver are also shown, in which form this precious metal is generally found. The many different varieties of copper ore are also exhibited, as well as some curious crystals of ammoniac copper, still present on a deposit of rock crystal. Coquimbo contributes specimens of native copper, purple ore, gray mercurial copper, green silicate, and the more common copper pyrites. Numerous specimens of blue and green malachite are also shown; these specimens do not occur in large slabs like the Siberian malachite, but the exquisite forms assumed by the crystallisation on different mineral deposits give a variety and beauty

to this mineral which distinguishes it from that met with in Europe. One specimen of rock crystal is especially remarkable. Carrizal sends principally pyrites. There are also some fine specimens of *lapis lazuli*. Native cobalt, arsenic, and their different ores also lend variety to the display of minerals from the northern districts. Southern Chili brings a collection of ores of gold, magnetic iron, copper, sulphur, some soap clay, and a variety of coals and lignite from the southern coal-field. From the latter deposits many interesting fossils are exhibited. The various smelting works of Chili exhibit models of their processes for the reduction of copper ores in their respective stages, and foremost among them are the works of Urmeneta and Encrazuriz and those of Messrs. Lambert and Son. Every day fresh discoveries in the South are being announced, and any fresh influx of European capital is likely to be diverted to these unwrought deposits of Southern Chili. Brazil shows specimens of coal. The Argentine States, copper and silver ores. California, samples from her Comstock and other celebrated deposits of silver ore. Bolivia shows a fair collection of copper ores from Potosilla, but her rich silver deposits in the department of Caracoles are very poorly represented. Fossils, however, from her secondary deposits are abundantly shown. In agriculture Chili has brought together an extraordinary variety of produce. The large white wheat produced in her corn fields is sufficiently well known in Europe to render any remark unnecessary. Samples of barley, oats, rye, and Chilian clover are also exhibited by the Southern Departments, besides linseed, wool, honey, walnuts, sole leather, and other staples. Cotton from the Northern Provinces is also shown, with raw silk, flax, almonds, raisins from Huasco (famed for quality), and a great many samples of Chilian wines. Considering the variety of the growths of this country, and the fine wines distinguished by the prizes awarded in Paris, there can be no doubt that when the landowners of Chili sufficiently study the culture of vines, there will be a magnificent future open to them. California has already become a pioneer in this matter, and her progress goes to prove that as old-world prejudices in favour of brands long in repute are overcome, and people venture to trust their own tastes, the Chilian wine-grower will find a wide and profitable market for his produce. The Chilian Colony in M Zealand Straits sends skins of ostriches, seals, foxes, pumas, and guanacos. The Southern Provinces of Valdivia and Lontue contribute specimens of the different trees indigenous to Chili, among others the Quillai, the bark of which yields in water a weak lye, which is highly esteemed for washing and strengthening the hair. The Department of Cauquenez is represented by a small collection exhibited in a little house made from the various woods of the district. In it are to be found stuffed specimens of Chilian fauna, and a numerous selection of dried plants and herbs valuable for their medicinal properties. The mineral deposits and agriculture are likewise separately represented. The neighbouring states have contributed liberally to the agricultural display. Guatemala sends sarsaparilla, cochineal, maguey, and other fibres; Nicaragua vegetable wax and silk; Brazil, dyewoods, timber, and fruits; Ecuador, cocoa, birds of gay plumage, leather work, also a Guayaquil hat of the finest straw, and a collection of Indian idols and curiosities. San Salvador sends the root of the ipecacuanha, dyewoods; Peru, potatoes, maize, yams, roquilla, and other dyestuffs, sugar-cane, cochineal, Yungas coffee, cotton, dates, tamarinds, and the leaves of the cocoa. The display of American agriculture is one of the best, perhaps, ever brought together. Below this gallery, in a quadrangle roofed over, are the appliances relating to education. A circular instruction is excellently provided for by an infinite of working models of farming machinery and implements, skeletons and diagrams of the physiology of domestic animals, and, in short, everything that can help a farmer toward learning his trade thoroughly. Desks and school furniture for primary education also find a place here, and numerous books from European publishers, a selection from which goes to form a library commemorative of this, the second Chilian International Exhibition.—*Manchester Examiner*.

## THE PAST YEAR.

If there had been a comet in the year 1875, how much the superstition of those who believe in portents would have been strengthened as one disaster after another pressed upon their notice! It would have been pointed out how the year began with fair promise, but, as it advanced, malign influences strengthened, resulting in ever-thickening calamities. Truly, we have had troubles varied and terrible—troubles of wind and floods on land; troubles of wreck and fire at sea; troubles of blight in our crops and of disease in our stock; troubles of explosions of fire-damp in mines, and of deeds of fiendish malignity perpetrated by man. Hence were we more inclined to say, with a sense of relief,

The year is going; let it go!

Whether the New Year's bells have rung in a more peaceful and more prosperous period, we cannot yet tell; but we are apt to think that a worse time cannot well be in store for us.

A brief history of the past year, as far as it concerned our crops, was given in our market article last week. Therein it was shown how extraordinary agricultural prospects were blighted; how crops as luxuriant in appearance as they had ever been known to be were nearly all more or less failures. We must except the root-crops, which were beyond an average, and the second crops of clovers and grasses, which, by their abundance, went far to compensate for a very short first cut, and that for the most part greatly injured by wet. Some farmers more fortunate than their neighbours would except the barley crop also; but, taking quality as well as quantity into consideration, it would not be correct to describe that crop as a success. With such extraordinary climatic vicissitudes as our crops were subjected to, it would, indeed, have been wonderful if a more favourable result had been realised. Recurring transitions from frost to heat, and from flood to drought, of such a decided character as those of last year, are more than cereal nature could be expected to bear. We need not recapitulate them, nor refer in detail to their effect upon the various crops, as to do so would be only to repeat the statements contained in the article before referred to; but we will add that it was a subject of great congratulation that we had brilliant harvest-weather, and that so prolonged that farmers were able to gather in their injured crops in the best condition then possible. What farmers feel most is that to what may be termed the injury of Nature is added the insult of the law of supply and demand, which condemned them to low prices, in spite of a small yield. They have been used to bad crops many a time and oft, but, as a rule, they have been to some extent compensated by more or less high prices. This has not been the case in the past season—at least not with respect to such corn as most of them had to sell. It is true, that good malting barley, plump and bright peas, and well-grown beans have been selling well; but the farmers who had these to dispose of were the happy exceptions, and nobody wanted the thin barley, the black peas, or the shrivelled beans which the majority had to sell. Another consolation which farmers often have when their corn crops are deficient is that their stock does well; but the perfect plague of cattle disease which came upon them in the autumn, and which no amount of rain could "wash away" (as some vainly hoped it might), destroyed all hopes in that direction. When this was given up, they might, in the ordinary course of things, at least have been able to say, "Better luck next year;" but even the pleasures of hope were denied them by the inexorable Eighteen Hundred and Seventy-five.

Only a little wheat was put in before the autumn floods came, and some of that was injured seriously; and then, without a breathing-time between, came frost and snow to put an end to all thoughts of field-work till the middle of December. At last, on his death-bed, this wicked old year repented; but he could not repair the evil he had done. The rest of the wheat land could be sown, indeed, but only when sowing winter wheat was an experiment, and when the time for spring varieties had not come.

There may be some critics who would say that Parliament in the year 1875 has only imitated Nature in making great promises to those concerned in agriculture, only to break them; but, although we admit that over-sanguine expectations have been disappointed, we cannot regard a Session which gave us the Agricultural Holdings Act as one of failure. We need not tell our readers, who can recall the criticisms which we made when that Act was passing through Parliament, that it is by no means all that we desired it to be; but it is surely a great thing for tenant-farmers that, for the first time in their history, the presumption of the law of their country will shortly be, that improvements executed on their occupations are their property. Of course, people who expected that the "Farmers' Friends" would abolish the Malt-tax, equidise Local Taxation, stop Cattle Disease, do away with Out-door Relief, and reform all the Land Laws in one Session of Parliament, are thoroughly discontented. Not being lunatics, Mr. Disraeli's Government did not promise to do impossibilities. We will not say that they have done well what they actually promised to do; but in these days of compromise we learn to be thankful for small mercies. When Parliament met on the 5th of February, the measures of especial interest to agriculturists that were promised in the Speech from the Throne were bills for amending the laws relating to Agricultural Tenancies, for consolidating and amending the Sanitary Laws, for simplifying the Transfer of Land, and for consolidating and amending the laws relating to Friendly Societies. Excepting that the Sanitary Laws have only been amended, and not consolidated as well, no one can deny that these promises have been kept, however much dissatisfaction may be felt with the methods of fulfilment. When a deputation from the Farmers' Club waited upon the Prime Minister on March the 2nd, to urge the claims of tenant-farmers to greater security for their capital invested in the land, it met with so courteous a reception, and received such fair promises, that all doubts as to the sincerity of the Government in their avowed intention to carry a measure relating to land tenancies were removed. On the 12th of the same month the Duke of Richmond introduced the Agricultural Holdings Bill in the House of Lords, and it was received with a very general chorus of disapprobation from the farmers and the press. But it was soon seen that, cautious and compromising as the measure was, it was too liberal for the majority of the members of our Legislature, and especially so for the members of the House of Commons. The chief complaint was that the bill was not compulsory; but what could be expected, when it was known that the landlords almost universally were opposed to interference with freedom of contract, whilst the tenants were by no means at all generally in favour of it? The Central Chamber of Agriculture, and several of the local chambers, including that of Scotland, had declared against such interference. It is true that the London Farmers' Club, and many local clubs and chambers, went with Mr. Read and Mr. James Howard for a compulsory measure; but, taking the

landlords, the tenants, and the public generally into account, these were only a small minority. No wonder, then, that the Government did not feel called upon to bring forward a compulsory bill, they being only too glad to have such ample excuses for making it permissive. In the Upper House the bill underwent very little alteration. It passed the second reading after a single debate, and without a division, on the 15th of April, went through Committee just as quickly on the 22nd, and on May the 13th was read a third time and passed. Its course through the House of Commons, where it was introduced on the 24th of June, was less smooth and speedy. It passed its second reading there after a single night's debate; but seven sittings were occupied in getting it through Committee, so numerous were the amendments—chiefly of a Conservative character—that were moved. At one time it was feared that it would have to be shelved till another Session, but Mr. Disraeli was determined to pass it, and the Merchant Shipping Bill was dropped to secure that object—a proceeding that drove Mr. Plimsoll mad, and occasioned great indignation amongst the public. The bill was passed, and will come into force on the 14th of February next. After that date all new tenancies from year to year or at will must come under the Act unless there is a written agreement to the contrary; and all old tenancies of the same kinds will also be subject to the measure, if neither landlord nor tenant gives notice to the other before the 15th day of April that he desires the existing contract between them to remain unaffected by the Act. No lease current at the commencement of the Act will be affected by it. Such as the measure is, we must make the best of it. It can serve no good purpose now to make up our minds that it is going to be generally evaded. Those tenants who desire to come under it had better resolve that, as far as their endeavours can avail, it shall not become a dead letter.

We cannot say that we have a very high opinion of the other measures to which we have referred. The Land Titles and Transfer Act is merely permissive, and its effect cannot be great. As to the Friendly Societies Act, we are by no means sure that it will not do more harm than good, by giving a false sense of security to the poor men who invest their savings in these often sadly mismanaged institutions.

Several bills and resolutions affecting agriculture were brought forward in Parliament by independent members during the past year; and we will mention some of them. The first in point of date was Mr. Barclay's Wild Animals (Scotland) Bill, which was brought before the House on Feb. 17th, and rejected. On the 2nd of March Mr. Fawcett called the attention of the House of Com-

mons to the subject of Education in the Rural Districts, and moved a resolution declaring that the same amount of school attendance should be secured to children employed in agriculture as was enforced in the case of those employed in other branches of industry. This resolution was strongly opposed, on the ground that the Agricultural Children Act, which only came in force at the beginning of the year, had not been given time for fair trial, and it was negatived. Shortly afterwards Mr. Vans Agnew's Hypothec (Scotland) Bill was brought forward and rejected. Later on in the Session Mr. Sampson Lloyd moved a resolution in favour of the appointment of a Minister of Agriculture, but with no effect. On May the 24th Mr. Fawcett, to the surprise of everybody, came forward as a local taxation reformer, in moving an amendment to the Public Works Loan Acts Amendment Bill, but did not meet with success. Other bills brought forward unsuccessfully were Mr. S. Crawford's Landlord and Tenant (Ireland) Bill, and Mr. Trevelyan's Household Franchise (Counties) Bill. Lord Lyttellon raised the question of Poor-law relief in the House of Lords by moving a resolution declaring the expediency of reverting more nearly to the principles laid down in the Report of the Commission of Inquiry of 1833, with a view to the ultimate discontinuance of outdoor relief. This resolution was strongly opposed by the Duke of Richmond, who declined to entertain the belief that outdoor relief could ever be entirely done away with. A similar motion was to have been brought forward in the Lower House by Mr. Fawcett, but was crowded out by press of other business.

The Agricultural Labourers' Union has been very quiet during the past year, as far as outward demonstrations were concerned. The great lock-out in the Eastern Counties in the previous year was a crushing blow that could not quickly be recovered from. But, being at peace with the outside world, the unionists took to fighting amongst themselves, and the result is a division of the old union into two hostile unions, one being still presided over by Joseph Arch, who seems to have greatly gone down in public esteem, as overrated men when they get spoiled by flattery are apt to go, and the other by Professor F. W. Newman.

During the year several men well known in agricultural circles have been removed by death, amongst whom we may mention Mr. Edward Holland, late President of the Royal Agricultural Society, Lord Tredegar, Mr. James Allan Ransome, Mr. Willoughby Wood, Mr. William Palin, Mr. Manning Prentice, Sir Joseph Hawley, Sir Percyvall Hart Dyke, Sir Harry Mainwaring, Lieutenant-Colonel Fuller Maitland Wilson, M.P., Captain W. D. Fordyce, M.P., and Mr. Howard Reed.

## LANDLORDS AND THE AGRICULTURAL HOLDINGS ACT.

In the course of his clever and facetious speech at Oxford, Sir William Harcourt referred to the Agricultural Holdings Act as a conspicuous example of the inadequacy of the measures of last Session, which he described as "nothing but dabs of putty stuck into cracks to stop a hole." In justification of this contemptuous denunciation of the Act he said: "It was brought in with a big flourish of trumpets as a measure which was to increase the food of the people, and to remove the only blot which remained on the hierarchy of the land." . . . The evil which this bill professed to cure was the want of security to the tenant for the capital invested by him in his landlord's soil. It is impossible to conceive a more flagrant injustice than the absence of such security, and yet what security does this statute guarantee? I am

told that the land-agents throughout the country have, almost without exception, advised their clients to give notice to their tenants that they will not come in under the Act. If they do, in what position will the tenant-farmers find themselves? And, what is more to the purpose, in what sort of a situation will Parliament stand before the country when, having recognised and proclaimed an injustice, it has provided so illusory a remedy for its redress?"

Now we cannot tell what authority Sir William Harcourt had for making the sweeping statement that land agents, "almost without exception," had advised the landlords to refuse to come under the Act; but if the advice has been so generally given, and should be also generally adopted, we agree with him in thinking that

Parliament will stand in a very queer position after having disregarded so many warnings as to the inadequacy of a permissive measure at the time when it was under discussion. In our remarks upon the Act last week we advised tenant-farmers not to take it for granted that the measure was to be set aside, but to make as strong a stand for it as their position will allow. If, after having made that stand, they find that their resistance is vain, and the Act becomes a dead letter on the great majority of estates, then there will be grounds for the strongest argument in favour of making it compulsory. But if, on the other hand, the tenants without a struggle accept stereotyped agreements, which will in a few words deprive them of the justice which, after many years of agitation, they have induced Parliament verbally to grant them, it will be said that they care nothing about the Act, and that therefore it may as well as not be permitted to drop into the limbo of disused statutes.

We need not, however, too hastily rush to conclusions on this subject. Even if Sir William Harcourt has not been misinformed as to the advice of the land agents, we may yet hope that the landlords will be too prudent to risk the storm of indignation that will be sure to follow their general evasion of the Act if their tenants show a proper spirit, and the discredit that in any case will fall upon them. They are not in the present day so favourably regarded by the general public that they can afford to court unpopularity, and this they would virtually do by riding rough-shod over a measure that was brought in to remedy an injustice to which their tenants have for so long been subjected at their hands under the sanction of the law of the State.

But, although we hope that the general evasion of the Act expected by Sir William Harcourt will not take place, it is, unfortunately, certain that on several large estates agreements have been drawn up for the purpose of setting the Act aside. Only the other day we had sent to us a printed copy of the conditions on which a farm on an estate in one of the southern counties is offered to be let, and one of them is as follows:

"With reference to the recent Act of Parliament (Agricultural Holdings England) 38 and 39 Vic. cap 92, it is hereby to be understood that such is not to be embodied herewith, nor in any way to affect this agreement."

Long ago we heard of similar clauses having been prepared by the agents of other estates, ready for any new contract that may be entered into with a tenant after the 14th of February next, when the Act comes into force. Now if this example is about to be extensively followed, what a practical comment it will be upon the freedom of contract controversy that was rife last year! The advocates of freedom of contract were loud in their declarations of the needlessness of any interference between landlord and tenant. The farmers of this country, they said, are quite able to take care of themselves, and it is an insult to them to legislate as if they needed any protection in the arrangements which relate to the hiring of land. Shrewd men at a bargain—none shrewder—they may be safely left to assert their rights, and to settle the terms of their contracts with their landlords. Those who asked for a compulsory Tenants' Compensation Act, on the other hand, urged that there is seldom, if ever, real freedom of contract between landlord and tenant in this country, simply because the parties do not meet on equal terms. Land is limited in quantity, many landlords own large breadths of it, and the demand for farms is so active that tenants are bound to hire on conditions that they feel to be unfair, if they hire at all. The landowner lays down his conditions, and the applicant for a farm knows that if he will not take it on those terms another will. He has a living to get, and he has not been taught any other way of getting it

than by farming; so he swallows his sense of injustice and takes the farm on terms that he knows will neither allow him to do his best for himself, for his landlord, for the workmen whom he employs, nor for the consumers of agricultural produce.

Is it the intention of the landlords to settle this controversy by proving the correctness of the argument of the friends of compulsory legislation? If they are about to make it a fixed condition in the letting of their land that the Agricultural Holdings Act shall be set aside, they will do this most effectually, whether they intend to do it or not. For, in effect, they will declare beforehand that they will not enter into any discussion with applicants for their farms as to the terms upon which they will let them. "Here," they will say, "are our conditions, to be swallowed whole by any one who intends to farm under us, and no one who wishes to have his capital secured to him by the Agricultural Holdings Act need apply." It is obvious, to use a clever distinction that was drawn by some one during the discussion of this question last year, that if there is, in a certain sense, freedom of contract, there is no freedom *in* contract when the conditions of letting are stereotyped, and tenants are treated on the "take-it-or-leave-it" principle. There is freedom to contract or not to contract, but there is no liberty to arrange equitably the terms of an agreement, as the opponents of compulsion all along assumed that there would be. If, then, such a clause as that which we have quoted is to be a common condition in farm covenants, the landlords will have shown most conclusively the emptiness and deceitfulness of the "freedom-of-contract" cry, and will have taken the most effectual course possible to them for ensuring the ultimate adoption of the compulsory principle which they so strongly deprecate, and which a large section of the tenants would gladly avoid if they can secure justice without it. We have no disposition to "take trouble by the forelock," nor to make a fuss about a grievance before it is realised; but with such a statement as that of Sir William Harcourt before us—and there have been many similar assertions made—we do not think it is at all premature to utter a note of warning. When the Agricultural Holdings Act was passed, we accepted it with the loyal intention of making the best of it, and we believe that tenant-farmers generally were prepared to do the same; but if they are to have no chance of doing this—if the Act is to be snatched from them without so much as a "by your leave"—it is absurd to suppose that they and their representatives in the Press will be satisfied with a piece of "leave giving" that is no *av*. We warn the landlord's not to presume too far upon the timidity and subserviency of the modern representatives of their ancestors' retainers. The farmers are beginning to feel the dignity of independence, and to learn the power of association and organised effort. Let the Agricultural Holdings Act be only proved to be for the majority of tenants the mockery, delusion, and snare that many people have from its first introduction declared it to be, but which it will not be if landlords are wise, and the proof thus afforded will be the signal for another Tenant Right agitation, in which we, true to the traditions of this journal, shall not hesitate to take an active part.

#### WORCESTERSHIRE AGRICULTURAL SOCIETY.—

The following report was presented to the members of the Society at the annual meeting held at the Crown Hotel, in this city: The committee have the pleasure of reporting to the general meeting that the society has experienced a very successful year, and they desire to acknowledge the continued liberality and support of subscribers and donors of prizes. The committee also wish especially to acknowledge



the cordial reception accorded to the Society last summer by the city of Worcester, and the hearty co-operation of the local committee, which so materially assisted in bringing about the success of the show. As regards the show of 1875, they particularly desire to notice the excellence and convenience of the site which was provided, as well as the high quality and numbers of the stock and implements exhibited. The great interest taken by the public in the show was proved by the presence of nearly 19,000 persons on the last day, and they congratulate the society and the city of Worcester on the fact that, in spite of the collection of such a vast crowd, their behaviour was so admirable that not a single case occurred calling for the interference of the police. At the suggestion, and assisted by the liberality of their president, Lord Coventry, the Society awarded last year, for the first time, prizes for the best-managed farms in the county; and the committee wish to acknowledge the ability shown and the labour expended by the judges in awarding these prizes. Before leaving this subject they must acknowledge, with thanks, the great liberality of Mr. C. H. Birbeck, the proprietor of *Borrow's Worcester Journal*, who has given to the Society £100, to be expended this year on a piece of plate, to be given as a prize to the best farm. The prizes offered last year for the first time for stock exhibited by tenant-farmers in this county attracted a good entry in certain classes, but the committee hope that a continuance of them in future years will lead to larger and improved competition. Prizes were also given at the late meeting by the local committee for the best shooting of hunters and roasters. This competition will, doubtless, help largely to spread the knowledge of good principles in a matter of primary importance. From the statement of receipts and expenditure for the past year, and the general account of the financial position of the Society, the committee think that the result, showing a surplus for the year of £171 5s. 9d., may be considered

eminently satisfactory, when it is remembered that £33 13s. 9d. has been expended on the farm-prize account, and £44 given in local stock prizes, in addition to the usual expenditure of previous years. The committee have taken very seriously into their consideration the future of this Society. The question which they had to determine was, whether the Society could reasonably expect a repetition of the same liberal reception from the different towns which have been visited during the last six years if it should propose to revisit them after so short an interval as must elapse if it continues to hold its show annually in this county, and the conclusion they have come to unanimously is to recommend to this meeting—That it be recommended to the general meeting that negotiations be opened with the Gloucestershire and Warwickshire Agricultural Societies, or either of them, with a view to the societies holding joint agricultural shows in 1876 and the following or two following years. Such shows to be held alternately, or in rotation, in each county. That A, B, C, D, and E be a committee to carry on such negotiations and arrange details. That it be an instruction to this committee that no arrangement should affect the individuality of this Society, and that the following points be suggested as the basis of their proposal: 1st. That the society of the county in which the show is held should have the general management of the show, and that the same society shall take all profits and be responsible for all losses made at the same; but that the other society or societies should appoint one or more stewards to act with the body of stewards, and represent the interests of their own societies. 2nd. That the society or societies of the county or counties in which the show is not held should pay £ towards the expenses of the show, and be at liberty, in addition, to give any prizes open to their own members only. Members of all the societies to have the same general rights of exhibition, entry, &c.

#### MR. C. S. READ, M.P., AND THE MINISTRY.

On Wednesday Jan. 12, Mr. C. S. Read, M.P., and Sir R. J. Buxton, M.P., attended the weekly market-tea at the Swan Hotel, at Harleston, Norfolk, and spoke on the political topics of the day. The chair was occupied by Mr. Sancerft Holmes, and the meeting comprised several of the leading residents of the district. After the usual loyal and patriotic toasts, the Chairman proposed the healths of the two hon. members, the toast being received with loud cheers.

Mr. C. S. READ, M.P., in acknowledging the compliment, said he was very grateful for the almost unanimous verdict of approval which had been passed upon his conduct in regard to his retirement from the Government. He had been particularly struck with the movement which had been taking place in other parts of the country, and he had accepted with pleasure the comments of the press. The *Times*, in a most able and concise manner, had put the whole case before the country, and it had summed up the matter by observing that he was entirely in the right and the Veterinary Department of the Privy Council was entirely in the wrong. With regard to adverse comments which had been made upon him, he might, perhaps, pass them over altogether. It might possibly be well to say nothing at all about them, but he ought not to sit under false colours. False pretences had never answered his purpose, and never would. The first objection which was urged against him was that he was parading himself before the public in a most unnecessary manner. In answer to this he might say that within the last month he had had invitations from all parts of the country to attend public meetings, and meetings of chambers of agriculture, and that he had courteously but firmly declined them all, because he did not wish to parade himself before the country. He certainly did make a speech at a recent meeting of the Farmers' Club, but he had always been in the habit of doing so at the gatherings of that body. He had also had the honour to meet his constituents at Diss, and now he was with his friends at Harleston, and he meant to come again if they would have him. He could not help what his kind friends had said about him. He had been called a hero, a martyr, a Marcus Curtius, a Cincinnatus, and a political Jonah. These expressions were all extremely complimentary; but he thought his friends had

overshot the mark, and that he did not deserve any such compliments. He was simply an honest man, who had been sent to Parliament specially to represent the agricultural interest, and when he found that the interest was being persistently ignored by one department of the Government, and that his entreaties, which had been long persisted in, were also totally ignored, and even brought upon him with a good sound scolding, he considered it his duty to resign the office which he held, however honourable, distinguished, and lucrative that office might be. There was one journal which was read by a great number of thinking men, and its articles were always clever, although sometimes sarcastic. He referred to the *Spectator*. This journal gave him a good dressing the other day, although it did at the same time ample justice to his honesty and good intentions. If the *Spectator* had not said that his failure in office was a proof and a test of the impossibility of specially representative men being employed henceforth in any department of the Government, he should not have troubled the meeting with any remarks upon the subject. But he must, with the permission of his friends, make one or two replies to the crushing article which the *Spectator* was good enough to publish about him. The *Spectator* was good enough to say that he could not cease to be a mere representative of the farmers and become a representative of the State. Well, he never meant to cease to be a representative of the tenant farmers, but he was stupid enough to imagine that he could be a servant of the tenant farmers and at the same time be a servant of the State. If the tenant farmers' interest were against the interest of the State his friends might rely upon it that he should not support the tenant farmers' interest. He considered that all class interests were subordinate to the good of the State, and if the farmers asked anything against the good of the State, Parliament and the Government were quite right to refuse it. The *Spectator* next said that he had great narrowness of views, and that he resigned on a trivial question—that of the cattle disease. Well, he might take the narrow view, but he contended that everybody who ate a pound of meat—and in these times who did not do so—was interested in having the live stock of this country healthy. He believed that one of the most important



things which Parliament and the Government had to consider was the health of the live stock, in order that we might have cheap and healthy meat. Then the *Spectator* said that he took only the farmers' view of the matter, and that he advocated protection in regard to live stock. Yes; protection from disease, but not protection from importation. He did not care how much dead meat was sent into the country, but he did care how many foreign diseases were showered upon the farmers. If the farmers had such diseases to contend with, he considered that it was their duty and their interest to get rid of them as well as they could. Again, the *Spectator's* article, after pointing out how honest and straightforward he was, went on to make him out the most impracticable and tiresome man ever introduced into a Government office. Instead of being a sort of John Hodge, he was a complete hedgehog, who differed from his colleagues on every question, and badgered them in all possible ways. The article proceeded to say that he openly differed with his colleagues upon the malt tax question. Well, he inwardly differed with them, but as to outwardly differing with them, he never said a single word, except that he asked the Prime Minister whether he and the other malt repealers were bound to support the Chancellor of the Exchequer's proposals, or whether he would consent to their walking out of the house. Afterwards he went to the Chamber of Agriculture and made an apology for the Government, and then he got hissed and abused for his pains. With regard to the malt question, he believed that so long as the farmers got 20s. or 25s. per coomb for their barley, he should not hear very much about the repeal of the tax, but that when they only received 15s. or 20s. per coomb, then he should be halgered to vote for the repeal of the tax. His own opinion was that as the farmers were not united among themselves upon the question of the Malt-tax—that as they had the towns dead against them, and that as Scotland and Ireland were very averse to the repeal of the tax, the Government would not be justified in bringing the repeal of the Malt-tax forward. The farmers must first enlist the public opinion of the country more in their favour, and he should be happy to aid their efforts in this direction. The *Spectator's* article next said that he criticised the inadequacy of the relief which had been afforded on the matter of local taxation; but he really did nothing of the sort. On the contrary, he thought the farmers ought to be very grateful for the concession which had been made to them. In regard to local taxation, the late Government did nothing but talk upon the question. It promised to bring in all sorts of schemes for altering the incidence of local taxation, but it never offered to give the country anything except the house-tax; while in the year before last the Chancellor of the Exchequer gave the farmer and the country the benefit of a contribution of half the cost of the police and a large proportion of the cost of the lunatics of 4s. per head. He (Mr. Read) considered this a very fair beginning, and he gladly received it as a first instalment of justice. He was further charged with having failed to help the Government in passing the Agricultural Holdings Bill. He certainly failed to speak on the subject, because he was not allowed to do so. If there was any fault in his not having spoken it rested with those who kept him from speaking, rather than with himself. He was not going to give up his idea that legislation upon the subject should be compulsory and universal; but as soon as the bill went into committee, he waited upon the Prime Minister and offered to aid him in passing the measure through committee, and he rendered some little services in this respect, for which he was thanked. Considering that farmers could not now farm land properly without putting a certain amount of capital in the soil, he must say that the former law upon the subject of the relations of landlord and tenant—the law which gave everything to the landlord and nothing to the tenant—required amendment. He was one of those who always said that if you could not get all you wished you must take what you could get. The farmer had got the Government to make some concession in their favour, and he thought it right to be thankfully and gratefully accepted. The *Spectator* was of opinion that the Irish would not endure the plan which was proposed of slaughtering all cattle affected with pleuro-pneumonia, and compensating the owner for it; but a few days after the *Spectator's* article was written, the Cattle Defence Association of Ireland passed a resolution, in which they said that they were quite ready to accept the system of slaughtering with compensation in Ireland. He believed

we might fairly leave it to the Irish people to try and rid themselves of the fatal malady of pleuro-pneumonia. It had been said he had not acted the part of a gentleman because he had made known certain things which were secret, but really and truly all he had said had been known to everybody. Some people had been good enough to say that there must be ministerial discipline, and he admitted that there must, but that it be enforced fairly. He was perfectly ready to submit his little matter to a parliamentary committee, and if they came to the conclusion that the Veterinary Department of the Privy Council were all right and that he was all wrong, he should be happy to accept their verdict. He denied that he had been peremptory upon the question. It was in May, 1874, that he first called attention to the subject, and it was more than eighteen months afterwards that he made his final protest. The Duke of Richmond paraded 400 local authorities in his favour, but he (Mr. Read) believed that these local authorities were a source of weakness rather than of strength, as they differed with each other, and had a tendency to act according to their own particular local interests. He believed the members of the Irish constabulary would make just as good inspectors of cattle in Ireland as the captains and colonels who had been appointed inspectors in England by the Duke of Richmond. When he (Mr. Read) was returned to Parliament in 1865 his advice upon the cattle plague was solicited and acted upon by the Government of Lord Palmerston, but when the Conservative Government came into power he was never consulted upon similar matters, and when he offered his opinion his friends knew the result. With regard to the return of more tenant-farmers to Parliament, he should like to see a nice little party of such members, but he did not think that the number of tenant-farmer members in that House would ever be much increased, and he thought the farmers should be content to be represented by whoever really supported and advocated their interests, whether they were landlords or otherwise. He believed, for instance, that the present Prime Minister and Mr. Ward Hunt were excellent advocates of the rights of the tenant-farmers. In conclusion, the hon. gentleman said he was not a tame Tory. On the contrary, he believed the country must go on progressing and reforming, and that quite as many judicious social reforms would be obtained from the Conservatives as from all the Liberals in the world.

Sir R. J. Buxton, M.P., and several other gentlemen also addressed the meeting.

**DISEASED CATTLE AND SHEEP.**—At the London Mansion House the General Steam Navigation Company were summoned before the Lord Mayor and Alderman Robert Carden, at the instance of the Treasury, for having, on the 20th of November last and following days, unlawfully used a certain place of landing and places adjacent thereto, called Brown's Wharf, Blackwall, then in their occupation, for certain sheep and cattle, such places having just previously contained animals affected with a contagious or infectious disease, and not meanwhile been cleansed and disinfected as required by an Order in Council called the Animals Order of 1875, made in pursuance of the Contagious Diseases (Animals) Act, 1869.—Mr. Wontner, solicitor, appeared for the Treasury; Mr. Besley, barrister, for the defence.—The case was proved by Mr. Reginald Courtenay, one of the travelling inspectors of the Privy Council, and by Mr. Henry Joseph Haneczek, resident inspector at Brown's Wharf. The offence was committed on the 19th of November last, when a cargo of sheep had been landed there from the steamship Gamma. The sheep proved to be suffering from the foot-and-mouth disease, and were at once transhipped to the cattle market at Deptford to be slaughtered. The same day and the next—the landing-stages, gangways, and lairs having not been properly cleansed and disinfected—two other cargoes of sheep and oxen (1,685 beasts in all) were landed. For each beast so landed the company was liable to a fine of £5, or £8,000 odd in all. For the defence it was contended that the company had all along been acting in conformity with the advice and direction of an inspector of the Privy Council, and that the stages and lairs had been swept and washed as the Act directed. The Lord Mayor fined the company 1s. for each animal, or £815s. in all.

## EXTRACTS FROM LORD LEICESTER'S PRIZE ESSAY, No. II.

**HOW TO STORE STRAW-CHAFF.**—Mr. S. Jonas, the well-known Cambridgeshire agriculturist, has devised an improved method for making straw-chaff palatable to sheep and cattle, which he carries out practically in his own management. By cutting up straw in large quantities, and storing it away in some capacious old barn or storage-house, mingling with it thin layers of green chaff, and the whole trodden down firmly, and sprinkled abundantly with handfuls of salt as the layers are placed, he finds that he is able to improve very much the feeding value of his straw. The admixture of the green chaff causes fermentation, the result of which is, that the entire mass becomes impregnated with a grateful aroma, which makes stock devour it with something like the same avidity they display towards good meadow hay. . . . . The system of Mr. Jonas has excited considerable attention, and is rapidly becoming adopted to some extent, not only in Cambridgeshire, but throughout the Eastern Counties. He reduces his straw to chaff in the spring, or rather early summer, as soon as he can get green produce in sufficient quantity for the mixing process. But the proportion of green chaff required is not great—only about one-twentieth part of the straw-chaff—Mr. Jonas generally employing 1 cwt. of cut rye or tares to 1 ton of straw-chaff, and a bushel of common salt. This, after being compressed and undergoing fermentation, remains stored for use in the ensuing winter. The common sense of the farming community can comprehend the *raisonne* of a system which converts innutritious and unpalatable straw into a really good food by such simple means; and as Dr. Voelcker has investigated the matter, and finds by analysis that such fermented straw contains two-and-a-half times as much sugar, gum, and similar soluble compounds as ordinary straw, and one-fourth more of the albuminous or flesh-forming substances, science fully endorses the verdict of approval which has been delivered on this improved practice.

**SYSTEM OF CROPPING IN SUFFOLK.**—The system of cropping pursued, although varied considerably from that adhered to in the management of the heavier soils, is still the four-field in the generality of cases, for farm occupiers are, as a rule, bound by covenants not to deviate from that course. But very serious complaints have been made lately on the hardship and injustice of those who have advanced many stages on the road of progress having their hands fettered to serve the customs and requirements of a bygone period. Go-ahead farmers declare that what was a good rotation a quarter of a century ago is such no longer under the circumstances and conditions they have brought to bear on farm management, and that strict adherence to the four-course shift does not allow them to make the most of their farms. The fact that such a feeling extensively prevails, and that the occupiers of these better class soils, whenever permitted, now grow barley after wheat, for the same reason many of the Norfolk farmers do it, are alone sufficient to prove that the course of husbandry now pursued is far more enriching to the land than the farming generally practised only a few years since, and that many parts of Suffolk have in consequence very greatly improved.

**GROWTH OF SUGAR BEET.**—Neither in the production of sugar-beet, nor that of flax, to both of which crops certain parts of Suffolk have been devoted during the past few years, does the inquirer discover signs of improvement in practices likely to be permanently beneficial. The strongest hopes have been excited that both would prove, if not the salvation of many an East Anglian district, at least important adjuncts of rural industry calculated to increase materially farm profits. But the manufactory at Lavenham, the leading one for the production of home grown sugar in the entire kingdom, so far from being the forerunner of an active and wide-pervading industry, is said shortly to be abandoned. In the immediate neighbourhood of the factory the growth of sugar-beet has proved a remunerative undertaking, as from 12 to 20 tons per acre can be grown, for which 20s. per ton is the price that has been given when delivered at the factory, but at any important distance therefrom the cost of delivery in cartage has, of course, acted as a bar against the cultivation being pursued.

**ESSEX FARMING.**—The farming of Essex has been far more stagnant than that of Norfolk and Suffolk during the

last twenty years, except in those exceptional cases in which such daring innovators as Mr. M. chi have taken in hand, or in those districts near the Metropolis where it has fallen under the management of market gardeners. The average crop yields of many districts have certainly not increased much during the past decennial period. One practical man of great experience last year expressed himself in these terms to the author of this paper respecting the northern part of the county, from Saffron Walden to Braintree: "As to increased produce per acre, I know not what to say. Many farmers crop their land more than formerly, and by putting on some artificial manure, to the value of 30s. to 35s. per acre, they obtain an increased area of crop. But I am satisfied that the past twelve years would show a decided decrease in the yield per acre of both wheat and barley, with the land getting very full of twitch and other weeds." This unfavourable opinion was given before the harvest of 1874, consequently the very good grain crop then raised in Essex would be calculated to modify it somewhat, and no doubt the alleged fact is attributable very much to bad seasons, but the general correctness of the statement has been endorsed by several practical men. The cause is not difficult to discover. The greater portion of the northern and central portions of the county possess a heavy clay, resting on a chalk marl subsoil. There was a great deal more of summer-fallowing twenty years ago than there is at present, and thirty years since more still; for when Robert Baker wrote his Prize Essay, in 1815, he alluded to the system of cropping on the "Chalky Clay" district as that of wheat and barley alternated by fallows. The rotation most generally followed twenty years ago was one wheat, two fallow, three barley, four beans, and clover. A few roots may have been grown the second year of the rotation even then, but not many. Since then there has been a prodigious increase in the growth of mangolds, which are made to take the place of the bare fallow, frequently to the extent of one-fourth part of the unoccupied land, and many crop one-third of their fallows to some kind of root produce. To provide facilities for increase of stockage has been the primary motive for this. North Essex possesses very little permanent pasture land, owing to the climate not being considered well adapted for grass; probably not more than one-tenth to nine-tenths arable. The only way to increase stock, consequently, is to grow more roots and green crops on the arable land. This has been done very extensively, and no doubt the general produce of farms has been largely augmented thereby, although the two particular green crops, than which little else used to be grown at all, may have suffered in the result. In fact the partial filling up of the fallow year, coming between the wheat and barley crops, with something or other yielding root or green produce, has become very general in Essex, except on the very worst soils, and forms the most notable feature of improvement, unless the almost general adoption of better agricultural machinery and implements may be deemed of equal importance. The increase in the growth of mangolds in some districts has been prodigious during the past ten years, surpassing very much the proportionate acreages before estimated. In other cases vetches is a favourite crop partially to fill up the interval, for the produce can be fed or taken off sufficiently early for a late summer fallow to be made, which is followed, of course, by a good winter fallow. But at the late period mangolds are lifted it is difficult often to secure the latter on the adhesive soils of Essex, which ever have had the reputation of sticking like bird-lime in winter. When it is considered how necessary a fallow of some sort has always been deemed for barley in the county, no inquirer need be at a loss in discovering a cause for any slight falling off in the average yield of that grain, which can be proved to have taken place.

**BEDFORDSHIRE.**—The farming of Bedfordshire has very much improved since Mr. Bennett's Essay appeared in the Royal Agricultural Society's *Journal* eighteen years ago, a result alike characteristic of the chalk soils and green sand loams bordering on Hertfordshire, as well as of the tenacious clay lands of the Oolite system, of which nearly the whole of the northern division consists. The more perfect drainage of wet lands has been actively pursued on a scale of great magnitude, steam

cultivation having been adopted in some instances as the grand corollary. Bedfordshire has an advantage with respect to steam cultivation which few other counties possess, in having the beneficial results of the system, as well as every new and interesting experiment connected therewith, continually exemplified on the farms of Messrs. Howard, near Bedford, which may be considered example farms as far as regards steam cultivation, while those of Mr. Charles Howard, at Biddenham, deserve to be considered such in general management. The increase in mangold growing, which is so grandly characteristic of the whole of East Anglia, has here been predigious; while the enterprise of converting roots and green produce to beef and mutton, by the aid of auxiliary food, has been very widely adopted, and contributed greatly to the higher fertility of the county.

HUNTS AND CAMBRIDGESHIRE.—Probably the farming of no district in England has improved more in the past quarter of a century than that of the fens of Hunts and Cambridgeshire. The husbandry of a large proportion of its occupiers has undergone a radical change during that period, from the system of taking several corn crops in succession until the land got foul, and of their seeding it to clover or grass, to be renewed after three or four years with paring and burning. The advanced management, now all but universally practised, and which is very much based on the four-course system, is far less exhaustive, keeps the land cleaner in condition, and

yields a greatly augmented quantity of grain produce, besides the increased number of live stock now kept, and the profits made from meat production. Splendid crops of mangolds, cabbages, kohlrabi, turnips, faves, and clover are raised on this fen country, and the practice of converting them to meat by the aid of oilcake feeding has wonderfully increased in recent years. The district has, as may be supposed, a large superabundance of straw, which is now made into ready good farmyard manure, the practice of many being to cart off a portion of the roots to be consumed by fattening cattle in the yards in the winter season with auxiliary food. In some cases sheep also are fed in the yards throughout the winter, and aid in converting a large bulk of straw to excellent manure. But another practice which has gained still more general adoption latterly is that of taking young cattle, dairy cows, and aged stock from other districts to keep in the straw-yards throughout the winter. Not on the old starvation method of exclusive straw feeding, but on a system which is mutually advantageous to the cattle themselves, their owners, and the farm occupiers who take them in to keep. The latter afford unlimited straw supply gratuitously, on the condition that the stock receive about 5lb. of oilcake per day at the expense of their owners—an outlay only too cheerfully borne, on account of the thriving condition in which the animals are sustained thereby, while their rich droppings yield full compensation to the farmer for his straw.

## BENEFIT SOCIETIES.

At a meeting of the Essex Chamber of Agriculture, on Friday last, Mr. James Round, M.P., read the following paper upon this subject: Having understood, at a recent meeting of the Council of this Chamber, that it was desirable that the subject of benefit clubs should be brought forward, I consented to introduce it; and I will say, at the outset, that I do not pretend to any special knowledge or, indeed, to such an amount of acquaintance, with the question as would justify me in reading a paper, or, as I heard it described last week, in giving a lecture on Provident Societies. The fact simply was that I felt the disposition of agricultural labourers to insure against sickness was a topic in which those who frequent the meetings of this Chamber take a deep interest; and that it might appropriately be introduced at the present time, after the recent discussions at St. Stephen's, during the last two Sessions, resulting in the Friendly Societies Act, 1875. Whatever difference of opinion there may be as to the best kind of benefit society, there can be no doubt that it is highly desirable to encourage our poorer neighbours to become members of well-managed benefit clubs, whose object is to provide funds for them in sickness, in old age, or at death. It is, indeed, sometimes said that benefit clubs do not afford the best provision for a man to make, because his insurance is lost to him, that is to say, he is creating no capital. It is true that if a man (and the best-paid class of agricultural labourers might do this) saves from 6d. to 1s. per week, and began at 20, such a rate of saving means, at compound interest in Consols, from £100 to £200 at 60. I hope the time may come when the agricultural labourers may be capitalists; but at present, the difficulty is what is he to do in time of sickness during these 40 years? Few will possess immunity from ill-health, and it almost of necessity follows that the prudent man turns his thoughts to the nearest benefit club, which offers the desired relief in time of sickness, or when an accident renders him unable to work. It is stated that the tendency of the English is more to spend than to save; and that though the wage-earning classes of England have an income calculated at 300 millions per annum, that 30 millions of this is wasted in excess of drink and tobacco. It is satisfactory to turn from such statements as these, which have more or less truth in them, to the fact that three or four millions of the working-classes have spontaneously organised themselves into voluntary associations for the purpose of mutual support in time of sickness, and that the Registrar of Friendly Societies, in his report for 1859, states that since the passing of the first Friendly Societies' Act in 1793 to 1858, the number of societies enrolled and certified is 28,000. A reviewer in *The Quarterly* of 1861 says: "These associations appear to us to afford highly favourable indications of the

soundness of character of the common people of England. They are the outgrowth, in a great measure, of the English love of self-government and social independence, in illustration of which remark it may be stated that whereas in France only one person in 76 is found belonging to a benefit society, and in Belgium one in 64, the proportion in England is found to be one in 9." The reviewer goes on to state that the early history of benefit societies is somewhat obscure; but that the claims of some writers in behalf of the Loyal Ancient Independent Order of Odd Fellows of having been founded A.D. 55, in the reign of the Emperor Nero, will not bear investigation. Although most of these societies have comparatively a recent origin, they delight in titles savouring of antiquity, as appears from the names of the Ancient Order of Foresters, the Ancient Druids, the Ancient Mariners, the Ancient Britons, the Loyal Ancient Shepherds, and even an Ancient Order of Buffaloes. The history of friendly societies is not altogether a happy one; too often the rates of contribution have been inadequate; too often sickness payments have merged into superannuation allowances, when the rates only allowed the former; too often lax or unskilful management has brought them to ruin, and the well-intentioned efforts of the best of our working classes have proved valueless at the very period when they most wanted the benefits they had tried to insure. Some present in this room may be familiar with the answer of aged labourers in the Union House, when the question is put, "Why did you not belong to a provident club?" "Yes, I did, for a number of years; but I had bad luck and failed." When one thinks how most of this sad experience might have been avoided, had sound and well-managed benefit clubs been the rule and not the exception, such recollection should make every employer of labour, every man who takes an interest in the welfare of those around him, encourage only such clubs as are well managed, with tables of contributions and benefits calculated by competent actuaries. Parliament has from time to time passed laws, with a view of giving encouragement and protection to the members of friendly societies. The legislation of the present century does not appear to have been very fortunate. Well-intentioned it may have been, but while its mere interference with them produced a popular reliance on clubs, many of which were unsound, it did nothing to secure their solvency. For some time the State gave great help in one way—viz., by allowing a high rate of interest—£4 11s. 3d. per cent.—on the funds invested; but this privilege it withdrew in 1850 and 1855, and reduced it to three per cent. The amount of interest obtained by investment of the funds of these societies is most important, no less so than the amount of contributions. Just as it is reckoned that every deficient penny per

week in a member's payments continue at compound interest during the 49 years, between 20 and 60, must then amount at the end of that period to a deficiency in the funds of £15 or £16 for that member alone, so the rate of interest at which the capital of a society is invested will most materially affect the funds. Thus, if £100 be invested at 5 per cent. compound interest, it will double itself in about 14 years; but it would take 18 years to effect the same object if the interest was reduced to 4 per cent. The resolution I have put on the agenda paper, points to the best way that, in my humble opinion, the State can assist these societies—viz., by increasing the rate of interest now given. It may be true the State has in the past incurred losses by this course, but the State is composed of ratepayers, and there is to be considered the expense of maintaining in the unions those poor men who have been members of rotten clubs, let alone the indirect loss resulting from the non-cultivation of provident habits among the people. In 1873-4 the Royal Commission, which had been appointed in 1871, made their report, and early in 1873, Sir S. Northcote, the then Chancellor of the Exchequer, brought in a bill to consolidate and amend the laws relating to friendly societies. It did not pass into law in the first Session, as is frequently the case when bills dealing with important subjects are brought forward. The time was not lost, for the discussions that took place in both Houses, and the ventilation of the subject during the recess amongst those interested, must have proved an assistance to the Government who desired to legislate. Consequently, in 1875 the bill was re-introduced, with some differences; one, that the powers proposed to be given to the chief registrar by the first bill were curtailed in the second; also the proposal to establish local courts of registration was abandoned for economic reasons. The principles of legislation were stated by Sir S. Northcote to be, "That Government ought to interfere as little as possible with the voluntary action of those who were managing friendly societies, that it should supply information by publishing correct tables, but that it would leave this good work, which had sprung from the people, to be carried on by the people themselves." The Act has now come into effect, and, perhaps, amongst its most valuable provisions are the following: "Once in every year every registered society is bound to submit its accounts to a proper audit, and once in every five years there is to be a valuation of the assets and liabilities of each society, and a report of the valuer is to be sent to the registrar." It is true that the Act chiefly affects those large societies, such as the Manchester Unity, with nearly half-a-million of members, and the Ancient Order of Foresters, with 3,651 lodges and 388,000 members; but that the provisions which I have adverted to will be of great benefit to smaller societies, such as exist in this county, I cannot for a moment doubt. There are several flourishing provident clubs scattered over this and the adjoining counties, and several branches of the larger societies, such as the Loyal Stour Lodge of the Independent Order of Odd Fellows, which appear to be in a healthy position, ascribed by its chairman at a recent meeting at Manningtree. There are others, again, who have recently passed through times of difficulty. There is one in my own neighbourhood, called the Aldham and United Parishes Insurance Society, with 1,600 members and £21,000 in funds, which was founded in 1836. This society, which was pronounced solvent twenty years ago by the late Mr. Finlaison, has lately submitted its affairs to a thorough investigation at the hands of two competent actuaries. Their reports pronounce the assets of the club to be deficient by £10,000—the old rates having worked badly as the members grew old, and the sickness for some years past having proved excessive. The committee lost no time in taking the only course that the rules of the Society allowed, and ordered an increase of rates for all members. They felt that every month would render the deficiency more difficult to grapple with, and that any delay on their part would be most unjustifiable. That the insuring members found much fault at first with having to increase their monthly payments, cannot be wondered at, but that not a few should prefer to leave the club, instead of assisting to place it on a sound footing under the best actuarial advice, is much to be regretted. By far the great majority, however, have been wise enough to recognise their true interests, and have accepted the new rates; and within the last few days delegates from the various parishes have met a sub-committee for the revision of the rules, and agreed upon a revised code, which will be submitted in due course to the

approval of a general meeting of insuring members. One feature of this club is, that the expenses of management are defrayed from an honorary fund. The new rates will be settled according to Government tables, and I recommend all agricultural labourers in the district to join the club, if they are not already members. There is another society, well known as the Essex Provident, whose funds were reported by Mr. Neison to be £80,000 deficient. Not that this sum (or the £10,000 deficiency in the case of the Aldham Club to which I have adverted) was actually lost or run away with by the committee, as some members appear to have thought, but the society's accumulated funds, for it to be financially sound, should be increased by at least the above amount. Great credit is due to the managers and members of this provident club for the prompt way in which they set to work to remedy this state of things; and I am informed by a gentleman who takes great interest in its welfare that by a reduction of the sick allowance 12½ per cent., by abolition of funeral payments on the death of members' wives, by reduction of the time of full-pay allowance from 26 to 18 weeks, by having a special levy for management expenses, and by a slightly higher rate of interest for the funds, they have more than provided for the declared deficiency. The question how far the State should take upon itself the function of making any provision for the objects now aimed at by friendly societies, is one of great delicacy and difficulty, say the Commissioners in their report. It is said that the State should establish a national insurance Society, managed and guaranteed by Government, and the advantages of this proposal are set forth in paragraph 845 of the above report. I do not profess to have investigated the subject sufficiently to give a very decided opinion, but it does seem to me that the objections urged by the commissioners to a State friendly society, are difficult to meet, the main argument put forward by them being, that it would be impossible for Government officials to check imposition. The Poor-law system has many points of contact with the working of friendly societies. I am one of those who think that when a member of a provident club is compelled to apply to the guardians for relief, he should meet with special consideration. We are told that out-relief will be abolished in the future, but till this is the case, I think it might be granted to a member of a club in some cases where it might be refused to others. In conclusion, I would impress upon those connected with benefit clubs, the following most important considerations: 1st, That Government tables should be used in every case; 2nd, That there should be a good committee of management, partly composed of men not immediately interested in the relief afforded; 3rd, That in no case should any sick benefit be assured after the age of 65, as it is next to impossible to distinguish between simple infirmities of age and those which arise from disease. If these points be adhered to, if, as I cannot doubt, a stimulus has been given by the recent Act to the encouragement and growth of benefit clubs; and if the employers of labour and others accord their moral and pecuniary support to the best societies, we may hope that failures may become rare in the future, that the working classes may become more independent in the highest sense of the word, and that a brighter page may be added to the history of the agricultural labourer. In conclusion, Mr. Round submitted the following resolution to the meeting: "That in the opinion of this Chamber, it is desirable that more direct encouragement should be given, in the shape of Government security, in order to induce the labouring classes in larger numbers to insure in provident societies."

Mr. P. O. PAVILLON seconded the resolution.

Mr. JOSEPH SMITH, sen., proposed, as an amendment, "That a national benefit society be established under Government authority, whereby all may make provision against old age or sickness, with the certainty of enjoying what they make provision for, thereby enabling the Poor-law to be more strictly enforced, and outdoor relief to a great extent abolished."

The amendment was supported by Mr. W. E. BEAR.

A discussion followed, in the course of which

The Rev. F. A. S. FANE said it was one thing to lead a horse to water, and another thing to make it drink, and expressed an opinion that they would never get the agricultural labourer to join a benefit society until the Poor-law, upon which he relied, was repealed.

Mr. J. CHRISTY seconded the amendment.

Colonel BRICE, M.P., said if Mr. Smith would leave out the

word "sickness" from his amendment, he might vote for it; for he was perfectly convinced, after reading the report of the Commissioners upon the subject, that it was utterly impossible that any national benefit society could be formed in this country to provide for sickness. They could not guard against imposition in sickness, and he was quite of the opinion that they could not do better than leave their benefit societies to the people themselves. Compulsory registration and set tables were advocated by some, but he believed the opinion of the country generally was totally at variance with this course. He advocated the encouragement of the labouring classes to join sound benefit clubs as one of the best means of improving upon the present state of things.

Mr. PAVILLON agreed in the main with what Col. Brise had said, and that the difficulty of establishing a national benefit society was almost insurmountable, though he did not believe it was so insurmountable as Colonel Brise thought, because he believed men could be found in each district who could prevent imposition. The truth was, they wanted something more direct in the way of registration, and, in his opinion, no benefit society should be allowed to exist which did not submit in some shape to registration. The main difficulty in persuading the labouring classes of the present day to join benefit societies lay in the fact that the Poor-law, as at present administered, tended directly against the development and encouragement of these societies; and until they could in some way make the administration of that law so unpalatable and disagreeable as to make the benefits of benefit societies more apparent, they could not hope to see any very great extension in the number of the labouring classes who would insure in benefit clubs. Among other drawbacks, Mr. Pavillon mentioned the breaking up of old clubs, by which

men after subscribing for many years had eventually to apply for relief; the impression which existed among the classes sought to be benefited that because their fathers or grandfathers contributed so much to the rates they (their descendants) had a right to "take it out," and the consequent feeling that there was no shame in coming on the rates; as most potent, and he concluded by declaring that until they could establish a better state of things he feared they should stand in the same position as at present.

Mr. AMIS HEMPSON advocated some Government supervision; but he did not believe a Government benefit club would work, in consequence of the imposition which would be practised, and the cumbrous machinery which would have to be employed in its working.

Mr. E. GARDINER spoke on the same side.

Mr. ROUND, in replying upon the discussion, bore out the remarks which had been made against the possibility of a Government benefit society, and remarked that while there were a great many people who did not think much of imposing upon their neighbours, there were a great many more who would not think anything at all of imposing upon the Government.

The amendment was then put to the meeting and carried by 9 to 7.

In accordance with the usual order of proceeding, the amendment was then put, as a substantive proposition, and was lost by seven votes to five, an apparent contradiction which may be accounted for by the fact that several members imagined that the matter was disposed of on the amendment being carried and left the room.

A vote of thanks to Mr. Round for his paper, and to the President for his occupancy of the chair, concluded the proceedings.

## THE AGRICULTURAL HOLDINGS ACT.

A meeting of the Framlingham Farmers' Club was held for the purpose of discussing the subject of the Agricultural Holdings Act, introduced by Mr. F. G. Ling, of Framlingham. Mr. F. S. Conrance occupied the chair.

Mr. LING said the Act was passed with the intention of benefiting the tenant-farmer by giving to him (what he did not before possess) some legal security or guarantee for compensating him for unexhausted improvements effected by him upon his holding. The Act was a new measure, and hitherto there had been no statutory enactment on the subject. The landlord was originally, strictly speaking, entitled under the common law to the advantage of unexhausted improvements effected by the tenant, although his rights had in some respects been considerably modified by custom, and limited by agreement. But although we had not till now an Act of Parliament on the subject, we must not suppose that the question had escaped attention or consideration in agricultural quarters. On the contrary, great interest had always been taken in it, and it had received much attention and grave consideration; and so far back as 1818, Mr. Pusey obtained a Select Committee of the House of Commons, and the result of the action which had been taken at different times was the present Act, which contained many provisions based upon the report of that Committee. In the last Parliament Messrs. Howard and Read brought in a bill, the object of which was declared in a letter written to the press by those gentlemen. The 12th clause was the cause of the rejection of the bill, and it had been omitted from the present Act, leaving the question of the freedom of contract open. He (Mr. Ling) believed that the great reason why we had not had complete security for unexhausted improvements before was the difficulty felt that any Parliamentary enactment on the subject might have the effect of warping and destroying the feeling of mutual confidence between landlords and tenants. He (Mr. Ling) could imagine there could be nothing more gratifying to a landlord or tenant than to feel that each enjoyed the confidence of the other; and such a feeling must tend as much as anything could do to ensure good farming and consequent advantage to both landlord and tenant. He, however, did not think the Act which they were now discussing would tend in any way to diminish the confidence hitherto existing, the main feature in it being that it was not a compulsory measure; it was permissive, and there was no necessity why it should affect any

contract of tenancy if parties agreed that it should not apply to their contract. He did not intend to imply that if the Act were adopted difficulties would not arise. Mr. Ling quoted extensively from the Act of Parliament, commenting especially on the provisions which affected the tenant-farmer. He pointed out that where a tenant was under its provisions he was entitled by the terms of the Act to compensation in respect to nineteen subjects, divided into three heads or classes—viz., permanent, durable, and temporary. Permanent improvements included drainage of land, erection and improvement of buildings, and laying down of permanent pasture and the like. Durable improvements included the boning and chalking of land, &c.; and temporary improvements embraced application to land of purchased artificial or other purchased manures, and consumption on the holding by cattle, sheep, and pigs of cake or other feeding stuff not produced on the farm. As regarded improvements of the first class, claim to compensation could not be made except within 20 years from the year the improvement was effected, and seven years for improvements effected in the second class, and two years for those which came under the third class. As to improvements of a permanent character, the written consent of the landlord must be obtained, and in those of a durable nature the tenant must give notice not more than 42 nor less than seven days, of his intention to execute such improvement, or where it was given after the tenant had given or received notice to quit, unless it was executed with the previous consent of the landlord. Perhaps the most important feature of the Act was, whereas six months' notice, expiring at the end of the current year of the tenancy, was required to determine the tenancy, twelve months' like notice must now be given. In conclusion, he reminded the meeting that the question for them to consider was whether they wished to come under the Act, or whether they would leave themselves under the custom of the country. He must say that in many cases they got more by the custom of the country than they would do under the Act.

Mr. ROBERT GARRARD said he had not studied the Act very closely, but from what he had heard to-night and on other occasions, he had come to the conclusion that it was a measure which did not very greatly concern the Eastern Counties, and for his own part he should most certainly advise his clients to place themselves under the old Suffolk covenant. As to farming in this part of the country under that Act of

Parliament in its entirety, it seemed to him to be altogether out of the question for some reasons, amongst them being that the farmer would make no valuation at all. He thought it extremely likely that the Act would be found useful in some parts of the country, where land was reclaimed, hills levelled, pastures made permanent, and where the Act would doubtless prove useful, inasmuch as it would encourage the tenant to spend money, but as he had said there was little need for such a measure in the Eastern Counties. Commenting upon the Act, Mr. Garrard pointed out with regard to artificial manures, that there was to be an allowance for that used in the last two years, but there was a clause which practically cut one out by specifying the roots to be grown, such as potatoes, &c. Under the Act you could only claim for the artificial manure used in the root crop for that year. The provision as to the notice to quit was, he thought, the best feature of the Act. He had always advocated a twelve-months' notice to quit, and he had often seen the harrowing effects of a six-months' notice. Taking the Act altogether, he thought there was little to be feared from it either by landlords or tenants. If they commenced under the Act say next February, unless they gave a month's notice before their valuation was made they could not claim under the Act; and if they did, it seemed to him that the valuation would be finished by about Christmas. Having had a great deal to do with valuations during many years, he must say that he was much enamoured with the old Suffolk covenants, and his belief was that nothing better could possibly exist. He never had much faith in farming under an Act of Parliament, and he felt sure that the one under consideration would not greatly interfere either with the landlords or the tenants in Suffolk.

The Rev. C. T. CORRANCE said there were one or two points of importance to be considered in connection with this Act. As Mr. Ling had stated, there was undoubtedly a growing feeling before the passing of the Act, that the tenant should be compensated for the improvements he might make in the course of his lease; and this permissive Act only gave effect to the feeling which was widely spread throughout the country, and which found vent in the customs which had been introduced into Lincolnshire and other places, and had been embodied in this Act of Parliament. There were a few things which it was necessary to remember. The Act applied at present to two cases, in the absence of notice to the contrary, and tenancy at will or yearly tenancy, but it did not apply to any other holding or undertaking except prior to the 1st February, 1876. It was very important to recollect where the Act applied and where it did not. No lease drawn up after that date would be subject to the operation of this Act unless there was a special clause in that lease exempting it, or unless tenant or landlord gave notice that they did not wish to be under its operation. He agreed with Mr. Garrard that the most important part of the bill was that having reference to the notice to quit, but some misapprehension was likely to arise. The *rev.* gentleman read a quotation bearing upon part of the Act, showing how circumstances might arise so that the landlord if he wished to get rid of a tenant would practically have to give a two-years' notice.

The PRESIDENT: That may prove by-and-by a nice little nut for the lawyers to crack.

The Rev. C. T. CORRANCE continued: They had heard the different heads under which improvements came, but in the schedule of the Act there was a very meagre list. He had no doubt that the drainage included in the durable improvements meant only tile draining, as it would not be safe for anybody to give compensation for anything but tile draining; and besides, bush draining was rather a local custom, and did not prevail extensively over other parts of the country. Tile draining was more general, and it was likely that the Act of Parliament, which applied to the whole country, would refer to a general custom rather than to a local one.

Mr. JEAFFRESON asked whether, supposing his tenancy expired two years hence, and he bush-drained this year, should he be allowed anything?

The Rev. C. T. CORRANCE: Not as a permanent improvement.

Mr. JEAFFRESON: Under what head should I be allowed then?

The Rev. C. T. CORRANCE: I suppose you would come under the custom of the country. Looking through the list of first-class improvements he did not see that many of them applied to this part of the country. Tenants in Suffolk were

not called upon to erect buildings at their own expense. The rule for obtaining first-class unexhausted improvements was a very simple one. Say that the permanent improvement cost £100, notice, of course, being first given to the landlord that he wished to effect the improvement. If the tenant left the holding in ten years, he would have ten years to count, it being a 20 years' improvement. Therefore if you divided the 100 by 20 the product was five, and then by multiplying the product by ten that gave the tenant £50 as the sum to which he was entitled for the unexhausted improvement which ten years before cost him £100. The second-class improvements only lasted for seven years, so you had only to substitute the figure seven for twenty and reckon in exactly the same way. With regard to the third-class or temporary improvement, he thought considerable difficulty might arise—here, in fact, the difficulties would be found to reside. For instance, he did not see how it was to be ascertained how much feeding stuff had been consumed upon a farm during the last two or three years of the tenant's occupation. It had been truly said that under this bill valuations would be manufactured. During the last year a large amount of artificial manure would be used, or food given to stock in order to swell the valuation. It was, however, spread over three years, so that you could not simply take the last year. Another difficulty suggested itself. Was any hay sold off the farm, and if so what was the value of the manure which such hay and straw would have made? This was a most theoretical question, and one fertile in all manner of quarels and law suits. The constructors of the Act had not apparently forgotten to make ample provisions for the legal difficulties to which the Act would certainly give rise. There was a detailed form of procedure, and there would be plenty of litigation upon this point. But there was no reason practically why litigation should arise; if the landlords and tenants were honestly to determine to come to an agreement with each other as business men, they might certainly safely come under the operation of this Act. Besides this they need not allow the whole of the Act, if they did not wish to do so, to apply to their lease. It would be sufficient if a part of it only were introduced, specifying what part should apply, and under these restrictions he thought the Act might have a very beneficial effect. All would, he thought, agree that the Act was brought forward with a *bona fide* intention, to supply a recognised grievance, and to recognise in law the principle that the tenant was entitled to some compensation for what he laid out on his land, and to encourage, therefore, good farming to the end of his lease.

Mr. W. B. KENT said, if he rightly understood Mr. Corrance, that gentleman had stated that the compensation for permanent improvements was to be on a graduated scale. It should be remembered that the improvement in the second ten years would not be so valuable as in the former ten. He should like to know whether he should be entitled to the same rate of compensation in the nineteenth year of his tenancy as in the second.

The Rev. C. T. CORRANCE said he thought the definition he had given to that part of the Act was a right one. Proportionally the tenant would be entitled to the compensation in the nineteenth year as he was in the first. As to land under the ownership of trustees, the trustees were made parties to the lease, and must therefore be made parties to any action as against the tenant; but this did not appear to be the case as against landlords or charity trustees, for the Act said in effect, "The powers that this Act confers on the landlord shall not be exercised by trustees for ecclesiastical or charitable purposes, except with the previous approval in writing of the Charity Commissioners of England and Wales."

Mr. PAUL READ said perhaps the best thing that could be said in reference to this Act was that it was capable of being amended. He hoped none present would forget that it was the first statutory Act acknowledging the tenant that had ever been passed. If farmers would only work together, they had it in their power to make the Act anything they pleased. (A voice: "And a bad job too.") Mr. Read quoted Mr. McCombie, one of the cleverest farmers in Great Britain, who said in the House that the bill gave nothing and it took nothing away, and it was altogether the most innocent measure ever introduced into Parliament. Speaking on the question of the supply of food, Mr. Read argued that in that respect we in England stood upon very critical ground, and that it was quite possible for circumstances to arise under which the people of this country would be half-starved. The

country was so situated that it was of the utmost importance to produce as much food as possible. We were in a sort of fool's paradise in regard to our food supply, which might be seriously interrupted. He contended that the Agricultural Holdings Bill should have been made compulsory, and so constructed that people could not contract themselves out of it. He must also say that a bill of this kind which did nothing to restrict the over-preservation of game was of little use.

Mr. GRAY asked whether, if a tenant thought proper to come under the Act, a written covenant or agreement would be necessary?

Mr. PRESIDENT: No agreement.

Mr. GRAY: It seems that there are many things omitted that the landlord would wish should apply. What about the cropping of the land—could I crop it as I pleased if I came under this Act?

Mr. LING: That would be ruled by the custom of the country.

The PRESIDENT then summed up the discussion, remarking that, with Mr. Read, he should like to see an Act made compulsory, but not such an Act as this. He had no wish to see anything which would disturb the arrangements of either landlords or tenants. With regard to the improvements in the first class he, as a landlord, should be sorry to have anyone come upon his land, erect buildings, plant orchards, and do a great deal of the other work specified without consent, and at the expiration of the letting to have compensation for it. This would simply be a great act of tyranny. He objected to such an elaborate Act as this one, but possibly he might have no objection to a smaller one, and he should have no objection to compulsory provisions as to the tenant's fixtures. Tradespeople in towns had allowances made for trade fixtures, and why should not agriculturists have it? There were many broad features in the Act to which he entertained no decided objection; but if they were to have an Act of 60 clauses drawn up, with a view of covering the whole ground, he thought it should be an experimental Act, applied according

to the consent of the two parties. Let them see, in the first place, what such an Act would bring forth, and if it were liked by both sides, then the Act, or something like it, should be made compulsory. One thing that would militate against its being made compulsory was the number of points which admitted of legal doubts, and all present knew what legal doubts meant, viz., that it would be necessary to consult the lawyers; and this was to be guarded against as much as possible. He thought these difficulties would afford strong temptations to landlords to place themselves out of the operation of the Act, and he would not be surprised to find that the larger portion of the landlords of England would like to see an experiment of these legal doubts—as was said in the classics on *vite persons*, *in corpore vili*. Landlords contracting out of the Act would, he thought, be wise to bring themselves within the law as nearly as could be, by taking those clauses which were plain and clear, and refusing to be bound by the doubtful clauses. If a tenant, on taking land, meant to lay out his money upon it, don't let him do it under the sanction of the Act, but let him have a lease properly drawn out, with certain clauses of the Act included, and in that lease to specify what he might and what he might not do. By adopting this plan, he would have a sound guarantee that he would get his money again when he went out of the farm.

Mr. LING replied, remarking that he thought the Act had been conceived in a wise spirit, the guarantee of which was that it had been so long in coming. It was not complete, but as had been remarked much might be done towards making it so by the power of amendment. He trusted that the mutual confidence existing between landlord and tenant would continue, and then there would be no necessity to have recourse to an Act of Parliament.

On the proposition of Mr. JEAFFERSON a hearty vote of thanks was accorded to Mr. Ling for having introduced a subject so important to the farming community, and a similar vote having been passed to the President, the proceedings terminated.

## THE AGRICULTURAL HOLDINGS ACT AS IT AFFECTS LANDOWNERS.

[From the *Solicitors' Journal*.]

Very many of our readers, in their capacity of confidential advisers to landowners, will have put to them within the next few weeks the question, What should be done about the Agricultural Holdings Act? "In the first place," the client will say, "I want to know whether I am affected by the Act. If I am, what course should I take as to excluding or admitting its operation? I can judge for myself as to the main grounds on which the measure is supposed to recommend itself to the adoption of landowners. I think it for the advantage, in the long run, both of myself and my tenants, that the latter should receive compensation on quitting for unexhausted improvements; but I am in doubt as to whether it would be well to allow the whole of the Act to come into operation as regards my tenants, or simply to adopt the provisions relating to compensation; or whether a still better course would not be to provide for this myself, instead of trusting to the Act to do it. Give me the data for forming a judgment on this question by telling me exactly what liabilities I shall incur, and what remedies I shall obtain, if I permit myself to be brought under the Act." We shall attempt to give brief and plain answers to these questions: Are you affected by the Act? That depends upon the nature of the holding, the kind of tenancy, and the time at which it commenced. Is the property let an agricultural or a pastoral holding? If it is not, or if it is less than two acres, you need not trouble yourself further; the Act does not affect you. If the holding is agricultural or pastoral, and exceeds two acres, the answer will differ according as the inquiry is put with reference to existing or future tenancies. To tenancies for fixed terms commencing before the 14th of February, 1876, the Act does not apply. To tenancies from year to year or at will existing before the 14th of February, 1876, the Act will apply unless excluded by landlord or tenant. To all tenancies commencing after that date the Act will apply unless excluded by landlord and tenant. Now comes the question, What rights and liabilities will be acquired or incurred by the landowner by simply allowing the Act to come into operation?

Let us take, first of all, tenancies from year to year, and consider the practical effect of the clauses relating to notice to quit. If the Act is not excluded, the result will be that when the landlord desires to put an end to the contract he will have to give a year's notice expiring with some year of the tenancy. That is to say, if the tenancy originally commenced at Lady-day, and the tenant has committed some act of gross mismanagement of the land between Lady-day and Midsummer, he cannot, except in case of bankruptcy or composition, be got rid of for one year and three-quarters. Practically a letting from year to year to which the Act applies will be a letting for two years certain. The relations between landlord and tenant where the former has given the latter notice to quit are not usually very friendly; nor is land generally considered the better for the tenant's management during the period which elapses between the giving of the notice and its expiration. But in the case of a half-year's notice the mischief that can be done is comparatively little. The farmer generally enters on the land either on the 2nd of February or the 25th of March, and notice has to be given with reference to these dates; hence the period covered by the notice is that during and after the harvest; the crops have been sown, the manure has been put in; in the case of grass lands the spring manure has been laid on before the tenant knows that he is to have a notice to quit. But under the Act all this will be different. From the 2nd of February or 25th of March the tenant will have warning that during the whole of the next year he must get the most he can out of the land and do the least he can for it. Landowners know how much some tenants can do in this way without rendering themselves practically liable under the covenants in their leases. The best tenant does not feel any very enthusiastic interest in his land during the last year of his tenancy. Moreover it may perhaps be found that a new temptation will be afforded to test the validity of the notice to quit. If he succeeds in establishing its invalidity, he will be safe for another two years, for the landlord cannot give a new



notice during the currency of the old one, or he will waive it, and when the old notice expires it will be too late to give one for the ensuing year. Any one familiar with the subject knows how many grounds of objection may be raised to a notice to quit. Was it given in proper time—that is, with reference to the expiration of a current year of the tenancy? That depends upon when the tenancy commenced, a question sometimes very difficult to decide—e.g., when fresh agreements at increased rents have been entered into between landlord and tenant in the course of the tenancy. Was the notice expressed with due certainty and given by the proper person? did it come to the knowledge of the tenant? was it subsequently waived by the landlord?—all these questions may be raised by the tenant when stimulated by the prospect of obtaining two years' further enjoyment of the farm, or of getting the payment which the landlord will often make rather than run the risk of that result. We may discuss hereafter the advantage to the tenant of the prolonged notice to quit: as regards the landlord, we are unable to suggest any benefit from the adoption of this provision, except that it may perhaps induce the tenant to hesitate less about expending money on his farm, inasmuch as he may think he has a prospect of a longer holding. But if proper provision is made for compensation for unexhausted improvements, will there be any ground for reluctance on the part of the tenant about expenditure on the farm? If he leaves before he has got the full benefit of that expenditure, he will be recouped the unexhausted value of the improvement, and the more he spends the less chance there will be of his being disturbed. The special rights acquired by the landlord from year to year under the Act consist of a modification of the old and just rule that a notice to quit cannot be given for a part of the demised premises. The landlord may give a valid notice to quit a part only of the holding, provided (1) the notice is given "with a view to the use of land" for certain specified purposes, and (2) "the notice to quit so states." We may have occasion hereafter to draw attention to the looseness with which the clause is drawn; we simply say here that it enables the landowner to obtain possession of portions of land on which he may want to build farm-labourers' cottages, etc., to plant trees, or to open quarries or pits, etc. But in order to do so he must make up his mind or "view," as to the use of the land, more than twelve months before he can carry out his purpose; he must be prepared to have the whole machinery of the Act as to compensation put in force against him by the tenant with reference to the piece of land taken off the farm; and, when the value of the compensation on this score has been settled, there will remain to be determined the proportionate reduction to be made in the rent (1) in respect of the land comprised in the notice to quit; (2) in respect of any depreciation of the value to the tenant of the residue of the holding caused by its withdrawal; and (3) in respect of any depreciation of the value to the tenant of the residue of the holding caused by the use to be made of the land withdrawn. And, after all, the sole benefit derivable by the landlord under this new provision—viz., that he can obtain possession of a part without having to grant a fresh lease of the remainder—may be swept away; for the tenant is entitled to give notice that he accepts the notice to quit the part of the farm "as a notice to quit the entire holding, to take effect at the expiration of the then current year of tenancy, and the notice to quit shall have effect accordingly." So that if the landlord has given a notice to quit a portion of the farm for one of the specified purposes two days before the 25th of March, 1876, so as to make sure that the notice is given in ample time to be a good and valid year's notice for the 25th of March, 1877, he may receive next day a notice from the tenant which, if the language of the clause is to be taken literally, will actually have the effect of determining the tenancy on the 25th of March, 1876—i.e. two days after the notice to quit has been given. What is the practical course a landowner who has let his farm from year to year would take at present if he wanted to obtain possession of a part of the farm for one of the purposes specified in the Act? Is it not something like this? He goes to the farmer, and says, "Jones, I want a piece of Blackacre to build some labourers' cottages upon. I don't want to disturb you, or to give you notice to quit; but I shall have to do so if we don't agree; what reduction in rent will you want if you give up the piece of land?" Jones of course haggles and protests that Blackacre is his best field, but he knows to a nicety the real value of the land to him, and how much the worth of the residue of the farm will be diminished by taking it off, and he has no temptation to stand

out for a fancy value; he is aware that if he does not come to reasonable terms he will have a half-year's notice to quit the entire farm, and upon its expiration may be subjected to competition with other bidders for the residue of the farm on the reletting. The result will usually be the settlement of the matter without difficulty, and the giving up possession of the piece of land at once. Will the process be quite so easy if the tenant can say to the landlord, "If you want the piece, you must give me notice under the Agricultural Holdings Act; and you cannot get it for at least 12, or possibly 23, months?"

THE AGRICULTURAL HOLDINGS ACT.—A large number of the representatives of the principal North of England landowners met on Thursday, Jan. 12, at the Town-hall, Preston, to confer as to the Agricultural Holdings Act. Mr. Wyatt presided. Amongst the gentlemen present were representatives of the Earl of Derby, the Duke of Devonshire, Lord Skelmersdale, the Earl of Stamford, the Earl of Bective, the Duke of Buccleuch, Sir T. H. F. Hesketh, Bart., Sir T. D. Archibald, Sir H. de Trafford, Sir H. de Houghton, Mr. W. J. Legh, M.P., Colonel Fielding, Mr. J. Foster, &c. The total land represented was close upon 300,000 acres. In the course of the proceedings Mr. Willacy remarked that, if it were practicable, it would be one of the grandest things that could possibly be for any county to have a universal agreement. It would be a manifest advantage if they could have this general basis, and would do away with private agreements.—Mr. Hall, agent to the Earl of Stamford, thought the Act was entirely of a prospective character, and he proposed in all future tenancies to have a written agreement, and probably, as time and convenience served, to have an agreement with the past tenants.—The Chairman said Clause 56 meant that there must be a written agreement.—Mr. Hall remarked that the 57th Clause said that the Act should not apply if within two months after the commencement of the Act the landlord or tenant gave notice in writing to the other to the effect that he desired the existing contract of tenancy between them to remain unaffected by the Act, and so the statute was absolutely inoperative with respect to tenancies so long as these relationships subsisted between them. If they had tenancies in which they did not want to disturb the existing arrangements, there was no occasion to do so.—The Chairman remarked that he was not of the opinion that it would be possible to get any form of lease or agreement which would do for general adoption, but he did think it would be possible to adopt a clause, with respect to unexhausted improvements, which would be universal in the district, and he thought they might also get certain clauses in regard to outgoing, &c., which might work very well generally.—Mr. Hall moved, "That a committee of twelve, with power to add one to their number from each hundred in Lancashire, be appointed to decide on the best clause with regard to unexhausted improvements, and suggest any other clause which they deem possible to be universally inserted in Lancashire agreements." With respect to outlying and unexhausted improvements, he believed a form of clause should be adopted by them which would apply to almost any farm in the county.—Mr. Pardey, representative of Mr. Legh, M.P., pointed out that, under one of the clauses of the present Act, it was competent for a tenant, having received a short notice to quit say one perch only of his land for the sake of some improvement being carried out, to accept such notice as a notice to quit the whole. This and many other points would require the attention of the committee.—Mr. Forrester, agent to Miss Farrington, thought three committees from various parts of the county would be much better than one. He was of opinion that they could not frame one set of clauses for the whole county, and the suggestions of the committee might form a basis for future legislation upon the matter. The tenant-farmers ought to be consulted in the matter.—The Chairman said they would be represented on the committee.—Mr. Pardey said there was no general custom in Lancashire, and it was time that they found one.—Mr. Hafe, agent to Lord Derby, said that the action of the committee, aided by the services of the tenant-farmers, would tend to the obtaining of some agreement that should be universally acceptable to Lancashire. What they wanted to realise was simply that which was fair between man and man.—Mr. Clare, agent to Mr. R. J. Aspinall, did not think it would be a difficult thing



to frame a scale of compensation clauses that would suit the county. They could not frame an agreement to suit the whole of the county.—Mr. Drury, agent to the Duke of Devonshire,

said the better plan would be to report upon a certain class of compensation clauses applicable to all.—After a discussion a committee was appointed.

### THE PRESERVATION OF FOOD BY FREEZING.

The following paper, on "The Preservation of Food by Freezing, and the Bearing it will have on the Pastoral and Agricultural Interests of Australia," was read by Mr. MORT, at the meeting of the Agricultural Society of New South Wales, at Sydney, on the 3rd of November last.

Your Excellency and Gentlemen,—It will be well to inform you, by way of commencement, that much of the information which I am about to lay before you may savour of a twice-told tale, but many of my friends having specially invited me to put what I said verbally, on the occasion of the meeting at Lithgow, some two months ago, into a form which would render it capable of distribution among the members of your Society, I have deemed the most appropriate way of doing that to be by accepting the invitation to read a paper before you, in which the whole of the important subject under consideration should be brought to bear. With this object in view I have not hesitated to repeat much of what I said on the occasion referred to; and if my hearers should find it tedious to listen to it, they must charge those who have asked me to commit myself to this plan with the whole of the blame. It was in the year 1836 that my friend, Mr. Augustus Morris requested me to permit a meeting to be called at my rooms, for the purpose of considering the feasibility of conveying our surplus stock to Europe in the shape of frozen meat. The meeting was called by circular, but few responded to the call, as the idea was looked upon as absurd and visionary, but to me the knowledge of what had been done in nature appeared ground-work sufficient to rest an imitation in art upon. It was at this time I was introduced to my talented friend Mr. Nicolle, who fully confirmed the views I had adopted, and I committed myself to the task, which I hope, thanks to Mr. Nicolle's genius and my own desire to succeed, is not now far from accomplishment, and that task was—*how safely, simply, and economically* to convey animal food, in a perfectly natural condition, from one country to another. Within a little more than a twelvemonth I was enabled, by Mr. Nicolle's improved method of producing cold, to experiment on a large scale with fish, flesh, and fowl, thereby laying the foundation of that confidence which has never forsaken me, that that which had till then been generally pronounced impossible was at least feasible. The machine which enabled me to do this was constructed for using ammonia, by the gasification of which the cold was produced in spaces surrounding the substance to be frozen. We worked this machine for eight months, during which period, as many present will remember, we froze every description of food in considerable quantity, and proved beyond question that the bad character which frozen food had, in theory, in England and elsewhere, was not to be justified by fact; but of this I shall say more presently. It was during the eight months, working of this machine I discovered that it wanted one of the elements which I had in the beginning set down as essential to success, and that was *safely*, for, owing to the high pressure at which we had to work in hot weather, leaks showed themselves at intervals, which, on board ship, would, in all probability, have been fatal to life, and, although Mr. Nicolle's confidence in his own powers to overcome this difficulty at sea induced him to offer to take home a cargo under that plan, I declined to accept the responsibility of allowing him to do so, and reluctantly abandoned that which, in its initiation, I look upon as the means of accomplishing my object. And here, in justice to Mr. Nicolle and myself, I think I ought to mention that the information required was only to be obtained by practical experiment, no travelled road being open to guide us, for we knew that ammonia was preservative of iron; but ammonia cold, and ammonia under heat and pressure, were different things, as the sequel proved; and, wherever there was a weak point in the iron, in process of time there was a leak, and, as an escape of ammoniacal gas, equal to the volume only which could pass through a pin hole, would, under such a pressure as must be exerted to liquefy in hot weather, in all probability be fatal to life, we started the journey anew. This time we selected air as the agent to be

employed, by the compression and subsequent release of which we hoped to obtain the cold required; and we so far perfected this invention as to induce me to accept the invitation to lay our plans before a very influential meeting of gentlemen at the Chamber of Commerce, at which the late Sir Charles Cowper presided. That meeting took place on the 4th February, 1839, and it has been owing to the assurance I then gave that I have not over and over again since been tempted to creep from under a burden which the indifferent health of Mr. Nicolle, and my own illness, coupled with the difficulty and disappointments which must ever attach to experiments in an untried region, have made most wearying and oppressive. During the whole of this period, and even to within a twelvemonth ago, information of the most depressing kind was continually appearing in the scientific journals and other public prints, which led my friends to cold-shoulder my project in such a way as to call for more philosophy than I could at all times summon, convinced though I was of the truth which lay at the bottom of the well I was endeavouring to fathom. It may not be without advantage if, in their proper place, I trouble you with a few of these extracts, as they will serve to show how utterly unreliable public statements sometimes are, and how necessary it is to examine, and to prove the truth or falsity of things; for, upon the special point to which they allude, that of the injury to the quality of meat by freezing, the opposite has been so thoroughly demonstrated, as is so well known to many now present, that contradiction is no longer needed. The air arrangement involved the waste of much precious time in the manufacture of costly machinery, and I was thankful that Mr. Nicolle's fertile brain led me to abandon it, as I did some twelve months after that meeting, for I am quite satisfied that, under the very best conditions, it must have lacked another and most important element in my requirements, namely—*economy*. The plan for which I decided to abandon the air machine was that of obtaining cold by the liquefaction of ammonia by its affinity with water, under low pressure. In this I fancied I saw the end of my trouble, and, if no better plan had offered, I should have ventured to sea under it, but on the very day that I took Mr. Nicolle over to my engineering works, to set the large machine (which we had manufactured there) a-going, the work commenced anew. The machine was in motion, and the cold was being produced, but, to my annoyance, my friend had evidently lost interest in it. He made no suggestions for improvement; he simply gazed abstractedly at it; and it was only upon my taxing him with his indifference that he coolly told me that it owed the same defect in the degree that belonged to all machines where a mechanical vacuum had to be obtained, and that by a different, a totally different, employment of the same agent, we could do away with the air pump, multiply the cold obtained enormously, and at a price which would be much below that at which it could be obtained by the piston and cylinder plan, or by any other plan; in fact, that he could theoretically obtain unit of cold for unit of heat expended, which, of course, we cannot go beyond. To rest at the point I had reached would mean that all past expenditure and labour would be thrown away, as others would be sure to discover what Mr. Nicolle had himself that day discovered. This was a blow which it required all one's courage to bear up against, and in so seemed too much for human nature; but the thought of those Chamber of Commerce representations, and the low price of wool (for at that time wool was so low that the only way to our flocks from destruction appeared to be by giving value to the carcase), determined me, and to work we went, at a model machine, upon the last-discovered plan. That model many of you saw at work at the rear of the Royal Hotel, and as it fulfilled so satisfactorily all the conditions we required of it, without further hesitation I decided upon adopting it as the base of future large operations. This brings me to the year 1872, when I gave orders for the large plant now at work in Dixon-street, and about which a few particulars may not be out of place. The principle on which the

could be obtained, as will be inferred from what I have previously stated, is that of liquefaction of ammoniacal gas, by its affinity with water, under low pressure—using a strong solution instead of, as in our first ammonia machine, and as at the Ice Works, at Darlington, at present, the absolute liquor of ammonia—the vacuum necessary for the evaporation, whereby the heat is withdrawn, being produced by a chemical, instead of a mechanical process, as was the case in the machine which suggested the improvement. There are two machines in Dixon-street—in need, everything is in duplicate, not excepting the engines—each capable of giving cold equivalent to fifteen tons of ice in the twenty-four hours. The power employed to work the pumps, air exchangers, &c., is about four or five horses. The size of the freezing room is 80 x 70, and the cold room above it is the same. These rooms are cooled by the circulation of chloride of calcium through the freezing boxes connected with the machine, and then through four-inch sheet-iron pipes, placed under the ceilings of the rooms. These rooms consist of four walls, one within the other, having air spaces between, the two centre ones being filled with non-conductors, forming, altogether, a wall four feet six inches thick. In the upper, or cold room, there are the troughs for ice-making. The premises are connected by rail with the killing established at Lithgow, and the meat is brought down in specially constructed cars. In both establishments all labour-saving appliances are employed, whereby the killing power is largely enhanced in the one, and the manipulating power in the other. Killing at the rate of 250 cattle and 1,500 sheep a day can be easily carried on with present appliances, but the freezing power at our command is not, of course, nearly equal to such a supply, as I shall have occasion to show hereafter. Before dismissing the history of our inventions, I may state that whilst engaged in the erection of the plant, what we now term the board-ship machine suggested itself to Mr. Nicolle. This machine is based on a plan similar to that of our household machine, the principle of which is to obtain the extreme reduction of temperature possible by the use of frigorific salts, by utilising the waste cold in one charge to reduce the temperature of the next. This plan is not one that could be availed of with any advantage when quantity of cold is an object, as in the first freezing of a cargo of meat, but while it is only required to overcome the daily infiltration of the heat which may find its way into the frozen chamber on board-ship—in other words to support the cold therein—it is equal to all requirements, and as it is very simple and involves no special machinery, it is well calculated for the purposes to which we have assigned it. It has not taken long to give you the outline of the history of my travels in search of the agent required to accomplish the object with which I set out; but believe me, the road has been a weary one, for invention is a plant of slow growth. It is first the blade and then the ear, and in process of time may come the full corn in the ear; but in invention as in other growth there sometimes comes a frost which kills the root of your plant just as you think you are about to harvest your grain, and you have to go over your ground again and sow afresh. It is well perhaps that it has been so arranged, for if we could at one bound leap out of darkness into light, what disorder might not arise! Nay, it is doubtful if such a condition would not be antagonistic to all progress, for if the invention of to-morrow could displace the process of to-day, I question if we should not, from very fear of our enterprises being overturned, cease to enter upon them at all, and thus we should become so conservative that our march would be retrograde instead of forward. On reflection, I think we must all admit that it has been ordered wisely from the beginning, for as it was then even so it is now—there is a fossil period as well as a transition one, and the time occupied in attaining to the perfect development it would seem must necessarily be more or less tedious. All this I say by way of apology for the long delay which has taken place since we first broke ground, for I cannot but feel ashamed, in spite of all that can be said to justify the delay, that lookers-on have had much reason for doubting whether eventual success would ever be accomplished or not. My earnest determination is to carry it to that end, and if the means be within my reach, and health be spared Mr. Nicolle and myself, I have not the smallest hesitation in saying that this time next year will see all that has been aimed at an established fact. Having said so much in connection with the history of the work in which I have been engaged, I now come to that point which a good many of our housekeepers are anxious about, namely, the necessity of

exporting meat at all, considering how dearly the Colonial consumer has had to pay for it for some years past. In speaking to this important matter, I trust I may be pardoned by our good premier, Mr. Robertson, if, in the course of my remarks, I refer to the position under which our meat producing pastures are held, as I feel I may do so without fear of offence to the farmer of the Land Act, or his colleagues, as those gentlemen we all know were foremost in meeting the requirements of the agriculturists, and, we may be quite sure, will not be behind in devising means by which our production of fresh meat may be indefinitely increased when the power to transport it is provided. But before speaking particularly to that point, I will refer to our present position in regard to the momentous question of meat supply under existing conditions. The Government returns are so incomprehensible that it is necessary to take a period of at least seven years to arrive at anything like a fair estimate of progress, so I have taken the last seven shown in the returns, that is from 1867 to 1874. The population of the four Colonies—of New South Wales, Victoria, South Australia, and Queensland—has increased during that period from 1,371,900 to 1,790,555, or, in round numbers, one-third. The cattle during the same period have increased from 3,441,573 to 5,648,709, whilst the sheep in the like time have gone up from 36,555,667 to 47,824,299, the addition to the numbers of the former being considerably more than one-half, and to the latter a little less than a third. This increase has been made in spite of the fearful losses by drought, plague, and worm disease, which many will painfully remember played a sad havoc amongst our flocks and herds during the years 1868 to 1870. During a part of this septenary the slaughter for tinned meats, and also for tallow, caused no inconsiderable inroad into their numbers, whilst in the beginning of this period large numbers of sheep were withheld from breeding owing to the exceedingly low price of wool then ruling. To arrive at a really correct position as to numbers, we must add the increase in the Colonies for the years 1874 and 1875, which will only show in the returns for 1875 and 1876, for it must be understood that the returns for any year mean the numbers of the year immediately preceding—at least, so I am given to understand. But without going into problematical numbers, I will take those shown in the statistical summaries of the different Colonies for 1874, which are as follows—viz.:

	Population.	Cattle.	Sheep.
New South Wales .....	584,278	2,856,699	22,872,882
Victoria .....	808,437	956,668	11,225,206
South Australia .....	204,623	185,342	6,120,211
Queensland .....	163,517	1,650,000	7,606,000
	1,760,855	5,648,709	47,824,299

The increase in cattle in Queensland for the past year has been over 300,000, whilst the increase of sheep in New South Wales during the last fourteen years has been over 17,000,000, the numbers having advanced from 5,615,854 to 22,872,882, or, in other words, they have quadrupled themselves in spite of consumption, boiling down, and disease. With these figures before us, we may form some estimate of the annual excess of increase over consumption, and therefore make a tolerably correct deduction as to the surplus which will be available for export. My estimate of consumption is that each man, woman, and child in the Colonies will, including a liberal allowance for waste, consume 1 lb. per head per day, or say 350 lbs. per annum, which quantity, multiplied by the population, will give 616,299,250 lbs. As I have shown, the cattle of the four Colonies consist of 5,648,709, and the sheep of 47,824,299. Take one-fifth as the annual increase, and we have 1,129,742 cattle and 9,564,859 sheep. If we multiply the former by 650—the reasonable average weight of a beast—we have 734,332,300 lbs.; whilst the latter, at 50 lbs. each, will give 478,242,950 lbs., making together 1,212,575,250 lbs.; from which deduct the requirements for the population—say, 616,299,250 lbs., and we have as a surplus for export 596,276,000 lbs., or nearly 300,000 tons! But whilst these figures show how large is the excess of our production of animal food over our own wants, how insignificant that excess is in view of the wants of Europe, the United Kingdom having stomach for not only the whole surplus, but, if consumption were calculated on the basis of our own consumption—namely, 350 pounds per head per annum for forty millions of people,

surplus would have to be multiplied by twenty times to meet the English demand alone. Before dismissing this part of my subject, I have to refer to the causes which have led to the high prices of meat during the past year or two, and the fears entertained by many in respect of the retail prices of meat being unduly raised in the colony if large shipments are made to other countries. The causes which have led to the high prices of fat stock during the last few years are easily explained: If any one will turn their recollections back to the years 1868, 1869, and 1870, they will remember that pleuro-taged with unwonted violence, and in some parts of the colony and throughout Queensland a very serious drought prevailed. The losses during those years were enormous—more than many chose to own—and it has really been rather subject for surprise than otherwise that fat stock has not been higher during the years which those years stood to provide for—viz., 1873, 1874, 1875. After 1870 the seasons changed, and every year up to the present has yielded an increase such as the colonies have never known before—for the breeding has been upon a broad basis as to numbers, and stimulated also by high prices for fat stock of both kinds. Another cause of shortcomings of fat sheep to market has been the high price of wool, which has tempted many to hold them back for the fleece. The stocking of new country with cattle has also operated in favour of high prices for females, which have been more or less reflected upon the males. Our pastures are, as a rule, however, now stocked to danger-point, and “pastures new” are not to be had as hitherto; so that if seasons are at all propitious, a larger amount of fat stock must be got rid of in the future than has ever had to be dealt with since the colony was known. And in what way is this stock to be got rid of? I fear largely by boiling and tinning—the latter, as is well understood now, being an adjunct only to the former—for the powers of my establishment, even under the realisation of my fullest expectations, will not be equal to more than a few thousand tons a year, or about one-hundredth part of what I have estimated as surplus. Of course these works could be indefinitely extended; but this will take time, and I therefore, in my opinion, the “pot” will, for a considerable period, be the destination of a large amount of our surplus stock, always provided we have good seasons. As I have stated, I am aware that there are many of the townsfolk who look upon my process as likely to lead to scarcity and high prices; but I think they may, with far more reason, look in the direction of drought for the realisation of their fears. Any plan which will take off the annual increase of the stations at a profitable rate will lessen the temptation to overstock, and, in my opinion, tend to secure a good average price for meat, rather than an extravagant one. But to those who dread famine-prices in the colony, as the result of my operations, I would say, for their comfort, that the moment the rates of stock go up beyond a very reasonable price, other countries will furnish the supply which it may now fall to us to provide. With the addition which will have to be added for exportation charges and profit, the wholesale prices of fresh meat must advance considerably in England before prices can be materially affected in the colony; for even now the public institutions at home are supplied at sixpence a pound, although “friction,” as *The Times* calls it, which has to be added in its passage from the wholesale department to the private consumer, is so enormous as to more than double that price. Of course prices will equalise, as has been the case in the articles of milk, butter, poultry, &c., since railways have come into existence; but I have yet to learn that even should an advance take place in the value of meat, unless arising from adverse causes, it will tend to our injury; for I have ever noticed that with the prosperity of the pastoral interests every one prospers, excepting, perhaps, those only who live on fixed incomes; and of course the wage-earning classes are not included in them. That this vast continent is destined to become one of the great sources of supply for England and other parts of Europe, I have not in my own mind the smallest doubt; but to become that source, I am equally confident that great changes must take place in reference to the occupation of our pastures, so that the holders thereof may have every inducement to increase their capabilities, and to husband their powers to the utmost, instead of, as is the case at present, taking all they can out of them at as small a cost as possible without reference to the injury done to them—knowing, as the settlers do full well, that every improvement they make, is, as a rule, a snare and a pitfall; or, in other words, a temptation to

outsiders to sit down upon that very portion of their run which their improvements had been made to utilize. How the country has been murdered by overfeeding let the now many indifferent portions of it which were once renowned for their fattening properties speak. The “good bite” which ought to be, and is the prevailing characteristic of every properly managed feeding ground, is lost sight of, and the harvest without seed time is as confidently expected as in other countries it is expected with. This is mainly owing to a desire to get all that is to be got out of the land as quickly as may be—the sure result of a short and uncut tenure; and the consequence is, the natural grasses are destroyed and weeds take their place, thus becoming worm-producers instead of fat-makers; and where plenty and profit reigned in the beginning, loss and insolvency appear in the end. The wholesale cutting down of forest is being largely carried on in this country in the form of ring-barking—an excellent thing in its way, unquestionably; but where carried out indiscriminately, it is ruinous. Shade in summer is as essential to the well being of stock as shelter in winter, and in some places I have passed by, not even an ornamental tree has been spared, and the cattle have had to content themselves with the little shelter afforded by a two-rail fence. Having said so much in respect of the supply and demand for sheep and cattle, I need not, I am sure, make any excuses to a society like yours for calling its attention to the question of small breeds of cattle as against large, as the same bears directly upon the sort of meat to export. In doing so, I feel that I ought to place my remarks before you with much deference, as there are so many of my fellow colonists who are engaged in breeding large stock, and who may be presumed to know much better than I do which description is the most profitable, that to do what I am about to do would appear to savour of presumption. From the charge of presumption however, I shelter myself by the following quotation from the letter of a colonist on a visit to the Highlands of Scotland, to a friend out here, and which appeared in one of the public prints some time ago. It is as follows: “In another part of the estate, where rather more timber had been spared, my host pointed out a small herd of West Highlanders, of which he was evidently proud. These black and dun shaggy cockhorned, rather fierce-looking geenty, would have been looked upon with small favour by Mr. Bean-on-Beanstalk, if he had fallen across them, while out on the run in Saltbushland, while the sight of the somewhat aggressive patriarch of the herd, as that individual gave a short bellow, and advanced menacingly, would have caused him to flint, or to call aloud for his rifle. Black is a colour which I am afraid an Australian stockowner will never take kindly to as an external covering for any choice type of imported stock. Our prejudices are, in that matter, strong and indelible. Nevertheless, the West Highlanders are very paying stock. They fat well, are very hardy and easy to keep, and the quality of their meat is so unquestionably superior to that of the larger and coarser breeds—Shorthorns and others—that it fetches two pence and three pence per pound more in the London and leading English markets.” Accepting the pertinent fact above alluded to, I venture to other reasons for advocating the adoption of a smaller race of cattle for our Australian pastures. I am sure you will be prepared to admit that without using the quotation profanely “all flesh is grass,” or in other words, that beef and mutton is only grass converted into flesh. This admitted, the only objection to the smaller breed, to my mind, is, that increased numbers may involve a trifle more cost in looking after, branding up, &c.; but this is as nothing in comparison with the advantages which appear to me to show on the other side: 1st. The small beast damages his pasture less in wet weather, owing to his lightness and activity, than the larger one, and when hard times come he is the last to bog or lose his condition, the heavy beast having his heavier carcass to support, whilst less able to go in search of that support, and less able to get out of the mire when in it than his more active fellow. 2nd. As a milker the small cow will give a larger result for food eaten than the big one, the former having less carcass to support, and therefore able to appropriate more of the food eaten for milk. In addition to this the small cow is much more easily handled in the stalls than the larger one. 3rd. The small bullock is a better traveller in the team, more active and more capable of picking up a living on the roads; and as ten bullocks are as easily driven as eight, there is no disadvantage in using the larger number. 4th. The small animal fattens quicker than the larger one, and

when fat carries himself to market better, and when there gives a larger money return for the grass he has eaten than the large beast. 5th. The climate is adverse to large breeds, as may be illustrated by the reduced size of the offspring of wild cattle in the colony. But the great point is in regard to the value of the animal as beef for the European market; for, as the expense of carrying a pound of beef to market is the same on board ship whether it be worth threepence or sixpence, it is evident that the more valuable description will always command a correspondingly higher price at the place of shipment. It will doubtless occur to many of you, that large cattle are bred in England, but there the conditions are different. There they grow a beast that will give size at an early age, and when fat the railway car comes to the stall for him, but not so in Australia. My own experience has shown me that the "Kylie" cattle, imported by the late Mr. Hugh Wallace, are splendid milkers, easily fattened even on poor grasses, and furnish most delicious meat. They are like the Devons, prone to be wild if not cared for, but are easily managed in paddocks. It is gratifying to see how much attention is being now given to the Devon breed. It will be interesting to have the experience of growers upon them, as they ought now to be able to furnish the Society with a comparative statement as to their advantages or otherwise over the Saorthorn. Of course the Devon must not be looked to for milk. The remark as to frozen meat being less nourishing than meat which has not been frozen, is at once answered by the thawing in water, which causes the juices of the meat to exchange with the water, and *vice versa*, according to the well-known law of exosmosis and endosmosis. The necessity of thawing in water is, owing to progress having been permitted by the rigidity of the meat not having been continuous, which latter was well illustrated in the salmon which I had been kept in ice on board the "Nebraska," and which was not permitted even to cross the deck, but was placed in the boiling water at the door of the ice-room; and more notably, in the cargo taken to Buenos Ayres by M. Teller, and kept only at 32 degrees, rigidity being avoided, and which caused the meat to taint the moment it was exposed to the warm temperature of the latitude where it was opened. If meat be properly bled, and properly breathed, and when cool placed in the freezing room, and there kept frozen, I pledge myself that it will keep as much longer than fresh-killed meat which has not been frozen as it takes time to thaw it. That frozen fish, flesh, and fowl, thawed in the open air, will keep for days after it has been taken out of the cold, can be attested by numbers of Sydney residents; and if any one present doubts the fact, let him send a piece of meat to the Dixon-street works to be frozen, and test the question for himself. The manufacture of wine in a country every inch of which will grow the vine, is a subject so intimately connected with the production of artificial cold, that I cannot close this paper without a passing reference to it. When it shall be in the power of a vigorous man to control his fermentations by cold, he will not only be enabled to produce an absolute wine, but he will have the further power of ensuring a uniform make, and, when made, of killing the germ of ferment, thus giving it condition to travel, and without damage to its bouquet. I long for the day when the command of cheap cold shall be within the reach of our wine makers, for then will an industry be provided for the sons of Australia which shall not only tend to wealth and advancement, but do more towards the destruction of that monster evil, drunkenness, than could even a Father Mathew himself, though he were backed up by all the temperance societies in the world. There are several subjects which, if time had permitted, I should like to have referred to, amongst which is the mode proposed for the shipment of meat; the desirableness of making the vessels which shall take our meat home a means of bringing out population at a cheap rate; the various uses to which cold can be applied scientifically and socially, and a host of other things in connection with the subject of artificial cold, but I fear already I have more than wearied you; and, as Mr. Nicolle has something to tell you after I am done, I shall simply say a word or two by way of conclusion, and so end my long dissertation. From the commencement of our undertaking to the present hour we have been thoroughly imbued with the consciousness that there was no work in the world more big with importance to the social interests of mankind than this in which we have been engaged. Its aim and object may be summed up in few words—"There shall be no more waste." That is the sentiment what has kept us

nerved up to the battle we have been fighting, which has supported us in following up to the end the truth we saw in the beginning, and which will, I trust, give us power to go on until we have reached that point beyond which "the force of numbers will no farther go." We knew from the hour of our first experiments that the truth was at the bottom of the well, but we had no idea the well was so deep. I am now satisfied that, even if I should not be spared to see the first cargo landed in Europe, enough has been done to ensure its being accomplished by some one, and that before very long, for the difficulties are not on board ship, but on the shore. It is no easy task to freeze 500 tons of meat, containing, as it does, 375 tons of water; but to maintain the cold in that quantity of meat in a well-protected chamber is easy enough. Yes, gentlemen, I now feel that the time is not far distant when the various portions of the earth will each give forth their products for the use of each and of all; that the over-abundance of one country will make up for the deficiency of another; the superabundance of the year of plenty serving for the scant harvest of its successor; for cold arrests all change. Science has drawn aside the veil, and the plan stands revealed. Faraday's magic wand gave the key note, and invention has done the rest. Climate, seasons, plenty, scarcity, distance, will all shake hands, and out of the comingling will come enough for all; for "the earth is the Lord's and the fulness thereof," and it certainly is within the compass of man to ensure that all His people shall be partakers of that fulness. God provides enough and to spare for every creature He sends into the world; but the conditions are often not in accord. Where the food is, the people are not; and where the people are, the food is not. It is, however, as I have just stated, within the power of man to adjust these things; and I hope you will all join me in believing that the first great step toward the accomplishment of that end has its commencement in what has been done in New South Wales—a colony whose proudest boast it is to belong to that old country which we must all most fervently hope will be as large a partaker of the benefits which we trust will result from our labours as we hope to be ourselves. It is possible that I have left out many points in my paper, upon which some of those present may wish to be informed; if so, I have only to express my hope that members will not hesitate to ask questions in reference thereto, as I am most anxious that all existing doubts may be made known, and, if possible, set at rest. Thanking your Excellency, and all present for the patient hearing you have given me, I have much pleasure in introducing my talented coadjutor, Mr. E. D. Nicolle, who, upon my special entreaty, has consented to place his more scientific information upon the matter before you, at your disposition.

Mr. NICOLLE: Your Excellency and Gentlemen,—One of our old philosophers said, "There is nothing new under the sun." No doubt he spoke the truth, as, up to the present time, we have not discovered anything really new, but, rather, have scientifically applied old things to our present wants. I need not tell you that even steam, now the indispensable help of man, was not invented by any efforts of man's ingenuity, the elements surrounding us proving the contrary. The great astronomical discoveries made during the past centuries have no significance as to the discovery of any new things, for we only now begin to understand the old laws which have governed the universe for unknown ages. Chemistry, with its amazing wonders, also reveals to us nothing new. Geology, that old book, in opening its pages, presents to us this great fact; therefore, as men, we only apply old elements, in obedience to fixed laws, which we strive to discover and to understand, and if our application of these laws is true, we succeed—if false, we fail. The subject I am about to enter upon briefly, is not a new one, either; nor is the agent we employ to effect our purpose new. I refer to the preservation of food by regulated temperature, the importance of which will be felt more and more as the population of the world increases. That the human family is increasing in number, is an undeniable fact; and what resources have we in Europe at command to meet the increasing demand for food? The cultivated land there is well occupied, for agriculture, assisted by science and engineering, has reached a high rank in the scale of modern improvements, both as regards economy and increase of returns; but, like everything else, it has its own limits, and, therefore, we cannot expect much more from it to keep up the necessary balance to supply human food. But, although this is the case in other countries densely populated, it is not the

case with us here, but quite the reverse. We have a large territory, capable of producing immensely, owing to its highly favoured and genial climate. Science and engineering, as regards production with us, are not yet wanted, for we have space, which answers instead. That we can and will produce much more than we require, is not a mere theory, but a plain fact. But now comes the great question, if we employ our land to produce more than we require, how can we dispose of our produce? The distance that separates us from a sure market is not one of few days, but of several months, and how are we to send our produce in a saleable condition, to meet those distant requirements, and at a cost sufficiently remunerative to justify and support such commercial enterprise? Nor must we disguise the fact that, with regard to human food, there is a great prejudice, and, unless pressed by the pangs of hunger, people object to anything either in appearance or taste different to what they have been accustomed to consume. Add to this the fact that the journey to those markets can only be performed by sea, and we have the problem before us. To accomplish a safe transport to the antipodes, many chemical processes for the preservation of perishable food have been tried, particularly of late years, all claiming simplicity, but none of them seem to have, as yet, fully succeeded, nor is it likely that the introduction of chemical antiseptics will ever be received favourably. Cooked preserved meats, and salt meats, find a ready market, and are useful, but these applications are limited, and, although valuable, they are only substitutes for the real thing. Desiccated meat, or *charqui*, is tasteless and objectionable. All these modes, to ensure safe preservation, require heavy doses, either of chemicals, action of heat, or desiccation, therefore preservation is bought at a cost of quality. If preservation of food only meant preservation from decay, nearly all the processes above named would accomplish that purpose, but we require something else besides preservation. It is necessary that the process employed shall not in any way add to, abstract, or change any of the component parts of food which are by nature so well balanced for the great purposes of digestion and assimilation in the human laboratory as to make the addition of any substance dangerous, to say the least, and likely to interfere with the proper functions of the stomach. This is easily proved by the continued use of salt meat. In desiccated meat, as, indeed, is the case in most processes, the essential oils, such as eraticine and creatinine, are of so delicate a nature as to be easily destroyed, by the destruction of which the meat is rendered tasteless, and the proper balance disturbed. As to the introduction of chemicals into the process of preserving meat, nothing can be said in its favour; for who can assert, innocent as these chemicals may appear to be, when introduced into the system, what their action, re-action, and general uncertainty may result in? From this point of view, this process remains a problem, which the palate will care little about solving, for, at best, food so preserved is distasteful. Having thus reviewed a few of the leading processes for preserving meat and perishable food, and expressed an opinion thereupon, I must now touch upon what is called our process, but which, in fact, is no process of ours, but Nature's own process, as I have tried to prepare you for in my preface, and therefore we need not be ashamed of it, as we only profess to carry out what Nature has taught us. In approaching the subject of preservation of food by cold, and attempting to explain its theory, I feel conscious of my inability to do justice to it, as little is known of this most mysterious and wonderful agent, which at one time is called heat, and at another cold—we only know it by its effects, and even a proper name has not yet been given to it. It is called freezing, cooling, refrigerating; but these names can only be applied to one branch of its innumerable duties, and, to judge and appreciate its power, it will be well to try to define it by a more appropriate name. What should we call it—"heat"? No, that would not do—that would be a paradox, for by heat, although preserved, meat would be cooked. Let us call it temperature—that is vague enough, but yet it is quite in accordance with the instrument that measures its degrees; for what is the beginning of a scale of a thermometer—is it zero? and, if it is zero, what zero is it? But go at once to the end, and take the air thermometer, with its absolute zero of 460 degrees below the zero of Fahrenheit. Is this the beginning of the scale, and are we to infer that, below that, there is no heat? I think not. If we follow thermometry upwards it will introduce us, before it returns from the scene, to its friend, pyrometry and that approxi-

mate instrument, in acknowledging its inability to measure our agent, leaves us in the same ignorance as thermometry left us—at absolute zero. We have consulted the diamond, which requires the highest temperature of any known substance to consume it; but because we have consumed the diamond are we therefore to infer that we have reached the maximum of height in the ascending scale? We cannot say we have, and are perforce compelled to acknowledge that the same want of power which meets us in our endeavour to trace the beginning of temperature meets us in endeavouring to trace its end. We have no means of knowing its sources, and cannot go to the fountain-head, nor can we complete the circle; still, there is enough work for us in applying properly the few degrees we can measure, and I can only say that in this is a large field wherein there is room for many labourers. Having so far entered upon the nomenclature of our agent, and having accepted temperature as a name, we can now investigate the performance of this wonderful agent in its various forms. I will only mention a few, as knowledge, time, and paper would fail me to enter upon the subject at large; but from the few facts which I purpose relating we shall be able to judge whether we are trusting in vain in the power we are employing as our preservative agent. I will first take water at its ordinary temperature, and withdraw a degree after degree of temperature from it, until it reaches 32 deg. Fahrenheit. No change now takes place in the thermometer, although I have abstracted temperature from it, but the water begins to assume the solid state. If I continue to extract heat sufficiently, the mass will solidify, and the thermometer—which during the process of solidifying was unable to record what was going on, and stood still—begins again to register the temperature of the ice, which is now reduced one degree for every degree of temperature I extract. Let the process go on until we have attained the lowest degree our present appliances will afford, and no other change will take place. Keep this ice for any period, and then let the source of heat be restored, it will pass through all its stages, until it returns to its former state, when it will be found to possess the same elements and weight as before. If I now proceed to add temperature to the same water until I reach 212 deg. Fahrenheit, at that point the thermometer will again remain stationary, as it did at 32 deg. Fahrenheit, the addition of temperature, which is being employed to convert the water into steam, assuming the latent form as the abstraction thereof did in making the water solid at 32 deg. During the time that the abstraction and addition of this latent temperature was taking place, thermometry being powerless, we were in the hands of calorimetry—that most accurate friend of thermometry—and, through our acquaintance with him, we were enabled to measure quantity, instead of intensity; but had we not met with that important friend, we must have entirely lost the whereabouts of our agent. Thus you will see that by controlling the invisible agent we have caused the water to pass through three different states—namely, solid, liquid, and gaseous. If, instead of water, we take nut or wort and reduce its temperature to a little below 32 deg. Fahrenheit, we may keep it for an indefinite period without the slightest change; but if we add temperature, fermentation will set in gradually and change the substance. Fermentation will increase as rapidly as we are adding temperature, until we reach 90 deg. Fahrenheit, when it seems to have arrived at its most favourable condition, producing what is termed tumultuous fermentation. If we now proceed to extract temperature from it, the effect will be immediate in retarding fermentation, which will entirely cease if we return to our former temperature of 32 deg. I must now return to the preservation of perishable food by the abstraction of temperature, and illustrate the same by several facts, which will show that this mode of preserving food is, of all, the most natural, as during its action it neither adds, abstracts, nor changes any of the component parts. I will begin by the temporary preservation obtained by cool air. This process is as well understood, as it is often employed when Nature favours us with the power of employing it; but, having no control over the agent, we cannot rely upon it; besides which, as the summer months advance, in a semi-tropical climate like ours, its natural application becomes impossible. But this is not the case if we apply this natural agent produced by an artificial mode, as then we have absolute control, and can regulate its action according to our purpose. The limits of preservation above 32 deg. Fah. are in ratio to the abstraction of temperature; but at 32 deg. Fah., although

the rigidity of the particles has not taken place, meat has, at that temperature, been kept as long as eight months without showing any sign of putridity. During the first two months the meat acquired a fatty taste, which it maintained to the end of the experiment; but although a change in the taste had taken place, the germs of fermentation, such as *Mycoderma cerevisia*, had remained perfectly inert; in other words, there had been no fermentation. Notwithstanding what I have stated in relation to meat being preserved sweet at 32 deg. Fah., I must remark that a change had, in reality, taken place, and although the meat was good, the true balance had lost its equilibrium. This may justly be considered as a most satisfactory experiment of M. Tellier, showing the power of our agent even when employed mildly. But, if absolute preservation is wanted, we have it at command, for we have only to retreat behind the gate of 32 deg. Fah., and bring our perishable food under the protection of that temperature to make one day as a thousand years. Below 32 deg. Fah. nature is at rest; at that point our formidable agent has gained the victory over all its enemies, for rigidity of particle has taken place, and substances when released from that condition will return you after any period, however indefinite, atom for atom, in the same state as when entrusted to the custody of its icy gaoler. It has been said that rigidity by freezing bursts the tissues of the meat, by the expansion of the fluid they contain, during the passage from the liquid to the solid state; but this opinion has no true foundation, as will easily be proved if we turn to the pages of natural history at the class of Ichthyology. There we shall find that even animal life, when under the severe influence of our agent—that is to say, in the state of rigidity—to wit, fishes frozen and embedded in solid ice, which have been restored to life on the gradual melting of the ice, which would have been impossible had the tissues been ruptured, as in that case life must have ceased. Again, take a piece of tough meat and freeze it to the lowest temperature you can obtain, and afterwards thaw it, and you will perceive it as tough as before. Had the tissues been injured, the meat would have acquired a more tender quality, but this is not the case; therefore we have an undeniable proof, by these experiments, that no change whatever takes place even under the most delicate trial. It is commonly thought that when meat has been frozen it is necessary to cook it immediately after it is thawed, as it is then in imminent danger of rapid decay. This may be the case in cold climates, where the natural temperature of the atmosphere freezes the pores of the meat soon after the animal is killed, preventing the escape of its vapours while warm, which may probably produce this effect. But with reference to the artificial process in our climate, no such effect takes place, but on the contrary. Meat frozen will keep longer than meat unfrozen, and that according to the number of degrees of temperature it is below that of the unfrozen meat. I will now conclude these few notes by adding that the time is not far distant when the preservation of perishable food for supplying large cities will be placed under the care of this simple agent, and also when the exportation of fresh meat in its natural state to the antipodes will be an accomplished fact; for then, and only then, will waste cease. I have no doubt, also, that, by the proper application of this agent in regulating the fermentation during the process of wine and beer-making, the result must prove highly successful, as without the full control of temperature during fermentation it is a difficult task to achieve. As my friend Mr. Mort has given you the history of our labours, trials, and disappointments during these past years, I need only say that the success we have so far attained, and the prospect of fulfilling our promises, will make the remaining part of my labour an agreeable one. I cannot bring this subject to a close without expressing my very sincere esteem and admiration for Mr. Mort. Few men have toiled together and passed through such a labyrinth of difficulties as we have during eight years. Had it not been for his liberality, energetic enterprise, and love of progress, we should not have reached our present stage of advancement; but it is gratifying that Science sometimes finds her disciples amongst such noble minds who willingly sacrifice pleasure, rest, and even fortune for her cause. And now, gentlemen, allow me to thank you for the kind indulgence and attention with which you have listened to me during the reading of these notes.—*Journal of the Agricultural Society of New South Wales*

**SOUTH DURIAM AND NORTH YORKSHIRE CHAMBER OF AGRICULTURE.**—On January 19th a

meeting of this Chamber was held at the Central Buildings, Durlington, Mr. Backhouse, M.P., President of the Chamber, presiding. The subject of Local Taxation was introduced, and it was resolved to adjourn its discussion till the annual meeting. The following resolutions, proposed by Mr. Rowlandson and seconded by Mr. Coates, were carried: "1. That, with reference to the Contagious Diseases Animals Act, this Chamber highly approves of the manly, straightforward course of Mr. C. S. Read, and thinks he deserves the unanimous support of all tenant-farmers. 2. That the regulations of the Privy Council having signally failed in their object of preventing the spread of the foot-and-mouth disease and pleuropneumonia, this Chamber wishes to call the attention of the Government to the traffic in Irish cattle, and hopes that it will place Irish cattle on the same footing as other imported cattle, especially paying attention to the cleansing of railway trucks and ships, and that it will also give more power to the local authorities, requesting them at the same time to issue similar restrictions in any particular district." The resolutions were agreed to after a very short discussion, and the Chamber adjourned.

**THE YORKSHIRE AGRICULTURAL SOCIETY.**—The quarterly meeting of the Council of the Yorkshire Agricultural Society was held in the Council-room, Blake-street, York, on Jan. 12, Lord Auckland presiding, and 22 members, being present. The secretary reported that the members' ledger corrected to the 15th inst., showed the Society to consist of 67 life members and 503 annual subscribers, only 24 of whom were in arrear. The finance committee met in the morning and paid all demands against the Society for the past year, and the cheques drawn that day, when presented and paid by the treasurers, would leave a balance in favour of the Society of £525. The value of the Society's plant had by various additions increased during the year, and now stood at £408 5s., being £81 12s. in excess of the valuation at the end of 1874. The list of prizes to be offered at the show to be held at Skipton next August was then agreed upon, the total amount being as follows: For cattle £475, for horses £938, for sheep £335, for pigs £113, for shoeing smiths £13; total £1,800, of which sum £400 is contributed by the local committee of Skipton. Mr. Fairley, the Society's chemist, read his annual report, which will shortly be published amongst the proceedings of the Society of 1875.

**GOVERNMENT AND THE FARMERS.**—The London correspondent of *The Manchester Guardian* writes: "Rebellion continues to spread in the ranks of the tenant-farmers. If the resolution passed by the Nottinghamshire Chamber of Agriculture, approving of Mr. Clare Read's withdrawal from the Government, were not significant enough on this point, there is no mistaking the cheers which greeted the remarks of the Duke of St. Alban's in presiding at the subsequent banquet of the Society. His grace told his hearers that they must look to their own exertions, and rely on their own energies in providing the machinery which should effectually represent their wishes before Parliament. The 'agriculturalists' present, to whom he speedily addressed this advice, applauded him to the echo. Similar convictions are already bearing fruit in the southern counties. In Dorsetshire I learn that the tenant-farmer candidate, Mr. Fowler, is certain to be returned should Messrs. Digby and Hambro both persevere in going to the poll. It is true there is a rumour that if Mr. Hambro gives way Mr. Fowler would retire also, and allow Mr. Digby to walk over; but even this concession is only an instance of the prudence which '*recule pour mieux sauter*,' and would require in compensation that should Mr. Portman, the present senior member for the county, succeed to the peerage, no opposition would be made by the Conservative party to the candidature of a tenant-farmer representative. If Mr. Digby declines to divide the Conservative interest, Mr. Fowler will fight Mr. Hambro to the last; and as he would in that case have all the Liberal votes, as well as those of the agricultural party, he would in all probability win the seat. The spirit of discontent has spread like a contagion to the neighbouring county of Wilts. The Local Chamber of Agriculture will hold a meeting at Warminster on the 19th instant, ostensibly for the purpose of expressing sympathy for and approval of Mr. Clare Read, but it is well understood that arrangements for starting a tenant-farmer candidate for Wilts at the first available opportunity is the true object of the gathering. In North Shropshire the popular feeling seems turning strongly in favour of Mr. Stanley Lighton, entirely owing to

his being regarded as the 'farmers' candidate; and in East Suffolk the Conservatives are reported to be at their wits' end in the selection of a nominee, knowing as they do that unless they can provide a very 'strong' man the Tenant Farmers' Association will bring forward a candidate against them. It is no slight proof of the gradual increase of this feeling that there are reasons for expecting the testimonial

fund to Mr. Clare Read will amount to £20,000. But the tenant-farmer is not Mr. Disraeli's only source of trouble. His recent selection of peers, while satisfactory enough so far as it goes, has caused so much disappointment to certain of the influential members of the party that the creation of another small batch may be expected at no distant day.—*Carmarthen Journal.*

## THE AGRICULTURAL HOLDINGS ACT.

On the 14th inst. a special meeting of the members of the Derbyshire Agricultural Society was held in the Guildhall, at Derby, for the purpose of hearing Mr. John Shaw, estate agent of Sir John Harpur Creave, and other gentlemen, read a paper on "The Agricultural Holdings Act." Mr. J. G. Cronista, chairman of the committee, presided, and there was an unusually large attendance.

The CHAIRMAN, in opening the proceedings, said that in performing the duty which devolved upon him in taking the chair on that occasion, it was necessary for him to say but few words in introducing Mr. Shaw to them. It would, however, perhaps be remembered that at their last meeting he ventured to throw out the suggestion that the Derbyshire Agricultural Society might be materially to its usefulness if gentlemen of experience could be induced from time to time to impart the information which they had acquired, in the shape of a lecture on paper, to those persons connected with agriculture, who had had fewer opportunities than themselves of becoming acquainted with the subject in all its details. That suggestion appeared to have been based on very sound ground, as the large attendance of members that day testified, for he did not remember having seen so large a meeting of the intelligent agriculturists of the district, as there was on that occasion, for a long time, and it indicated very clearly that the subject about to be discussed was one which interested deeply the minds of all agriculturists and the public in general.

Mr. SHAW then read the following paper:

The Agricultural Holdings Act, 1875, may, I think, be considered one of the most important Acts ever passed by Parliament with reference to land, and one which may, ultimately, very materially affect the relations between landlord and tenant. The discussion of this Act must, therefore, be a matter of great interest to the members of the Derbyshire Agricultural Society; and I can only regret that the subject has not fallen into abler hands than mine to introduce. But being, as you all know, very largely engaged in the management of estates in this and adjoining counties, I have carefully examined the Act with the view of dealing with it practically, and I have thought it desirable to state my views openly, so as to invite discussion from others—particularly from tenant farmers—and I feel sure that this cannot better be done than by bringing the subject fully before the members of this Society. Various opinions exist as to the advantage or utility of the Act, but it may be considered, at all events, an attempt to remove difficulties which have, from time to time, sprung up between the owners and occupiers of land, and also to secure to the tenant compensation for improvements which he could not hitherto claim except by special arrangement. The scope and object of the Act appear to be imperfectly understood, and to be considered from various points of view. There are some persons who would ignore the Act, and treat it with contempt, as being non-compulsory, and as falling short of their own ideas of what ought to be done; and, on the other hand, there are those who speak of the Act as a dangerous innovation—full of complexity and difficulty, and who, under any circumstances, propose to contract themselves out of it. There are others, and I must confess to have been one of these until I made myself better acquainted with the subject, who, whilst believing much good to be in the Act, thought it necessary, at the outset, to contract out of it. I am, however, inclined now to modify those views, and am prepared, as far as possible, and so far as the circumstances of each case will admit, to deal with the Act practically at once. It is unnecessary to refer to the various attempts to legislate upon the question of Tenant-Right—thirty years ago by that eminent agriculturist the late Mr. Pusey, and recently by other experienced men—but it may be

well to call your attention to the great improvements which have been made during the last quarter of a century in the construction of agreements for letting farms in this and other counties, many of which agreements have been made as liberal to the tenant as circumstances would permit, and have been generally well received. I have myself, personally, during a long practice, paid much attention to the question of Tenant-Right, and have, whenever opportunity offered, introduced the most liberal tenancy agreement I could consistent with fair security to the landowner; some of the compensation clauses of which (and of other agreements which I could name) are really more liberal than the Act now under consideration; but there are, on the other hand, many contracts of tenancy where the protection is all on one side, and many others where there are no written agreements at all. Before considering the Act in question, it may be well to direct attention shortly to the Common Law of Agriculture and the custom of the country, which at present affect the relations of Landlord and tenant.

"The Common Law annexes to the relations of landlord and tenant many rights and obligations; thus, without any express covenant between the owner of the farm and the tenant to whom he lets it, the law will impose upon the owner the duty of allowing the tenant quietly to enjoy the premises without let or hindrance, and upon the tenant the duty of paying the rent reserved, keeping the farm in a proper state of repair, cultivating it in a husbandlike manner—doing no waste—and rendering it up at the termination of his tenancy. These are material duties which the law considers to arise from the mere relations of landlord and tenant; and when parties enter into that relation the law assumes, in the absence of some special proof to the contrary, that the observance of these duties was a portion of their agreement. The obligation of an agricultural tenant as to repairs, cultivation and waste depend on the custom of the country; but the law forbids the tenant to commit waste. An Act was passed in 1871 (14 and 15 Vic., cap. 25) which enacted that, where by permission of the landlord in writing, a tenant at his own cost and expense erected on any farm any building or machinery, either for agricultural purposes or for the purpose of trade and agriculture, all such buildings and machinery should be the property of the tenant, and should be removable by him (on his first giving one month's previous notice in writing to the landlord of his intention to do so), unless the landlord or his agent should then elect to purchase and take them at a valuation, to be settled by arbitration in the usual way. The custom of the country upon an agricultural tenancy is continual and all-important, and the rights which custom gives to the tenants are exceptional to the general common law. Custom governs the relation of landlord and tenant unless excluded or modified by express stipulation. The tenant, in the absence of special stipulations, must take, till, and quit according to the custom of the country. Where a custom is found to exist it is applicable to all tenancies, in whatever way created, whether verbal or in writing, unless expressly or impliedly excluded by the written terms thereupon, and by stipulations inconsistent with the custom. All agreements and leases therefore which are intended to comprehend all the rights and obligations of the parties intended to be bound by no local custom, but that the whole terms of the contract are to be read in the words of the instrument, and in the obligations of the general law." Agricultural customs throughout England are very various, and, in some districts, vague and uncertain; but, as we all know, there are many customs which are well understood and readily proved, and which have an important bearing upon an agricultural tenancy. It will thus be seen that until the Agricultural Holdings Act comes into operation, the tenancies



are governed (with the exception of the short Act of 1851) by the common law and the custom of the country, where no written agreement exists; and in other cases by agreement and custom, except where the custom is expressly or impliedly excluded. With reference to the Act of 1875, I think it may be convenient to classify the sections somewhat differently to the order in which they are printed, to enable us to understand more clearly the bearing which one part has to another; and to connect together more prominently the various features of the Act. I therefore propose to take—Firstly, Clauses 1 to 4, which are preliminary, and Clauses 54 to 60, which show the general application of the Act; secondly, Clause 51, as to notice to quit, Clause 52 as to resumption of possession of portions of the holding for improvement, and Clause 53, as to fixtures; thirdly, Compensation Clauses, 5 to 19; fourthly, Procedure Clauses, 20 to 41; lastly, Clauses 42 to 44, which give power to a landlord to charge the holding in respect of compensation paid to a tenant, and to obtain advances from an improvement company; Clauses 45 to 50, which provide for the application of the Act to Crown and duchy and ecclesiastical and charity lands. Firstly, then—Clauses 1 to 4. These clauses are preliminary, and give an interpretation of terms, but section 2 fixes the commencement of the Act from and immediately after the 14th February, 1876. Sections 54 and 55: Under these clauses the landlord, or tenant, or intending tenant, may enter into any agreement they think fit, and may adopt all or any of the provisions of the Act, but there is a proviso that when the landlord is not absolute owner no charge shall be made on the holding under this Act—by any agreement—greater than might have been made thereon under this Act in the absence of such agreement. Section 56 makes the Act imperative upon every contract or tenancy commencing after the 14th February, 1876, unless the landlord and tenant agree in writing that the Act, or any part of it, shall not apply to the contract. Section 57: In a tenancy from year to year, or at will (but not otherwise), current, that is in existence at the commencement of this Act—the Act shall not apply to the contract if within two months after the 14th February next the landlord or the tenant gives notice in writing that he desires the existing contract to remain unaffected by the Act—or, in other words, either of them by notice to the other, may contract himself out of the Act. Section 58 excepts non-agricultural and small holdings. Section 59: This clause, if in operation, prevents a tenant from claiming under any agreement or custom in respect of the same thing. Section 60: This is the last clause of the Act, and requires careful reading and consideration. "Except as in this Act expressed" nothing shall take away, abridge, or affect any existing power, right, or remedy of a landlord, or tenant, or any other person, under any Act, or law, or custom of the country in respect of a contract of tenancy, or of any improvement, waste, emblements, tillages, away-going crops, fixtures, tax, tithes, rents, charge, rent, or any other thing. In point of fact, it is, I think, clear that all existing rights and privileges, except those which are distinctly dealt with by the Act, are to be preserved; and this proviso is important, as there are so many matters of custom and practice necessary between landlords and tenants which are not noticed in the Act, and which it would be difficult to dispense with. At the same time there does not appear to be any necessity for legislation upon these customs, but to leave them as heretofore; or, what is far better, to provide for them in a written agreement. The clauses referred to in this first division will explain the general application of the Act, and show how far the Act is imperative, and how far it may be adopted or applied in part or in full to existing and future tenancies, and also how far provision is made for securing existing rights and interests not dealt with by the Act. Secondly, Clause 51 as to notice to quit. This section substitutes a year's notice to quit for the usual six months' notice, but the Act does not apply to cases of bankruptcy or assignments to creditors. Twelve months' notice is certainly a boon to the tenant, and I see no objection to this, except in the case of death or bankruptcy. In the event of the decease of the tenant, I think it should be stipulated that the tenancy may be terminated by an ordinary six months' notice; and, in the case of bankruptcy or assignment, that the tenancy shall expire at the end of the year in which such bankruptcy or assignment may arise, without any notice to quit. It may also be necessary in some cases to make an exception to the twelve months'

notice where any serious breach of covenant has been committed, or where there has been a failure in the payment of rent. Section 52: The notice in this case for the resumption of possession of part of the holding for the erection of cottages and other improvements, or for any of the purposes mentioned, appears to me to be twelve months previous to the end of the year, as in the preceding section. I think three months' notice at any time should be sufficient under this clause, as there is ample provision for compensation to the tenant, and a longer delay might prove a considerable loss and inconvenience to the landlord. Section 53: This section provides for the removal by a tenant of any machinery or other fixtures belonging to him on certain conditions, but excepts a steam-engine erected by the tenant without notice to, or consent, of the landlord. Thirdly, Compensation clauses. By Section 5, where a tenant, after the 14th February, 1876, executes certain improvements on his holding, he will be entitled, under the Act, to compensation as set forth in the various classes mentioned—that is to say: In the first class, where such improvements have been carried out with the previous consent in writing of the landlord, but not otherwise, the improvement shall not be deemed to be unexhausted for 20 years after the outlay has been made; and the compensation due on the determination of the tenancy shall be the sum laid out by the tenant, with a deduction of a proportionate part thereof for each year of its existence, and with a further deduction for any necessary expenditure for putting the same into good repair. There is a proviso that in case the landlord is not absolute owner the compensation shall not exceed a capital sum fairly representing the additions to the letting value of the holding at the termination of the tenancy. As to some of the works particularly in the first-class I think they should be done by the landlord, but where this is not possible I see no objection to an allowance for 20 years on such improvements as the erection of buildings and other permanent works of a like nature. I do not, however, agree that the term of 20 years should apply to some of the items, such as the making of ozier beds, gardens, and orchards, nor, except in special cases, to the drainage of land, the making of fences, and the laying down of permanent pasture; but as the previous consent in writing of the landlord is absolutely necessary in respect of every work so done, this part of the Act must, I think, remain entirely permissive, and should not be put in force without a special agreement in each case. In the second class, improvements which have been done after notice in writing to the landlord of not less than 7 or more than 42 days are such as may be deemed to be exhausted for seven years, and the compensation to be paid at the expiration of the tenancy shall be the sum properly laid out, deducting a proportion for every year of its enjoyment by the tenant after the outlay has been made, but there shall be no allowance for any improvement made after notice to quit, except by consent in writing of the landlord. This second class of compensation I should be prepared to admit in its entirety, with the provision that the allowances under it for boning and liming should only apply to pasture (bone and lime applied to arable land to be otherwise provided for on a different scale). The notice required from the tenant will enable the landlord to satisfy himself that the work is properly done; but it would also be desirable to stipulate that vouchers or certified copies thereof should be delivered by the tenant to the landlord within a limited time after the completion of the work, in order that a record may be kept from year to year, which would materially assist an arbitrator in making a fair award at the expiration of the tenancy. In the third class, the compensation to be paid to a tenant on quitting his farm is limited to two years, and it is to be the proportion of the sum properly laid out on the improvement, as fairly represents the value, to the incoming tenant; but no compensation is due under this class where a crop of corn, potatoes, hay, or seed, or any other exhausting crop has been grown, neither shall there be taken into account any greater outlay during the last year than the average of the three preceding years of the tenancy. There is also a proviso that nothing shall be paid for the consumption of cake or other purchased food for cattle, where under any custom or agreement the tenant is entitled to, and claims payment for the additional value of the manure left on the farm, and if any hay, straw, or root crops have been sold off the holding within the last two years of the tenancy (for which no return has been provided) a deduction shall be made for the value of the manure which would have been produced therefrom if con-



sumed on the premises. There are deductions to be made for the taxes, title rent-charge, rent, and landlord's compensation under the Act, and also for any allowance by the landlord to the tenant in consideration of any improvement; and these deductions are to extend to any tenant's compensation under the Act (see secs. 15, 16, and 17). I see no objection to the tenant's compensation in the third class, except that a more definite mode of ascertaining it would be preferable. It appears in the Act to be left entirely to the judgment of the valuers, only limiting the time in which any allowance is to be made to two years, and prohibiting any compensation after a crop of a certain description has been taken. In many agreements which I have settled a more liberal scale of compensation under this head has been adopted. But there is something to be gained by making the scale as simple as possible. There is, however, as we all know, a practical difficulty in ascertaining the real value of artificial manures or artificial food for cattle. The proviso that the outlay shall be limited to the average of three years is, I think, fair, and it would in my judgment be desirable, in any case of compensation arising under this class, if an annual statement (verified by vouchers if required) could be delivered at a stated period by the tenant to the landlord. The restrictions in section 15, and the deductions in section 16, with the set-off in section 17, are, I consider, fair. Section 18: A tenant is entitled to compensation from the landlord in respect of any breach of contract. This should be enlarged by giving the landlord the same right. Section 19: Where a tenant commits or permits to waste, or commits a breach of covenant, and claims compensation in respect of an improvement, then the landlord may make a counter claim, but not otherwise, for any such waste or breach committed within the four years of the determination of the tenancy. This clause is an important one, but does not, I think, do justice to the landlord (except that it may be found the landlord's remedy for waste under the common law still exists), as it will be observed that under the Act the landlord can only put in a counter claim for waste when the tenant first claims compensation for improvement. This is a matter which requires alteration, as it is only fair that a landlord should be as fully protected by having his farm and premises kept in good order and repair as a tenant is secured in obtaining compensation under the Act or otherwise. Upon this point I feel strongly, and shall certainly enlarge the clause so as to provide as far as possible for compensation for all dilapidations or waste, in any agreements I may make embodying the Act. We now come to the Procedure Clauses, No. 20 to 41. Clauses 20 to 40: These sections relate to proceedings to be taken under the Act for the purpose of awarding compensation, and where the parties do not agree the difference is to be settled by arbitration. The mode of appointing arbitrators is particularly set forth, and where one party fails to make an appointment, the County Court, or the application of the other party, may appoint a referee or umpire (as the case may be), or where two referees are appointed, either party may, by notice in writing on appointing his referee, require the umpire to be appointed by the Enclosure Commissioners for England and Wales, or otherwise by the Judge of the County Court having jurisdiction; but if the other party dissents from an appointment by the County Court, then the umpire shall be appointed by the Enclosure Commissioners. The method of procedure is also particularly set forth in the various sections, with full directions as to the award, which is to be given in detail. Section 41 provides a simple and inexpensive mode of serving notices. These provisions are very important, as by the Act there will be no difficulty in obtaining an award by one mode or other. But the question of expense will have to be carefully watched, and it would be desirable, if possible, to have a graduated scale of charges fixed. The Lord Chancellor, by section 40, may prescribe a scale of costs of proceedings in the County Court, but in other cases the costs will be subject to taxation by the Registrar of the County Court and to revision by the Judge. Sections 42 to 44: These sections empower the landlord to charge the holding in respect of compensation paid to a tenant, with restrictions where the landlord is not absolute owner, and power is also given to obtain advances from any improvement company. Sections 45 to 50: These sections apply to the Act to Crown and Duchy Lands, and also to Ecclesiastical and Charity Estates, and are important. I believe I have now exhausted the Act, and have endeavoured to classify the various sections so as to explain them in relation to each other as clearly and

intelligibly as I could, and also to show as far as possible the practical operation of the Act. It will be remembered that the Act comes into operation immediately after the 11th February, 1876, but either landlord or tenant (on certain conditions) may contract out of it, or out of any part of it, and the Act does not (except as therein expressed) interfere with any existing right or custom between landlord and tenant. A year's notice, except in case of bankruptcy, is substituted in lieu of the usual six months' notice. Power is given to resume the possession of land for improvements and for other purposes on certain conditions. Provision is made as to fixtures; and the Compensation Clauses provide for three distinct classes of improvements. The proceedings under the Act are very fully set forth, and powers to *limited* owners, and the application of the Act to Crown and Duchy Lands, and to Ecclesiastical and Charity Estates are provided for. My remarks upon the various sections and divisions of the Act will have explained the views I entertain with reference to them, and, with the exception I have mentioned, and the alterations and additions I have named, as in my judgment desirable, I think the Act may be adopted with fairness and advantage to both landlord and tenant. But at the same time it is important to bear in mind the various matters of custom and practice between landlord and tenant, which are not noticed in the Act, and which still rest upon the old Common Law of Agriculture (the Act of 1851) and the custom of the country, except, in so far, as the same may be affected by this Act or by any written agreement. It will thus, I think, be manifestly most important that proper agreements, in writing, shall in *all* cases be entered into, so as to embody all those clauses of the Act which are desirable, and also to provide for all other matters and things requisite for an agricultural tenancy. If this be done in a fair spirit, I fully believe the Act will ultimately prove the basis of most agricultural tenancies; and, although permissive, it may have the effect, practically, of satisfying those who ask for more compulsory legislation, whilst, at the same time, the good feeling between landlords and tenants, which I am glad to know exists upon so many estates, may be preserved. My task is now ended. The subject is one of great practical importance, not only to those interested in land, but to the country at large. I am fully aware of the imperfect manner in which I have introduced it, but I have been guided by a sincere desire to consider the whole question fairly and impartially, and to deal with it in the most practical manner.

The CHAIRMAN said the assembly contained not only landlords and their agents, but they were favoured with the presence of some of the most practical agriculturists and eminent occupiers of land in the immediate neighbourhood, and it would be very gratifying to hear an expression of opinion upon the Agricultural Holdings Act by those who were interested in land.

Lord DENMAN said that when the Act was before the House of Lords, it certainly seemed to him that six months' notice was better than twelve, if landlords and tenants found it necessary to part. The question now seemed to be whether they were to form a good contract under the Act, or to contract out of it. Various opinions had been expressed with regard to the measure itself, Mr. Storer, of Nottingham, having expressed his opinion that the Act was quite spoiled in the House of Lords, and Sir W. Harcourt, at Oxford, that it was a much more liberal measure when it left the House of Lords than when it left the House of Commons. As had already been remarked, it was a very intricate measure, and required to be very closely studied before its details could be mastered. Mr. Shaw had evidently considered it with great care, and the time he thought should be given to the preparation of agreements between landlords and tenants, seemed to indicate that these must be the basis of their dealings in the future. This was by no means a settled question, the Act having been passed at the close of a Session, which there was a constant pressure upon the Government to terminate sooner than was, perhaps, desirable for the proper discussion of a measure of this importance; and if the Act which they were attempting to pass in Scotland for the re-valuation of the tenant, in the matter of improvements, should prove a better one than the English Act, he hoped the latter would be amended in the same direction, so as to do perfect justice between landlord and tenant. He was quite certain that both landlord and tenant had the same interest in the land; and if the understanding was that they were both to do their duty to

it, and to receive proper remuneration for so doing, the result must prove a beneficial one to all parties. He did trust that although this Act provided for the period of notice to be given in the event of the tenant quitting his land, that not a single tenant in this district would hold his land for a bit less time in consequence of this Act, but rather that it would tend to promote the permanency of their holdings. His lordship then referred to an eminent service rendered to agriculture by men whose names were justly honoured in this county; and notably by one nobleman, who told him at Ilolkham, many years ago, that the land there, when he came of age, was only worth 2s. 6d. an acre, whereas its value had now been increased, by proper cultivation, to a very much larger figure. He trusted that in this country a good understanding might continue to prevail between landlord and tenant, and that the necessity might never arise for such a measure as had been passed for Ireland. He hoped, too, that whether the Act was adopted or not, or used wholly or in part, as the basis of our agreements, everything would be done fair and above board, and that the landlord, the consumer, and, above all, the tenant, who was the food producer, might all be benefited together.

Mr. S. ROBSON, Melbourne, said he was not going to make a speech, but there were two matters touched upon in Mr. Shaw's paper, with reference to which he wished to say a word or two. The first point to which it seemed to him there was some objection, was that a tenant should not be allowed to underlet. He agreed with Mr. Shaw that in ordinary course of things this was not desirable, but in the last year of a tenant's occupancy, he might want to sell off his stock some weeks before he gave up possession, and, if this principle was adopted, he could not let his grazing for the four or six weeks he remained on the farm. The incoming tenant might say that he did not want to take to those six weeks' keep, and the person quitting would consequently lose the produce of his land for that period, although he was paying rent for it. The other point was that the tenant, before he could recover compensation for manure, should be bound to give annually, before the 25th March, a written statement to his landlord of the amount used on his farm during the year. It occurred to him that some of them might not like it to be known that more had been used in any particular year; and that, although it was no doubt desirable that some guarantee should be given that the articles claimed for had been bought, the plan suggested would have a tendency to make their affairs rather too public.

LORD VERNON, who was applauded on rising to address the meeting, said he was not at all astonished that there should be any hesitation on the part of those present in offering observations upon the subject, when he saw certain land agents of eminence around him who hesitated to give them the benefit of their experience, and remembered that Mr. Coke had declined to do so when called upon, although he had more knowledge of farming in his little finger than he (Lord Vernon) had in his whole body. He also saw around him a number of leading farmers of Derbyshire who were far more conversant with agriculture than he was himself, and as they had not ventured to offer any observations he was not surprised that other gentlemen had hesitated to do so. As he anticipated when he entered the meeting, a large proportion of those present had attended to hear about the Agricultural Holdings' Act for the first time, and it was not therefore fair under the circumstances to call upon people to give an opinion upon a very momentous question like that, although it had been fully and exhaustively treated by Mr. Shaw. He was quite sure there was no one present who had not been greatly benefited by the opinion Mr. Shaw had expressed, and who would not leave the room without feeling that he had a very important matter of business to consider, and would doubtless be much guided by the light which Mr. Shaw had thrown upon the question. It was the function of agricultural societies partly to promote agriculture by the exhibition of stock and produce; but it was no less their province to promote discussion on important questions bearing on agriculture, and he did not remember any question which had come either before that or any other society of such paramount importance as that which was occupying their attention that afternoon. The Act which had recently been passed, was, he believed, the first which had really dealt in a concise way with the difficulties that had existed in the relations between landlords and tenants. Happily their difficulties had always been very much modified by the good under-

standing which had ever existed between landlords and tenants generally. He could not, however, consider that the transactions which had taken place even between himself and his tenants were conducted upon what he called real principles of business, and therefore he looked anxiously to the operation of the Act to put their relations upon a business-like footing. He was glad to find, as was noticed in Mr. Shaw's paper, that it was possible to adopt the main principles of the Act with modifications which might make the Act palatable both to landlords and tenants, and he considered that the Government deserved credit from all classes of agriculturists, whatever party they might belong to, for having faced a question of very great difficulty, and which might have involved them in considerable discredit amongst those who had usually supported their policy. He considered they went bravely to their task, and he thanked them for their efforts in that direction. The main principles of the Act, which was introduced into Parliament, were in the first place, and this was important whether people managed their land under the Act or not, that agreements must become the rule and without any exception whatever. Secondly, the authors of the bill insisted that the principles of freedom of contract between landlord and tenant should be universally preserved, and inasmuch as provision was made that the Act might be adopted or not, it might be adopted with or without modifications. They also insisted that if the Act was adopted the tenant farmer should hold his land under a year's notice, and he might say with regard to this that although he felt there might be difficulties here and there with respect to relinquishing farms, and landlords might lose here and there by a year's notice, taking a broad view of the question he thought the balance would be decidedly in favour of people holding under a year's notice.

A cordial vote of thanks was given to Mr. Shaw, and the meeting then adjourned.

MR. G. F. STATTER'S SALE.—On Tuesday, Jan. 18, Mr. E. Telford, auctioneer, of this city, was engaged, at Red House farm, from ten in the morning until after dark in the evening, in disposing of the stock, crop, implements of husbandry, &c., the property of Mr. Statter, of Broomhills and Red House farms. The stock included 51 Shorthorn cattle, some of which were of high-class pedigree; 200 pure-bred Border-Leicester sheep, many of which were prize-winners at local and other shows; 14 strong horses and 12 light horses, amongst which were several prize takers; and 18 pigs of the celebrated Duckering breed. The stock comprised 9 stacks of lea and meadow hay, 19 stacks of grain, 9 of beans, and upwards of 25 tons of mangold wurzel. The implements were a numerous lot, and all of the most modern construction. The attendance at the sale was extremely large, the competition brisk, and everything sold remarkably well. The sheep were put up in lots of five each, and Mr. Wright, of Worksop, who is a large breeder of border Leicester sheep, secured the first lot at £5 each; Mr. Wright also paid £10 10s. each for two border Leicester tups and £5 5s. for the third. Some of the other lots sold as high as £5 10s., £5, and £4 each. In the cattle class the highest priced animal was knocked down to Mr. Nicholson, Barkhouse, for £28, and several others ranged from £16 to £19 each. Mr. Mitchell was the highest bidder in the horse department, securing one strong animal at £93; Mr. Thompson, of Burgh, paid £82 for another; whilst the third and fourth brought £66 and £56 respectively, two others selling for £35 1s. and £34 each. 81 guineas was the highest price reached in the light horse class, and was paid by Dr. Hodgson, of Carlisle; Mr. T. Statter, Stand Hall, securing the second for 49 guineas. The total result of the day's sale was as follows: Horses, £848 12s. 6d.; cattle, £519 2s. 6d.; sheep, £782 18s.; pigs, £78 8s.; implements, £231 7s.; crop, £658 18s. 6d.; total, over £3,000. There were also four acres of Swede turnips sold, but these, with several other things which were sold, are not included in the above figures. Ample provision was made, as is the usual custom, for the general public attending the sale; but Mr. Statter allowed every one to partake of his hospitality; and we hear that certain parties who would have been better away, tended in some degree to spoil the entertainment.—*Carlisle Patriot*.

## AGRICULTURAL EDUCATION.

TO THE EDITOR OF THE DORSET CHRONICLE.

Notice has been given by the High Sheriff (Mr. Moyssey) and Sir A. Hood that they will move at the next session to order the police to prosecute for inaction of the Agricultural Children's Act. So far as this shows a desire to extend the education of the working classes one cannot but sympathise with it entirely, but various circumstances which I will endeavour to explain make me eager to ask these old friends of mine not to persevere with their motion. Two Acts received the Royal assent on the 5th of August, 1873, to apply compulsion to education. This one, c. 67, laid down the limit of twelve as the age within which no child should be employed who has not attended school during the previous year a certain number of times. And the Act creates an awkward necessity of finding time for school along with work until the child is eleven, and is embarrassed besides with provisions and exceptions very proper in themselves, and certain difficulties of detail which it is best not to explain, which will make the working of it difficult, though it may be good to guide our practice generally. The other Act, c. 86, makes education a condition of relief up to 13, so that a poor widow with many children, or a man with a broken leg, cannot have outdoor pay at all unless they pay themselves for the schooling, which they cannot do, or have special relief for the purpose, which is altogether objectionable; and in either case they lose the labour of the older children. It is strange at the very least that the education of pauper children is rigorously extended to 13, while that of non-pauper children ceases altogether at eleven, and from seven may, or rather must from eight, have been only half-time. This last law seems to me thoroughly bad. Children must be fed before they can be taught. And this brings me to the great difficulty of the first measure. In the early part of last year an influential farmer inquired of me whether he was safe in not dismissing the children of a labourer, who, with a sick wife, could not live without the children's labour. I could only tell him to wait and see what was done; that in the first place we should probably not inflict a penalty, but only explain the law and that he was safe until then; and I gave what advice occurred to me generally as to the Act and the administration of it, and begged him to consult his neighbours. To this I got a hearty response: "Every employer," he said, "of children whom I have met (and I have talked with a good many), including myself, concurs in the opinion expressed by you—that where the parents can educate their children they ought to do so, but where the family is long, and in some cases where a widow has boys, it would be a great hardship to prevent their being employed, and would ultimately drive many to the parish." Here then is the view I have formed—that this law had better serve us generally as a guide, and may be made to work in a safe and wholesome way by the help of neighbours, and the general consent of society, without prosecutions. A friend of mine tells me he has just made his Christmas distribution of meat and coals depend on this educational test, and he is right. What I would advise is that the clergyman of each parish, who has now by general consent the chief care of education, should consult with the principal farmers, who have the power in their hands, subject of course to the law and its penalties, and agree with them in what cases the Act must be put in force, and in what cases it should be relaxed. They know among them the means and necessities of their poorer neighbours, and will have ample power—so much indeed that I am rather fearful of it, for I do not like compulsion, except when it is brought to bear on the vicious part of mankind. Let my old friends, to whom I am now appealing, and the clergy—who are very rightly eager to make the poor educate their children, whether they will or no—let them think that they are really copying the work of the late Liberal party, who were content with no measures but those of strong compulsion, and ridicule the tameness of the legislation of the last two years. My friends can remember, as I do, when the Liberals were for the liberty of the subject, but now Liberals are another thing; they have been in power and have tasted the pleasures of it, and have had well-merited experience that the people will not support a policy of compulsion. The democratic compulsion of the majority is much the same as the old feudal com-

pulsion; if anything, it is worse, for it is more difficult to deny or elude. As to education, there can be no doubt that our poorer neighbours will gradually avail themselves of its advantages, and hereafter possibly to a greater extent than we have any notion of now, and beyond what these Acts provide us to age. We must not force it on them; we had better recommend it, and encourage them to go on, and it is well to show them that the law which they and we and the clergy-men and the farmers are all alike bound in conscience to obey says, and rightly so, that their children are to be taught.

F. H. DICKINSON.

P.S.—I find there is an impression that the parent where a child is employed in contravention of the Act, c. 67, is under a penalty of £1. This is not so unless he has deceived the employer.

THE AGRICULTURAL CHILDREN ACT AND THE RURAL POLICE.—The *Maidstone Journal* says: Kent was one of the first of the farming counties of England to discover that the Agricultural Children Act contained no clause declaring by whom the new law was to be put in motion, and it at once sought to supply the omission. But the task was surrounded with considerable difficulty. The most natural channel of inspection was, of course, the county police, but there were objections against the use of this agency, which we pointed out at the time, and which succeeding events have only tended to strengthen. The police were already engaged in several ways which were foreign to the immediate purpose of their enrolment; and the additional part they have been required to play under the Cattle Disease Orders has afforded a pretty clear instance of the prejudice which they have to encounter when travelling out of the more immediate circle of their duty. It has been said that wherever a law is broken it is the duty of the police to bring the offender to justice; but this is an opinion which we by no means endorse. If the constabulary are to be saddled with every conceivable kind of duty, criminal and civil, some of their work is certain to be ill done. But even this is not the chief evil to be apprehended. We fear that there is a growing feeling, especially among the lower classes, that the police, instead of being the natural protectors, are the natural enemies of the public. This has been brought about, in a great measure by the entirely novel turn which recent legislation has given to their duties, and by which they have been constituted spies in all kinds of uncomfortable businesses. The consequence is that, when seeking information as to strictly criminal matters, they are in danger of being repelled from quarters where ready assistance ought to be given them. Under these circumstances we are glad to find that the Court of General Sessions has seen its way to the adoption of a middle course in reference to the proposal which Mr. L. J. W. Fletcher made on Tuesday last, "that the police be instructed 'to enforce' the provisions of the Agricultural Children Act." The Court decided to warn parents and employers that the law will be enforced, and await the result of such caution. They thus avoid committing themselves to a course which would be locally irritating, and which there is also reason to suppose would not be legal. Prosecutions could not be conducted without expense, and, as the Chief Constable remarked, there is no rate from which money could legally be drawn to be devoted to purposes not sanctioned by Act of Parliament.

TENANT-RIGHT IN SCOTLAND.—The *Glasgow Herald* reports that the farm of Barholm Mans, Kirkcaldy, Fife, which has been a long time occupied by Mr. James Muir, a widely-respected agriculturist, has just been let by order of Mrs. Grant, of Barholm, to Mr. Craik, from Neath, Glamorgan-shire, at an increase of rent equivalent to a rise of £75 on the old rent. As Mr. Muir was an offerer, and had no intention of leaving the farm, his removal caused considerable excitement throughout the agricultural world of Galloway. Mr. Muir being well known and widely respected. At a meeting of the Penninghame, Miuwigaff, and Kirkaubreck Ploughing

Society, the matter was warmly canvassed. In proposing the health of Mr. Muir, Mr. Kerr, banker (who is also tenant of the farm of Calgowl), said they had toasted Mr. Muir as their vice-president; he now asked the company to fill a bumper in order to drink to him as an agriculturist and a neighbour, whom they were exceedingly sorry to know was about to leave his farm. No man, he was sure, had their best wishes more sincerely than Mr. Muir had, as an influential agriculturist and as a good and improving tenant. Since he came into the district Mr. Muir had distinguished himself in no ordinary way. He came into a farm which was to a great extent common moor, and what was it now? During different times Mr. Muir had reported to the speaker the improvements he was making; and, looking back from to-day, when he was about to leave—and to leave it, too, not altogether of his own free will, he remembered—to the time that he became tenant, what a change he saw! Mr. Muir had raised and carted no fewer than 33,000 loads of stone from the high land; and, taking each cart only to represent the expenditure of a shilling, they had here an outlay of £1,650 for one improvement. For all this the proprietor had never given him a farthing. Mr. Muir had assured the speaker that he had sunk money in that wild land which he could never take out of it. And not only had he so improved the wild land, but he had improved the lower parts of the farm also. He had dug out a large dam, and excavated and built a wall round it; he had built sluices; he had erected a large water-wheel; in short, he had made Barholm what it never was before. But in those days he had an excellent proprietor, whom he respected. But, alas! two years before the lease

falls out he loses that proprietor, and falls into other hands; he got a proprietrix. They would all agree with him when he said that the widow of the deceased laird could not be expected to be capable of judging of the merits of Mr. Muir as an agriculturist; but surely, at the same time, his large expenditure in the improvement of the farm ought to be taken into account some way. And he said this, that if this sort of thing was to go on, the sooner they became, as in England, year-to-year tenants the better. ("No, no," applause, and "Not ready for that yet.") Such treatment as Mr. Muir had had could only lead to indifferent and bad farming throughout Scotland; and he had no doubt the change in the tenancy of Barholm would do a vast deal of good to the tenant-farmers of the South of Scotland, by inducing them to look to themselves. To change an old and improving tenant for the sake of a £10 note was a contemptible thing at any time, especially so when that £10, during a nineteen years' lease, would not compensate Mr. Muir one-tenth of what he had done for Barholm. Mr. Muir said he never had any desire to leave Barholm, and never intended to leave it. He had been laying on manure on the lea crops every year the same as before, and on a field of turnips last year he had put £15 worth of manure on eleven acres. This year he had paid £30 for raising stones; and, as he had said, he had acted well to the farm up to the present time, not intending to leave. He respected the proprietrix nevertheless, and had ever tried to do justice to her, although it was very doubtful if she had tried to do the same to him. He would so leave the fences and houses as to put it out of her power to claim anything from him, and he would see that they were as perfect as possible.

## THE SHORTHORN CONVENTION AT TORONTO.

The Fourth Annual Convention of the American Association of Breeders of Shorthorns was held at Toronto on December 1 and 2. The attendance was larger than that of preceding meetings, and was also of a good representative character. President Pickrell's annual address was an interesting paper. He alluded to the surpassing this year of all previous averages, and expressed his opinion that the future was bright. He recommended the appointment of a committee to report on the best means of preventing the introduction of foot-and-mouth disease and other contagious diseases. Correspondence between the Duke of Devonshire and himself regarding interchange of reports was laid before the meeting. The financial reports were mainly satisfactory. A committee was appointed to draft amendments to the constitution. Judge Jones, of Ohio, introduced a resolution proposing that animals whose pedigrees show descent from imported ancestry, or as many as seven crosses of approved or recorded blood, are entitled to registry in the Herd-books. At the mover's request the resolution was tabled for the present. A vote of thanks was passed to the Shorthorn Society of Great Britain for their Reports, and the American Associations' publications were directed to be sent in return. Dr. Stevenson read an essay on "Breeding Shorthorns." A committee's report recommending that the levy be 2 dollars was adopted. Mr. S. Wilmot, of Newcastle, was elected an honorary member. A question from Iowa regarding the pedigree of Lucius (5916) was ordered to lie on the table. The following gentlemen were chosen Directors of the Association: Mr. Avery, of Detroit; Mr. T. L. McKeen, of Eastern Penn.; Benjamin Sumner, of Woodstock; J. D. Sears, of Texas; Phineas Steadman, of Chicopee, Mass.

Judge Jones read a paper on "Shorthorn Breeding conducted as a Science, with a View to maintaining the highest Excellence in useful Qualities." A discussion on in-and-in breeding ensued. Gen. Curtis, of New York, asked breeders to give their opinions. Mr. Groom, of Kentucky, supported the system, citing the Dukes as examples. Mr. Sodowski, of Illinois, had a heifer not bred-in that had won 36 prizes out of 38 times she was shown. He deprecated selfishness in the matter. C. J. Taylor, of Ontario, cited Lady Fragarant and Commander-in-Chief as instances that in-breeding did not deteriorate cattle. Mr. Kissenger, of Missouri, had shown cattle not in-bred that were never beaten. Mr. Martin, of Cayuga, thought high breeding had done much in Canada. He thought it a fraud that stock with only four crosses could not be registered,

as much stock had been sold on the supposition that it could. Dr. Stevenson, of Indiana, argued against in-and-in breeding, citing its admitted evil effects on the longevity of man, and saying that the fact that there were but seven pure Dukes alive was an argument against the system. He advised Americans to study closely the work of the British breeders, as they understood the subject better than any other men in the world. Dr. Miles, of Illinois, brought up some facts to prove that in-breeding in man was not so pernicious as commonly supposed. The main question to decide was how far in-breeding could be carried with advantage. Mr. Sodowski said his father's and brother's herds had deteriorated under in-breeding, but had been restored under out-crossing. Hon. David Christie questioned Dr. Miles upon the reliability of his statistics. Dr. Miles replied that other figures recently compiled bore him out. The discussion then closed. Resolutions were passed regretting the loss to the Association by the death of Col. Meredith, of Indiana. An order was made that a hitherto unpublished paper by Mr. Matthews, of Virginia, should be added to the proceedings of the Convention.

Dr. A. Smith, of Toronto, read an exhaustive paper on Various Cattle Diseases and their Treatment, and received the thanks of the Association. The committee on the foot-and-mouth disease recommended the appointment of a permanent committee, consisting of one from each state and province, by whom any outbreak of the disease in their district should be reported to Government. Report concurred in. Mr. Matthews moved that he who owned the cow when it was bred should be declared the breeder of the calf. Judge Jones objected, and moved reference to a committee. Mr. Matthews objected to the delay. Mr. Page, of New York, supported the resolution. Hon. D. Christie said the rule had hitherto been to regard the owner of the animal at the time of copulation as the breeder. Mr. Martin concurred, as did Mr. Kay, of New York. Mr. Harison, New York, thought the owner of the cow when she calved ought to be considered the breeder; in which Mr. Stone, Guelph, concurred. Mr. Allen said the Indianapolis Convention decided that it should be the person under whose direction the animal should be coupled, and he favoured the continuance of that. Judge Jones withdrew his motion to refer. Mr. Harison moved to rescind the Indianapolis resolution. Hon. D. Christie seconded the motion. Mr. Bailey moved that, when a cow was purchased in calf, the calf should be entitled to registry as bred by the owner of the cow at the time of coupling. Mr. Brown moved

another amendment, declaring that the owner of the animal at the time the calf was dropped was the breeder. This amendment was subsequently carried by 38 to 33 votes. Formal

resolutions of thanks to various parties closed the proceedings.  
—*Canada Farmer*

## DEVON LONG-WOOLS.

The breed of sheep known in Devon and Somerset by this name is very akin to that of the Border Leicester in appearance and general characteristics. Both sorts of sheep are longer in their bodies, and stand higher on their legs than true Leicesters, and for both claims have been made by their breeders of being more remunerative in their returns of meat and wool. The only defect in the comparisons is the certainty that the Devon Long-wool is the result of Leicester engrafted on an ancient native stock, whereas the North-country breeders claim for their breed purity of origin from the Bakewellian stock. The old Bampton is the original stock from which Devon Long-wools were derived, and it was well known throughout the West of England in the last century. Mr. R. Proctor Anderson, in a letter published in Arthur Young's "Annals of Agriculture for 1772," designated it "the best breed in Devonshire," and stated that it had existed in the district round Bampton "from time immemorial." The description he gives of the Old Bamptons in this letter is as follows: "They are generally whitefaced; the best breed more like the Leicestershire than any other, but larger-boned, and longer in the legs and the body, yet not so long as the Wiltshires by which they have been crossed, nor so long-backed as the Leicesters." A fat ewe rises to 20 a quarter on the average, and wethers to 30lbs. or 35lbs. a quarter at two years old. Eighteen lbs. of wool have been shorn from a ram of this breed that was supposed to be 40lbs. the quarter. The carcase is coarser than that of the Dorset, and the wool cheaper." Billingsby, also, in his "Agricultural Survey of Somerset," published in 1798, mentions Bampton sheep as "a valuable sort, not much unlike the Leicester, well made, and covered with a thick fleece of wool, weighing in general 7 or 8lbs., and they sometimes reach even the weight of 12lbs." On the management of these sheep at that period he says: "The sale ewes are put to the ram about the end of July, and the flock ewes about a month after. Young rams are preferred, as it is supposed that old ones degenerate in quality and weight of their wool. The wether of this breed, when fattened on turnips, at two years old attain the weight of 25lbs. per quarter, and being driven to Bristol market, a distance of about sixty miles, are sold without their fleeces in the months of May and June." Vancouver, in his Survey of Devon, published by the Board of Agriculture, in 1808, says: "The sheep most approved in the division of Tiverton are the Bampton-Notts, the wether of which breed will at twenty months old weigh 22lbs. per quarter, and shear 6lbs. of wool to the fleece. The same sheep, well wintered, and kept on for another twelve months, will average 28lbs. per quarter, and yield 8lbs. of unwashed wool to the fleece." In the same paper Vancouver remarked that the first cross of the breed with that of the new Leicester or Dishley was getting much into favour, and becoming very generally to be adopted. The reason why he states to be, "From its improving the form, and bringing the animal three months earlier to market." A stronger infusion of Dishley blood was, however, deemed prejudicial to the interests of Devon flockmasters at that period, and Vancouver had been informed it should not extend beyond half Bampton and half Leicester, as otherwise the lambs and young sheep would be less hardy, and become ill-adapted for the districts where the old Bampton had been accustomed to thrive. In some parts of Devon this apprehension gradually disappeared, and the flockmasters drew closer to the Leicester type as the present century advanced, until they had well-nigh refined away the Bampton altogether. At the present day there are almost as many Leicester flocks in Devon as descendants of the Bampton cross; that county having become one of the strongholds of the legitimate descendants of the breed Bakewell created. The result which always occurs more or less whenever two breeds of near kindred affinity are propagated close beside one another in the same part of the kingdom, is not absent here, viz., a great variety of gradations in characteristics, according as the flock is brought close to or allowed to diverge widely from the one or the other.

As in Yorkshire all sorts of crosses between the Leicester and Lincoln Long-wool manifest themselves, so in the West of England the Devon Long-wool in one man's hand may represent a very different kind of animal to what it does in those of another. Some critics at the Royal Taunton Show last July declaimed loudly against the diversity of type apparent in the Devon Long-wools exhibited there. But there is, perhaps, no help for this. Some farms require stronger and more hardy animals than others, and their occupiers, no doubt, find it a wise policy to adapt the stock to the peculiarities of soil, climate, and situation, rather than that of laying hold of one particular type, and insisting on propagating it, whatever circumstances may stand in the way. Very different names have also been applied to these sheep. It is only during the past seventeen or eighteen years that they have, by general consent, received the appellation—Devon Long-wools. Previously they were not unfrequently termed Leicester Long-wools, and at a still earlier period were known as "Devon-Notts." But as "a rose with any other name would smell as sweet," so does it matter very little what these sheep are called, that not at all detracting from their usefulness. A west-countryman knows what he wants, and in nine cases out of ten he would pick out the best of this breed at a market or fair, as being the most thrifty and remunerative sheep for the redland arable farms of Devons and West Somerset. Neither are any other kind so well fitted for the Somerset marshes. Colonel Luttrell, of Bridgewater Court, about fifteen years ago, tried an experiment by running Devon and Hampshire hoggets together on some of his best low-lying marsh lands. But he was surprised to find that while his Devons laid on fat rapidly and became ripe for the shambles, the Hampshires made little or no progress, and a second lot of Long-wools were placed against the same Short-wools in the autumn with a similar result. "On October 28th," he says, "I put the thirty Downs with thirty of the next best Devons on a piece of after grass. I had both lots weighed, and I again weighed them November 28th, when I found that the Downs had increased in weight 243 lbs., whereas the Devons had increased 436 lbs." No one will wonder, then, why, in many districts of the west, long-wooled sheep are preferred to short-wools, be they Hampshire, Shropshire, or Southdown, and there are several reasons why this description of long-wool suits many districts best. They are more hardy than the Leicester, in the first place, and are also longer and larger-framed, which allows them to yield heavier weights of flesh. The mutton has always been considered very juicy, and not being quite so tallow as that of Leicester, is of better quality. Then, again, as regards wool, there is a decided advantage in Devon Long-wools over Leicesters in the average weights of fleeces, the quality being about equal. The Leicester is, no doubt, a handsome sheep smaller boned, and more refined in symmetry and shape. He will also come a little sooner to maturity, although not much, rapid flesh-forming being brought to a high state of perfection in the best flocks. Of course the rent-paying farmer cannot afford to sacrifice much to beauty. He generally selects the sort which is most remunerative, and there are scores of places in the West for which this would naturally be the Devon long-wool. In the past history of this breed there appear facts and evidences which justify the conclusion that many experiments have been made with it. Mr. Wilson was evasive of that opinion when treating on the various breeds of sheep in his article in the Royal Agricultural Society's Journal for 1855, for he says, "they are now so intermixed with Leicester blood as to partake more of the character of that breed than of the old stock. Crosses with the Lincolnshire and with the Exmoor breed are also met with. Mr. Wilson might also have added the Southdown with some show of reason, some being of opinion that there must have been a slight infusion of that blood at some period or other to account for the grey faces of the Devons which were far more general half a century ago than they are now. Mr. Andrew Hoogood, the occupier of a large farm near Whiten, and

father to Mr. Obad Hosegood, winner of the Royal prize for Somerset farms, once informed me that the Bampton sheep had grey faces in his youth, and that they were very hardy, and excellent in their returns of mutton and wool. Another old-established breeder has also stated that about forty-five years ago the blue tint in the face got to be preferred, and became very general. Experience eventually proved, however, that animals with this characteristic were thinner in both flesh and wool, exhibiting likewise indications of weakness of constitution. Consequently, the practice of breeding towards the grey-faced type was discontinued, and it is now a comparatively rare circumstance to find Devon long-wools with grey countenances. Taking the best bred flocks alone into consideration, the conclusion may safely be arrived at, that few, if any, experiments have been made in them by infusing foreign blood during the past quarter of a century, at least. The well-known flock of Mr. Richard Corner, of Torrington, is not only one of the most celebrated of this breed, but probably the oldest in existence. It can be traced back to a very early period in the century, for Mr. Corner inherited it of his own father some thirty-eight years ago, who had at that period brought it to a high state of perfection without having employed any foreign cross beyond the legitimate one, Leicester or Bampton. Mr. Corner, sen., appears to have disposed of one of his rams for seventy guineas, quite half a century ago. He was well-nigh as celebrated a ram breeder as his son is at the present day, and it can be proved that rams have been regularly sold from the flock for over sixty years past. On one occasion Mr. Corner, sen., sold a ewe and two of her off-springs for 100 guineas, the produce consisting of two rams, one a shewling, and the other a lamb only four months old. Mr. Richard Corner is, at the present day, accustomed to make very good prices of his rams, which are generally disposed of by auction at Taunton Fair, when a number consisting of thirty or forty usually realise averages amounting to from fifteen to twenty guineas each, while his best sheep yield from fifty to seventy guineas. Mr. R. Corner is a West Somerset breeder, and so are Mr. Bird and Mr. R. Farthing, who are likewise noted. There are several breeders of renown in the county of Devon, among whom Sir Heathcote-Amory, M.P., has recently very much distinguished himself, for he won all the Royal and Bath and West of England first prizes last year, although

having Mr. R. Corner for a competitor, who had previously carried all before him. Mr. Corner was, however, in some respects beaten with his own weapons, as Sir J. Heathcote-Amory has, undoubtedly, made considerable use of his blood. The other leading Devon breeders are Mr. John Wippel, of Barton; Mr. John Drew, of Exeter; Mr. Partridge and Mr. William Wippel, of Thurvorton; and Mr. G. Radmore, of Court Hayes. The wether sheep of this breed are usually fattened on turnips the first winter, and go to the shambles in the months of March, April, and May, at weights ranging from 24lbs. to 25lbs. per qr. When shorn they cut from 9lbs. to 11lbs. clean washed wool, although shorn as lambs the previous year. Nor is much oilcake or corn needed to produce such results. The ewes of the best flocks often clip eight or nine pounds of wool each, and fat ewes from Mr. R. Corner's flock have often averaged from 35 lbs. to 40 lbs. per qr. A considerable quantity of wool is also clipped from the lambs the first year, for they yield to the extent of from 2½ lbs. to 3½ lbs. each, which is quite as much as Southdown ewes were accustomed to clip not many years ago. Although lambing often commences with the new year, it is by no means general until towards the end of January or beginning of February. The lambs are weaned according as they are well or ill kept, sometimes as early as the middle of April, and occasionally as late as June, but about the first or second week in May is the usual period. If the lambs were fed with oilcakes from the first, as is the case often in short-wooled flocks, the wethers would come ripe for the shambles long before Christmas. Leicester blood is seldom infused at the present day into many of the flocks. Mr. R. Corner has used nothing but the best Devon long-wool rams for many years past, and it is seldom he can obtain them any better than from his own stock. Some of the leading flocks have been kept free from the slightest foreign impress for twenty years at least. But it must be admitted there are others such as the Court Hayes flock, in the management of which the rule instead of the exception has been the employment of Leicester rams. This, probably, detracts somewhat from a fixed type, although it is pretty generally well known among practical men in West Somerset and North Devon what a Devon long-wool sheep ought to be.—*The Live Stock Journal.*

## PAUPERISM AND CHARITY.

At a meeting of the members of the Botley and South Hants Farmers' Club, held on Monday, Mr. W. Warner in the chair, Dr. GRIFFIN read a very elaborate paper dealing with some points in connection with Poor-law and Charitable Relief, from which we take the following:

Perhaps nothing has more fostered pauperism than the faith that a truly Christian duty is performed in giving, without inquiry, immediate relief to the apparent wants of any applicant. At the same time, the fear of being called cruel and inhuman has gradually taught boards of guardians to become more and more lenient in their treatment of paupers, until at last the labouring classes have been brought to look upon parish relief as their right, and it is now consequently sought for by them and obtained when any difficulty arises. Without doubt, this view of the labourer is, in fact, a lingering relic of the old Poor-law, which was, to a great extent, a rate in aid of wages. One ill effect of being able to obtain relief at the first moment of distress—and that relief of a kind neither mentally offensive nor bodily irksome—has been the production of absolute unthrift, improvidence, and a reckless expenditure of their earnings in a large proportion of the working classes. The Poor-law has shown the way that, however thrifty they may be, in their old age or in their time of need they will be no better off than others who squander all their wages in the beer-shop. The ill effect has been increased by the profusion of indiscriminate charity, both of a public and a private kind, and by the labourers' want of faith in provident societies, which, through ignorance of the laws that govern sickness and mortality, and the desire to make them attractive, led their projectors to offer advantages which it was impossible for them to fulfil. Before pauperism can be very materially reduced, many of these causes will have to be taken in hand and altered. If we intend to obtain a successful issue, we should endeavour

to handle them all at one and the same time. This can only be effected by an organisation of all the agencies through which relief of every kind is given. With regard, however, to pauperism itself, there is much need for change in its treatment. Originally the new Poor-law intended to make parish relief so deterrent a character that none but the absolutely destitute would apply, and that the recipient would be so dissatisfied with the way in which it was given, that he would, when in work, do his best to prevent himself falling into such a position as to be compelled to apply for it. A wise Poor-law, foreseeing that a hard-and-fast line would occasionally cause an act of cruelty, permitted certain exceptions. Unfortunately in most places that which should be exceptional is now the rule, and *vice versa*. This is especially exemplified in the matter of out-relief, and particularly of partial out-relief. Partial relief is a form of relief which is most destructive to habits of thrift and independence. By partial relief recipients, to enable them to live, are compelled to supplement the relief by other means; indeed, nearly all outdoor relief, when it is given, is known by the guardians to be insufficient for maintenance; if supplemented, as it often is, by begging, then the parish pay becomes an official certificate of the recipient's poverty, a legal licence to impose on the charitable, or a livelihood is made up by thieving, by vice, by relatives, by charity, or by work. If by work, then it lowers wages, for the recipient, being subsidised by the guardians, is enabled to sell his labour at a lower rate than others, and the consequence is that many are unable to earn sufficient to be provident. It must always be kept in mind that the duty of the Poor-law is to relieve only the absolutely destitute. Those who are poor or in straitened circumstances should be taken care of by charity. True and organised charity will find them out; indeed, the opinion which is gaining ground is that Poor-law

relief should confine itself strictly to relief in the workhouse, and that organised charity should provide temporary and special cases with the necessary assistance at home. Indoor relief, then, should be the rule, outdoor relief the exception. At once a cry is raised of the greater expense of keeping a pauper in the workhouse than outside, and the inhumanity of breaking up a home. Now all statistics and experience prove that the more out-relief that is given the greater is the amount of indoor relief that ultimately follows. Out-relief is the parent of in-relief. The Rev. N. Bury, in his report to the Local Government Board, gives a few facts, which show what effect a systematic plan of offering relief only by the workhouse can do in the short space of one year. In the Brixworth Union it was determined to offer the workhouse, on the 1st of January, 1873, to a large number of paupers in receipt of out-relief. The following table will show the result:

Date.	In-paupers.	Out-paupers.	Cost.
January 1st, 1873	67	917	£5,704
January 1st, 1874	73	542	£1,425

Thus in twelve months there was a diminution of 375 out-paupers, with only an increase of six in, and a saving of £4,279. Mr. Bury further shows that not only is the pecuniary gain great by such a action, but that on the score of humanity there is much to be said, and he gives the condition of those who were not allowed to be paupers. In the report of the Local Government Board for 1873 there is a long argument to show the utility, kindness, and humanity of a persistent application by guardians of the workhouse test. In considering the case of widows with dependent children, who constitute no less than 33 per cent. of our outdoor pauperism, the great difficulty is the sympathy which is expressed for them; so great has this been the case that amongst the labouring class a widow is supposed to be justly entitled to a pension from the poor-rate. Humanitarians say the woman has become a widow through no fault of hers, but forget the baneful effect which her relief by the parish has on the thrift and provident habits of the working class, and the inducement it holds out to the recipient to relax her efforts to obtain an independent livelihood. Mr. Longley, after advising that if support is required the children should be sent into the workhouse, and the widow left out to gain her livelihood, and showing what a double advantage this is to the children, says, "It is notorious that a large number of widows of the poorer class co-maintain and bring up large families independently of Poor-law relief. Again, it has invariably been found that when out-relief has been refused to widows with families, a large portion of them have, under this pressure, found it possible to obtain an independent livelihood." He strongly advises their employment by the board as paid and independent servants. In a union where the workhouse test was applied last year with much strictness to widows in receipt of out-relief, the guardians offered them regular employment as scrubbers in the infirmary, at 9s. a week, the work ending on each day at 1 p.m. In every instance the offer was refused, on the ground that they "could do better for themselves." South Stoneham would do well to consider the matter of out-relief, for I find that on January 1st, 1875, there were in receipt of relief no less than 1,721 paupers, out of a population, according to the Census of 1871, of 32,201, or 1 to 18 of the population; whereas for the same day, for the whole of England, the average was only 1 to 28—that is, one-third less, or a matter of 605 paupers on one day in South Stoneham more than the average for England would give her. Again, of the 1,721 paupers, no less than 852 were outdoor and able-bodied, or 1 to 2; whereas for the whole of England the ratio of outdoor able-bodied paupers in receipt of relief, on the 1st of January, was 1 to 3. If we look still closer, and take only the adult able-bodied outdoor paupers, we shall find that in the South Stoneham Union their ratio to the total number is 1 to under 6, but for the whole of England it is 1 to 9. No mere accident of locality can account for this, for in a neighbouring union, that of Winchester, with a population in 1871 of 26,697 on January 1st, 1875, there were but 1,044 paupers, or 1 to 25 of the inhabitants, of which only 267 of the outdoor paupers were able-bodied, or not 1 to 3, and of the adult able-bodied only 87, or 1 to 12—just half of the ratio in South Stoneham. Indeed, the ratio of adult able-bodied outdoor paupers to paupers relieved, on January 1st, 1875, was 1 to 19 in Havant, Portsea, Lynton, Ringwood, New Forest, and Stockbridge Unions, and only 1 to 27 in Whitechurch. In

Atcham Union, with 45,565 inhabitants, there were but 587 paupers on January 1st, of which only 4 were outdoor or adult able-bodied, or 1 to 118 instead of 1 to 6. Again, the ratio of the cost per head of the population for out and in-maintenance only is in Atcham, 1s. 10d.; in Stoneham, 5s.; in Atcham, out-maintenance only, 5d.; in South Stoneham it is 3½d. Yet Atcham is a rural union, in which the wages average 19s. to 12s. a week, but for thought, from a city, and so the p have been there systematically incalculated by the guardian. Again, every day I hear of the difficulty which mistress have in obtaining domestic servants, yet in South Stoneham on Jan. 1st there were in receipt of outdoor relief 229 adult able-bodied women, and in the whole of Hampshire no less than 2,648; in addition there were 468 indoor able-bodied, or 3,116 healthy women capable of work, yet kept by the poor-rate, when plenty of well-paid, well-fed work was at hand waiting to be done. In out-relief I include medical relief. Medical relief is the most prolific source of pauperism. Seven out of ten paupers have become paupers through sickness. It is not so much that disease makes paupers from its incapacitating character, as it is that sickness, being looked upon as one of the ills that "flesh is heir to," has readily granted to it a medical order, and it becomes the first step on the downward road. Medical orders frequently tend to grants of meat and stimulants. These react and increase the number of applicants for medical orders. The latter become so numerous that the medical officer is occasionally compelled to neglect his patients. In return, he finds the way smoothed by a recommendation for meat or stimulants. The meat or stimulants are ordered by the relieving officer in retail quantities, sufficient for a week, on some small shopkeeper, who has to supply a quantity up to a certain value, which is supposed to last the week. These tickets are sometimes sold, exchanged, and more rarely have been discounted for money at a sum less than the value named. If obtained correctly, the more common way is for the healthy ones of the family to eat the meat, and to give the water in which it has been boiled whole to the sick member. The stimulants are not always obtained of the same kind as recommended by the doctor; are seldom, if ever, given to the patient as ordered by the doctor, and very frequently are nearly abandoned by other than the sick. If the guardians give meat and spirits to outdoor paupers, they ought to supply the same from the workhouse stores, and purchased wholesale. Meat should be given as the doctor orders it, as beef tea or broth, and daily. If they are wise, Boards of Guardians will not, except in very rare cases, allow meat and stimulants to be given to outdoor paupers, certainly not beyond the next board meeting. If an outdoor pauper require meat and stimulants, it is almost an impossibility for him to get them, as ordered, outside the workhouse infirmary; so that the guardians should give the applicant an order. There will in time be no hardship in practically abolishing outdoor relief, for there is no contingency against which there is less difficulty for the poorer classes to make provision than sickness, and what little difficulty there is properly directed charity can easily overcome. Anyhow no medical order for a casual pauper ought to have a duration longer than the interval between the meetings of the board, and at each it should be renewed, discontinued, or an order for the workhouse infirmary substituted for it by the guardians. In many unions where relief in confinements and burials has been granted to the casual poor only on loan, the success has been most marked. The labour-yard is open to much abuse. It supplies with money many an idle, dissolute fellow, who is content to let his wife slave away for the family while he is performing an amount of work which is not really worth what he is paid for it. Too often the money is at once spent in the neighbouring beer-shop, and even the bread is not always taken home. In some unions the guardians have been so impressed with the evil of the labour-yard that they have done away with it. Mr. Longley says: "Stories are rife in those unions of paupers who remained at work in the stone yard for two or three years consecutively, and in one union a relieving officer assured me that there were a hundred men in the union formerly employed in the stone-yard, but now earning their own living, who would infallibly have been still receiving relief in the stone-yard had it still remained open." Mr. Longley adds that he himself had found in the labour-yard of one union a man who had been there for two years. Relief offered only in the workhouse soon attracts these men where work is to be found. When one remembers



that our law compels a householder, however poor, to pay a pauper's rate, it seems to me that the ratepayers have a perfect right to insist that the guardians should lay before them, in the fullest manner, how the fund to which they have been forced to contribute has been spent. The very fact of the paupers knowing their names, addresses, ages, the dates, and the cost of the relief which they receive, will be published to their neighbors and their employers, will prevent a very large number from applying. In the Basingstoke Union this is now done half-yearly. The workhouse, too, must be made a workhouse, and not an almshouse. If boards of guardians will carry out in their integrity the principles of the new Poor-law, heed the frequent advice tendered by the central authority, and act upon the warning voice yearly uttered by the various inspectors of the Local Government Board, then only the truly destitute will receive relief at their hands, and that relief will be of a deterrent character. The public must remember that it is their ignorance and their false views of charity which have taught working men in the time of need to rely upon the parish. Unthrift has, as it were, been thrust upon them. At the present moment charity is not ready for the entire abolition of out-relief. When it is abolished it will be a bright day for the working man. But the poor will always be with us, and must be helped by some charities, and instructed to think of the future. In no short time, for they are very apt to learn, as a million of Old Fellows and Foresters alone show, they will invent methods to help themselves. It is requisite to give help in such a manner that the poor man sees he is helping himself, and to conclusively show him that if he try he will, as a rule, succeed, and that if he does not try, only uncertain charity or an uncomfortable, not a cruel, workhouse is in store for him. At present the knowledge that a lazy, a dishonest, and a squandered life is as well rewarded by our laws, and by indiscriminate charity, as a steady, hardworking, frugal one, is a great check to individual efforts of providence and thrift. *Pari passu*, with a determined and unswerving adoption of a deterrent form of relief, an organisation of charity and Poor-law must take place. The Local Government Board has sanctioned it, the drift of modern thought and experience favours it, and the voice of common honesty and justice demands it. Want of accurate information and intelligent investigation are the curse of the Poor-law system. Poor-law and charity have stood haughtily apart, neither caring to know anything of each other's work. In those places where the Poor-law and charity have united in their work amongst the poor, the success is most encouraging. In 1871 the Local Government Board sent Mr. Doyle, one of their inspectors, to report on the system pursued at Elberfield. This system consists of a combination of a very strict Poor-law with a very thorough and considerate examination of cases. A very large number of volunteer visitors are enlisted, each having charge of only four families, of whose every circumstance they inform the guardians. This system had been, in 1870, in practice for nine years. In 1852 the population was under 50,000, and the number of paupers over 4,000, or one pauper to twelve of the population, and the expenditure was over £7,000. In 1857 the population had increased to nearly 53,000, while the number of paupers had decreased to 1,528, or one pauper to thirty-four, and the cost had decreased to £2,623. In 1870 the population was over 70,000, but the paupers had diminished still further to 1,062, or one pauper to sixty-four of the population; in other words, a co-operation of charity with Poor-law made, in nineteen years, four paupers out of every five independent persons. On Mr. Doyle's arrival home he endeavoured to establish something like the Elberfield system at Macclesfield, with the result of reducing, at the end of the first three months, the number of cases of out-relief from 490 to 239. In the Metropolis, during the last three years, nearly forty charity organisation societies have been established, each coterminous with the Poor-law Union, and in the same three years the weekly pauper-roll has been reduced from 105,000 to 83,000. All employers should insist upon those who work for them belonging to some benefit society. In such cases where it is impossible, on account of age, &c., they should initiate one for them, and make them pay to a provident dispensary for their families as well as themselves. This plan is not new in England. Many large firms and railway companies do so, notably the firms round the North Staffordshire Hospital, to which all the employed are compelled to have deducted from their weekly wages 0½d. if it be under 7s.; if

over 7s. and under 18s., 0½d.; if over 18s. and under 40s., 1d. These small subscriptions last year amounted to above £2,500, and entitled them—working men and their families—to medical attendance at any time at this hospital. The Bavarian Poor-law empowers the communal authorities to require workmen and labourers to pay as regular contributors towards such a fund, in return for which the contributors acquire a right to hospital assistance. By the same law large employers of labour may be called upon by the Poor Relief Council to provide for assistance to their work-people in cases of sickness, and such employers may then establish in their manufactories a special sick fund, and require the work-people to contribute to it. In Austria and the whole of North Germany the working-people are compelled by both local and general law to subscribe to sick and death funds. If old charity and Poor-law worked in unison in the Stockbridge Union, there would not have occurred at East Tytherley the scandal of a child being allowed to die without its father having been able to obtain medical assistance. The guardians, logically, were right in refusing to continue to give medical orders to others in full employment. A provident dispensary existed in this village to meet the requirements of such cases, but there was a scandalous failure, simply because either Cunnons' mind was incapable of appreciating his duty, or his wages were not sufficient for a large family. The first cause should have been met by a concerted action of both charity and Poor-law, through which Cunnons should have been gradually taught the necessity and righteousness of helping to help himself. The second, either by an increase of wages, or if they were of the market value, and the family too large for him to be wholly provident, then charity should have been ready to assist in paying to a dispensary the contribution necessary for the whole family. Relief given by way of loan would tide over the difficulty. Penny banks, clothing clubs, benefit societies, and branches of provident institutes are required in every parish, &c., but there must be an organisation of them all. While out-relief is in a transition state, relief given by the guardians on loan would, perhaps, be an easy way to tide over a temporary difficulty. To those who say that the English labourers cannot afford to be members of sound benefit societies, I tell them, then, that either their wages are not sufficient for them, and their employers supplement them by rates wrung from others poorer than themselves, who have no interest in their gains, or that they are, as a rule, sufficient for provident habits. The general consensus of opinion is that never were wages in a more satisfactory condition than at the present time. Employer and employed have yet to learn that they must know each other, and care for each other better than they do now. Too often each sees little else than the selfish traits in the others' character. It is the duty of the upper class to first hold out the hand to a closer acquaintance-ship, and to persevere, even if the hand be at first rudely repulsed. We must help the poor by personal example, by personal sympathy, and by personally teaching them the way of thrift. No nation can long continue in prosperity with a wide gulf between employer and employed—a gulf from either side of which not seldom comes up scarcely any other cry than that of "Money, money! reciprocal advantages! mutual concession!" Personal sympathies and the fostering of the semi-charities cannot fail to bridge it over, and help to bring an ebb in the tide of unthrift, improvidence, and pauperism.

The reading of the paper was listened to throughout with great interest.

MR. SPOONER said he thought he should be right in concluding that there was a universal feeling of indebtedness to Mr. Griffin for so kindly bringing the subject forward, for a more important one could not possibly be introduced. If there were any ground of complaint it was that the question was so large that it would be found impossible, during any single afternoon, to do justice to its consideration, and, therefore, probably the best thing to do under the circumstances would be to address themselves to some of those salient points which might contain the pith of the matter, leaving the paper for further consideration till after they had seen it in print. It appeared to him that there could not be a doubt as to the correctness of the principles endeavoured to be established, but there was a certain weak point. Go where they would, they would find that it had been said—"It is plainly far more economical to give a little temporary relief than to break up a man's home and make him go into the workhouse." There was a great deal of truth in



such an argument, and it was because it had not been sufficiently met by that system of charitable institutions in which men might co-operate together for their own good, and by a stricter superintendence as to each particular case which might come before the guardians of the poor. He had been particularly struck with some facts brought forward by Mr. Trank at a meeting of agriculturists at Salisbury, when he showed that in Wilton the amount of the Poor-law relief was almost greater than in any other parish in England. Those who were cognisant of the parish knew that it consisted mostly of good farms and good lands, that there was an excellent landlord, who had well managed estates and good cottages, and yet they found that the amount of Poor-law relief and outdoor relief was almost greater than in any other parish in England. Now the more they studied that fact the more they must be convinced that there must be something radically wrong there, and it was an evil that should be met. No doubt the guardians, in many instances, had been lax in their exertions, and they had not made sufficient inquiries into the cases which had come before them. It was urged that in agricultural parishes the guardians knew the circumstances of every family, and, therefore, that they were the proper men to determine whether the cases were proper cases for outdoor relief; but all present at that meeting knew what human nature was. They knew that a man did not like to be unpopular—that he liked to have the character, and probably deserved the character, of being disposed to be kind. The maxim, too, that a man had better err on the side of charity had, unfortunately, been too current for many years. Abandoning justice, and allowing charity to preponderate one year after another, had introduced that system which now so unfortunately prevailed. But since the rise in wages, in consequence of the greater demand for labour and the prevalence of emigration, and the number of men in small parishes being much less now than formerly, it had been felt that the time had now arrived when a check must be put to the system, and remedies must be provided. He concurred entirely in Dr. Griffin's statement—that charity was hardly prepared to take the subject up, and, therefore, all they could now do was to make outdoor relief a strong exception, in the hope that gradually charity might be introduced, and that any cases of debility and sickness would be sufficiently provided for by the system, aided by the main object itself. He should have liked to see more explanations (but they could not expect them) from the introducer as to the principles of the society intended, in a great measure, to take the place of outdoor relief. It was very desirable to encourage charitable institutions, but he had no doubt that pauperism had been aided and promoted by the indiscriminate distribution of charity.

Mr. BLUNDELL said that he had been much pleased with the paper read, and they were all extremely obliged to Dr. Griffin for the pains he had taken and the detailed manner in which he had gone into nearly all parts of the subject, which could not fail to have their effect and weight on society generally. It seemed to him, however, that there were many cases relieved in which the parties were not really deserving of relief—not cases of necessity. It frequently happened that parties received money from the parish when they were a great deal better off than some of those who paid the rates, and he thought it would be very advantageous if the names of all who received out-door relief were published every week or every month, and if that list were published in some conspicuous place—on the church or chapel-doors, in order that all persons might be able to see who were in receipt of relief and thus to form an estimate of the cases. People would then learn that others as well or better off than themselves were in receipt of relief would reprobate with them, and they would thus assist the guardians in meeting the cases on their merits. Dr. Griffin had made the remarkable statement that in South Stoneham Union there were 229 adult able-bodied females receiving outdoor relief, whilst the inhabitants of towns experienced the greatest difficulty in getting servants at all.

A VOICE: We have the same difficulty in the country.

Mr. BLUNDELL said that the statement was positively astounding that in the union in which they lived there were so many women capable of domestic service who were receiving parish relief. That showed some great and important change was necessary; otherwise it would lead to the subversion of society altogether. He thought some steps ought to be taken to separate the poor's-rate proper for other charges paid with it. It was now a handy basis for Parliament to fix a

rate upon for almost anything. Education, the highways—almost everything now became chargeable and was based on the poor-rate, but such matters should be kept entirely separate. It had been affirmed that relief in aid of various charges should be obtained from Government, and this had been partially effected; but he entirely objected to such a system. There was now an enormous mass of property in the country that paid nothing at all to local taxation, and, if they had to take the charges referred to from the general taxation, did not they pay them a second time? No doubt they did, and how came it that there were so many wealthy persons who took no interest in the amount of rates? Because they lived on the interest of that which paid little, or nothing at all, and, therefore, it was no wonder that there were so many drones and wasps as they found now. He hoped that the Charity Organisation Society would succeed, and that it would not forget the wealthy who paid scarcely anything towards the rates. These were the parties who ought to come forward, for they had their pockets full of money, and it was extremely unfair that the middle and trading classes of this country should be called on to pay the enormous rates they did when so many paid none at all.

Mr. SMITH, seeing several guardians of the South Stoneham Union present, asked if any of them could explain what was stated with respect to the women in Dr. Griffin's paper. It might be that many of the able-bodied women referred to were old women.

The Rev. J. M. LEE, one of the guardians, said he thought there must be some mistake in the figures put before the Club, and, if that were so, the arguments based on those figures fell to the ground. He quoted a number of the figures cited by Dr. Griffin, and compared them with the official returns from the Union, the result being a very wide difference as to the number of paupers and the expenditure for their relief.

This difficulty led to an irreconcilable difference, and it soon became quite apparent that any intelligent discussion of the affairs of the South Stoneham Union was totally impossible, as either the figures of the Poor-law Board were not understood, or something was included in their returns which was not included in the returns of the Union. For instance, the returns from the head-office gave the number of able-bodied paupers receiving outdoor relief in the Union at 832, whereas it was stated that they did not now know in the Union what it was to give relief to able-bodied men out of the house. There was also some confusion in the discussion as to whether it was 832 "men," or "paupers," in the paper. The latter, it will be observed, was the correct term used. It would also seem that the same remarks apply to the number of women receiving relief.

Dr. GRIFFIN said he would send the returns to the press, and they would show whether the figures were right or wrong, or whether the returns of the clerk to the guardians or the Poor-law Board were incorrect. The returns he had quoted were for 1875.

The Rev. Mr. LEE thought it would be undesirable, on account of the expense, to publish the lists so frequently as suggested. He explained the allowances to widows and children in the Union, and the mode of the allowances. When a woman became a widow they allowed her 5s. a week for the first month, and after that nothing, but they gave her 1s a week for her children if under age. There were a great number of children receiving the shilling a week, but their mothers got nothing at all. The guardians of the Union, at their last meeting, determined that a list of the names of different persons receiving relief should be placed on the table, so that the guardians of the different parishes should see the names of those in receipt of relief.

Mr. BLUNDELL said he should like the public to see the list.

The Rev. Mr. LEE said the numbers now receiving relief were not so large as they had been, either in the house or out of it, and the rating was less, although other items had been added to it. If these things were true, he could not understand how they could be so badly off at South Stoneham. They must be paying an enormous number of people with no money at all. Something had been said about relief by way of loan. They had tried it several times, but could not get the money back again. Many considered receiving relief as much a right as receiving wages. They said, perhaps, that they had paid rates for so many years, and that, therefore, they were entitled to receive relief if necessary. He should like to see public notice given that, after a certain time from the present day, no

relief should be given out of the house, except in cases of sickness. Then people, perhaps, would take care of themselves, and would enter benefit clubs, and, therefore, no great hardship would be inflicted if out-relief were refused them. Many, however, had been members of clubs which had become bankrupt. They were now too old to enter other clubs, and it would be a great hardship to say to such that no relief should be given them, except in the house. Mr. LEE likewise explained that it was not persons who paid the paupers' rate, but property.

Mr. JOHN GATER remarked that there could not be the slightest doubt as to the importance of the paper read by Dr. Griffin. The very fact of its inducing the guardians of the South Stoneham Union to speak in the way they had proved a once its importance, because, whether Dr. Griffin's figures were derived from a correct source or not, it was very evident that the guardians of that union did not entertain the same convictions of them as he did. It appeared to him, however, that the large number of paupers referred to as men, women, and children in the union of South Stoneham must be altogether wrong, and he could not help thinking that the number must include all the men, women, and children who were receiving relief by certificate from the medical officer. As to there being so many able-bodied men and women as stated, he was quite sure that there were not so many. He was, indeed, confident that there were not a tenth of the number, and he was not sure that there were not a hundred. This question was a matter of such great importance that he hoped it would be adjourned, and that the guardians of South Stoneham would attend the next meeting for the discussion of the subject. It always seemed to him a most difficult thing to determine as to who should be entitled to outdoor relief and who should not be. It was often impossible to determine between real and feigned want, except by compelling persons to give up all their outside ties, and compelling them to enter the house. Still, there were cases in which a few weeks' assistance had been known to keep people from going into the workhouse, and thus preventing them from becoming, as it were, acclimatised in the union. This difficulty appeared to him to be that they so often were deceived by those who applied for outdoor relief, seeing that they had such limited means of ascertaining the facts of the cases. They must depend upon the relieving officer, or they must investigate the cases for themselves; but, although guardians of the poor might be very zealous in their work, and however much time might be at their disposal, still it was practically impossible that every guardian should be able to make himself thoroughly acquainted with the circumstances of every poor person in his district. Therefore he thought they should have some means of making known to the public at large who were actually in receipt of relief, for it was a man's neighbours—perhaps, in about the same position in life as himself—who were best acquainted with his circumstances, and whether he had that in his home and about him which ought to prevent him from receiving parish relief. They wanted some plan as little obnoxious as possible to place before the ratepayers the knowledge which the guardians required, and he believed that the South Stoneham guardians had adopted a system which, if not so extended as it might become, would supply the want which was now felt. All ratepayers should consider it their duty to go to the Union to inspect the list of those in receipt of relief, when they would be able to acquaint the guardians with the facts of any case that might come under their notice, and which called for observation from them.

Mr. BARFORD thought it should go forth from the meeting that they had the startling fact that the official conclusions furnished by authority from headquarters had been come to on false bases. The actual figures were totally different from those supplied by that authority. With respect to publishing the proposed lists, he thought that such a system would do an infinite amount of good. He also referred to the abuses created by giving relief in kind. In many instances where stimulants were recommended for a patient, he had no hesitation in stating that the patient had never received them at all. It would be a great improvement if they had a store at the union, instead of giving tickets to patients to get what they required from small shopkeepers, for there was no abuse so great and universal as that proved to be.

Mr. T. WARNER observed that it would not do to go to the Poor Law Board and tell them that they had issued erroneous

statements. Perhaps their figures might be correct, but the cases had not been properly classified. It was probably in that way that the mistakes arose. They should be classified to show the infirm, the old, the young, the sex, and every other particular, which would probably make up the numbers given by the Board. He agreed that people should be required to provide for "rainy days," and not apply for relief at the eleventh hour.

Mr. SMITH suggested that the numbers given by the Poor Law Board might include persons receiving medical relief, and he thought that when they came to examine into the subject they would find that the Board was right after all.

The CHAIRMAN said that the subject had been so fully discussed that little was necessary for him to add; but, whatever error or inaccuracy had occurred, it did not lessen the interest in the subject generally. He thought that the Poor Law, whatever its intentions might be, had been much abused, particularly in cases of outdoor relief. There were many cases in which men who had been receiving good wages for several months became ill, and the next day they applied for relief. But they ought to be members of some club, or save something, to meet cases of that character. The law of the land now was such that any destitute person could demand relief. Still, he thought it should be given by way of the house, or by way of loan, to be repaid in a certain time, for then, if a man were to forget to repay the money advanced, he would be chary of coming again. The system, too, worked disadvantageously with respect to the medical man, who was expected to attend a patient in sickness without receiving any payment from him, but as a part of his official duties. Many of these people, however, could, if they pleased, afford to pay for such services themselves. They might join a medical club, and then, in sickness, they would be entitled to the attendance of a doctor. They did not do so now, and, if the doctor were called on to visit them, he knew that if he did so without an order from the relieving officer he would not be paid. He held that every man should be encouraged to become a member of some benefit society, and if employers of labour were to tell their men, in case of their falling ill, that they would not assist them unless they belonged to such a society—if they made it a condition that unless the men tried to help themselves, they would throw them on the parish at once—probably it would induce a great many to belong to a benefit society. With respect to the list of recipients, he should like to see more publicity given to it. He had been a churchwarden and overseer, but had not seen one for twenty years.

Dr. GRIFFIN, in the course of his reply, said that he felt rather sorry that he had instanced the case of the South Stoneham Union, as it had diverted attention from the general discussion of the subject, to which they ought rather to have adhered, and not to have kept to the particular instance in question. He recommended that the names of the paupers, their disease, the amount they received in relief, &c., should be published every six months.

The Rev. M. LEE produced a printed book, and said the guardians had done it every six months.

Dr. GRIFFIN said that was the first he had heard of it.

A resolution was about to be proposed, when Mr. JOHN GATER said he thought the meeting should be a journé in order that the guardians of the South Stoneham Union might have the opportunity of reading Dr. Griffin's paper, and also of going into the statistics adduced by him.

Dr. SHIELD remarked that there was not an able-bodied man in his district who had relief.

It was then unanimously agreed that the meeting should be adjourned.

The proceedings closed with a vote of thanks to Dr. Griffin for the able manner in which he had introduced the subject, and to Mr. W. Warner for presiding at the discussion.

**LORD BEAUCHAMP AND HIS TENANTS**—Lord Beauchamp has always been conspicuous for his earnest desire to promote high farming on his estate, and an announcement we are able to make to-day will entitle him not only to the gratitude of his tenants, but the esteem of the general public. The past season has been an unusually trying one in most agricultural districts; the prevalence of disease among stock, the extraordinary amount of rain, and the greatly enhanced cost of labour materially interfering with the

returns. In order to relieve his tenants of any undue burdens, Lord Beauchamp instructed a well-known valuer in the Midland Counties to visit his estates and to furnish him with a careful valuation. Where the rent has been in excess of the value it has been reduced, but where the valuation was higher than the rent no change has been made. This act of liberal consideration will not fail to secure warm appreciation, but Lord Beauchamp has taken other measures to encourage his tenants. At the rent audit, at the Crown Hotel, in Worcester, on Wednesday evening, Mr. Lakin announced that his lordship would give several valuable prizes to those tenants whose management was most meritorious. The handsome sum of £100 will be awarded for the best-managed farm of more than 100 acres, and £200 will be

divided into three equal prizes for the three next best farms, irrespective of extent, on the estate in 1877. The judges will be men of tried aptitude, and in every way entitled to the confidence of the tenants. As may be supposed, Lord Beauchamp's generous proposals have been received with something very like enthusiasm, and we look forward to a most spirited contest. Several of his tenants are known far and near for their knowledge and success as farmers, and need such encouragement as this will doubtless show what enterprise, determination, and sound judgment can do. Such a landlord deserves a hearty response to his efforts to improve his estates and advance the interests of his tenants, and that he will meet with such a response is a foregone conclusion.—*Berrow's Worcester Journal.*

## NORTH-RIDING TENANT-FARMERS AND CONSERVATIVE LEGISLATION.

A quarterly meeting of the Bedale Chamber of Agriculture was held on Tuesday, Jan. 12. Capt. Clarke, president, occupied the chair, and the attendance of members was large. After the usual routine business, a paper was read by Mr. ROBINSON, of Maudby, Thirsk, on "Agricultural Legislation for 1875." He commenced by saying that he did not speak as a politician, but as a tenant-farmer, and if he appeared to attack the policy of Mr. Disraeli's Government it was not from any party feeling. He divided his remarks under two heads—the work that had been done, and the work that ought to have been done but had not been done. The first amounted to a minimum, notwithstanding Mr. Disraeli's promises, and the fact that a tenant-farmer had been a member of the Government. The Agricultural Holdings Bill was the only legislation that had, during 1875, resulted from the Premier's promises. Mr. Robinson, having pointed out how the various clauses were arranged, went on to say that in clause 7 they were shown the way in which improvements of the first and second class were to be valued. In each case the sum laid out by the tenant on the improvement was to form the basis of the calculation, and from that sum was to be deducted a certain portion for each year, supposed to represent the actual benefit arising to the tenant from such improvement. Now, although that seemed very straight, it was in fact a very one-sided way of putting the matter. At the end of twenty, or seven years, as the case may be, the tenant was supposed to have received back the full value of the improvements; but where, he asked, was the interest of the sum expended all the while? If a tenant expended say £20 on a permanent improvement, he was supposed to receive the amount from the benefit arising therefrom in 20 years, or at the rate of £1 a year; but over and above that he ought to have received in that time £10 as interest upon the original outlay. But that idea did not seem to have been present with the compilers of the bill. Clauses 9 and 10 were entered as safeguards for the landlord. By clause 9 the tenant shall not be entitled to compensation for an improvement of the first class, unless he has executed it with the consent of the landlord in writing; and 10, as the improvement of the second class, unless he has given notice in writing to the landlord of his intention to do so, he shall not be entitled to compensation. Mr. Robinson then said: My opinion is that both these clauses are bad, and in either case a tenant who had accidentally forgotten to carry out either of these two clauses, might be robbed out of that which was partly his due. I think that with the sole exception of the erection of buildings, it should not be imperative that the tenant should have the consent of his landlord to the improvements in order to obtain compensation for them, but that if such improvement was in accordance with good husbandry, and had increased the value of the holding, then the tenant should receive compensation accordingly. Mr. Robinson next dealt with clauses respecting the making of agreements, which he strongly condemned. Practically, Mr. Robinson continued, the Act will cause little or no change. Acts of Parliament are intended to remedy grievances or defects in the law. In this case we know and feel there is a grievance, and a very legitimate one, and it was acknowledged by the speakers in the debates; but, as usual, the farmers had to go to the wall, and that squariness which Mr. Disraeli so profoundly respects still held their own, and the country was treated to the richest piece of humbug that this generation has seen. But after all

the farmers were rightly served, for it was well nigh impossible to get farmers to combine for any purpose, while, if they were but united, it would be an easy matter to obtain their rights. But he trusted there was a better day dawning, and that for defence of their rights farmers would combine. Having touched upon what had been, Mr. Robinson proceeded to consider what ought to have been, but had not been done. No relief had been accorded them in the way of local taxation, but the farmer still bears the entire burden of local rates; and the magistrates are still allowed, without any check, to increase the salaries of the officials. Another was that respecting the restrictions upon the trade in foreign cattle, and the orders of the Privy Council relating thereto. As the loss arising to the grazier from imported diseases was greater than the value of the stock imported, the farmers were entitled to the greatest protection; but instead that idea was pro-pooled by the Government; and the tenant-farmers' representative, after being snubbed by his chief, had resigned the post which he held, thereby sensibly weakening Mr. Disraeli's administration; and he (Mr. Robinson) thought they ought that day in some way or other show their appreciation of Mr. Read's action; and may the day speedily come when they would be more largely represented! Had the tenant-farmers been properly represented, that sham of shams, the Agricultural Holdings Bill, would never have seen the light. Mr. Robinson concluded by trusting that farmers would not sit down under defeats, but struggle on until they were in a position to develop the most-producing and corn-growing capabilities of this country to the greatest extent.

In the course of the discussion which followed, the CHAIRMAN approved of a great many of the points upon which Mr. Robinson had touched; but respecting the permanent improvement, those in the first class to expire in twenty years, he was strongly of opinion that those were landlords' improvements.

Mr. SMITH agreed entirely with Mr. Robinson, but differed from the chairman respecting the twenty years' improvements. In some cases there were poor landlords who could not put up buildings whilst the tenant could. But he did not find fault with the fact that any building put up by a tenant, at the end of twenty years became the landlord's sole property.

Mr. TROTTER did not agree with Mr. Robinson that the bill was a sham of shams. The present Government was the first who had acknowledged that the tenant-farmers had a grievance, and it was something to have a "case" only. They ought to be thankful for what they had got, and strive for more. It was, he contended, right and proper that a landlord should have power to withhold his consent to the erection of buildings on his land, if such were unsuitable or fancy ones. What the present Government had done for them was a "leaven," and it lay with the tenant-farmers to work it up.

On the proposition of the CHAIRMAN, seconded by Captain OTTER, a cordial vote of thanks was passed to Mr. Robinson for his paper, and the same was ordered to be printed and circulated amongst the members.

The CHAIRMAN drew the attention of the meeting to the presentation to be made to Mr. C. S. Read, who had resigned his position in the Government. He cordially endorsed the action of Mr. Read, who, on the Agricultural Holdings Bill, had been "muzzled" by the Prime Minister; and in the

Contagious Diseases Animals Act had not been treated with the consideration he deserved.

After some discussion it was resolved, on the motion of Mr. OYLER, seconded by Mr. SMITH, that three guineas should be sent from the Chamber to the Read testimonial

fund, together with a vote of thanks to Mr. Read for his services.

After a vote of thanks had been accorded to the Chairman, the meeting broke up, it being determined to call a special meeting of the Chamber for the 22nd February, to discuss the question of local taxation.

## REVIEW OF THE CORN TRADE DURING THE PAST MONTH.

With the opening of the year 1876 the wheat trade commenced under very peculiar circumstances. The past year began favourably, with the prospect of an early season, as well as a good one; but the winter loitered, making the spring backward, causing the issue to be doubtful. The blooming time came late, and when we wanted sunshine and calm in the month of July, which we reckon to be high summer, came a deluge of rain, putting all calculation out of course. It was soon apprehended, by men of experience, that we should suffer; and so we have, for our wheat yield only turns out five-sixths of an average, and of but poor quality and weight. Speculation, which for a long time had been dormant under the abundance of 1874, suddenly woke up, and the orders that went out on English account were so numerous that our stocks at the close of December, dating from the 1st of September, were 50 per cent. beyond what for a long time had been known. The remnant of the good year 1874 was forgotten, and with a good harvest time, after a bad period of bloom, it was thought matters were then rectified; prices went back, and have since been kept down by the surplus imports. But the weekly deliveries so fully confirm the *Mark Lane Express'* estimates of the crop that, bad as things are, we still look for a rally, more especially as, through unfavourable circumstances, little more than half of the future crop has been sown. The late holidays added to the dulness of the trade, which has further been injured by the damp, mild weather, which has generally lowered the quality of samples, so that on that score alone prices have lately been weakening, without any marked declension. This last week, indeed, the London averages show an improvement of 2s. 5d., simply from the fact of the frost having returned; for, on the previous week they were only 45s., which was actually 1d. below the general averages, so that to send to London, under such circumstances, was to lose money. In France and all over Europe there has been a dulness as well, and tendency downwards; but as we drift into March breezes our prospects may brighten, and trade resume its animation. In Australia as well as at New York prices have lately been advancing. We herewith give the quotations for wheat at different ports, as recently made: White wheat at Paris 48s., at Bordeaux 47s.; Mariaopoli at Marseilles 45s. 4d., Danube 38s.; best native wheat at Brussels 49s., at Courtrai 46s., at Louvain 48s., at Liege 46s., at Amsterdam 44s., at Maestricht 45s.; best at Hambro' 50s.; native at Cologne 44s., at Mayence 46s., at Petersburg 42s., at Danzig white 50s., Stettin (for April and May) 43s. 6d., Berlin 43s., at Vienna 41s., at San Francisco 52s. 6d. c. f. i., at Adelaide 43s., No. 1 spring at New York 40s. per qr.

The first Monday opened on a small supply of English wheat, but there was a fair arrival of foreign. There were but few fresh samples during the morning from Essex and Kent, and the damp weather then ruling greatly deteriorated most of the samples. The few that were dry

went off quietly, at the rates of that day fortnight, the previous Monday having been a holiday, but the rest were extremely difficult to place. The foreign trade was still very inactive; holders were not generally disposed to press sales, which would certainly have rather lowered prices. With numerous arrivals of floating cargoes very little demand was experienced, but prices were nominally the same. The country remaining under the influence of the holidays and damp weather, very little business was passing; but as the week closed frosty so the latest markets were more firm, but with the exception of Liverpool, which was 2d. per cental cheaper on the week. Edinburgh and Leith were without change, but Glasgow gave way 1s. per qr. At Dublin the wheat trade ruled heavy, both for native and foreign qualities.

On the second Monday there was a small increase in the English supply, while that from abroad was doubled, free contributions coming from America, Australia, India, and the Baltic. The show of fresh samples from the near counties was again limited, but after the frost the condition was somewhat improved. The dry and saleable portion went off pretty freely at unaltered rates, lower sorts being quite of uncertain value and almost impossible to place. The foreign trade evinced no improvement, either in value or demand, but nobody seemed inclined to press sales. Though floating cargoes were numerous they experienced an improved inquiry, at previous rates. The renewed frost having rather improved the condition of country samples, there was more activity in the sales, at fully previous rates; though where the condition was bad, business was still difficult, with prices rather lower; but Liverpool this week recovered its position, having effaced the decline of the previous week. Though Edinburgh and Leith remained dull, Glasgow noted an improved inquiry, at fully previous currency. Dublin again very dull, and rates generally 6d. per barrel down.

On the third Monday the native supplies were still small, and those from foreign ports fell off greatly, Adelaide being the principal source of supply. A thaw having for a few days again appeared, the condition of the fresh-brought samples went back, and but very few were found fit for millers' purposes. Such only sold slowly, at unaltered rates, the rest being of uncertain value, and quite neglected. But though foreign supplies had so materially lessened, there was no revival of the market, and the very little done was at unchanged quotations. Floating cargoes, in spite of free arrivals, sold readily. The wheat trade in the country lost its upward tone, from the return of damp mild weather, though white sorts improved at Spilsby 1s., and good red was firm at Lynn and Gainsborough. Liverpool on Tuesday was unaltered. On Friday the market was 1d. to 2d. lower per cental. Leith, Edinburgh, and Aberdeen were much the same for wheat, but Glasgow was rather lower. Native wheat remained dull at Dublin, but there was a rather improved demand for foreign, at fully previous rates.

On the fourth Monday there was another moderate supply of English wheat, but the foreign arrivals were

fair, and about half from Southern Russia and the Principalities; India, New York, and Adelaide doing good service. There were but few fresh samples this morning from the near counties, and they were generally in poor condition. Only those that were dry found buyers, and that slowly, at the previous rates, the remainder being passed by. The foreign trade remained on a small scale, and to have forced sales would have lowered prices. Floating cargoes of fine old kept their value, but not inferior sorts.

The imports into London for four weeks were 19,958 qrs. British Wheat, 94,164 qrs. foreign, against 22,608 qrs. English, 66,168 qrs. foreign in 1875. The imports into the kingdom for the four weeks ending 15th of January, were 4,160,949 cwt. wheat, 517,210 cwt. flour, against 2,619,312 cwt. wheat, 532,677 cwt. flour for the same period in 1875. The London exports for four weeks were 1,995 qrs. wheat, 50 cwt. flour. The general averages opened at 45s. 9d., and closed at 44s. 7d. The London averages commenced at 47s., and ended with 47s. 5d.

The quotations of flour during the first month of the new year showed but little change, though country sorts gave way at the opening 1s. per sack, bringing Norfolks down to 33s. for the best, made of old wheat, and 30s. to 31s. for that made of new, while foreign barrels at the same time yielded in a like proportion. With the temperature so continually varying, the market has hardly been fixed as to values, and business throughout has been dull, though the top price of town-made has steadily been kept to 47s. per sack. In Paris, too, the trade has been heavy, and the best marks for consumption did not exceed 37s. 3d. per sack. The imports into London for four weeks were 77,591 sacks country sorts, 6,815 sacks, 30,142 barrels foreign; against 83,544 sacks country, 12,886 sacks, 26,200 barrels foreign in 1875.

Malting barley has found but a moderate demand, the Scotch supplies having kept up well; but prices cannot be said to have gone back for fine sorts, though dull enough for secondary qualities; and grinding foreign has been reduced 6d. to 1s. per qr., and continues to be the cheapest feeding-stuff on the market, useful 50lbs. sorts being procurable at 25s. At this price there is no inducement to make free imports, and, as the season advances, we rather look for some improvement in the price. The four weeks' imports into London were, in British qualities, 16,548 qrs. in foreign 27,673 qrs.; against 15,854 qrs. British, 101,751 qrs. foreign for the same time last year. So there is a considerable falling-off in foreign imports.

The malt trade all through the month has been inactive, and only the primest qualities maintained their previous value, holders getting more anxious to sell.

The imports of maize, without being heavy, have been fully equal to the demand, and new qualities have given way 1s. to 2s. per qr., not being worth over 30s. for flat American; but fine old round sorts were still held at 32s. to 33s. The month's imports amounted to 43,868 qrs., against 59,069 qrs. for the same time last year.

The oat trade, with moderate supplies, has undergone but slight fluctuations during the month. On the second Monday, when the supply was moderately heavy, prices advanced about 6d. per qr.; but on the following week, when the quantity was somewhat less, they lost as much, and since then no change has been noted, leaving rates much as they commenced. 35lbs. swedes are worth 23s. 6d., 40lbs. 26s.; 35lbs. old Russian 24s. 6d., 40lbs. 27s.; and as nothing now can be expected from Russian ports, the probability is that they will continue at about this range, in consequence of the large demand. The imports for four weeks into London were 5,164 qrs. English, 384 qrs. Scotch, 162,602 qrs. foreign; against 1,626 qrs. English, 477 qrs. Scotch, 100 qrs. Irish, 126,437 qrs.

foreign, for the same time last year.

The supplies of beans have been fair, including foreign; but prices have not materially changed. New English have given way 1s. to 2s., and old, of all sorts, on the third Monday were reduced 1s. A large demand for the country has kept up the value of this grain more than might have been expected, good dry new harrows being still worth 47s., old Egyptian 40s., old Italian 43s. to 44s. The imports into London for four weeks were 3,787 qrs. native, 10,729 qrs. foreign; against 3,219 qrs. native, 4,394 qrs. foreign in 1875.

English peas have been in moderate supply, but foreign have fallen off; and the frost not lasting long enough to create an extra demand for boilers, these, as well as those for hog-feed, have given way 1s., without activity in the demand. The new English white are very poor, and not many worth over 38s.; while Canadian are worth 42s. and hog-feeding sorts 39s. Maize and barley, both being relatively cheaper, have, in many cases, supplied their place. The imports into London for four weeks were, in English sorts, 2,822 qrs., in foreign 1,927 qrs.; against 1,568 qrs. English, 30 qrs. foreign in 1875.

We have had unusually free imports of Linseed, and of fine quality, from India, which have served to reduce values 1s. to 2s. per qr.; the arrivals in four weeks being 68,563 qrs., against 26,479 qrs. last year.

In red Cloverseed occasional sales have been made, at enhanced prices for fine French and German sorts, though but very little English has come to market, and that not so fine as expected. It has, however, sold readily; and as the supplies from America are neither expected to be large or low-priced, dealers have shown rather more confidence in the trade. White seed and trefoil have also been rather on the move, and Alsike as well.

Spring tares have been placed at full rates; and though reported scarce at Hambro' and 2s. to 3s. dearer, more are beginning to appear, and were saleable at 58s. to 60s. per qr.

## REVIEW OF THE CATTLE TRADE DURING THE PAST MONTH.

The most interesting event in the cattle trade during the month has been the arrival of a moderate quantity of dead meat from America. The present operation is merely tentative, but it has proved so successful that there is no doubt that this new branch of enterprise will be extended. The consignments have come to hand in excellent condition, and have been disposed of at such prices as to render the operation profitable. The meat is kept sweet by the cold dry air process.

The cattle trade has on the whole been quiet. At one time very full prices were obtained, but these currencies were not altogether supported. As regards beasts fair supplies have been received from our own grazing districts, and although second-rate animals have been rather plentiful, there has been a better show of choice descriptions. Scotland has contributed over 1,000 excellent beasts, but the arrivals from Ireland have as usual been of indifferent quality. The Norfolk stock has come to hand in tolerably good condition. The show from the Continent has been chiefly made up from Denmark, Holland, Spain, and the condition of the receipts has been about an average. As regards trade, at one time much firmness prevailed, and 6s. 4d. to 6s. 6d. per 8lbs. was paid for the best Scots and crosses, but later on the market became weaker, and 6s. to 6s. 2d. per 8lbs. was the extreme rate.

The sheep pens have been pretty well filled, but the increase in the supply was due to the greater liberality in the foreign receipts, English breeds being rather scarce than otherwise. The market on the whole was firm, but without being active, nor were the best prices maintained up to the close. The choicest Downs and half-breeds have sold at 7s. to 7s. 4d. per 8lbs.

Calves were firm at full prices.

Pigs steady.  
The total imports of foreign stock into London last month were:

	Head.
Beasts .....	4 442
Sheep .....	32,647
Calves .....	663
Pigs .....	236

	Total	37,988
Corresponding period in 1875 .....	15,914	
" 1874 .....	29,513	
" 1873 .....	19,889	
" 1872 .....	17,850	
" 1871 .....	10,298	
" 1870 .....	21,727	
" 1869 .....	12,214	
" 1868 .....	20,000	
" 1867 .....	24,084	
" 1866 .....	28,838	
" 1865 .....	16,952	
" 1864 .....	9,967	
" 1863 .....	11,893	
" 1862 .....	8,783	
" 1861 .....	2,708	
" 1860 .....	6,760	
" 1859 .....	9,264	

The bullock arrivals from our own grazing districts, as well as from Scotland and Ireland, thus compare with the three previous years:

	Jan. 1873.	Jan. 1874.	Jan. 1875.	Jan. 1876.
Norfolk, Suffolk, Essex, and Cambridgeshire .....	4,000	5,100	5,200	8,500
From Lincolnshire, Leicestershire, and Northamptonshire .....	800	400	1,300	800
Other parts of England .....	2,020	3,000	1,600	1,560
Scotland .....	584	909	550	1,074
Ireland .....	1,855	1,900	450	1,384

The following figures show the total supplies of stock exhibited and disposed of at the Metropolitan Cattle Market during the month:

	Head.
Beasts .....	18,590
Sheep .....	108,500
Calves .....	1,390
Pigs .....	115

COMPARISON OF SUPPLIES.

Jan.	Beasts.	Sheep.	Calves.	Pigs.
1875 .....	14,021	78,350	930	235
1874 .....	16,850	82,260	1,435	545
1873 .....	14,940	64,300	1,376	575
1872 .....	18,141	78,128	848	438
1871 .....	15,028	73,840	314	365
1870 .....	19,251	91,760	1,127	985
1869 .....	19,880	94,930	654	1,201
1868 .....	17,620	86,820	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 .....	19,412	80,230	1,019	2,567
1863 .....	20,455	83,432	1,637	2,456
1862 .....	20,680	82,160	853	2,850
1861 .....	17,612	75,210	677	2,000
1860 .....	20,500	92,426	1,067	2,045
1859 .....	19,805	90,520	921	2,400
1858 .....	20,312	80,743	1,103	1,756

Beasts have sold at from 4s. 6d. to 6s. 4d., sheep 4s. 6d. to 7s. 4d., calves 4s. 6d. to 7s., and pigs 4s. 6d. to 5s. 10d. per 8lbs. to sink the oil.

COMPARISON OF PRICES.

	Jan., 1875.	Jan., 1874.
Beef from ... 4	4 to 5 10	4 6 to 6 4
Mutton .....	4 6 to 6 10	5 0 to 7 0
Veal .....	4 0 to 6 10	5 6 to 6 10
Pork .....	4 2 to 5 0	3 8 to 4 10

	Jan., 1873.	Jan., 1872.
	s. d. s. d.	s. d. s. d.
Beef from ... 4	4 to 6 2	3 6 to 5 10
Mutton .....	5 8 to 8 0	4 4 to 7 0
Veal .....	5 6 to 7 4	4 6 to 6 0
Pork .....	3 6 to 4 8	3 8 to 5 0

IMPERIAL AVERAGES

For the week ending Jan. 15, 1876.

Wheat .....	43,412½ qrs.	44s. 7d.
Barley .....	63,291½ "	34s. 3d.
Oats .....	3,945½ "	28s. 10d.

COMPARATIVE AVERAGES.

Years.	WHEAT.			BARLEY.			OATS.		
	Qrs.	s.	d.	Qrs.	s.	d.	Qrs.	s.	d.
1873...	58,892½	55	8	67,419	37	2	5,694½	22	6
1874...	51,186½	55	9	57,840	40	5	5,191½	22	8
1875...	55,728½	62	6	70,463	46	2	5,141½	27	2
1876...	67,084½	44	6	58,621½	45	6	3,328	29	1
1876...	43,412½	44	7	63,291½	34	3	3,945½	23	10

AVERAGES

For the Six Weeks Ending	Wheat.		Barley.		Oats.	
	s.	d.	s.	d.	s.	d.
Dec. 11, 1875 .....	46	1	35	4	24	9
Dec. 18, 1875 .....	43	7	35	4	24	10
Dec. 25, 1875 .....	45	9	34	9	24	4
Jan. 1, 1876 .....	45	3	34	6	24	4
Jan. 8, 1876 .....	45	1	34	5	23	10
Jan. 15, 1876 .....	44	7	34	3	23	10
Aggregate Avg. of above .....	45	7	34	9	24	2
The same period in 1875 .....	44	9	44	8	29	5

FLUCTUATIONS in the AVERAGE PRICE of WHEAT

PRICE.	Dec. 11.	Dec. 18.	Dec. 25.	Jan. 1.	Jan. 8.	Jan. 15.
46s. 7d.	...	...	...	...	...	...
46s. 14.	...	...	...	...	...	...
45s. 9d.	...	...	...	...	...	...
45s. 3d.	...	...	...	...	...	...
45s. 1d.	...	...	...	...	...	...
44s. 7d.	...	...	...	...	...	...

CURRENT PRICES OF BRITISH GRAIN AND FLOUR IN MARK LANE.

WHEAT, Essex & Kent, white .....	old 49 to 55	new 49 to 52		
" " red .....	old 47, ,, 59	new 42 47		
Norfolk Lincolnsh., and Yorksh., red .....	old 50	new 41 47		
BARLEY .....	Chevalier new .....	37 42		
Grinding .....	23 31 .....	Distilling .....	34 37	
MALT, pale .....	63 68 .....	old 69s .....	brown .....	52 56
RYE .....	...	...	...	42 44
OATS, English, feed 25 to 26 .....	Potato .....	...	...	— —
Scotch, feed .....	00 .....	Potato .....	...	— —
Irish, feed, white .....	22 00 .....	Fine .....	...	— —
Ditto, black .....	21 00 .....	Potato .....	...	— —
BEANS, Mazagan .....	44 45 .....	Ticks .....	...	43 44
Farrow .....	46 52 .....	Pigeon, old .....	...	54 56
PEAS, white, boilers .....	40 41 .....	Maple .....	44 to 45	Grey 39 40
FLOUR, per sack of 28lbs., best town households ..	43 47			
Best country households, old .....	37 40			
Norfolk and Suffolk, old .....	30 33			

FOREIGN GRAIN.

WHEAT, Dantzic, mixed .....	52 to 54	Shillings per Quarter extra .....	— to 57
Königsberg .....	49 52 .....	extra .....	— 54
Rostock .....	47 — .....	old .....	— 50
Silesian, red .....	46 48 .....	white .....	49 51
Pomera., Meckberg., and Uckermark, red .....	46 49		
Ghirka 45 to 47 ... Russian, hard, 42 to 45 Saxonka ..	46 50		
Danish and Holstein, red 46 49 ... red American ..	45 49		
Chilian, white 51 ... Californian 53 ... Australian ..	52 56		
BARLEY, grinding 25 to 29 ... distilling .....	30 24		
OATS, Dutch, brewing and Polands 23 to 27 .....	feed 21 24		
Danish and Swedish, feed 23 to 26 ... Stralsund ..	23 26		
Canada 20 to 24, Riga 23 to 26, Arch. 23 to 26, P'sbg ..	24 27		
TARES, Spring .....	60 64		
BEANS, Friesland and Holstein .....	42 43		
Königsberg .....	46 to 47 .....	Egyptian .....	39 40
PEAS, feeding and maple .....	40 — .....	fine boilers .....	40 42
MAIZE, white .....	30 32 .....	yellow .....	30 31
FLOUR, per sack, French .....	00 .....	Spanish, p. sack ..	00 00
American, per brl. ....	23 24 .....	extra and dble. ..	25 26

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PAYD-UP CAPITAL .....	1,200,000	} £1,425,790
INSTALMENT ON NEW SHARES .....	223,790	
RESERVE FUND .....	525,000	
INSTALMENT OF PREMIUM ON NEW SHARES .....	111,895	

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DIPPING COMPOSITION, which requires no Lard, and  
may be used with Warm or Cold Water, for effectually  
destroying the Tick, Lice, and all other insects in and on  
the Wool, preventing the alarming attacks of Fly and Sheat,  
and cleaning and purifying the Skin, thereby greatly im-  
proving the Wool, both in quantity and quality, and highly  
beneficial 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:—

6 lb. for 20 sheep, price, jar included .....	£0 2 0
4 lb. 30 " " " " " " " " " " " "	0 3 0
2 lb. 50 " " " " " " " " " " " "	0 4 0
1 lb. 75 " " " " " " " " " " " "	0 5 0
2 lb. 100 " " " (Cask and measure)	0 10 0
3 lb. 150 " " " included	0 15 0
4 lb. 200 " " " " " " " " " " " "	1 0 0
5 lb. 250 " " " " " " " " " " " "	1 3 6
6 lb. 300 " " " " " " " " " " " "	1 7 6
8 lb. 400 " " " " " " " " " " " "	1 17 6
10 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:—  
Buckled 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  
entirely natural. If it is used according to the directions  
given, I am satisfied, that while it effectually destroys vermin,  
it does not injure the hair roots (or "woik") in the skin, the  
fleece, or the carcass. I think it deserves the numerous  
testimonials published. I am, Sir, yours respectfully,  
WILLIAM HERAPATH, Senr., F.C.S., &c., &c.,  
To Mr. Thomas Bigg, Professor of Chemistry,  
Borough 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  
disease in Sheep, and which may be safely used in all  
climates, and at all seasons of the year, and in all descriptions  
of sheep, even ewes in lamb. Price FIVE SHILLINGS per  
gallon—sufficient on an average for thirty Sheep (according  
to the violence of the disease); also in wine quart bottles,  
ls. 5d. each.

### IMPORTANT TESTIMONIAL.

"Scoulton, near Hingham, Norfolk, April 16th, 1855.  
"Dear Sir,—In answer to yours of the 4th inst., which  
would I 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 81 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 sweetest 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 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,  
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OF

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# LONDON AND COUNTY BANKING COMPANY.

Established in 1836, and incorporated in 1874, under "The Companies Act, 1862."

SUBSCRIBED CAPITAL — £3,750,000, in 75,000 Shares £50 each.

## REPORT ADOPTED AT THE ANNUAL GENERAL MEETING, 3RD FEBRUARY, 1876.

The Directors have pleasure in submitting to the Proprietors the Balance Sheet of the Bank for the Half-year ended on the 31st December last. With reference to the exceptional loss arising out of the failure of Messrs. A. Collier & Co., mentioned in the report to the Proprietors in August last, the Directors have, after careful consideration, transferred £75,000 from the balance then carried forward, to the special account previously opened, which will, in their judgment, fully cover the whole of the deficiency.

This transfer of £75,000 leaves the balance brought from last account £13,856 12s. 3d., including £6,093 15s. reserved to meet interest then accrued on New Shares.

The Net Profits for the Half-year, after paying interest to customers and all charges, allowing for rebate, and making provision for bad and doubtful debts, amount to £142,874 6s. 8d., which, added to the above balance of £13,856 12s. 3d., produces a total of £156,730 18s. 6d. Out of this sum the Directors have added £25,000 to the Reserve Fund, raising that Fund to £699,522 10s.

They recommend the payment of a dividend of 8½ per cent. for the half-year, and that the balance of £14,730 18s. 6d. remaining (after providing £15,000 for interest on new shares) be carried forward to Profit and Loss Now Account,

The present dividend, added to that paid to 30th Jano, will make 16½ per cent. for the year 1875.

The Directors retiring by rotation are James Morley, Abraham Hodgson Phillipotts, and James Duncan Thomson, Esquires, who, being eligible, offer themselves for re-election.

The Dividend, £1 14s. per share, free of Income-tax, will be payable at the Head Office, or at any of the Branches, on or after Monday, 14th February.

### BALANCE SHEET of the London and County Banking Company, 31st December, 1875.

By	
Capital paid up.....	£1,200,000 0 0
Installments received in respect of new shares .....	299,045 0 0
	£1,499,045 0 0
To reserve fund .....	£25,000 0 0
Installments received in respect of new shares.....	1,63,522 10 0
Amount now added.....	25,000 0 0
	699,522 10 0
Amount due by the Bank to customers' balances, &c.	21,390,784 6 4
Liabilities on acceptances, covered by securities.....	2,162,095 7 0
	23,561,679 13 4
To profit and loss balance brought from last account, less £75,000 referred to in the report .....	7,762 17 3
To reserve to meet interest accrued on new shares.....	6,093 15 0
To gross profit for the half-year, after making provision for bad and doubtful debts, viz.....	395,530 1 5
	1,09,386 13 8
Less amount added to reserve fund.....	25,000 0 0
	384,386 13 8
	£26,141,833 17 0

Cr.	
By cash on hand at Head Office and Branches, and with Bank of England.....	£2,735,258 10 2
By cash placed at call and at notice, covered by securities.....	3,375,270 15 2
Investments, viz.:	£6,110,529 5 4
By Government and guaranteed stocks.....	2,336,751 16 9
By other stocks and securities.....	89,505 11 11
	2,117,560 8 8
By discounted bills, and advances to customers in town and country.....	11,905,755 3 4
By liabilities of customers for drafts accepted by the Bank (as per contra) .....	2,162,095 7 0
	16,967,880 10 4
By freehold premises in Lombard-street and Nicholas-lane, freehold and leasehold property at the branches, with fixtures and fittings .....	411,137 11 3
By interest paid to customers .....	77,776 19 5
By salaries and all other expenses at head-office and branches, including income-tax on profits and salaries .....	129,948 19 0
	£28,141,833 17 0

PROFIT AND LOSS ACCOUNT.	
To interest paid to customers, as above.....	£77,776 19 5
To expenses, as above .....	129,948 19 0
To rebate on bills not due, carried to new account .....	41,929 16 9
To amount added to reserve fund.....	25,000 0 0
To interest on new shares .....	13,900 0 0
To dividend of 8½ per cent. for half-year .....	102,000 0 0
To balance carried forward .....	14,730 18 6
	£400,386 13 8
By balance brought forward from last account less £75,000 referred to in the report .....	7,762 17 3
By reserve to meet interest accrued on new shares.....	6,093 15 0
By gross profit for the half-year, after making provision for bad and doubtful debts.....	395,530 1 5
	£400,386 13 8

We, the undersigned, have examined the foregoing Balance Sheet, and have found the same to be correct.

(Signed) WILLIAM NORMAN, }  
 RICHARD H. SWAINE, } Auditors.  
 STEPHEN SYMONDS, }

By Order, GEO. GOUGH, Secretary.  
 London and County Bank, 27th January, 1876.

### LONDON AND COUNTY BANKING COMPANY.

NOTICE IS HEREBY GIVEN that a DIVIDEND on the Capital of the Company, at the rate of 8½ per cent. for the Half-year ended December 31st, 1875, will be PAYABLE to the Proprietors, either at the Head Office, 21, Lombard-street, or at any of the Company's Branches, on or after Monday, the 14th instant.

By Order of the Board,  
 W. MCKEWAN, } Joint  
 WHITBREAD TOMSON, } General Managers.  
 21, LOMBARD STREET, February 4th, 1876.





*Friesian*

# THE FARMER'S MAGAZINE.

MARCH, 1876.

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PLATE.

TREDEGAR, A "ROYAL" HEREFORD BULL, THE PROPERTY OF MR. WILLIAM TAYLOR,  
OF SHOWLE COURT, LEDBURY.

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## THE FARMERS' CLUB. OUR MEAT SUPPLY.

My object in the preparation of this Paper has not been to throw impediments in the way of the importation of cattle from foreign countries—much less from Ireland—but, on the contrary, to suggest the adoption of such measures which, if put in force, would speedily rid the United Kingdom of diseases of modern origin, and thus prepare the way for the abandonment of all restrictions. The present regulations are notoriously inefficient: they satisfy no one, they cause anxiety to, and embarrass the foreigner by their uncertainty; and they harass the home producer, without affording him the needful protection.

It will be seen, by reference to page 160, that I advocate the adoption of more thorough measures, or the abandonment of the inoperative regulations now in force; substituting, in lieu, penalties for moving, or exposing for sale, animals suffering from contagious diseases.

I have been led to write this short Preface to correct misconceptions which have arisen in the minds of certain newspaper critics, who have probably been misled by the abridged reports of the Paper which appeared the morning after its delivery.

JAMES HOWARD.

*Clapham Park, Bedfordshire, Feb. 14, 1876.*

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The first meeting for the year took place on Monday evening, February 7th, in the new room at the Caledonian Hotel, Adelphi, the Club having recently removed from the Salisbury Hotel, where it had been located ever since the hotel was erected. On the same occasion the new secretary, Mr. Druce, barrister, son of Mr. Joseph Druce, also made his first appearance in the office of Secretary, in which he had just succeeded Mr. Henry Corbet, who, after having held the post for nearly 30 years, had been compelled by ill health to resign. There was a very large attendance. The above subject, "Our Meat Supply," was to have been introduced by Mr. James Howard, in whose name it appeared on the card, but, as will be seen from what follows, that

gentleman being indisposed, the opening paper was read on his behalf by his brother, Mr. Charles Howard.

The chair was taken by the President for 1876, Mr. T. HORLEY, jun., who, in his opening remarks, commenced by apologising for the late period at which the meeting began, namely, seven o'clock, instead of the usual hour of six. This delay was, he observed, owing partly to the fact that the Committee had that day to perform the important duty of electing a new Secretary, whom he had now the pleasure of introducing, and who he was sure every member of the Club would feel great pleasure in seeing in that position. He felt quite certain that gentleman would do his utmost for the benefit of the Club, and would prove agreeable in the intercourse which the members might have with him. The delay was also partly owing to the fact that on that occasion the dinner preceding the meeting had been attended by as many as 80 or 90 gentlemen. The subject to be introduced this evening was deeply interesting both to

British agriculturists and to the teeming millions of population. The price of meat was a matter for very serious consideration, and anything which could be done to show how the supply might be increased would be welcome to the British farmers, and conducive to the prosperity of the country (Hear, hear). He was sorry to say Mr. James Howard was prevented by indisposition from reading his paper himself; but he had a very good substitute in his brother, Mr. Charles Howard, and he had no doubt that the paper would lead to a valuable discussion.

A Member having observed that the Chairman had not mentioned the name of the new Secretary, the CHAIRMAN announced the name of Mr. Druce.

Mr. C. HOWARD, after remarking that his brother had for two or three months been deprived of the proper use of his voice, and that he had just telegraphed to him from Bristol that he did not feel able to come up to the meeting, and adding that he hoped that, like some public men, he would be found able to read another man's productions—(laughter)—proceeded to read the following paper:

The subjects selected by the Committee of the Club for the opening of the present year's discussions, whilst being one of great moment to the British farmer, possesses an interest extending far beyond the bounds of the agricultural circle. The meat supply of the country is a question which comes home to every household; indeed, it has become one of the most pressing domestic questions of the day. It may almost be said to be a vital question, for not only does the population rapidly increase, but meat among all classes has become much more an article of diet than formerly. Scientific men tell us that meat is not so nutritious, weight for weight, as some kinds of vegetable food—Scotch oatmeal, for instance—but owing to its being more tempting to the appetite and stimulating in effect, those who can afford it are content to pay far more for the luxury than its intrinsic value. Evidence was given before a Parliamentary Committee in 1873, that owing to the increase in mining and manufacturing, and the consequent rise in wages, the consumption of meat in Germany, Belgium, Holland, and other countries on the Continent had become much greater than formerly. Seeing however, how many aspects will present themselves for remark or discussion, I will not waste time in introductory remarks, but plunge at once into the subject, which, for convenience, I have ranged under the following heads: 1, Prices, Consumption, Waste; 2, Home Production, Foreign Supplies; 3, Cattle Diseases: their Origin, Effect and Danger; 4, Legislation: its Defects and Remedies; 5, Stockowners' Prudence, and Hindrances to Production.

PRICES.—Within the limits of the present generation, the normal price of meat was about 6d. per lb. I can remember several periods when prime joints were sold in the country at much less than that sum. From the examination of the books of a large country butcher, placed at my disposal, I find that during the past 25 years the retail price of meat has increased 4d. to 5d. per lb., and, singularly enough, it has risen by gradual steps; at the end of each five years the advance has been just about 1d. per lb. Of course, during this long period there have been occasional checks to this upward tendency, but these have invariably been of short duration. I may say that, from inquiries I have made, the advances in London butchers' prices correspond closely to those I have named. From a table I have given in an appendix it will be seen that between 1853 and 1863 an advance of 20 per cent. took place, in the Metropolitan Market, in the price of prime beef in the carcass, and as much as 30 per cent. in mutton. In the following 10 years—viz., to 1873—the total advance was 32 per cent. in beef and 42 per cent. in mutton. The prices in 1875 were higher than in 1873, beef being 3d. and mutton 3d. per lb. higher. The butchers' profits have, unquestionably, been relatively higher than when prices were lower; but it must be remembered that the butchers' profits, per stone, must be greater when the carcasses cost 6s. per stone than when they are to be bought at 4s.; still, taking the greater risk and the greater capital into account, it cannot be denied that the correspondence between the prices charged by the butcher and the prices realised for the animal has been upon the side of the retailer. An important element in dealing with prices is quality; but I do not think it necessary to go into this subject further than to remark there can, I think, be no question that the average quality of home-produced meat is far higher since our improved breeds of cattle, sheep, and pigs have extended themselves so

widely throughout the country. Nowadays, in what are known as low neighbourhoods, both in London and in the provinces, one constantly sees meat of such quality as formerly was only expected to be met with at the West End or at first-class butchers. What is the average consumption of animal food by the British beef-eater? although a curious, interesting, and important question, is not one that could be easily answered with exactness, even if our agricultural statistics were not so imperfect as we find them—a fact which intelligent farmers begin to deplore; still, we are not altogether without data to go upon. The members of the Club will not forget the interesting and elaborate paper (in 1872) by Mr. Jenkins, Secretary of the Royal Agricultural Society, who went so fully, I may say exhaustively, into the question. In the appendix to my paper, to which I have thought it well to relegate all statistical matter, a number of tables\* will be found. From the information which these afford, I have arrived at the conclusion that the average yearly consumption of meat is about 96lbs. per head, which at 8d. per lb, taking the population for 1875 at 32½ millions—amounts to the enormous sum of 10½ millions per annum. Although not strictly within the limits of my subject, I would say that to these figures it would perhaps be safe to add 20 per cent. as representing the value of the fish, fowls, birds, game, rabbits, pigs (not enumerated), goats, &c., required to satisfy the national appetite. Before concluding this part of the subject, I would say just a word upon waste of animal food, for notwithstanding its dearth, the waste which takes place is proverbial; nor is this confined to the kitchen or the household, a waste that has so often been pointed out by students of cookery, and lately brought so prominently before the public by Mr. Buckmaster—but the waste in bad weather from putrefaction is enormous. It has occurred to me that at our meat markets, and large butchers' establishments, some such plan as that recently adopted in transporting carcasses across the Atlantic might be introduced with no little advantage. I shall refer to this new feature of the trade presently. Such a device would not only save much valuable food from being wasted, but the possessors of such an appliance would be enabled to supply well hung meat, an advantage which could not fail to be appreciated, and that speedily. Rotary fans could be constructed for small establishments, which would only require winding up like a clock. I have at my house in Bedfordshire an American fan of this kind, used for making what is termed air-gas. When I come to the importation of live animals, I shall have to point to another source of waste. Having therefore said thus much upon prices, consumption, and waste, I will pass on to the more important and perhaps interesting questions of

HOME PRODUCTION.—No greater change in the condition of English agriculture has taken place than in the production of meat: an English farm is now regarded as a meat manufacturing establishment, quite as much as for its corn growing capacities. If we had the means of ascertaining, how deeply interesting it would be to know the increase in the production of animal food since the commencement of the present century! Here again we feel the loss of agricultural statistics, for we have no data to go upon. Some idea may, however, be formed of the growth of our meat production, from the fact that nearly 2,000,000 homegrown cattle are annually slaughtered, and no fewer than 11,000,000 sheep\* besides 5,000,000 pigs. The total annual value of animal food produced in the United Kingdom cannot be estimated at less than from 85 to 90 millions sterling. Notwithstanding this apparently large production there can be no question, as I shall point out in conclusion, it could be enormously increased were all the impediments to production swept away. My observations on home production may be considered brief: to those who would pursue the subject more in detail, I refer them to Mr. Clarke's tables already alluded to, and which have

\* Most of the tables I have given were prepared by Mr. J. Algernon Clarke for the Select Committee on Contagious Diseases (Animals), and subsequently published in the report, as well as in the *Chamber of Agriculture Journal*. I consider the country owes a debt of obligation to Mr. Clarke for his great pains, and the valuable information afforded. Had these tables attracted the notice of the Statistical Society, I have no doubt Mr. Clarke would long since have had the privilege conferred upon him by putting F.S.S. at the end of his name.

rendered any lengthened observation on this branch of my subject unnecessary: I will therefore pass on to the question of

**FOREIGN SUPPLIES.**—When Sir Robert Peel's tariff was introduced, throwing open our ports to foreign animals no little consternation was created in the minds of British farmers by the proposal. That they were about to be exposed to the rigours of free trade in corn seemed inevitable, but stock owners were taken by surprise when it was proposed to extend the principle to live stock, and many regarded the latter as a calamity the worse of the two. I well remember the dismay which the memorable tariff caused. The fears, however, turned out to be groundless; for, owing to the enormous growth of our trade and commerce, and to the rapid increase and prosperity of the population, all the meat which we could produce at home, all the foreigner could spare us, was wanted, and prices, instead of receding, steadily advanced. I would take occasion here to remark upon what has recently been said by some of my political friends about British agriculturists seeking to restore the principle of Protection by hampering the trade in foreign cattle. I have no hesitation in saying that such utterances display ignorance, and are neither more nor less than libels; the present race of agriculturists have accepted the principles of Free Trade, and this as cheerfully as any other branch of the community: they desire nothing in the shape of protection or monopoly. (These sentiments met with the loudest applause from the audience.) Free imports of meat must not, however, be confounded with unchecked importations of disease. What is demanded, in respect of importation of disease, I shall speak of presently. There are few subjects of which I can claim as much knowledge as Mr. Bright; but I am quite sure that the right honourable gentleman, who is both a political and personal friend, would be the first to acknowledge that upon agricultural and rural subjects, upon the views and the opinions of the agriculturists of England, I have the right to claim as full a knowledge, and even a more intimate acquaintance. I will therefore say, I deeply regretted that Mr. Bright was tempted to write upon a subject of which, he confessed, he had but an imperfect knowledge. The other day I saw in a Manchester paper the report of a speech expressing similar views by another friend of mine, Mr. P. Rylands, late M.P. for Warrington, which was far more offensive than Mr. Bright's letter, because more dogmatical and denunciative. I was sorry to find such a man descending upon a topic he really knew nothing about. The Table, in the Appendix, showing the importations of live and dead meat for the past 35 years is the best answer to these insinuations and charges. A glance at the figures will show to what proportions the foreign trade in live and dead meat has attained. To show its expansiveness, I will refer to the two past years: in 1874 our imports of cattle, sheep, and swine were 1,068,167, valued at £5,250,000; in 1875 they rose to 1,313,489; showing an increase upon the year of nearly 300,000 animals. The value of imported animals in 1875 was £7,330,420, showing an increase over the previous year of more than £2,000,000. The importations in 1875 of dead meat, in the shape of bacon, hams, and other meat, fresh, salted, or preserved, amounted to 3,131,542 cwt., which, taken at 60s. per cwt., gives the total value as £10,291,626. Large as the figures I have quoted may appear, it will be seen, by reference to the tables appended, that the supply of live animals from abroad bears but a small—a very small—proportion to the home production. If due allowance be made for the greater weight of the British animals, to say nothing of quality, the foreign proportion of the whole supply may be put down at 5 per cent. As London takes the great bulk of the foreign supply, the proportion for the Metropolis will be far higher. In making a comparison between home production and foreign supplies, it will be seen from the above statement that imported dead meat bears a much larger proportion than live animals, yielding in proportion to the home supply something like 12 per cent. A very large addition to the importation of fresh meat may now be expected, for it appears that nature has at length yielded up her secret, how meat may be kept fresh for an indefinite, at all events a protracted, period. Several consignments of fresh meat have already been received from America; the vessels bringing over the carcasses are fitted, it appears, with rooms kept cool by currents of cold, dry air, from a fan: a full description of these compartments, and the whole process, will be found in *The Farmer* of January 10. The editor of this

ably-conducted journal states that "the meat has stood every test, not only of the salesman, but of consumers, and both City and West-end speak favourably of it. Not only is it fresh, but it has that quality which housewives know as 'old killed,' so often wanting in our home-killed meat." For my part, I have great doubts about the quality. During my journeyings in America I never was fortunate enough to meet with either beef or mutton that was not only dry, but comparatively tasteless. However, the discovery of the process, if the shipments should pay the projectors, will, unquestionably, have an influence upon the dead-meat trade to this country, the extent and importance of which we can scarcely re-estimate or anticipate. Not only will the vast capabilities of Texas and other cattle-rearing states receive a vast stimulus, but, if it be found profitable and safe to send fresh meat across the Atlantic, the present trade in live animals from the Continent will speedily become a thing of the past, and a trade in dead meat take its place—a consummation to be greatly desired by the British farmer. With respect to this so-called American process, it is well known that our own countryman, Prof. G. Gamgee, has for years past been working in the same direction, and I have reason to believe that no small share of the credit of the invention is due to his exertions, and to the experiments he made with refrigerators and cool rooms when out in Texas, some seven years ago. I was much impressed by a statement made before the Parliamentary Committee (1873) as to the enormous waste of meat attending the foreign trade in live animals. Mr. Robinson—an importer I shall again refer to—informing the Committee that the waste in a 12-cwt. bullock, five days at sea, is no less than 2 cwt., and this notwithstanding that these bullocks have all the food and water they will take, such rapid waste seems almost incredible, but as the American question were weighed when embarked, and again upon landing, there was no doubt of the fact. Again Mr. Robinson spoke of it as about the average waste. What an additional and powerful argument is this in favour of the dead-meat trade! Having now treated, as briefly as I well could, of price, consumption, and supply, I will proceed to the more knotty and thorny questions involved in that of

**CATTLE DISEASES: THEIR ORIGIN, EFFECT, AND DANGER.**—The question of the origin of cattle diseases, more particularly of foot-and-mouth complaint and pleuro-pneumonia, has given rise to much discussion and a good deal of heated controversy. Having for years watched the strife, I have observed that the preponderance of scientific opinion and the evidence of facts have been tending slowly and gradually to the conclusion that both diseases are of foreign origin. It will not be forgotten that when the cattle plague (indiarpest) suddenly broke out in this country, and created such consternation by its fatal consequences and the rapidity of its march, we were gravely assured by professional men, and by professional writers, that the malady was generated in the London dairies, through the confinement, the dirty and unwholesome condition, in which the cows are kept. The opinions as to its foreign origin, of such men as Professor Smead, Professor Gamgee, and others—founded upon experience gained abroad—stood for nothing: the whole profession was convinced of its incapacity to cure the disease, and the views expressed as to its foreign origin were regarded as unscientific and the effects of prejudice. When, however, Government at length stepped in to save the cattle of the country from annihilation, and adopted the "stamping out" policy all along advocated by the veterinary professors, it was seen by the results that they were not only right in their theory as to the foreign origin ofinderpest, but that their views were also correct as to foot-and-mouth and pleuro-pneumonia being imported diseases; for in stamping out cattle plague, the latter diseases were simultaneously extirpated: not a case, too, appeared again in England until some time after the cattle-plague restrictions were removed, and importations freely resumed. I would not maintain that under no possible circumstances could these diseases be generated in England; I simply maintain that not only is the balance of evidence against the theory, but that there is little or no evidence on the other side—its opinion. So far as I have been able to ascertain, these maladies are no more indigenous to this country than are yellow fever, typhus, cholera morbus. In support of this position, I will give two or three facts. In certain districts in remote parts of Ireland the foot-and-mouth complaint has never appeared. In a recent letter of Mr. R. O. Pringle, of Dublin, I met the fol-

Stock of the Farm," I find the following statement: "There are many extensive cattle rearing districts in Ireland where foot-and-mouth disease is unknown, simply because no strange cattle are ever taken into these parts of the country, the breeders being exclusively exporters. When, in 1874, pleuro-pneumonia was prevalent in England and Scotland, the official report stated that not a single case had been reported from Wales, also an exporting country. Again, the isolated countries of Norway and Sweden, which are non-importing countries, have enjoyed an immunity both from foot-and-mouth and pleuro-pneumonia. Similar cases could be quoted from the antipodes, from America, Canada, and other countries; but it is now well known that disease everywhere follows the lines of cattle-traffic, and that the animals themselves are the chief carriers, the old theory of these contagious diseases being "in the air" is entirely exploded. Again, it is a very significant fact that the old veterinary writers appear to have known nothing of the foot-and-mouth or pleuro-pneumonia diseases. I have in my possession the agricultural portion of the library of the late Mr. Fisher Hobbs. The other day, when looking it over, I found, "Pearson's Horse, Cattle, and Sheep Doctor," published in 1811. The author, a veterinary-surgeon of thirty years' standing, treats of some sixty diseases of cattle and sheep, but no mention is made of either of the diseases in question, or of any akin to them. The late Professor Youatt traced the first outbreak of foot-and-mouth disease to two lots of some bovine species brought over in 1839 for the Zoological Gardens, Regent's Park. Clater, again, in his earlier editions of his "Cattle Doctor," says nothing about these diseases; but in the 10th edition (1853) I find the following remark: "Since the eighth edition of this work was published, a new disease (foot-and-mouth) has appeared among cattle and sheep, and for the last twelve years has spread through the kingdom, scarcely sparing a single parish." So, again, of pleuro-pneumonia: in the same tenth edition Clater states that, although long known to exist upon the Continent, its first appearance in this country was in the winter of 1842-43. One word upon the theory of exposure inducing contagious diseases. Many in this room remember the time when cattle and sheep were sent up from distant counties to London in droves. They also know the heat, the dust, the wet, the cold, the hardships, and the fatigue which animals in those days had to undergo. How many a "dropped bullock" have I seen in my younger days! but whoever heard of these exhausted and often cruelly-treated animals dropping with foot-and-mouth complaint? Who, again, in those days, ever thought, when they brought home a fresh lot of bullocks from a fair, of putting them into quarantine, although they might have known that the animals had been driven hundreds of miles from fair to fair? I should not have dwelt so long upon the origin of disease, but that interested persons—importers, dealers, butchers, and others—have so persistently urged the opposite view, and have induced so many to believe their statements. However, the fact that somehow or other these diseases have got amongst our flocks and herds is of more practical importance than the theory of their origin. Still more important and practical questions are, How they are to be held in check? How to extirpate them? What are the means to be adopted to prevent their recurrence? Before, however, I pass to the consideration of these points, and as arguments in favour of vigorous measures, I would first call attention to the grave danger which exists of these maladies becoming naturalised among our animals, for a closer study and a growing knowledge of the facts of epidemiology are constantly adding more and more support to the view that diseases not naturally inherent may, by their prevalence in generation after generation, become indigenous. To my mind, this is one of the most serious aspects of the whole question, for it would be converting naturally healthy flocks and herds into unhealthy ones, subject at any time to outbreaks of contagious diseases. If, as we are assured, there is danger of such a calamity, it behoves Government—it behoves all concerned—to make a determined and united effort to stamp out and to keep out so dire an enemy. I would further point to the direct money loss the nation has sustained through cattle disease, to the enhanced cost of meat to the consumer, and to the grave consideration of the permanent effect in checking breeding and production. I know how tedious to a meeting like the present are long lists of figures or statistics, and I therefore shall give general results instead. The country is much indebted to a former neighbour

of mine, Captain Johnes Smith, for the zealous manner in which he has discharged his duties as chief constable of Cheshire in relation to cattle diseases; also for the ability and care displayed in the returns he has obtained and published. For the year 1872 I find from Captain Smith's tables that no fewer than 52,000 cattle were affected in Cheshire with the foot-and-mouth complaint. Cheshire being a breeding and dairying county, the number of cows and heifers is large in proportion, as would be the loss also. In this county alone to say nothing of sheep and pigs, the loss cannot be estimated at less than £150,000 to £160,000 for the year. An old member of this Club, Mr. Duckham (widely known to the editor of the "Hereford Herd Book"), gave very important evidence before the Parliamentary Committee in 1873. This was a most important committee, moved for, it will be remembered, by our friend Mr. C. S. Read. I remember I never rose to speak in the House with greater pleasure than in support of the motion for its appointment. Mr. Duckham also handed to the Committee a paper and returns (published at p. 634 in the Report of the Committee), showing the direct money loss sustained in the year 1872 by the stock owners of Herefordshire from foot-and-mouth disease. Mr. Duckham in this paper showed that if the loss was as great in other parts of the United Kingdom, it would amount to the astounding sum of £20,000,000, a sum exceeding by four times the total value of our importations of live-stock. So great a loss as this has probably never taken place in any year; but if taken for the disastrous year in question at one-half or one-third this amount, the magnitude of the evil is sufficiently apparent. I need not dwell upon the effect which such an amount of disease has upon the price of meat, for, striking, as it does, at the root of production, its influence is obvious—cheap meat and diseased stock cannot go together. Last autumn *The Daily Telegraph*, which has not always written with wisdom on the subject, took steps to inform itself by obtaining reports from correspondents in various parts of the country. The publication of these reports, from 70 different centres, showed how important an element in the price of meat is disease. Serious, however, as are the direct money losses to the nation, and the immediate effect in raising prices, the influence of disease in checking breeding is far more serious, inasmuch as it is cumulative in its effects. I have heard farmers make light of foot-and-mouth complaint—as did Mr. Dent in a letter to *The Times* last autumn. It is well known that there are two types of the disease. Those who have had experience of the more virulent form have reason to regard it with considerable apprehension; whether, however, in respect of store stock, it is a subject to be treated lightly or not, the serious effect upon breeding stock is unquestionable. The York Chamber of Agriculture—Mr. Dent's own county—in a string of resolutions passed at its meeting last September showed how fully alive its members were to its serious character, and with what different views they regarded it to the former member of Scarborough. *The Times*—whatever opinions we may entertain as to its general policy—is seldom wrong when facts and scientific principles are involved. In a recent article on the subject of foot-and-mouth disease it was very forcibly pointed out that the effect must not be measured by "the comparatively trivial nature of the disease as it affects a single animal." The writer fully recognised, as he termed it, "the magnitude of the evil," and advocated thoroughly practical and efficient measures for the speedy extinction of the malady. That foot-and-mouth complaint is a fruitful source of abortion, barrenness, and drying up of the milk, every man of experience knows too well. Let any one who entertains a doubt read the evidence of Mr. Duckham and other witnesses before the Parliamentary Committee. Were the materials at hand for making the calculation as to the extent to which our stock of cows has been kept down by the death of cows, heifers, and heifer-calves, as well as by abortion or barrenness, the cumulative effect would stand out in proportions so large as to be altogether startling, even to the authorities of the Privy Council. That there is no full or official record of the losses the nation has sustained is to be deplored. Had one been kept, I have no doubt it would have revealed the fact that our losses from disease far exceeded the total amount of the importation of live animals: one million head of cattle in the six years preceding the outbreak of rinderpest perished from pleuro-pneumonia alone, whilst the total importations during the same period were only about half a million.



LEGISLATION: ITS DEFECTS AND REMEDIES.—It was my intention to give an outline of the legislation upon the cattle trade and cattle diseases, but I came to the conclusion that the time would be better spent in considering and discussing what further legislation and regulations are needed. I will therefore briefly state that the importation of cattle was prohibited in the last century, but the rule was, for exceptional cases, at times suspended, and occasionally a few animals were allowed to enter by special Customs permit; others, it is said, were run in without. In 1842, Parliament rescinded the prohibition and put on a duty of 10s. to 20s. per head. In 1846 this duty was repealed, and our ports thrown completely open. The outbreak of cattle plague led to the passing of the Cattle Diseases Prevention Act (1864). This Act mainly dealt with rinderpest, and did not touch the main home difficulties. The Contagious Diseases (Animals) Act (1869) was next brought in and passed; this, as is generally known, invested the Privy Council with powers to deal with every kind of cattle disease by the issue of Orders in Council, classified thus: (1) Local Orders, relating to particular places in the United Kingdom; (2) General Orders extending to all parts of Great Britain; (3) Foreign Orders. The Contagious Diseases (Animals) Act, considering the great difficulties surrounding the subject, and the still greater prejudices which had to be contended with, was a wise and well-considered measure: its great defect was that it left too much power in the hands of the Privy Council Department. At all events, I am sure you will concur with me that the powers given under the Act have not been as wisely used as they might have been, or as Parliament had a right to expect. I can testify how desirous was Mr. Forster, during the passing of the Act, to avail himself of the opinion of our friend Mr. C. S. Read, upon the clauses and amendments, and how often he said, in relation to particular points, "What are Read's views?" The working, or, more properly speaking, the marring, of this Act by the Veterinary Department of the Privy Council has shown, perhaps more than any other circumstance, the necessity for an Agricultural Department of Government, presided over and worked by men practically acquainted with the work and duties of such an office. Mr. Read, as President—or Vice-President if a peer must be at the top—would certainly have been more at home, and able to render the country better service, than at the Local Government Board; but then it is proverbial that in the filling of places in Governments, special knowledge, considered so indispensable in other pursuits, is neither required nor thought of. Although about to suggest a number of provisions in respect of the cattle trade and cattle diseases, I am not insensible to the difficulties surrounding legislation upon the subject, nor would I have members of the Club shut their eyes to these impediments, nor to the necessity for joint and individual exertion. The position of the President or Vice-president of the Privy Council is a most difficult and unenviable one. On the one hand, he is urged with more or less pressure, as diseases increase or diminish, to adopt more vigorous and stringent measures for checking and keeping out disease. On the other hand, populous towns and cities, often misled by ignorant or interested parties, urge upon him, by deputations or through their members, the necessity for relaxing existing restrictions, maintaining that the regulations in force check the supplies. I know the pressure that was put upon Mr. Forster by both sides, and how difficult he felt the position, notwithstanding his determination to take the course best calculated, in his opinion, to serve the general interests of the community. I believe that I speak the sentiments of the stockowners of the kingdom when in a few words I say, all that we desire is, all that we ask of the Government is, the adoption of the best remedies for stamping out disease already existing, and of keeping it out of the country for the future. Stockowners complain, and, as I think, justly complain, that their views have not had the attention they are entitled to, either from the late or the present Government—I would not for a moment obtrude my political preferences upon the Club, but I am bound to say that we have in this matter far more to complain of in the present than in the late Government; the present would seem to have left itself completely in the hands of its intractable and incompetent permanent officials. Witness the letter addressed three months ago, from the Department to the Monmouthshire Chamber of Agriculture; in substance it was simply a cool

refusal even to consider a very reasonable resolution of that Chamber, or to acknowledge in any way the necessity for further steps being taken to arrest the progress of foot-and-mouth disease. Again, look at the last report of the Department; why, it reads very much like a confession of incompetency upon the part of the present officials for their position. As I have already pointed out, the Act of 1869 entrusts the Privy Council with almost unlimited powers, and yet, so armed, the officials all but declare themselves helpless before the face of the destroyer. It transpired at length that nothing short of the retirement from office of our friend Mr. C. S. Read could break this spell, or rouse the Duke of Richmond from his apathy. The new-born zeal which impelled his grace to rush down into the country—a few days after this retirement—ostensibly to address the farmers of Sussex, but really to demolish Mr. Read, was simply amusing. The casual listener or reader might be at a loss to imagine who the darts of the noble duke were being aimed at, for the individual was nameless. His Grace seemed to be addressing "the man in the moon," and altogether oblivious of the existence of such a being as the Secretary of the Local Government Board. The travelling inspectors paraded by his grace for the first time with such pomp had long ago been urged as necessary; before the Parliamentary Committee in 1873 their appointment was urged as indispensable to the proper carrying out of the regulations in force. How often Government was subsequently appealed to upon this and other points, we shall perhaps learn when Parliament meets. The results of the recent cases of prosecution against the railway companies and the General Steam Navigation Company conclusively show that the resistance to the appointment of travelling inspectors was a blunder. Again, the plea that the Irish would not submit to the same regulations as were imposed in England met at once with a prompt reply from the other side of the Channel. The Irish Cattle Defence Association immediately passed the following resolution: "That it is most desirable that the regulations with regard to contagious diseases in animals should be uniform in Great Britain and Ireland." This and other resolutions upon the subject were at once endorsed by associations in Ireland, north, south, and west; it would therefore appear that Government was absolutely without any defence for the position it had taken up. With respect to further legislation or Orders in Council, I believe the fact is, that the Government, past and present, has been afraid not only of Irish opposition, but of the clamour raised by cattle-salesmen, shipping agents, butchers, and importers, who, to serve their own ends, have come forward as the champions of cheap meat for the people. Singularly enough, leading men, populous places, and a portion of the press have been induced to listen to the wily talk, and to believe the unsupported statements of these disinterested individuals as to the high price of meat being the result of restrictions adopted more to keep out contagion. A glance at the tables annexed will show how unfounded are these assertions. Whilst the English continues to be the highest market—as it long has been—and the demand most regular, the surplus meat from other countries will find its way to British ports. The only period when foreign supplies have to any extent been diverted from the English market was during the Franco-German war; the combatants were then for a time competing customers. I will now refer to the provisions and regulations I deem necessary and desirable: 1. That in order to avoid the present diversity of action, all Orders in Council or legislative enactments, bearing upon the trade and disease in animals, should be imperative, and not permissive; further, that their application should extend throughout the United Kingdom. 2. That provision be made to secure the practice of inspection throughout the three kingdoms being more thorough; to this end a sufficient number of qualified men should be appointed by Government to act as itinerant inspectors, who should be charged with the duty of visiting fairs, markets, and ports, to see that local authorities, railway companies, wharfingers, shipping agents, local inspectors, &c., attend to the respective duties imposed upon them by Orders in Council or Acts of Parliament. Further, a sufficient number of veterinary inspectors should be appointed at the ports of Great Britain and Ireland, to make a proper examination of animals before shipment or landing. 3. That a universal system of local officers be established, such officers (farmers or veterinary surgeons) to be armed with powers to enter at all reasonable times upon farms and premises, to

order isolation of diseased animals, as well as those in contact with them, also to give orders as to the treatment of infected places; the owners of cattle or occupiers of premises to possess the right of refusing admittance to such officers until they have undergone the process of disinfection. 4. That the owner of any animal affected with a contagious disease should be compelled to give immediate notice of such case to the local officer nor should such animal, or those which have been in contact, be allowed to be removed until the inspector reports them free from disease. 5. That upon the outbreak of contagious disease in any locality the local inspector should have the power, subject to the local authority, of prohibiting the movement of animals without an order, not only from the infected farm or premises, but from any adjoining farm or premises the local inspector may deem requisite. 6. That whenever foot-and-mouth disease or other contagious maladies become general or dangerously prevalent it shall be the imperative duty of the Privy Council to order a temporary stoppage of fairs and markets for store stock, and the adoption of other regulations enforced during the time of the cattle-plague. 7. That in respect of pleuro-pneumonia all affected animals be immediately slaughtered; that compensation be made to the owners at the rate of three-fourths the value of each animal, the salvage to belong to the owner. That the remainder of the herd be isolated for a period of not less than five clear weeks; that they also be immediately inoculated for the disease at the expense of the local authority. 8. That, as the success of any regulations depends mainly upon the action and co-operation of cattle-dealers, they should be required to take out a licence, and which should be liable to be suspended or revoked by the magistrates in the event of such dealer being convicted more than once of offences against the Act or Orders in Council. 9. That in respect of animals from Ireland or other of the British Isles, so long as such islands are free from contagious disease, no restrictions should be imposed upon exportation or importation; animals coming therefrom should in all respects be treated as English, Welsh, or Scotch cattle, or animals arriving coastwise at one British port from another; but in the event of contagious disease being reported to exist in either of these islands, all animals before leaving such island should be passed by an inspector at the port of embarkation, and the owner should be called upon to produce a certificate from the local authority of the district the animals come from that such district is free from contagious diseases. Should the animal be unsound, or the owner fail to produce a satisfactory certificate, such animals not to be embarked until they have been subjected to such quarantine as the inspector may order, or in accordance with rules to be issued by the Privy Council. 10. That all vessels used for the importation of animals be certified by the Board of Trade as to space, ventilation, convenience, &c.; and that regulations for the efficient cleansing and disinfecting of such vessels be issued and rigorously enforced. 11. That all foreign animals intended to be slaughtered for meat should be landed at specified ports and sent to markets separate from those used for home stock. That all such animals should be branded or marked on landing, and not allowed to be removed alive from the place of debarkation. 12. That proper quarantine grounds should be provided by Government for foreign store stock arriving from "unscheduled" countries, which stock should not be removed therefrom until seven clear days have elapsed. In the event of contagious diseases breaking out among any lot thus placed in quarantine, the whole should be slaughtered with the least possible delay. Should cattle arrive at an English port from any country where pleuro-pneumonia exists, such cattle should either be slaughtered upon arrival or be subjected to a quarantine of not less than 23 days, and immediately inoculated for the disease. The suggestions embodied in the above list may appear rather a formidable array of restrictions and regulations. To any who may be of opinion that they are too numerous or too stringent, I would point out that their object is to stamp out disease with the least possible delay, and to destroy the virus. The existing regulations have been tried long enough to show how totally ineffectual they are; I therefore maintain that as they are harassing without being effective, they should either be supplemented by some such plan as I have suggested or swept away altogether, and, in lieu, severe penalties imposed for moving or exposing for sale animals suffering from

contagious diseases, or that have been in contact with affected animals. I would further point out that if the proposed machinery is as effective, as I believe it would prove to be in ridding the country of the contagion and its germs, nearly the whole machinery could then be stopped and laid aside, like the scaffolding of a building, until again required. It was my intention to give reasons for each of the foregoing proposals. My paper has already run to great length, and I believe the necessity for most of the suggestions will be obvious to members of the Club. I shall be prevented taking the ordinary course of defending my proposals in a reply after the discussion, having lost—I hope but temporarily—my powers of speech. There is one knotty question I would say a few words upon—viz., Irish cattle. It has been urged of late that they should be subjected to the same restrictions as are advocated for foreign animals. Home rulers would look upon such a course as an additional argument for their cause. I am not for dis severing the two countries; on the contrary, I advocate, as far as possible, uniform laws and equal privileges. Ireland must, in this matter, be recognised as an integral part of the United Kingdom. The Irish may object to the proposal for inspection and quarantine on their side, but I maintain that they can have no grounds for valid objection, remembering how rigorously they shut their own ports against English cattle during the time of the rinderpest, and this, I believe, until some time after England could show a clean bill of health. The regulations proposed would be an additional incentive to active local efforts for extirpating contagion in the sister isle. With respect to the proposal for separate markets for foreign stock, I always thought that the late Government made a mistake in yielding to the Corporation of London upon the foreign cattle market question, and I remember, with satisfaction, that I did my best to prevent it. All imported animals intended for immediate consumption should have been sent to the Deptford market for sale and slaughtered there; at present only cargoes of animals from scheduled (suspected) countries are sent there. If the entire foreign supply were sent to this market, no restrictions whatever would be necessary, either in respect of inspection or quarantine; the whole might at once be abolished, and thus an end put to all controversy. I know that it is objected that two markets are inconvenient to cattle salesmen and the trade; this might be alleviated by holding the foreign market on a separate day. Whilst the convenience of a class should be consulted, it ought not to be allowed to outweigh far graver considerations. Then again, it is objected that there are fewer buyers at Deptford than at the Metropolitan Market. With the present fitful and irregular supplies, this is doubtless the case, but with a more regular and larger supply, the market on a separate day, competition would increase, and the necessary number of buyers would assuredly be attracted. Perhaps there is no man in this country better acquainted with all the bearings of the foreign trade in animals than Mr. Anthony George Robinson—a large importer, merchant, and shipper of foreign cattle. To those who would gain a full knowledge of this subject I commend the admirable evidence he gave before the Select Committee (1873). Mr. Robinson advocated water-side markets for all foreign cattle, and maintained that if slaughter at these markets were made universal and compulsory, it would not injuriously affect the trade in foreign animals, nor diminish the supply, but on the contrary; for in answer to a question from the chairman (Mr. Forster), Mr. Robinson said, "I think we should have a steadier trade, taking it all through, even with our Spanish cattle, if they were slaughtered at the water-side." The foreign trade, he said, was interfered with by the uncertainty which our regulations caused, and by the present market arrangements. Mr. Robinson's testimony is all the more valuable because of the financial interests he has at stake, and which would be jeopardised by unwise regulations or restrictions. Further, Mr. Robinson is a Liberal—a member of the Reform Club—and therefore politically opposed to restrictions which would hamper trade; I may say that having had the pleasure of Mr. Robinson's acquaintance for some years, I put great faith in his opinions: he is a man that can look at both sides of a question. As to quarantine for store animals, I regret that there is no separate record kept of the number of store animals imported from foreign countries, but as the number is known to be very small, the carrying out the suggestion for providing quarantine grounds is surrounded with the less difficulty. The great bulk of imported store animals

is from Ireland. I have always felt the difficulty of providing quarantine grounds for so large a number as come from Ireland, hence I came to the conclusion that arrangements for guaranteeing England against disease from the sister country should be carried out by the Irish themselves. Twice I pointed out, when in the House of Commons, that Irish cattle were often depreciated to the extent of £1 to £2 per head, through their liability to fall with disease after purchase, and from the consequent suspicion attaching to them. The Irish breeder has, therefore, by far the greater interest in the removal of the evils. Having said thus much on the subject of legislation, I will conclude with a few observations—a very few—upon

**STOCKOWNERS' PRUDENCE AND HINDRANCES TO PRODUCTION.**—Disease is spread in a number of ways over which the farmer has no control. He is the victim of other people's carelessness and the State's neglect. At the same time, in how many instances are diseases spread by the carelessness and neglect of stock-owners themselves? To put fresh stock, whether bought at a fair or from another farm, amongst the rest of the herd, is, in these days, running a risk which a prudent man would avoid; yet how often is it done, not only to the injury of the owner, but also of his neighbours? My own bailiff, whom I have more than once cautioned for his temerity, came to me last summer with the information that a heifer he had recently bought from a neighbour had fallen with the foot-and-mouth complaint. Thinking there was no danger, she had been turned out with a number of others. I had at the time about a hundred and sixty head of horned stock upon the farm. Fortunately by the adoption of prompt measures we managed to confine the outbreak to the cattle in immediate contact, and thus avoided a very serious loss. I am not sure that an action for damages could not be sustained against a man who injured another by selling animals he knew had been in contact with diseased stock, and who had held back the fact. When taking a stroll in Yorkshire some time ago I came across a lot of cattle terribly bad with foot-and-mouth disease. The field in which they were depastured adjoined a large common, upon which some hundreds of cattle were turned out, a post and rail fence being the only division. No difficulties were interposed to the spread of the contagion. Surely, I thought, the owner of these animals ought to have provided means against injuring his neighbours and the public in such a way; and if he were not amenable to the law, I thought that the laws, in the interest of the community, should be amended. It would be beyond the scope of my paper to enter into details as to the treatment of disease. I would, therefore, simply observe that I believe the main remedies to be isolation, cleanliness, and the use of disinfectants. Care should be exercised that deodorants are not used for disinfectants, the former being simply sweeteners and purifiers of the atmosphere, whilst the latter destroy, in some mysterious way, the very germs of contagion. That the capabilities of the United Kingdom are sufficient for producing a far larger meat-supply no one informed upon the subject can entertain the shadow of a doubt; the margin for expansion in this department, moreover, is much wider than in an increased corn production. The following instances are proofs of what may be done in the production of meat. A well-known member of this Club occupied a large farm belonging to a peer—himself a practical agriculturist. This tenant, who had ample security for his outlay under the terms of a long lease, and great confidence also in his landlord, got out for me, not long since, a return of his sales. These showed that in the previous two years he had sold beef, mutton, and pork to the amount of £10,000. Deducting from this sum £28,000 for animals purchased, left a net meat return of £5 per acre. From returns made to me from other parts of the kingdom, I find that this case, although far above the average, is by no means exceptional. In one such return the production was no less than £7 per acre. From a return just furnished by my own bailiff, I find that last year the net amount of sales of beef, mutton, and pork upon 563 acres was £3,200, being at the rate of £5 13s. 8d. per acre. No tenant can continue to farm upon this scale of production without enhancing, from year to year, the value of the land in his occupation, nor without embarking considerable capital in the enterprise. The profits, moreover, upon meat manufacture are generally more prospective than immediate. The producer has to wait. Therefore, unless a tenant be secured not only in respect of his outlay, but secured

against advance of rent upon the improvements he, himself, has effected, it need be no marvel that he does not hunch out to the extent I have just instanced; nor, seeing that a man who attempts such a course exposes himself to greater risks and losses, through fluctuations in the value of stock, as well as disease, need it cause surprise that such instances are exceptional. Last year a Bill was brought into Parliament, the avowed object of which was to increase the food of the people by making our own fields and homesteads yield a larger increase, according to the glowing and generous opening statements of His Grace, the Duke of Richmond. The provisions of the Bill were to have a marvellous effect in inducing the farmers of England to lay out their capital in the improvement of their occupations by the security which this wonderful Bill was to give them. As I listened to the noble duke my spirits rose. Surely, I thought within myself, the deputation from this Club to the Prime Minister had the desired effect—we are after all to have a real Bill; but, alas! a speech which commenced by an acknowledgment of the justice of the tenants' claim, by a recognition of the national advantage which would accrue, was brought to a close by the *noire* statement that the bill would be found to have nothing binding in it—an assurance which appeared greatly to relieve the minds of "my lords." Although the avowed object of the Agricultural Holdings Act bears directly upon the subject of my paper, I will not make this the occasion to enter upon a lengthened criticism of its provisions, but I do desire for a moment, to recal to your recollection what was asked of the Prime Minister by the deputation of this Club. When asked to introduce the subject before the Premier, I endeavoured to put the case in the simplest possible form. I remarked to the right hon. gentleman that the capital which a tenant embarked upon his holding consisted, for the one part, of his live and dead stock, which were removable, and, for the other part, of labour, manure, and materials, sunk in or upon his holding, which were irremovable. That, as both were paid for out of the same pocket, the law ought to secure the tenants' right in the property he could not remove just as fully as it did in the live and dead stock. This is all that was asked of the Government—nothing more, nothing less. What has the bill done? It has changed the presumption of law, which a stroke of the pen can render useless. I do not deny that the discussion upon the bill in Parliament and throughout the country may lead to good results, but as to the Act itself, I contend it has done nothing, or next to nothing, toward carrying out the object for which it was brought in. It has not conferred a single right upon a tenant which he did not possess before, but it has conferred rights upon the owner, and, therefore, perhaps, Mr. Holbrow, a farmer and valuer, who spoke upon it at Cirencester last week, had some justification for saying that the bill had got a wrong title, that instead of the "Agricultural Holdings Act" it should have been "The Landlord's Protection Act." Yet I have heard tenants meekly remark that it is a step in the right direction. It may be, but my conviction is that the step was of the nature of a move, a dexterous move, taken to shelve a question simply because it was likely to become embarrassing in county politics. When the Land-laws of England are thoroughly overhauled—as doubtless some day they will be, perhaps in a ruder fashion and under greater excitement than we see or any of us desire—the Duke of Richmond's and the Duke of Argyll's speeches, with the Lords' debates upon the bill, will probably be exhumed and brought forward as proofs, that, through traditional sentiment, the great landowners of England are unfitted to legislate on land question in the public interest; for if the debate in their lordships' house was characterised for one quality beyond another, it was that of unselfishness—a quality, I am bound to confess, the Peers display less of in the ordinary affairs of life than, perhaps, any other section of the community. The Marquis of Huntly was a notable exception among the peers. He took throughout a broad view of the question, and after the bill had passed, he gave expression to the following sentiments: "I think," said the Marquis, "that when once the Legislature has been asked to interfere with the present law, to change the presumption of the law in favour of the tenant, to declare that, by the application of capital, increased industry and increased production resulted to assume that it was of national advantage to promote that industry, and therefore to give security for

capital in order to obtain its application—I think, I say, that these expressions from one of our youngest peers, I will conclude my address with the remark, that it is seldom so much provisions in the new law compulsory.” With a quotation of wisdom is conveyed in so few words.

A P P E N D I X.

TABLE I.—ABSTRACT FROM SIR H. S. THOMPSON'S PAPER ON "AGRICULTURAL PROGRESS," JOURNAL OF THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, 1864 (COMPLETED UP TO 1875), SHOWING THE WHOLESALE PRICE OF PRIME MEAT PER STONE OF 8LB., IN THE METROPOLITAN MARKET.

Kind of Meat by the Carcass.	Average Price for 5 Years ending 1863.		Increase in 10 Years.		Average Price for 5 Years ending 1873.		Increase in 20 Years.		Average Price for 1874 and 1875.		Increase in 22 Years.			
	s.	d.	s.	d.	Price. d.	Per cent.	s.	d.	Price. d.	Per cent.	s.	d.	Price. d.	Per cent.
Beef .....	4	2½	5	0½	10	20	5	6½	16	32	5	8½	18	35½
Mutton .....	4	5	5	9	16	30	6	4	23	43	6	5	24	46

TABLE II.—ABSTRACT SUPPLIED TO MR. JAMES HOWARD FROM THE STATISTICAL DEPARTMENT OF THE BOARD OF TRADE.

QUANTITIES OF LIVE AND DEAD MEAT IMPORTED INTO THE UNITED KINGDOM, IN EACH OF THE YEARS FROM 1840 TO 1875 (INCLUSIVE).

Years.	Animals.			Beef, Salted or Fresh.	Bacon and Hams.	Pork.	Meat, Salted or Fresh.	Meat Preserved otherwise than by Salting.
	Oxen, Bulls, Cows, and Calves.	Sheep and Lambs.	Swine and Hogs.					
1840 .....	No.	No.	No.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
1841 .....	—	—	998*	29779	6181	29532	—	—
1842 .....	4264	644	1453*	42060	5194	44579	—	—
1843 .....	1521	217	410	30022	8355	54164	—	—
1844 .....	4889	2817	361	60724	7368	27118	—	—
1845 .....	16833	15957	265	106768	6768	30844	—	—
1846 .....	46043	91624	1590	87815	5483	39700	—	—
1847 .....	75717	142720	3856	177172	14203	72789	—	—
1848 .....	62738	130583	1242	117695	107732	235899	—	—
1849 .....	53149	129266	2119	121980	121980	254132	—	—
1850 .....	66461	143498	2653	149962	396447	348275	—	—
1851 .....	86520	201559	7287	135414	352461	211254	—	—
1852 .....	93061	230037	15599	117384	192118	154800	—	—
1853 .....	125253	259420	10524	124693	81436	96555	—	—
1854 .....	114339	183436	12767	183286	205667	162731	—	—
1855 .....	97527	162642	11077	192274	423510	160898	—	—
1856 .....	83306	145059	12171	230755	241494	204326	382	2155
1857 .....	92963	177207	9016	187838	372793	156266	110	23899
1858 .....	89001	184482	10678	168558	196685	89765	327	6134
1859 .....	85677	250590	11565	219589	107251	163330	632	579
1860 .....	104569	320219	11084	262104	326106	173325	2690	1758
1861 .....	107096	312923	18162	189761	1345694	227758	1101	2784
1862 .....	97887	209472	27137	288369	1877813	170751	695	725
1863 .....	150998	430798	85362	346821	1069390	228015	1474	1474
1864 .....	231733	496243	132043	244431	713346	222449	3480	8083
1865 .....	283271	914170	73873	232048	635782	205282	151820	2318
1866 .....	237730	790880	48070	246767	537114	160285	97916	15539
1867 .....	177948	539716	33721	246120	638127	151362	38343	20118
1868 .....	136688	341155	69067	229233	740193	190874	50247	3214
1869 .....	220190	709843	95724	215748	567164	257014	31300	80634
1870 .....	202172	669905	85562	302079	1093838	296144	42340	254833
1871 .....	248611	917076	16100	228912	2001855	212820	55354	350729
1872 .....	172993	809822	60978	260554	2987229	289695	79841	26.749
1873 .....	200802	851116	115389	261721	2542095	322574	119403	265223
1874 .....	193862	768916	71828	216516	2629901	268392	144987	171746
1875 .....	263698	977863						

\* Chiefly from the Channel Islands or Isle of Man.

TABLE III.—ABSTRACTS FROM PAPERS HANDED IN BY MR. JOHN ALGERNON CLARKE TO THE SELECT COMMITTEE ON CONTAGIOUS DISEASES (ANIMALS) 1873.

ESTIMATE OF THE ANNUAL HOME PRODUCTION OF MEAT.

TABLE A.—SHOWING THE NUMBER OF COWS AND HEIFERS AND THE NUMBER ANNUALLY DRAFTED FOR MEAT.

Period of Calving.	Heifers Annually added to the Herd, Enumerated at First Census.	Heifers and Cows Enumerated at Second Census. Mortality, 8 per cent., deducted.	Cows Enumerated at Third Census. Mortality, 8 per cent., deducted.	Cows Enumerated at Fourth Census. Mortality, 8 per cent., deducted.	Cows Enumerated at Fifth Census. Mortality, 8 per cent., deducted.	Cows Enumerated at Sixth Census. Mortality, 8 per cent., deducted.	Total Cows and Heifers in Milk or in Calf, Enumerated on 25th June.	Drapes or Drafted Cows.			
								Enumerated at Fifth Census, or Two Years Old and above. Mortality deducted.	Killed for Meat before the Fifth Census. Mortality deducted.	Killed for Meat before the Sixth Census. Mortality deducted.	Total number of Drapes or Drafted Cows for Meat.
First Quarter of the Year .....	300,000 Heifers in calf.	270,000 Heifers in milk.	250,000 Cows in milk.	230,000 Cows in milk.	210,000 Cows in milk.	200,000 Cows in milk.	1,460,000	...	...	190,000	—
Second Quarter of the Year .....	300,000 Heifers in calf.	270,000 Heifers in milk.	250,000 Cows in milk.	230,000 Cows in milk.	210,000 Cows in milk.	...	1,260,000	...	200,000	—	—
Third Quarter of the Year.....	50,000 Heifers in calf.	50,000 Cows in calf.	50,000 Cows in calf.	40,000 Cows in calf.	40,000 Cows in calf.	...	230,000	...	40,000	—	—
Fourth Quarter of the Year .....	150,000 Heifers in calf.	140,000 Heifers in milk.	130,000 Cows in milk.	120,000 Cows in milk.	110,000 Cows in milk.	60,000 Cows in milk.	710,000	50,000	—	—	—
Total .....	800,000	730,000	680,000	620,000	570,000	260,000	3,660,000	150,000	240,000	190,000	480,000

TABLE B.—SHOWING THE NUMBER OF CALVES DROPPED PER YEAR, AND NUMBER PROBABLY KILLED FOR VEAL.

Nominal Number of Dams to Calve per Year. Mortality after the Census in June deducted.	Actual Number of Calves per Year; from Delays and Abortions, 20 per cent. less than the number of Dams.	Number of Live Calves; deducting 5 per cent. from the number of Calvings for Dead Calve and also 5 per cent. Mortality before four months old.	Number of Calves Killed for Veal; 20 per cent. of the Calves under four months old.	Veal Calves Killed before the Census in June 25.	Veal Calves, enumerated as under one-year-old, at the First Census.	Total, enumerated as under one-year-old, at the First Census. Mortality after four months old at the rate of 10 per cent. per year, deducted.	Number of Calves for Stock; with Age, at the First Census.	Number of Calves, one-year-old and under two years, at the Second Census. Mortality, 8 per cent., deducted.	Heifer Calves added to the Herd, and enumerated as Heifers in Calf, to be deducted.	Total, enumerated as one-year-old and under two years at the Second Census; with Age at the Second Census.	Total, enumerated as under two years old at the Second Census.
1st Quarter—1190000... Mortality, 6 per cent.	950000	850000	170000	170000	—	670000 Mortality, 2 per cent.	670000 3 to 6 mths. old	620000 1 1/2 to 1 1/2 years old.	—	620000 1 1/2 to 1 1/2 years old.	1290000
2nd quarter—1160000.. Mortality, 8 per cent.	930000	840000	170000	100000	70000	740000 Mortality, 0 per cent.	670000 0 to 3 mths. old	620000 1 to 1 1/2 years old.	—	620000 1 to 1 1/2 years old.	1360000
3rd Quarter—220000... Mortality, 2 per cent.	180000	160000	30000	30000	—	120000 Mortality, 7 per cent.	120000 9 to 12 mths. old	110000 1 1/2 to 2 years old.	40000 1 1/2 to 2 years old.	70000 1 1/2 to 2 years old.	190000
4th Quarter—630000... Mortality, 4 per cent.	500000	450000	90000	90000	—	340000 Mortality, 5 per cent.	340000 6 to 9 mths. old	320000 1 1/2 to 1 1/2 years old.	100000 1 1/2 to 1 1/2 years old.	220000 1 1/2 to 1 1/2 years old.	560000
3200000	2580000	2300000	460000	390000	70000	1870000	1800000 0 to 12 mths. old	1670000 1 to 2 years old.	110000 1 1/2 to 2 years old.	1530000 1 to 2 years old.	3100000 0 to 2 years old.

TABLE C.—SHOWING THE NUMBER OF CATTLE AT DIFFERENT AGES PROBABLY KILLED FOR BEEF.

Number enumerated at the Second Census as one year old and under two years; with age at Second Census.	Heifers added to the Herd before the Third Census, and enumerated as Heifers in calf; to be deducted.	Number of Young Stores and Bulls remaining.	Number killed for Meat before the Third Census. Age 1½ to 2½ years.	Number of Stores, Fatting Beasts, Working Oxen, and Bulls enumerated as two years old and above at the Third Census. Mortality 3 per cent. deducted.	Number killed for Meat before the Fourth Census; Age, 2½ to 3½ years.	Number of Fatting Beasts, Bulls, and Working Oxen enumerated as two years old and above at the Fourth Census. Mortality 3 per cent. deducted.	Number killed for Meat before the Fifth Census; Age, 3½ to 4½ years.	Fatting Beasts, Bulls, and Working Oxen enumerated as two years old and above at the Fifth Census. Mortality 3 per cent. deducted.	Number killed for Meat at older Ages; Age, 4½ years and above.	Number enumerated at older ages, as two years old and above. Mortality 3 per cent. deducted.	Drapes or Drafted Cows enumerated as two years old and above.	Total enumerated as two years old and above on June 25.	Total Number of Cattle of all kinds enumerated on June 25.	Total Number killed for Meat.
620000 1½ to 1½ years old.	300000	320000	10000	300000 2½ to 2½ years old.	40000	250000 3¼ to 3¼ years old.	—	—	—	—	—	—	—	—
620000 1 to 1½ years old.	300000	320000	10000	300000 2 to 2½ years old.	30000	200000 3 to 3¼ years old.	—	—	—	—	—	—	—	—
70000 1½ to 2 years old.	10000	60000	—	60000 2½ to 3 years old.	10000	50000 3½ to 4 years old.	—	—	—	—	—	—	—	—
220000 1½ to 1½ years old.	50000	170000	10000	160000 2½ to 2½ years old.	20000	140000 3¼ to 3¼ years old.	—	—	—	—	—	—	—	—
1530000 1 to 2 years old.	300000	570000	30000	820000 2 to 3 years old.	100000	700000 3 to 4 years old.	400000	200000	280000	310000	50000	2200000	9260000	1750000

N.B.—From a comparison of other tables, prepared by Mr. Clarke, and of estimates by other authorities, I conclude the number of Cattle killed for meat in 1875 to be about 2,000,000.—JAMES HOWARD.

TABLE D.—SHOWING THE NUMBERS AND DEAD WEIGHT OF CATTLE, CALVES, SHEEP, LAMBS, AND PIGS, PROBABLY KILLED FOR MEAT.

Animals Killed.	Average Age when Killed.	Number.	Dead Weight per Head, Imperial Stones.	Weight of Meat in Imperial Stones.	Weight of Meat in Tons.	Price per Ton.	Value of Meat.
Cattle .....	years 1½ to 2½	30,000	30 (420 lb.)	900,000	—	£	£
Cattle .....	years 2½ to 3½	100,000	40 (560 lb.)	4,000,000	—	—	—
Cattle .....	years 3½ to 4½	400,000	50 (700 lb.)	20,000,000	—	—	—
Cattle, Bulls, &c. ....	Older	280,000	50 (700 lb.)	14,000,000	—	—	—
Drapes and Drafted Cows.....	...	480,000	46 (644 lb.)	22,000,000	—	—	—
Total Beef .....	...	1,290,000	47½ (662 lb.)	60,980,000	—	—	—
Veal, Calves .....	weeks 8 to 12	460,000	7 (98 lb.)	3,220,000	—	—	—
Total Beef and Veal.....	...	1,750,000	36½ (514 lb.)	64,200,000	401,250	70 7½d. per lb.	28,087,500
Lambs (10 per cent. of 10,640,000, Total Sheep and Lambs killed).....	weeks 12 to 16	1,140,000	3 (42 lb.)	3,420,000	—	—	—
Sheep.....	years Avar. 2½	9,500,000	5½ (77 lb.)	47,500,000	—	—	—
Total Mutton and Lamb .....	...	10,640,000	4¼ (67 lb.)	50,920,000	318,250	84 9d. per lb.	26,733,000
Sucking Pigs and Porkers .....	months Avar. 5	1,820,000	4½ (65 lb.)	—	—	—	—
Bacon Pigs .....	years Avar. 1½	3,026,000	17½ (250 lb.)	—	—	—	—
Total Pork and Bacon .....	...	4,846,000	9½ (134 lb.)	46,039,000	287,731	65 7d. per lb.	18,702,515
Total Home Supply of Meat.....	...	...	...	...	1,007,231	...	73,523,015

N.B.—The weights of the animals given above are considered by many practical men to be much too low.—JAMES HOWARD.

TABLE E.—SHOWING THE TOTAL ESTIMATED MEAT SUPPLY TO THE RELATIVE PROPORTION FURNISHED BY HOME AND BY FOREIGN ANIMALS.

Animals Imported in 1872.	Number.	Dead Weight per Head, Imperial Stones.	Weight of Meat in Imperial Stones.	Weight of Meat in Tons.	Price per Ton.	Value of Meat.
Oxen and Bulls .....	110,537	46 (681 lb.)	5,084,702	—	£ —	£ —
Cows .....	23,840	40 (560 lb.) (Cattle 4½) (626 lb.)	1,153,600	—	—	—
Calves .....	33,525	7 (98 lb.)	231,675	—	—	—
Total Cattle .....	172,902	37½ (524 lb.)	6,472,977	40,455	70 (7½d. per lb)	2,831,850
Sheep and Lambs .....	809,817	4 (56 lb.)	3,239,268	20,245	84 (9d. per lb)	1,760,583
Pigs .....	16,101	7 (98 lb.)	112,707	704	65 (7d. per lb.)	45,760
Total Imported Foreign Animals .....	...	...	...	61,404	...	4,638,190

SUMMARY.

	Weight in Tons.	Per Cent.
Home Supply of Meat .....	1,007,231	83.16
Foreign Animals in 1872 .....	61,404	5.07
Foreign Dead Meat—Bacon, Pork, Hams, Beef, and other Meat in 1872 .....	142,574	11.77
Total Meat Supply .....	1,211,209	100.00
Population of the United Kingdom, 1871 .....	31,609,910	6.09 Imperial Stones of Meat per head.

Mr. MECHE said he was sure they were all agreed that they had had a very intelligent, interesting, and instructive paper (cheers). As regarded the increased prices of meat, he thought it would be wrong to assume that that meant increased value in relation to other productions. The prices of other things had risen in proportion, as any one might see from Doubleday's Financial History of England, in which was shown the effect in that respect of the great gold-finding of a former age. He was very much pleased with what he had heard read towards the end of the paper. They heard a great many complaints, in the present day, about foreign stock, and yet they were told that only six or eight per cent. of the entire consumption of the country came from abroad. They must look, not abroad, but at home for such a large increase of animals as would feed the people more abundantly, if not more cheaply. It was notorious that the capital invested in live stock was now at a minimum instead of a maximum. Mr. Howard cited a case in which the amount thus employed was £5 an acre, and in his (Mr. Mechi's) case it was £4; but, taking the whole country, they would find, on examination, that the production was less than £2 an acre, and the amount might certainly be increased 50 per cent. or doubled, with advantage to the farmers and to the country at large. The quantity of manure made was an important element in the production of corn, and had a most important bearing on the production of meat. That brought him to the large question of freedom of action, or the encouragement of the investment of capital in the soil. That was one thing which was greatly needed to make meat cheaper. Many of the old customs connected with agriculture were not consistent or compatible with the large increase of production. Farmers must endeavour to change themselves as well as their landlords. The whole system of agriculture required enlargement, and without that it was impossible to have that increase of production which would enable it to keep pace with the growing population and wealth of the country. With regard to murrain among cattle, to hear many persons speak one might almost suppose that it was a quite new thing, but that was by no means the case. If they read the history of the industrial system of England, or that part of it which related especially to agriculture they would find

that there had been days when there was no roast beef at Christmas, because the cattle had to be slaughtered as soon as the grass had ceased to grow, there being no cake, turnips, or clover in those days. It was recorded that, at one period, one-third of the cattle perished during winter from murrain and other causes. They had not yet arrived at such a state of things as that (Hear, hear), and he believed that, with the exception of the evil arising from climatic influence, disease was now chiefly generated by want of proper provision for the health of animals. They heard a great deal about Irish cattle. Ireland was a country which had a very mild climate—a country where you hardly saw snow at all in winter, and where animals might be left exposed to the atmosphere at that period of the year without suffering evil effects. What did English agriculturists do with Irish cattle? They took them from a country whose climate was rendered mild by the Gulf Stream, brought them to a country which was much colder, and turned them into the fields. What was the consequence? Why, that these animals became affected, as they themselves would be under such treatment, with pleuropneumonia (Cries of "No, no"). He repeated that, and he would add that the putting of animals in vessels without proper arrangements, the placing them in a railway without proper protection against the east wind, and the subsequent turning them out in a country where the climate was unpropitious, was one of the chief sources of the present complaints. The mischief did not arise in the case of Welsh or Scotch cattle, but it constantly arose in the case of Irish cattle, and, seeing that, after they had been carried by ships and railway in the manner he had indicated, they were not properly sheltered, and fed, it was no wonder that disease spread, and the price of meat increased. They ought to look at home in that case as well as abroad. They must take science for their guide, and it was unscientific to expose animals in the way he had mentioned, and expect them to do well. He believed the time would come when British agriculture would show a much larger production of meat than it did at present (Hear, hear).

Mr. FRASER MITCHELL said he had listened with great attention to the able paper of Mr. Howard, but there was one thing which he regretted not to hear mentioned,

and that was the wrong inflicted on farmers by their being prevented from using malt freely in the feeding of cattle. (Cries of "Question.") He had five-and-thirty head of cattle which were diseased last September, and he did all he could to nourish them properly; but he was exposed to great disadvantages by the cause to which he alluded. Justice ought to be done to farmers in reference to that matter, and he was sure that they were not asking too much in asking for the free use of malt. (Renewed cries of "Question.")

Mr. ALFRED CROSSKILL (Beverley) said that, before making a few remarks on that subject, he wished to add his testimony to that of Mr. Mechi to the exceedingly able manner in which it had been introduced. Some persons might object to one implement-maker praising another, but he could not help saying that, while Mr. James Howard was known throughout the world as a great implement-maker, he was also widely known as one of the best practical farmers in the country, and therefore any opinions which he expressed on that subject might fairly be regarded as opinions which were shared by practical farmers generally, and as likely, if proper attention were paid to them, to lead to beneficial results (Hear, hear). He was very much pleased that Mr. Howard had drawn attention to a point which required to be made much more prominent before the public than it had been hitherto—namely, the very small proportion which the quantity of imported cattle bore to the quantity of cattle produced by English farmers (Hear, hear). Not long before his death Mr. H. S. Thompson, who had for many years taken an active part in the proceedings of the Royal Agricultural Society, wrote a paper in which he stated that the importation amounted only to 5 per cent., the production of the British farmer being 95 per cent. of the total consumption of beef in this country. That statement seemed almost incredible, and he believed that many persons who read the paper thought the statistics were not quite correct; but he was glad to find that Mr. Thompson in the main was confirmed by Mr. Howard—that, allowing for a small increase in the foreign importation, the British farmer supplied at the present moment more than 90 per cent. of the entire consumption of live stock in this country (Hear, hear). Why did he dwell on that point? Why was he anxious that the facts should be thoroughly known and understood? Because they had to deal with that question in a general point of view (Hear, hear). They there represented a large majority of the British farmers, notwithstanding what had been said by Mr. Mechi, representing as he did, perhaps, a small minority (laughter). The great bulk of the farmers, and of those who supported them on that question, believed that the larger proportion of the disease from which they suffered was imported from abroad (Hear, hear). That was the strong conviction of the vast majority of the English farmers, and they were supported by evidence, while the other side were supported by little else than sentiment. That being the case, the farmers thought that more restrictions ought to be placed on the importation of cattle. When they expressed that opinion publicly they were met by the outcry that they did so solely for the purpose of keeping up the price of their own animals; and the point which he wanted to see impressed on the English public was that the saving of home cattle from disease would have a far greater effect in keeping down prices than any amount of importation from abroad which could reasonably be expected. So far as that question was concerned, it did not matter politically whether there was a Conservative or a Liberal Government. They would never succeed in their efforts unless they made it known that they did not take the course they were taking simply for their own interests, and unless they based their position on the broad ground of the national and general welfare (Hear, hear). They should endeavour to convince some of the Radical members of Parliament representing large populous towns—men who, as some persons would say, appealed to public opinion, or, as others would say, excited public clamour; for, without such aid, they would hardly expect to impress their views on the community at large.

Mr. T. DUCKHAM (Baysham Court, Ross), said he fully endorsed the opinion expressed by Mr. Crosskill, that the question raised that evening was a grave one for consumers as well as for producers. The maintenance of the health of the stock of the nation must tend to keep down the price of food, while the supplementary introduction of food from abroad—which was intended by the Legislature to conduce to the same result—if it brought contagious diseases could not but be seriously

prejudicial to home herds and flocks, and proportionately enhance the cost of meat. The introduction of foreign disease must interfere with the application of that grand principle which was so earnestly advocated by Mr. Mechi, the affording proper security for capital invested in the soil, and lessen that desire to produce food on the part of breeders and feeders, inasmuch as it swept away annually millions' worth of animal food. Mr. Howard had mentioned that he (Mr. Duckham), in some evidence which he gave before the House of Commons, overestimated the loss sustained in 1872 by foot-and-mouth disease, which he put at about £32,000,000, or four times the value of the importation; he did not consider that he had overestimated it, and he was glad to find that his estimate of the value of the importations last year was in accordance with Mr. Howard's own view of the matter. That day he had read a report of a discussion in which the loss from foot-and-mouth disease in the United Kingdom in 1872 was estimated at £32,000,000. Soon after his own evidence on the subject was given, the Leicestershire Chamber declared that in their opinion his estimate was rather below than in excess of the actual loss. But, in addition to the loss in the amount of the food of the country, there was injury to the health of the people. They all knew that the milk of a cow suffering from foot-and-mouth disease often killed its calf; pigs, too, died from its use, and even cats have been killed by it. That day he had read in the *Birmingham Daily Post* an account of a frightful disease among a number of people living in a Midland town which was attributed to foot-and-mouth disease. It was there stated that the inhabitants of whole sides of streets had been affected, and the symptoms appeared to be similar to those which marked the existence of animals suffering from foot-and-mouth disease. As regarded remedial measures, in this country they wanted uniform regulations, instead of regulations widely differing in different parts of the country. One side of a hedge was under one set of local authorities, and the opposite side under another, and the regulations were not even similar.

Mr. THORNTON said, with regard to Irish cattle, that a gentleman in County Meath had, since the year 1843, been in the habit of receiving bulls from Yorkshire, and returning them annually; on no occasion had disease broken out at either end of the journey, merely from taking care that the vessels in which the cattle were shipped were properly cleansed and disinfected. He believed Ireland was a nursery of stock for England; but in the transit from railways to the ports and on shipboard animals were so tightly packed they could scarcely move, and the heat and sweating arising from this close packing prevented them taking food, and brought on cold and fever, rendering their system more liable to the disease which was in course of time engendered on board ship. Foot-and-mouth disease might be made much worse by exposure and cold. An old Irish breeder had told him things would be all right "if they will only leave us alone," but restrictions were necessary, and, above all, it was most necessary that drovers and dealers should be licensed. With respect to the capital invested in stock, to which allusion had been made by Mr. Mechi, there was a gentleman on his list (Mr. S. P. Foster), farming about 700 acres, who had just invested £3 per acre in one animal.

There being loud and reiterated calls for Mr. Read, M.P., Mr. C. HOWARD observed that he believed an understanding had been come to that that gentleman should reply on behalf of his brother.

Mr. H. NEILD, (The Grange, Worsley, Manchester), said he felt the great importance of the dissemination of Mr. Howard's paper at Manchester. At the present time he held in his hand a report of a speech delivered recently in the Free Trade Hall, in that city, by Mr. Jacob Bright—a speech which was fraught with mischief in relation to that question of the meat supply. He was not going to read the whole of it (laughter), but he could not help remarking that it illustrated the fact that consumers generally greatly needed enlightenment on that question. (Hear, hear). Mr. Bright there spoke of the complaints about foreign disease as a protectionist dodge, but there was not the smallest pretence for such an assertion. A great deal of mischief has been done by imperfect legislation. He had himself suffered to the extent of 96 head of horned stock from foot and-mouth disease. Some farmers in his part of the country were thinking of giving up the breeding of cattle in consequence, of the losses which had been sustained. As to the Agri-



cultural Holdings Act, it would seem to be regarded as mere waste-paper. A very large number of persons had contracted themselves out of the law, and the other day a meeting of land-agents in Lancashire, representing 300,000 acres, agreed that any tenant who refused to do that should have his farm revalued. Farmers must have justice and fair play, which were at present denied to them (Hear hear).

Mr. C. S. READ, M.P., said he had had an unexpected office imposed upon him, that of replying to the remarks made on the paper read by his friend, Mr. Charles Howard, on behalf of his talented brother. On some points of detail he differed a little from Mr. James Howard, but, regarding it as a whole, he thoroughly and heartily endorsed it. He would not go into the Agricultural Holdings Act, because there might perhaps be a good deal of difference among them with regard to it. There was, in fact, very little for him to reply to. What Mr. Crosskill said about it was most important, and so also were the remarks of Mr. Neild, who represented a large manufacturing district. Almost the only speech to which he need reply was his friend Mr. Mechi. [A VOICE: "The Malt-tax."] Malt was a food which was very useful in producing meat, but, as everyone knew that, there was no occasion to dispute about the matter (laughter). What he wanted to impress upon them was this: that if, as an agricultural club, they did not begin at the right place, if they did not build on a proper foundation, they could not expect that any theory would lead to beneficial results. The theory advocated by Mr. Mechi was rotten and unsound (cheers). Mr. Mechi was a gentleman of great scientific attainments, but on the question of cattle disease he had not consulted science, or even practice. He had told them that they brought cattle from Ireland, where they were exposed to all the vicissitudes of climate throughout the entire winter, took them to the eastern counties, and other parts, and subjected them to treatment which engendered disease. In the eastern counties Irish cattle were turned into well-litred yards, or covered boxes. [Mr. MECHI: "Not at first."] He begged to say that that was the case in his own district. They did not there turn them out late in autumn or winter, as was, he believed, done in Ireland. The difference of climate of which Mr. Mechi spoke was really not worth thinking about. In Ireland it always rained in winter. [Mr. C. HOWARD: "And in summer."] And in summer, of course (renewed laughter). [Mr. MECHI: "It never freezes."] But which was the most comfortable for animals—to lie down on a bed of straw, or to lie down in a bed of mud, and constantly rained upon, he would leave the meeting to decide. He would not ask Mr. Mechi how it happened that pleuro-pneumonia was not seen in Ireland until a few years ago. Badly as Irish cattle were treated in transit now, they were treated ten times worse then. In many cases they were then actually thrown from the ships into the sea and left to swim ashore, in order to avoid the payment of port dues, and the most inhuman practices were followed; and yet nothing was heard of foot-and-mouth disease before 1839, or of pleuro-pneumonia before 1842. [Mr. MECHI: "There were no railways then."] Cattle were exposed then to the greatest hardships, to the most inhu-

man treatment; but the truth was that whatever might be done in the way of injury to cattle, you would not cause those diseases unless there were contagion in the neighbourhood where they were driven or kept. If Mr. Mechi were right, they had better have no restriction at all; but what he (Mr. Read) wanted to impress on the meeting was that it was impossible for foot-and-mouth disease, or pleuro-pneumonia to spread, or to be produced by ill treatment, unless the germs of those diseases already existed. Mr. Thornton attributed to Mr. Howard the opinion that Ireland might be left to take care of itself. He believed that what Mr. Howard did say was, that if there were equal laws for England and Ireland they might rely upon it that the Irish people would loyally work the law, and carry it out. A great deal had been said about the extent of the losses arising from foot-and-mouth disease. He held in his hand a letter from a gentleman, who was well known in the eastern counties, Mr. William Gurdon, of Essex. Mr. Gurdon had taken the trouble to ascertain the loss by weight which animals affected with foot-and-mouth disease underwent in a month. Ten Irish heifers became afflicted with that disease in the beginning of October, and most of them quickly recovered. Since then the increase per month of two animals which had the disease very badly, averaged only  $2\frac{1}{2}$  stone; the increase per month of two that had it very slightly was  $5\frac{1}{2}$  stone; and the increase in the case of the remaining six which were affected in a moderate degree, was  $3\frac{1}{2}$  stone. Thus, there was a difference between the highest cases and the worst of no less than 3 stones in a month. Taking the dead weight at two-thirds, the result showed a very considerable amount of damage, not only while the cattle were sufferers from disease, but also for some time after they had recovered. They all knew perfectly well that diseases were transmitted by filth, cruelty, and privation, and that such treatment rendered animals more liable to be affected; but let none run away with the idea that Mr. Mechi was right when he said that those diseases from which farmers had suffered so much could be engendered by ill treatment.

The CHAIRMAN, in proposing a vote of thanks to Mr. James Howard for his able paper (which he observed contained a great deal of practical good sense) said they should all do every thing in their power to eradicate the idea that the diseases especially referred to were not contagious, adding that if they yielded at all on that point they would thereby weaken their position very much indeed (Hear, hear).

The motion having been seconded by Mr. H. Neild, was put and carried unanimously and, with a brief acknowledgment from Mr. C. Howard on behalf of his brother, the proceedings terminated.

At a meeting of the Committee held prior to the general meeting of the members on the 7th inst., Mr. Corbet, who had resigned the office of Secretary to the Club, through ill health, was, in recognition of his long connection with the Club, elected an honorary life member.

*Caledonian Hotel, Adelphi, W.C., Feb. 8, 1876.*

#### NEW MEMBERS.

Colonel Agg, The Hewletts, Cheltenham.  
William Beale, Esq., Chiddington, Edenbridge.  
Charles Courtoys, Esq., Little Heath, Old Charlton, Kent.  
J. G. Edwards, Esq., Broughton, Stockbridge.  
F. K. Lenthall Esq., Begselsleigh Manor, Abingdon, Berks.  
Henry Sheasley, Esq., Samuel Street, Woolwich, Kent.

#### THE TERRITORIAL PROPRIETARY OF ENGLAND.

The "Domesday Book" of William the Conqueror has been repeated in the reign of her Most Gracious Majesty Queen Victoria, and the circumstances under which the two documents have been compiled present as wide a contrast as the different periods in English history. In the year 1085, as old chroniclers inform us, it was the fear of an invasion of the kingdom by the Danes, and the difficulty which the King then experienced in putting the country in a satisfactory state of defence, that led him to

undertake a general survey, to ascertain the quantity of land held by each person, and the quota of military aid which he would be enabled to summon to his assistance, each man to be called upon according to the extent of his holding or his stake in the realm. For the purpose of securing accuracy, commissioners were appointed, with ample powers to ascertain "upon the oath of the several sheriffs, or others, according to the nature of the place, what was the name of the

place, who held it in the time of the Confessor, who was the present holder, how many hides of land there were in the manor, how much meadow and pasture, what mills and fish ponds, with other particulars, and what was the gross value in King Edward's time; what the present value, and how much each free-man or soc-man had or has." All this was estimated. First, as an estate was held in the time of the Confessor; secondly, as it was bestowed by the King himself; and, thirdly, as its value stood at the time of the survey. These were the particulars ascertained, the commissioners sending in returns for each county separately; and in such manner Domesday Book, or the General Register for the whole kingdom was compiled.

Notwithstanding, however, the very stringent measures taken for insuring accuracy, there is no doubt that the commissioners did not always obtain or furnish correct information, and that sometimes, as in the case of the present return, the statements of what we should now designate as the "gross estimated rental," and the "estimated rental," are not altogether reliable. Owing, likewise, to the different designations in use at that time, it is difficult to distinguish those persons who may be properly considered as owners from those who were in the possession of land as mere occupiers only. According, however, to the best approximate, there were at the time 54,813 landholders exclusive of 7,968 burgesses, who held land either individually or in a corporate capacity, and therefore would not be counted. Moreover, the villeins to the number of 108,407 are omitted, because it is quite certain that, when they occupied small portions of land, they did so on sufferance only. In fact they were regarded as mere chattels, which could be bought or sold, and they were not allowed by law to acquire any property, either in land or goods. The Domesday Book, although a most valuable landmark in English history, was still further imperfect by the omission of the present counties of Northumberland, Cumberland, Westmoreland and Durham.

The present survey originated in the desire to settle, if possible, a controversy which has been held for many years past between two opposite classes of theorists with regard to the actual number of the present owners of land. Upon the authority of a former census, it appeared that only 30,000 such persons existed; and although this return admitted of an easy explanation, yet the bare statement, as it stood, favoured the opinion of those who held that the soil was owned by an infinitesimal number of persons. The case is clearly stated in the words of Earl Derby, in the House of Lords, on the 17th February, 1872. His lordship then asked "Whether it was the intention of her Majesty's Government to take any steps for ascertaining accurately the number of proprietors of land and houses in the United Kingdom, with the quantity of land owned by each proprietor. They all knew that out of doors there was from time to time a great outcry raised about what was called the monopoly of land, and in support of that cry the wildest and most reckless exaggerations and mis-statements of fact were uttered as to the number of persons who were actual owners of the soil. He entirely disbelieved the truth of the popular notion that small estates were undergoing a gradual process of absorption in the larger ones. He apprehended that, through the agency of the Local Government Board, it would be easy to obtain statistical information which would be conclusive in regard to this matter."

The Government having, as was intimated at the time by Lord Halifax, determined upon such a return being made, it has since been prepared, and now, after some delay, makes its appearance with the data contained. We have some explanatory matter by the compilers with regard to the machinery employed in its collection. All the statements and information, with the exception of the addresses of the owners, are derived, it appears, from the

various lists which are made out for the purposes of rating in every parish. As the valuation lists of the several parishes are deposited with the clerks of the unions, application was made by the Local Government Board to those officers to prepare and furnish the particulars so far as regarded the parishes in their respective unions, corrected as far as practicable from information within their reach, or which might be obtained from the parochial officers, with the addition of the addresses of the owners.

The return thus obtained comprises the whole of England and Wales, exclusive of the Metropolis, and some estimate may be formed of the labour expended in its compilation when it is borne in mind that the information had to be supplied in respect of nearly 15,000 parishes, containing about 5,000,000 separate assessments. Certain inaccuracies may, therefore, hereafter be discovered, but the main facts as disclosed must be taken as correct. The results, upon a cursory glance, seem completely at variance with the loudly-asserted opinions of those who advocate the *petite culture* systems of France and Belgium with regard to the monopoly of landed property assumed to exist in England. Instead of the 30,000 persons held forth as the territorial proprietary, it will be seen by this return that the number of owners of one acre and upward is 269,547, and the number of owners below one acre 703,389, making a total of 972,836, or nearly one million persons—a much nearer approach to a fair proportion of the whole population. The publication of these figures will, no doubt, be a source of great annoyance to those extreme reformers who ask for a great deal more than the removal of the artificial tramels which impede the free sale and cheap transfer of land; but the Domesday Book of 1875 is at the present moment, from its bulky size and the nature of its contents, both for them and for others, a portentous fact, and one that needs further investigation to ascertain its correct bearings.

THE ART OF BREEDING HORSES.—One of the most ardent lovers of horses in the country is the Rev. W. H. Murray, of Boston. At the recent meeting of the Massachusetts State Board of Agriculture, Mr. Murray made an address on the Art of Breeding Horses. As his positions are of universal interest wherever the nobility of the horse is maintained, we quote for our readers the following abstract of the address from the Boston *Cultivator*: "Mr. Murray began by remarking that the propagation of life organisms is one of the most beautiful and divine mysteries of the universe, and the discussion of it should be in a grave, reverential spirit: thus he approached it, and thus had he learned what he knew of the subject. He found the bottom fact of his subject in the Bible—that 'everything shall produce of its kind, according to its seed.' Find your typical horse of each sex, and then you may realize the idea of the 'perfect horse.' No business can succeed until its laws are so well understood that results can be known before they appear. From whatever cause, New England has hitherto made a failure of breeding fine stock. His idea of the cause was that it was ignorance. He thought ignorance at the bottom of nearly all failures. Breeding is generally done by men who have neither time nor capacity to study the subject with the careful studentship which it demands. As a rule, extraordinary offspring were the results of extraordinary parents. Yet it often happens that a good sire and dam produce a poor colt. So another step must be taken, and we must decide that parents must complement each other in temperament. A sire to be desirable must be a good horse. He must not be chosen simply on account of his special beauty in any one direction, but of his perfection as a whole. Then, after that, he must have the particular point you wish in your colt in prominence. Thirdly, the sire being good as a whole, and specially good in certain points, he must have that mystic power of reproducing himself which is the rarest among horses. He did not know of over twenty or twenty-three in America and eleven in

New England that had this power. The highest type in this direction, he had no hesitation in saying, was Justin Morgan, a little horse which stamped its image on all its descendants, and not only that, but also gave to its descendants the power to transmit the same image. The question is often asked, which influences the colt more, the sire or dam? The Arabs have it that the foal follows the sire. They have kept their breed of horses for 3,000 years in perfection unchanged, and that is proof that they have known and obeyed the laws of breeding for that time. He was inclined to believe that they were right. Probably it was understood in that maxim that such dams only should be chosen as would not interfere with the sire's transmitting himself. Then they chose only the very best stock horses, and treated them like kings, as they deserved to be. A principle that should always be followed is never to breed to an ugly sire or dam. The offspring will always reflect the character of the parents, and it is a crime to breed an ugly-tempered colt. Again, breeding should never be allowed except in proper nervous condition. Never when the sire is kept fat like a

hog; never when he is drawn out fine for some great nervous feat. Size, colour, health, temperament, and speed are the great essentials of a good stock horse. The speaker sought for beauty first in his colts. The time was when a horse was considered valuable if he could 'go,' no matter how he looked. But now beauty is considered of more importance. So he bred first for beauty, secondly for docility, and thirdly for speed. He had been asked to tell what it was that made a horse trot. He would say what it was not: it was not the whip, nor was it the way the horse was driven. The best way to drive a horse is to let him alone. He wished it was the custom to drive without reins. There were a few gifted, prophetic men, like Charlie Green, Budd Doble, Woodruff, who knew more than both of them, who knew exactly what to do, but for common drivers the best way was to let the horse alone. If a horse be a trotter he did not need be made one: he would show it. If he was not a trotter, he, Mr. Murray, did not want to have anything to do with any attempt to make him one.—*Pacific Rural Press.*

## KINGSCOTE AGRICULTURAL SOCIETY.

### DISCUSSION ON THE AGRICULTURAL HOLDINGS ACT.

At the last monthly meeting of this association, held at Hunters' Hall Inn, Kingscote, in the absence of Col. Kingscote, M.P. (who was detained in London), the chair was taken by Mr. H. C. Hayward, the vice-president.

Mr. HOLBOROW (Willsley), who opened the subject for discussion, said he had been requested by the secretary to the association (Mr. Burnett) to read a paper at this meeting, and as he had engaged to give one to the Cirencester Chamber of Agriculture on Monday, it was thought it would be well to discuss the same subject at the meeting of this association. He regretted that his paper did not apply to the vale as well as to the hill-country, so as to make it more applicable to the Kingscote district, but the principle in each case was the same, and the details in each case did not materially differ.

The CHAIRMAN, in inviting discussion, said he had never liked the Agricultural Holdings Act well enough to be able to say much upon it, and from the explanations given by Mr. Holborow it was very clear that its provisions were very deficient. He hoped the subject would be well discussed in all farmers' associations, as the more it was discussed the better prospect there would be of a revision of the Act.

Mr. BARBER said he did not see any need for this parental legislation. In his opinion the Act was a farce. The landlord and tenant should make a fair agreement, and then abide by it. Why should the Legislature step in between them and make a contract for them? It was a slur on the common sense of Englishmen to say that they wanted this Act. He could not think why on earth it was ever thought of. There were certain parties who required certain restrictions; but surely if a tenant did not like the contract drawn up, he was at liberty to leave it.

Mr. BURNETT said he was very glad the Act had been passed, although it was not what farmers had wished. One thing he considered very hard was that if a tenant was leaving at Lady-day and refused to prepare the land for roots the incoming tenant or the landlord should not be allowed to do it. The sooner that system was abolished the better. He thought one good result of the Act would be that good agreements would be made—agreements fair and honest—between both parties. Although there were no landlords present, he felt bound to say this, that all round the Kingscote neighbourhood the landlords wanted to do what was right and fair. Mr. Barber had said the Act was not wanted; he (Mr. Burnett) was quite sure none of the landlords in this neighbourhood wanted it. It was passed by a pressure from outside. A cry was got up, 'We must have security of tenure: we must have security for investing our capital;' and it ended in the cry, "We must have an Act of Parliament." He believed there was not a landlord or tenant in this neighbourhood who could not meet and make out a fair agreement. One hard thing according to custom was this, that a tenant got no more for his root crop if he left at Michaelmas than he did if he left at Lady-day,

and yet if he left at the latter date the roots would be consumed. Surely the roots at Michaelmas would be worth something to the incoming tenant? and yet the outgoing tenant would get no advantage. That ought to be altered. He confessed that the more he looked at the Act the less he liked it. Col. Kingscote did not wish to come under the Act, and so had drawn up a new agreement.

Mr. HOLBOROW said he had seen the agreement, and it was one of the most liberal he had met with anywhere, even more liberal than that drawn up by the Marquis of Lansdowne's agent, with which he (Mr. Holborow) had had something to do.

Mr. BURNETT said he was pleased to have Mr. Holborow's good opinion, and he should be pleased to let any one see the agreement. He agreed with almost everything Mr. Holborow had said with respect to the Act, and was certainly of opinion that in its present state it could not be practically worked.

The CHAIRMAN agreed with Mr. Burnett that if the Act induced contracting parties to make better agreements it would be of use. At the same time he thought with Mr. Barber that landlords and tenants were quite capable of making their own agreements. The Act seemed to deal with agriculturists as if they were children.

Mr. GOULD (Didmarton) said that as far as he could see the Act encouraged high farming, the object apparently being to get what a well-known statesman once said was wanted—two blades to grow where only one grew before. He thought the best thing to be done was to draw up a fair and liberal agreement.

Mr. GARLICK said it was rather un-English for Parliament to step in in this matter. As a rule agreements were drawn up by stewards who were not men of business, who knew no more about farming than he (Mr. Garlick) did of law, and that was precious little.

Mr. GARN: The fact is they are chiefly made by lawyers. Mr. HOLBOROW said landlords often selected their agents from one of four classes. The first was some poor member of the family, who wanted an income, and knew as much about farming as the landlord himself. The second was the City man, who had no sympathy with the tenant who simply visited them in a rigid manner twice a year to get their rents, and gave a promise to give what they asked for but never fulfilled it. The third was some old favourite household servant, though a few of these were first-class men. The fourth was the family attorney, who generally let things get into such a bad condition that in the end somebody found out to their cost what a bad policy had been pursued.

Mr. B. DREW thought the effect of the Act would be that in the course of two years there would be more leases and agreements than had ever existed. That, in his opinion, would be the great advantage of the Act.

Mr. Cox said one advantage of the Act was that it gave to the outgoing tenant compensation for the expense he had been to in buying feeding-stuffs—a compensation which in that form custom had not generally provided for. If all landlords and tenants were honest this Act would not be wanted, nor would it have been called for; but he could not agree with Mr. Barber that no legislation on this matter was necessary. No doubt Mr. Barber had a good landlord and a good landlord's agent. But suppose his landlord were to cease to hold his farm, and in his stead came some grasping, money-making man, who said he must have good interest for his money, and doubled the rent; Mr. Barber would then leave, and as his agreement with his old landlord did not affect the new one, he would in leaving lose the money he had put into the land. By the provisions of this Act the new landlord would be bound to give him compensation, so that in such a case legislation would be greatly to his benefit. He did not think the Act was a good one, and he was rather inclined to take Mr. Holborow's view that it protected the landlord rather than the tenant. He admitted, however, that the Act gave advantages to the tenant in regard to building, especially in cases in which the landlord had only a life interest in the farm, as hitherto the tenant could in such cases get no security for the money he chose to lay out in erecting buildings, even with the landlord's consent. In such cases the Act was beneficial to landlord and tenant. In reference to manures, Mr. Cox said some manures were only worth one year in compensation when applied to the root crop, and nothing when applied to a corn crop. He admitted that saunfoin improved the land, but when, as he had known cases, everything was taken off for eight or nine years, compensation ought not to be allowed. Speaking of the Act altogether, he thought there was some good in it, but not all the good that was required. He could not agree with Mr. Barber that the Act was not wanted. If all landlords and tenants were honest it would not be wanted; but there were grasping parties on both sides, and where custom did not allow to each what was right and fair the Act would be of great service.

Mr. BURNETT pointed out that Mr. Cox's argument as to the possible results to the tenant of a change of landlord was not altogether a sound one, especially with reference to artificial manures and feeding-stuffs. As to buildings, he thought that was entirely a landlord's matter, and even if he had only a life interest in the farm he could make the necessary outlay by getting a loan from the Enclosure Commissioners and charge the tenant five per cent. upon it.

Mr. BARBER said a yearly tenant would be foolish to put up buildings without proper security.

Mr. HOLBOROW said a loan from the Enclosure Commissioners became a mortgage upon the property, and the property could then only be dealt with with their sanction. To get this sanction was a long and tedious process.

Mr. RICH objected to the Act being called a Landlords' Protection Act. It appeared to him that the Act gave the tenant more privileges than he had hitherto enjoyed by custom. He believed that, like the Irish Land Act, it would have this good effect, that it would make landlords and tenants more careful to have proper leases and agreements. He certainly thought the 19th clause was in favour of the tenants, for if the tenant had committed waste the landlord could only claim for it by a counter claim; so that if the waste of the tenant more than balanced the improvements he had made, he would not put in a claim, and the landlord could only recover by taking legal proceedings. Was it not also an advantage to the tenant to have twelve months' notice instead of six? He thought the Act was a good one, and certainly not one which favoured the landlord more than the tenant.

Mr. HOLBOROW, in replying on the discussion, said a necessity had existed for an Act of Parliament, and this Act certainly did not meet the necessity. He agreed with the principle laid down as to first-class improvements, and it was only fair that the tenant should obtain the landlord's sanction before making permanent improvements. The principle of the second class was also tolerably fair, though Cotswold farmers would not be much affected by them. But as to the third-class improvements he must say that what was given, and reasonably given, in the 9th clause was most absurdly taken away in the 13th. The result would therefore be that the tenant would be dishonourably treated. He had no hesitation in saying that the 13th clause was a delusion and a snare. It was a snare simply because it was easy for a tenant to be deceived as to

the working of the two clauses. He was sorry to say it, but he knew as a fact that many tenants did not know what was in their agreements until they were obliged to refer to them. He said the Act was a Landlords' Protection Act, because in several most important points it gave great protection to the landlord, while in several important matters it did not protect the tenant. As to the 19th clause referred to by Mr. Rich, he thought that was upset by the 60th. It was perfectly fair that when a tenant claimed compensation for improvements the landlord should also claim compensation for waste. But if the tenant did not make that claim and the landlord could not make a counter-claim, he was in exactly the same position he was in before the Act was passed—he could enter an action against the tenant. In the Kingscote district they were in a district of first-rate landlords, and they had no ground of complaint against the land-agents. But that was not the case in other districts, where it was a very common thing to find estates managed by gentlemen who did not understand their business, the consequence being that first tenant, then farm, and finally landlord had to suffer. He did not wish to refer to politics, but he must say emphatically that he did not agree with John Bright in his desire to do away with the entailment of landed property in England. He firmly believed that if they were once to see that done they would begin to see agriculture in England go down, down, down; and then away would go the tenant-farmers, the men of capital, men competent to deal with the soil as it should be dealt with, to breed cattle and sheep as they should be bred, and they would get on and on in the direction of the condition of the Irish potato-farmer. He trusted he should never see the law of entail done away with.

Votes of thanks to the chairman and to Mr. Holborow closed the proceedings.

**EFFECTS OF ELECTRICITY.**—The most certain and painless death known to science is caused by the lightning stroke, or by what amounts to the same thing, the electric shock. When a powerful discharge of electricity is received in the body, existence simply stops, and the reason is obvious. Helmholtz has proved that for any vibration which results in sensation to reach the brain through the nerves, one-tenth of a second of time is required. Furthermore, time is also needed for the molecules of the brain to arrange themselves through the effect of that vibration, through the motions and positions necessary to the completion of consciousness, and for this an additional period of one-tenth of a second is expended. Consequently, if, for example, we prick our finger with a pin, it takes two-tenths of a second for us to feel and recognise the hurt. It can easily be conceived, therefore, that if an injury is inflicted which instantly unfits the nerves to transmit the motion which results in sensation, or if the animating power is suddenly suspended by an injury to the brain before the latter completes consciousness, then death inevitably follows with no intervention of sensibility whatever. Now a rifle bullet, which traverses the brain in the one-thousandth of a second, manifestly must cause this instant stoppage of existence, and proof of this is found in the placid faces of the dead, and in the fact that there is nothing more common than to find men lying dead on battle-fields, shot through the brain, but with every member stiffened in the exact position it was in when the bullet did its work. But the rifle ball is slow beside the electric shock. Persistence of vision impresses a lightning flash on the retina for one-sixth of a second, but its actual duration is barely one-hundred-thousandth of a second. The effect of the shock on the system is excellently described by Professor Tyndall, who, while lecturing before a large audience, inadvertently touched the wire leading from fifteen charged Leyden jars, and received the other discharge through his body. Luckily the shock was not powerful enough to be fatal; but as the lecturer regained his senses he experienced the astonishing sensation of all his members being separate and gradually fastening themselves together. He says, however, that "life was blotted out for a sensible interval," and he dwells with much stress upon the opinion that "there cannot be a doubt that, to a person struck by lightning, the passage from life to death occurs without consciousness being in the least degree implicated."—*Scientific American*.

## LECTURE BY J. J. MECHI.

At a recent meeting at Chelmsford, under the auspices of the Essex and Chelmsford Museum, Mr. MECHI delivered the following lecture.

Some two or three years ago I had the pleasure to read, at your Literary Institute, a paper, "Agriculture as Compared with other Industrial Occupations." You will find it in my book "How to Farm Profitably." You have kindly invited me again; but although I am now in "the sea and yellow leaf," I accept your invitation. I thank Chelmsford for its hospitality, because I have already no less than four dinners and four beds offered to me to-day; but fortunately for my stomach I am not ubiquitous, although a seasoned ex-alderman. If in the course of my remarks this evening I should tread on agricultural toes, it will not be on those of the many good, intelligent, and progressive agriculturists in this county, among whom I would especially mention several in the immediate neighbourhood, who are well up in steam and live stock, covered yards, drainage, &c. In fact, my late friend, your townsman, Mr. James B. ad e, had thirty years ago covered and enclosed cattle-yards, and was also a very deep cultivator by forcing the land under the plough, and thus grew immense root-crops—in one instance 37 tons an acre of white carrots, beating Mr. Robert Baker's rival swedes, and winning the wager of ten guineas. Mr. Beadell Sen, and his late partner, Mr. Chancelor (whom I am glad to see present) have erected a great many capital covered home-steads. The infection has spread in my neighbourhood; for Mr. Edward Harvey has a first-class covered, enclosed, and paved cattle-stead, recently erected by Mr. Grimes, of Colchester. Mine has been in use for 30 years. The time will come when no landowner will permit an open farmyard. Animals are always more healthy in the covered yards. We shall all, I think, agree that the most important of all the arts is that of producing food. Those who doubt it should go without their meals for a week, and they would soon come to a more sound conclusion. This art, previous to this century, was here and elsewhere merely empirical or experimental. Effects were seen, but causes were unknown. The calf growing and thriving on its mother's milk seemed quite natural, but nobody knew what made its bones, and that if there had been no bone earth in the soil which produced the plant food of the cow the animals could have had no bone—in fact, no existence, or a very rickety, imperfect one. Rickety children owe their imperfection to the use of food deficient in bone earth (phosphate of lime). A friend of mine, whose wife had twins, told me that the babes would not thrive on London milk, but grew famously when they took the genuine Swiss milk in tins. This was a comparatively recent affair. Science explains all this—without science effects are seen (often too late), but causes are unknown. In 1830, Sir Humphrey Davy, and in 1840 Baron Liebig, first gave to agriculture a scientific basis. I would strongly recommend, not only to agriculturists, but as a book for every library, "Liebig's Familiar Letters on Chemistry," as a profitable means of greatly enlarging knowledge and stimulating thought; for that great man not only treats abundantly of agriculture, but numerous other subjects of vast interest. I have in my library his works as follows: (1), "Chemistry in its Application to Agriculture and Physiology;" (2), "Principles of Agricultural Chemistry;" (3), "Letters on Modern Agriculture;" (4), "The Natural Lives of Husbandry;" (5), "Familiar Letters on Chemistry." But what is science? Is it not perception, observation, comparison, reflection, and inductive reasoning, with a view to truthful conclusions? Newton, on seeing the apple fall from a tree, asked himself why it did not go up instead of down, and then arose our astronomical knowledge. So it was with Galileo and our revolving globe, and Torricelli and the barometer. Water, the least compressible of any substance, when converted into steam, becomes more compressible. Somebody who saw and reflected upon its power when lifting the lid of the bubbling pot or kettle, applied that power to most important uses and mechanical science, thanks to Watt, Stephenson, Fowler, Arxwright, and other philosophers, who have given us millions of

willing, but unsuffering and untiring slaves, which labour night and day for our use, comfort, and profit. Harvey, by reflection, discovered the circulation of our blood. Jenner preserved human life and beauty by observation, reflection, and inductive reasoning. Formerly a beautiful woman might, in a few weeks, become plain or hideous from small-pox. In my early days most persons were more or less disfigured by it. Jenner asked himself which class of society, or which trade or occupation, was most free from this pest, and he found that dairymaids generally escaped. Then he asked himself why, and ascertained that when milking, if they had a cut or injury on the fingers or hand, the pimple or pox on the cow's udder caused a similar outbreak on the wound, and so we got cow-pock vaccination. This was science, and a blessed science too, but how fiercely it was opposed and disbelieved! I remember seeing, in caricatures, cows' heads, cows' horns, cows' faces, all shown on paper as resulting from introducing this cow disease into the human frame. Time and truth, however, at length prevailed, and we are no longer shocked and pained as we used to be. Franklin brought down lightning from the clouds; and now, if the Emperor of China happens to have a fit of sneezing, lightning brings it by telegram to our breakfast-table next morning in the steam-printed sheet—electricity and steam have all but annihilated time and space. Everything natural is done well and wonderfully without the aid of man, but our efforts should be directed to inquire how they are so well and perfectly done. Happily, chemical analysis and philosophic sagacity at last enlightened us. Liebig justly says, in his dedication to the British Association of his "Chemistry in its Application to Agriculture and Physiology," "But it is not the mere practical utility of these truths which is of importance. Their influence upon mental culture is most beneficial; and the new views acquired by the knowledge of them enable the mind to recognise, in the phenomena of nature, proofs of an infinite wisdom, for the unadmittable profundity of which language has no expression." The time has arrived for something, in British agriculture, more than the mere practical man. Liebig says in his "Modern Agriculture," published in 1859, p. 232, "Agriculture is, of all industrial pursuits, the richest in facts and the poorest in their comprehension." "Facts by the million cannot be heaped, but scientific principles, which are expressions for these facts, may be so, because they are immutable in their nature. Facts are like grains of sand which are moved by the wind, but principles are these same grains cemented into rocks. A fact simply tells us of its existence, but experience ought to inform us why it exists. Perfect agriculture is the true foundation of all trade and industry; it is the foundation of the riches of states. But a rational system of agriculture cannot be formed without the application of scientific principles; for such a system must be based on an exact acquaintance with the means of nutrition of vegetables, and with the influence of soils, and action of manure upon them" (Liebig's "Chemistry in its Application to Agriculture and Physiology," p. 173). But as a means of gaining knowledge we must have education, which, although it does not give the mental food, cultivates it, and enables it to produce its crops in proportion to its natural fertility. As a nation we have been sadly behind in this matter of mental cultivation, Scotland alone excepted, for there John Knox gave them by law, 300 years ago, schools in every parish, provided by the heritors or landowners; so we had Scotch stewards, gardeners, bailiffs, and successful Scotchmen everywhere. The want of early education in England is made very evident to me by my extensive agricultural correspondence; which, in many cases, is very imperfect, although the writers are, no doubt, naturally intelligent and able. The clear and well-written Scotch, colonial, and American correspondence proves to me that education there has been much earlier and more general than in England. My laborers, and most others of 50 years of age, are unable to read or write, and this is the case of some of the small tradesmen; however, when they first came into our large parish there was only a village and dame's school. How let me commend the Royal Agricultural College at Cirencester, which instructs youths, previous to their entering in the higher departments of electricity, the veterinary art, botany, surveying,

ke. Many of its students now rank high in agriculture and other callings requiring intellectual as well as technical knowledge. My name has stood on its council list for nearly 30 years. Nature does her farming well, both in the wide ocean and on the wide, uncultivated, and uncivilized continents. Witness the glorious forests, the luxuriant prairies, and varied natural productions, affording food for hosts of enormous elephants, and cattle, deer, and other animals, and all this without the aid of man. But then all is returned to the soil, and there are no town sewers to waste the elements of fertility in rivers. Here let me compliment your town of Chelmsford and congratulate the worthy and intelligent farmer who utilizes the precious contents of your sewers as a means of providing you more abundantly and cheaply with nutritive substances. What an example for your corporate neighbours Colchester and Ipswich!

**SEA VEGETATION.**—I may be asked, "What has this to do with British farming?" I reply, Stop the supplies of guano, all made from fish, and we should soon awaken to the interest we ought to feel in marine vegetation. But we are unwittingly grateful, for we return to the sea by our rivers the food produced by the guano. What a financial mistake! In the deep and wide ocean, where no aid of man is required, there is an amount of vitality both of plants and living creatures as great, or greater, than on land. Liebig, in his "Familiar Letters on Chemistry," No. 30, says, "Every one knows that in the immense, yet limited expanse of the ocean, whole worlds of plants and animals are mutually dependent upon, and successive to, each other. The animals obtain their constituent elements from the plants, and restore them to the water in their original form, when they again serve as nourishment to a new generation of plants. The oxygen which marine animals withdraw in their respiration from the air, dissolved in sea-water, is returned to the water by the vital process of sea-plants; that air is richer in oxygen than atmospheric air, containing 32 to 33 per cent., while the latter only contains 21 per cent. The oxygen now combines with the products of the putrefaction of dead animal bodies, changes their carbon into carbonic acid, their hydrogen into water, while their nitrogen assumes again the form of ammonia. Thus we observe that in the ocean a circulation takes place without any addition or subtraction of any element, unlimited in duration, although limited in extent, inasmuch as, in a confined space, the nourishment of plants exists in a limited quantity." We well know that the marine plants cannot derive a supply of humus for their nourishment through their roots. Look at the great sea-fungus, the *Fucus giganteus*. This plant, according to Cook, reaches a height of 360 feet, and a single specimen, with its immense ramifications, nourishes thousands of marine animals; yet its root is a small body, no larger than the fist. What nourishment can this draw from a naked rock, upon the surface of which there is no perceptible change? It is quite obvious that these plants require only a hold—a fastening, to prevent a change of place—as a counterpoise to their specific gravity, which is less than that of the medium in which they float. That medium provides the necessary nourishment, and presents it to the surface of every part of the plant. Sea-water contains not only carbonic acid and ammonia, but the alkaline and earthy phosphates and carbonates required by these plants for their growth, and which we always find as constant constituents of their ashes. All experience demonstrates that the conditions of the existence of marine plants are the same which are essential to terrestrial plants; but the latter do not live, like sea-plants, in a medium which contains all their elements, and surrounds with appropriate nourishment every part of their organs; on the contrary, they require two media, of which one—namely, the soil—contains these essential elements which are absent from the medium surrounding them—*i.e.*, the atmosphere. Is it possible that we could ever be in doubt respecting the office which the soil and its component parts sub-serve in the existence and growth of vegetables? That there should have been a time when the mineral elements of plants were not regarded as absolutely essential to their vitality? Has not the same circulation been observed on the surface of the earth which we have just contemplated in the ocean, the same incessant change, disturbance, and restoration of equilibrium?

**CHANGES OF THE TIMES.**—We live in altered times. Science, applied to manufactures and other industrial arts, has changed us from a primitive and skin-dressed people of hunters and warriors to be the works of the world; but

we must not forget that we are indebted to other more advanced nations than ourselves for much of our manufacturing and agricultural knowledge, so that both landowners and tenants should not cling too tenaciously to old and primitive customs when others more profitable knock at our doors and ask for admission. "The History of Essex" tells us that "As early as 1304 a number of Flemings, who had emigrated from Bruges, landed at Harwich, and established their craft at Worsted, in Norfolk (giving worsted manufactures), and at Bocking and Shalford, in Essex, from whence they spread to Braintree, Halsted, Coggeshall, Dedham, and East Bergholt." It further informs us that "the Du Cane, or Du Quesne, family emigrated from Flanders, in the reign of Elizabeth (sixteenth century), to avoid the cruel persecution of the Duke of Alva, and settled first at Canterbury and afterwards in London, where they became wealthy merchants, and fostered the woollen manufacture introduced by their countrymen into this part of the kingdom." Since then we have been to China for our china, Japan for our Japan ware, and to the East Indies for our bandannoes and shawl-patters. From 1498 to 1608 a large advance was made in our agricultural condition. Farmers passed from woollen trenchers and wooden spoons to pewter, and even in some cases to silver; their straw pallet was exchanged for a feather-bed, and their rents were doubled. Ladies had to travel on horseback until 1559, when the first carriage was introduced. The long smart sticks carried by footmen were formerly a necessity, because the carriages were so clumsy, and the tracks—miscalled roads—so rough and the ruts so deep that, to prevent the conveyance from capsizing, the footmen running beside it had to press their sticks vigorously against it. There could have been no carriage-lamps, for we see at many of the iron gateways of the old mansions in the vicinity of London fixed iron extinguishers, in which the footmen put out the light of their flambeaux. Hackney-coaches were first let for hire in London in 1625. In 1634 Captain Bailey placed four hackney-coaches to ply for hire at the "Maypole," in the Strand. Farmers' wives used to ride behind their husbands to market on horseback, &c. The first wheelbarrow was invented by Pascal about the time of Oliver Cromwell. Science has changed medical practice, for we no longer cut and bleed. They said of the celebrated Dr. Lettsom:

First I bleed, and then I sweats 'em,  
And if they dies, why then I Lettsom.

Even in my time there was no gas, no steamboats, no railways, no telegraph, no penny post, no police, no cabs or omnibuses, no sewers, nor w.c.'s. The old watchman used to call the time and state the weather at night, and clean boots and shoes and knives and forks by day. A friend of mine assured me that one of his ancestors used to come into the city by a coach which left Paddington for London twice a week. I had no security of getting a corner, even to any of our suburban districts, unless I booked my place, and I well remember Chancellor's coaches from Kensington to London. Some years ago I read a paper before the London Farmers' Club, on the Past, Present and Future of British Agriculture (as per my book "How to Farm Profitably"), and I had to tell them many things that seemed oddly new. How we had no roast beef at Christmas, because as soon as the grass failed the fat animals had to be slaughtered. We had no clover, no turnips, no oilcake, or other winter food. I remember the time when we had no manure in this country; when the authorities in Germany commanded the farmers to try a newly-introduced seed (clover): they hated the idea of a foreign seed, so, although compelled to sow the seed, they proved their prediction to be correct, for the seed would not vegetate. It was afterwards discovered that they had boiled the seed to prevent its germination! Prejudice is naturally strong and often unprofitable, for nearly all our tows opposed the noisy, smoking railway-engine, and have had to repent at leisure. I was often asked what I thought of it, and replied "Time is money;" and if you can save time and pay no more for it, there must be an advantage gained. But to come to science and its effects.

**SCIENTIFIC TREATMENT OF LIVE STOCK.**—When the rising generation of landowners and farmers shall receive scientific agricultural instruction as a part of their general education, they will know and practice more profitably than at present. Animals are physically like ourselves, and have a winter and a summer suit provided for them; like us, they like dry beds and proper shelter, especially pigs, which have "much cry, but little wool." Sheep, having woollen jackets, can withstand

cold; but don't like rain or wet beds. Hairy animals require more warmth, and also shelter, especially during eight months out of the twelve. Sheep fatten very quickly under cover on straw on a paved floor; no foot-rot there. When I see cattle standing imploringly at the field-gate—lean, cold, and miserable—and I then come into a nice warm room to find a fat lap-dog on a cushion or carpet before a good fire, certain thoughts pass rapidly through my mind concerning the "Farm balance-sheet," "Live stock account," and science. Who ever saw a lean lad's lap-dog? and yet what small and delicate feeders they are! They get their fat from heat. Depend upon it, high-bred Short-horns with silky coats require, during the cold, wet months, warmth and shelter. I can readily understand why North Wales cattle have been, and are now, so long and so extensively purchased in Essex. A long course of hardy acclimatization has given to them a tremendously thick hide, so thickly covered that they can stand hardship and exposure better than the Irish cattle, which come from much milder climates than our own, and too frequently get lung complaints in our cold country. The best thing for them as soon as they arrive is a dose or two of Epsom salts, some nutritious food, and comfortable shelter. If arriving in summer, they should, before the end of September, be taken into sheds. "Cold and hungry" is an accepted axiom. Science tells us truly that both men and animals are living fires, supplied with heat by the combustion of the carbon of our food, just as the furnace consumes the carbon of the coal; and as the temperature of human blood is always, and in every climate, 98, and that of cattle 100, it follows that the colder the atmosphere the more food or coal must be consumed to keep up the bodily temperature. A cold November day increases our appetite. I want to persuade my brother-farmers that, as a source of heat, coal at half a farthing per pound is a much cheaper source of heat than barley or other feeding-stuffs at one penny or more per pound. Therefore, by warm food, warm air, and proper shelter, animals will be fattened more quickly and more cheaply and profitably than by our present system. The saturated coats of animals in wet, cold weather give off, in the condition of steam, the products of their food just as the steam from a boiler appropriates and gives off the carbon of the coal. The time will come when landowners and tenants will concur in providing proper shelter and heat for the live stock. A regular temperature will be then secured by either warm water or steam-pipes, just as our factories are warmed. This is really an £ s. d. question.

**HEALTH AND DISEASE.**—In this respect human beings and animals are alike. Every effect has its cause; and although some of the causes are still undiscovered, science has proved that improper food, impure air by want of ventilation, sudden changes of temperature, irregularity in feeding, want of shelter, bad water, are all injurious to health; and that animals feeding in the field are often killed by hoar frost, excess of succulence, ergot or rye, or liver fluke. Some of these are caused by low undrained soil and miasmatic exhalations. The dangers to human health are very numerous, and have been discovered by science, especially bad water and impure air; the latter, owing to the numerous closet and sink drains, is too often the fatal cause of fever and other destructive maladies. We innocently and confidently believe that a rush of water down the pans, pipes, and covered ways, renders them, and the atmosphere in them, pure and clean; but I know that it is not so, for their adhesive attachments and corrosions which simple water does not remove, and which too frequently generate putrescent and infectious gases, are little suspected. In large mansions, especially, I have had nasal evidence early in the morning, before the outer doors were opened, that there were dangerous exhalations from escaped gases. We are very much indebted to recent science for providing detergent compounds which are of a cleansing nature, and I would especially mention the "permanganate of potash," as first and best. It costs about 10s. a lb.; a single pound in a small house, up to 20lbs. in a large mansion, annually would save many a life. I have been told that we are indebted to Mr. Condy for its discovery. I always use it. Its action is immediate, and without smell.

**SCIENTIFIC VENTILATION FOR MAN AND BEAST.**—When I see much gaping in a private room or public assemblage, I know that the ventilation is imperfect, and that the occupants are rebreathing the tainted air which had already passed through the lungs. Fortunately for our cottagers the joints and door fittings are imperfect, and permit the entrance of some fresh air; and our open fire-places and chimneys are, to

a certain extent, safeguards; but the system, or true principle of ventilation (heath I call it) is but little understood. I therefore exhibit to you this evening an illustration of the true principle. Folks naturally, but erroneously suppose that a large hole in the roof or ceiling will permit the foul air to escape and fresh air to enter; but it is not so, as you will see by these candles, which in less than a minute go out for want of oxygen; but if I divide the opening vertically, by dividing it into two parts the candles burn brilliantly and permanently, for all the vitiated hot air goes out on one side of the partition, while on the other side the fresh air enters and descends, thus causing circulation without draught. This system has been in operation at my business premises in town, and in thousands of other establishments, with great benefit, but it is still very insufficiently known. It is very cheap. It was first applied by the late Mr. Watson, of Halifax, Yorkshire, and is continued by his successors, but the patent has, I believe, long since expired. It is especially suited for stables and cattle sheds; but how rarely we see it! It is the want of ventilation which causes farmers to keep their horses in open horse yards, because experience taught them that unventilated stables were fatal to health. When agriculture is conducted scientifically, cattle sheds and stables will be warmed in cold weather up to a certain temperature, and warm food will be given—for it is a well-ascertained fact that heat can be produced by coal much cheaper than by food. Before I leave the ventilation question I should say that both men and animals are merely living candles or fires, and will suffer or go out for want of oxygen to keep up the fire or heat. Our annual Coggeshall meeting, at the "White Hart," was in a long unventilated room, or box, almost like the Black Hole at Calcutta; and I always felt the ill effects of the poisonous atmosphere. But since three openings were made in the ceiling, both the human fires and the gas lights have burned brilliantly and healthy. This ventilation question is agriculturally one of £ s. d. Horses in horse boxes, and cattle or sheep in sheds, with good ventilation, help fill the farmer's pocket. Ball-rooms owe much of their exemption from stagnation to the energetic gyrations of the happy couples who are constantly keeping the air in circulation. For offices, where there is a sedentary occupation, ventilation is most important.

**THE WATER WE DRINK.**—Here again science has, by chemical analysis, advised and warned us. That warning was, and is, I am sorry to say, too often wanted, and too often neglected. Farmers, and their live stock, too, have been often poisoned by the water from the open farmyards and yet too many continue to permit their animals to drink at ponds brown with sewage. In some cases they escape for a time, but, at last, great loss and mischief ensue. Witness Professor Veelcker's report, in reply to a farmer who had a very heavy and unexplained loss of stock. The analysis showed the water they drank was stronger than ordinary sewage. Water, even apparently pure, will cause deposit; and how rarely are our cisterns cleansed and attended to! That is why the continual, instead of intermittent, water supply is so desirable. Until scientific analysis enlightened us, we believe that the brilliant sparkling water of our London wells was perfection, but science soon showed that they contained death draughts; and the enormous loss of life by cholera at the rear of my premises in Regent-street was traced to the brilliant water of a pump in that neighbourhood.

**THE SCIENTIFIC STEAM PLOUGH.**—John Fowler's name will be permanently remembered by British agriculture; but, alas! where are the suitable paths for his plough to travel on in our dense clays which most require its aid? For want of a few grass headlands, it is expected to travel on or sink into melted glae or birdlime, kicking it up in wet weather or working itself into deep muddy holes. I know of two cases (but not in Essex) where the ponderous engines have remained fixed since October. Many a mile of worthless fence might be removed to make way for a grass path for the steamers. Said a New Zealand farmer to me the other day, "I am amazed at the wretched condition and unnecessary number of English fences. Surely they might be made good like the railway ones, if there is still a desire for them?" Where would be our trains without a suitable road? On Mr. Proul's, Mr. Middlebrook's, and other farms, where these engines are owned and worked, proper grass paths are prepared for them. Landowners and farmers should consider that if they are to have contract work done well and cheaply, and at all times, they must put their farms into a fit condition to receive them. On almost any of our lines of railway, and



certainly from Colchester to London, the fields are in form and size unadapted to the 400 yards of rope in rectilinear line.

**THE AIR WE BREATHE AND THE SOIL.**—Our leaves of bread and rounds of beef are dependent on an alliance between the elements of plant food in the air and in the soil, aided by water. If they were not brought together by some means there could be no food. Nature does this without the aid of man. Witness the enormous forests, the vast plains of rich pasture, the varied and abundant fruits and other natural productions. But nature is just, for that which is grown upon the land is restored to it by decay, or by the animals and birds which consume it. It is man alone who robs and impoverishes the land, by neglecting to return to it its incombustible elements. Liebig says, truly, at p. 229 of his "Modern Agriculture," "Large towns, like bottomless pits, gradually swallow up the conditions of fertility of the greatest countries."

**HOW ARE PLANTS BUILT UP OR FORMED?**—We ought, as agriculturists, to know this, so as to be able to employ the right building materials in the right place—I mean in the subsoil as well as in the top soil, for we cannot manure the subsoil through the upper soil, as the latter has the power to arrest much more of the elements of manure than we ever apply to it. Liebig ("Modern Agriculture," p. 25) says, "Plants contain combustible and incombustible elements. The latter, which compose the ash left by all parts of plants on combustion, consist, in the case of our cultivated plants, essentially of phosphoric acid, potash, silicic and sulphuric acids, lime, magnesia, iron, chloride of sodium. Their combustible portion is derived from carbonic acid, water, and ammonia, which, as elements of food, are equally indispensable. By the vital process plants are formed from these materials when the atmosphere and soil supply them at the same time in suitable quantity and in the proper proportions. The atmospheric elements do not nourish without the simultaneous action of the elements of the soil, and the latter are equally valueless without the former. The presence of both is always required for the growth of the plant. . . . An element of food is ineffective if there be absent a single one of the other elements of food which are conditions of its activity." In Cheshire the one thing wanting was bone-earth (phosphate of lime).

Our own bodies are formed of the same elements as plants, and I have often caused merriment when I have said, in the presence of a goodly assemblage, like the present, of well-developed agriculturists, that we are all gas and water, except a very small per centage of earthy matter. If desiccated 76 per cent. of our weight would go off as steam, and if we were then burned 20 per cent. more would go to the air as gases, leaving only the small per centage of incombustible ash which we had consumed in our food, and which was indispensably necessary for our formation. Without plenty of water the elements of our bodies, like the sap in plants, would not circulate. We can see, at the Kensington Museum, the details of our formation. Economical housewives would feel uncomfortable if aware that in every pound of lean meat they get three-quarters of a pound of water. Meat is much dearer food than bread and cheese, or than oatmeal and milk, and our labourers well know this. In my mind's eye I picture to myself the atmosphere filled with undeveloped forms of plants and animated creatures. We may safely paraphrase Shakespeare—substituting chemist for poet—who says, "The poet's eye, in a fine frenzy rolling, doth glance from heaven to earth, from earth to heaven, and as imagination (science) bodies forth the form of things unseen, the poet's (chemist's) pen turns them to shapes, and gives to airy nothing a local habitation and a name." Professor Tyndall has enlightened us on the subject of solid matter in air; and, as for its perpetual motion, we have only to examine a sunbeam in a dark room or cellar. The bulk of every plant and living object is derived from, and ultimately goes to, the air. Undertakers always bore a hole in leaden coffins for the escape of gases, which would, otherwise, bulge and burst the coffin. Recently an undertaker (rather green in the matter) omitted to make a hole in the leaden coffin, and was astonished at finding it forced out of shape, and a gurgling noise within. In his distress he applied to a friend, who soon managed an escape for the impent gases. The 120,000,000 tons of coals which we raise annually once came from the air as vegetation, and disappear in air by combustion, again to form vegetation, except in both cases the trifling per centage of incombustible ash which ever was, and ever will be, earthy and non-aerial. A city or a haystack disappears in combustion, leaving only the earthy or non-aerial

ashes. Well, then, if the air is so full of good and necessary things, how can we best obtain them for our use and profit? How can we best get back from the atmosphere that enormous amount of carbonic acid and ammonia (plant food) given to it by decay, combustion, and by other sources. In well-drained and properly cultivated soils the air circulates freely, and the roots of plants obtain from the carbonic acid and ammonia circulating within it a portion of their food by their roots, just as the leaves do from the carbonic acid and ammonia in the atmosphere. Liebig, in his "Principles of Agricultural Chemistry," No. 7, p. 19, says, "The roots of plants in regard to the absorption of their atmospheric food behave like the leaves—that is, they possess, like these, the power of absorbing carbonic acid and ammonia, and of employing them, in their organism, in the same way as if the absorption had taken place through the leaves."

**CONCLUSION.**—Excuse my repeating the words I addressed to you twenty three years ago when concluding my paper. Some of these predictions have been already verified. I see, in perspective, a railway activity pervading agriculture. The time is coming when farms will be squared, trees removed, and game moderated; when tramways will intersect estates, and one horse will draw the load of four; when the sewage of our towns will ebb back to its original source; when the waters of our rivers and drains will be applied to the irrigation of our fields; when our millers will use steam instead of water; when our farmers and their children will be better educated, and rank higher in the social scale; when our labourers will be better housed, taught, and fed. Then will the blundering rudeness and clumsiness of ignorance be exchanged for the watchfulness and thought of an enlightened intelligence; then will the fractional calculations of profit outweigh the fears of cost; then will antiquated territorial legalities be superseded by personal responsibility, identity, and possession. I see all this in the distance: it is a mere question of time. I see mighty engines on rail-waved open fields, tearing up furrows a yard deep, making the land look like a sea. I see these hungry earthy masses saturated and immediately fertilized by the sewage of our towns—I see ample evaporation and facile percolation. Tottering and dilapidated farmeries will give way to permanent and convenient home-steads; the pinching economy of a penurious and pernicious system will be exchanged for liberal views and large operations; capital will develop its giant strength, unfettered by seigniorial restrictions; agriculture, commerce, and manufactures will unite by the ties of a great common interest and common intelligence, for the good of our people and for the honour of this great nation.

The meeting then terminated with the usual votes of thanks.

**CHESHIRE CHAMBER OF AGRICULTURE.**—At a meeting of the Cheshire Chamber of Agriculture, at the Lion Hotel, Warrington, Lord Wintarleigh presided. The object of the meeting was to listen to a paper by Mr. J. H. Law, of Silverdale, Carnarvon, on "Lime in its application to Agriculture: its use and abuse." There was a good attendance of farmers. In his paper, Mr. Law said that while lime was applied frequently and in large quantities to land, it was done at the expense of the utter exhaustion of the land; but when applied in small quantities it would exert a highly beneficial influence. No farmer should allow lime to take the place of manure. Mischief ensued when lime was used in considerable quantities, unless there was a liberal supply of manure with it. It might be used on light soil at the rate of five tons per acre, and pasture land ten tons per acre. The crops benefited by lime were barley, turnips, rape, white clover, and ryegrass. The Hon. W. Egerton, M.P., moved a vote of thanks to Mr. Law, which was seconded by Mr. Rigby, the secretary of the chamber. He said farmers ought to make themselves more acquainted with chemistry, as it would enable them to work their land with great advantage.—The meeting closed with a vote of thanks to the noble lord for presiding.



## WEST SUFFOLK CHAMBER OF AGRICULTURE.

A meeting of this chamber was held at the Angel Hotel, Bury St. Edmund's, on Wednesday, the subjects for discussion being "The present regulations regarding Diseased Cattle," and the resignation of Mr. C. S. Read, M.P." The chair was occupied by Mr. William Bidwell.

The PRESIDENT said, having been unable to find a member to introduce the subject of cattle diseases, he had himself drawn up a short paper, thinking that the matter was one that should be discussed. The President said: I propose we discuss it only in connection with foot-and-mouth disease, for the lung disease I do not consider infectious. At the same time I am fully aware many people do not share in this opinion. There appears no immediate danger of our being visited by the cattle plague, to stamp out which no regulations can be too stringent. The points upon which I would especially invite the discussion are—1st, Are the present regulations sufficiently effective to justify their expense and continuance? 2nd, If not, can they be improved sufficiently to make them so? And 3rd, What improvements can be suggested? Looking at the prevalence of the disease I am uncertain whether our present regulations have been really beneficial. They have now been in force some time, and yet, comparing corresponding seasons of the year, the disease I understand has not abated. I speak but vaguely on this point as I have no statistics to guide me. In some cases they have tended to increase the disease by rendering it impracticable to treat the animals suffering from it with proper comfort and nursing, which I have found the best way of quickly getting them through it. A case of this kind occurred after last Woolput fair, where a dealer bought a lot of good cattle which next day were discovered to be in the early stage of the disease, and were accordingly ordered to remain where they were until free from it. Food had to be carted to them, and I do very much doubt whether the necessary traffic from the meadow did not spread the disease more than if the bullocks had been allowed in this early stage to have gone to a farm where food and comfort would have been at hand. Upon the whole I am of opinion that unless the regulations can be rendered more effectual they are not worth acting upon, unless, perhaps in most flagrant cases. 2nd, Can our regulations be sufficiently improved to make them worth retaining? The impossibility of detecting the disease in its earliest stages presents a great difficulty in dealing with it. Another is, the authorities in market towns are reluctant to carry any severe measure into action lest they should prevent the dealers attending their markets, they being men of the most liberal expenditure, consequently those the towns like best to entertain. It appears to me that as three-fourths of the beasts grazed in this county come from Ireland, it is there the disease should be first dealt with. The best plan I can see is that every lot of bullocks, before being sent over here should be in quarantine and under inspection—such a plan would entail considerable expense—at the same time Ireland must be freed from the disease before we can expect to be free. No one can say anything against closing our markets when there is no trade going on, but in busy times, when only it could do good, the stopping the supply and demand is a much more serious matter than it at first sight appears. It would frequently lead to animals in one part of the kingdom suffering from want of food, whilst in other parts food was wasting for want of oxen to eat it. An Irishman, having to keep his oxen six weeks, say, longer than he had provided food for them, of necessity has to put them on short commons, from which no progress is made, thus entailing a greater loss than the disease itself, as that would generally be covered by a month's keep. Ten shillings a head annually on Irish cattle imported would, I think, fully represent the loss arising from the disease amongst them. If very severe restrictions are put in force, the price to the grazier here would be fully enhanced by that amount, for the dealer, finding himself liable to be mulcted in heavy penalties, or by the stoppage of his cattle, would only trade subject to getting much heavier profits. Therefore, setting aside the loss the restrictions entailed on the seller, the buyer would have to pay 10s. a head for his oxen more than if trade was unfettered. If I lose, as I have no doubt I do, £50 a year by the cattle d. case, and if under severe restrictions my cattle to

graze cost me £50 a year more, I am no gainer, even supposing all are kept from disease; but rather a loser, as I have in part to pay for the inspection. The Magistrates' Committee, I see, recommend that all market trucks, &c. should be compulsorily cleansed and disinfected. Well, this is all very well; but, to take this town, is it practicable to disinfect, say 15 or 20 (or near this) layers where bullocks are taken in before and after market, these layers occupying between 20 and 30 acres? Coming tired into these of a night, cattle are, I think, more likely to take the disease here than in the markets. The aggregate loss arising from the foot-and-mouth disease is enormous, and no sacr. fee hardly would be too great to permanently get rid of it. I despair of doing this, and am of opinion that the severest regulations would act on y as a check, and be not worth the expense and inconvenience they occasion. In fact, the mitigated cure is worse than the disease. I am quite prepared to have the soundness of my opinion questioned, and, indeed, to have this Chamber decline to endorse them.

Mr. T. THORNHILL, M.P., said he might perhaps be allowed to take this opportunity of offering his apology for not having been seen so often at the meetings of this Chamber as he should have liked to have been. But the fact was he had had a great deal of trouble and sorrow at the death of his beloved father, and he had a great deal of business to transact in consequence. He might have a great deal more to do yet, and if he could not for a time attend meetings of this character with a regularity which he desired, he hoped due allowance would be made for the position in which he was placed. He was very glad to be able to be present to-day, because he thought the subject under consideration was a very important one to all classes of society, not only to the farmer as producer, but to the public at large as consumers, who were interested in keeping the prices as low as possible. The foot-and-mouth disease seemed to him to be a very capricious disease, and sometimes affected animals otherwise than by contagion. He mentioned the case of two calves at Barningham that were kept together in the same yard in which they were born, but they were attacked with that disease, whereas the cows, though driven about the roads, never had it. Mr. Thornhill alluded to the case of some hoggats which fell down with the disease, whilst some ewes in the next field escaped altogether, and that in the face of the fact that one of the ewes was in the habit of jumping over the hurdles and going amongst the affected hoggats and returning amongst the ewes. Not only did the ewe escape, but it did not communicate the disease to the rest of the ewes. At his own place at Pakenham he had been in the habit of having the mouths of his stock washed with carbolic acid and water, and the animals had never had the foot-and-mouth disease, although his friends had had it on their farms very close to his. It seemed to him, from what he had seen of the disease, that it would be impossible to entirely stamp it out with the present regulations. As to pleuro-pneumonia, which was a much more dangerous disease, the restrictions could not perhaps well be too strict in order to stamp it out. But with regard to the foot-and-mouth disease, he considered the restrictions might perhaps be so far relaxed that persons might be allowed to move affected stock from one part of the farm to another. The matter was one that required to be very carefully considered, in order to know the best course to adopt, so that the interests of all parties concerned might be fairly taken into account. Being a large farmer himself, farming about 1,500 acres, he knew the importance of obtaining stock cheaper, for not only was it of benefit to the farmer, but to the public at large. He did not think it would be advisable at present to interfere with fairs and markets, but he agreed that the rules and regulations having reference to the cleansing markets, and other places where cattle were brought together, could not be too stringent. Happily in Ireland, where a good many of the store cattle came from, cattle disease was not so prevalent—at least, there was no rinderpest, which was the kind of disease which we in England had to dread amongst cattle coming from farms there, especially as there was not the same machinery for guarding against diseased cattle there as in England, there being, amongst other things, a great want of

inspectors. This was a subject on which he did not want to pledge himself, as it was one that would soon be brought forward in the House of Commons, and until the discussion had taken place it would be impossible for him to pledge himself as to what was best to be done; but his friends might rest assured that, interested as he was himself in agriculture, he would do the very best to promote the cause of agriculture.

Mr. RODWELL spoke at some length on the subject, and in the course of his remarks he alluded to the meeting of the Executive Committee at Stowmarket, when certain regulations having reference to the foot-and-mouth disease were drawn up. The meeting was a small one, but he did not know that it was the worse for that, for amongst the gentlemen present was Lord Henniker, who had taken infinite pains to master the subject. Some difference of opinion prevailed, and the subject was well discussed. He for one thought it was perfectly unnecessary to recommend any restrictions so strong as those recommended in Norfolk. The committee came to the resolutions to which Mr. Biddell had referred. He had been a sufferer from the foot-and-mouth disease amongst his flock; and this was a subject which he felt bound to study, not for himself so much as for those whose interests he had to watch in matters of this kind, and he had come to the conclusion that in cases where it was ascertained to be simply foot-and-mouth disease, it was better to have no restrictions whatever, but that it should be left to the buyer and seller to make their own bargains, the buyer to exercise the greatest precaution he possibly could. As had been said they had to consider the interests of the consumer as well as the producer, and if a number of restrictions had to be imposed the value of the sound article—or the article that was not suspected—would be enhanced, and we should probably have to pay more than we should if we ran the risk of purchasing animals that had this particular disease which, excepting in the case of cows and sheep, was not so formidable that it might not be dealt with, as it had been in numbers of instances, very successfully. It should be remembered that in legislating upon this subject they had a strong public feeling to encounter against restrictions in the manufacturing and other districts of England. Mr. Rodwell quoted a letter written by Mr. John Bright on the subject, which protested strongly against restrictions of the kind carried out in Norfolk, which he said was simply done by the county members to curry favour with their constituents, and for the sake of keeping up the price of meat. This, Mr. Rodwell said, showed that there was a feeling on the subject by residents in large towns, and it was one of the difficulties that would have to be contended against. Therefore, he thought it would be better, where it was simply a case of foot-and-mouth disease, to have no restrictions, but to let persons take all the care they could in buying, and that there should be a law which would punish any person who knowingly sold an animal which was diseased. He hardly knew why the system of warranty should not be introduced, as was often done in the sale of a horse. Possibly the buyer would have to pay a little more for a warranted animal, but he would have the satisfaction of knowing that if the animal did not turn out sound the seller would have to return the money. He did not recommend this course, as it might lead to an almost endless amount of litigation, and the County Court Judge would probably have a great deal more to do than he had at the present time. He (Mr. Rodwell) thought it possible that if there were no restrictions the buyer would be more careful than he was at present not to buy unsound animals; and he considered it a great mistake that compensation should be given under the present imperfect restrictions, because the effect was to make people less cautious, because they knew if an animal turned out unsound and died they would get a certain amount of compensation. Considering the difficulties that surrounded the whole subject, he thought the course he had suggested would be the simplest solution of the whole question. People now knew better how to treat the foot-and-mouth disease than they did formerly. The present sort of panic feeling which existed throughout the country resulted from the feeling of apprehension which existed at the time the cattle plague was so prevalent. But the foot-and-mouth disease was a very different one, and he certainly thought it would be better to leave people to do as they pleased in reference to it.

Mr. W. N. KING mentioned two instances which had come under his notice to illustrate that the disease did not always arise from contagion. One was the case of five sheep brought

to his farm in September, but the disease did not break out until January, and singularly enough, though these five fed with the others, and were with them, they escaped the disease altogether. Mr. King expressed his concurrence in the observations of Mr. Rodwell in reference to the restrictions as to the foot-and-mouth disease. The public were sometimes put to great inconvenience without any compensating advantages.

Mr. J. E. WRIGHT pointed out that if there were no restrictions a man might drive diseased animals from one end of the country to another, scattering the seeds of the disease broadcast. It was quite true that the disease might not be contagious in every case, but it was very often contagious, and he was apprehensive that if there were no restrictions there would be great danger of the disease being much more prevalent than it was at the present time. There ought surely to be some means of preventing diseased animals being driven about the country with impunity.

Mr. RODWELL said he would make it an offence punishable with a fine or imprisonment for any person knowingly to drive diseased beasts from one place to another, just as in the case of a man sending diseased meat to London.

Mr. MANFIELD, alluding to the regulations issued by the Executive Committee of Suffolk, pointed out that farcy in horses was included under the head of contagious diseases, and he said he thought this must be a mistake, as farcy was not contagious.

Several gentlemen expressed a similar opinion, Mr. GAYFORD remarking that he had known horses having farcy to mingle with others for 14 or 15 years without communicating the disease.

Mr. MANFIELD remarked that he took a more serious view of the foot-and-mouth disease than did some gentlemen present. He had had it on his farm four different times, and each time it had broken out amongst fresh stock he had bought at Bury market. Beasts having the disease were placed on the meadows and other places outside the town of Bury. Other beasts went into the same places, and up to within a month he thought it was next to impossible to go to Bury market and buy cattle that had not the disease. There should be a thorough inspection of other places as well as the markets. It frequently happened that animals were driven to Bury having the disease, and those that were apparently sound were brought on to the market, while others were left behind. The difficulty that he saw was in detecting the disease in its early stage. The beasts that he bought had fallen down with the disease the morning after he had got them home.

The discussion was continued at considerable length.

Mr. RODWELL remarked that they must either take very stringent measures, as in the case of the cattle plague, and stamp the disease out, or have no restrictions at all. Unless the thing were done thoroughly, it were best left alone.

Mr. SALMON, the Town Clerk of Bury, said the Town Council were very anxious to do all that was possible to prevent diseased animals being brought to the market and other places in Bury, and with that view they had appointed a gentleman to fill the office of inspector, who was well qualified for the position.

Mr. E. GREENE observed there was no doubt that the disease was sometimes contagious and sometimes epidemic, and he thought it was one of those diseases that would in time wear itself out. He also pointed out the difficulty of detecting the disease in its early stage, and he gave some instances in point which had come under his own observation. He expressed his belief that it would be better to take away the present restrictions, and leave persons knowingly sending diseased cattle from place to place to be dealt with by the common action of the law. If they cleansed the markets, it was impossible to cleanse the layers, and it was from these places that most of the disease was propagated.

Mr. RODWELL proposed the following resolution: 'That as it would be impracticable to close the markets throughout the kingdom with a view to stamp out the foot-and-mouth disease, it would be expedient to remove the existing restrictions, which have proved inoperative and harassing to the trade, and if the present law is not sufficient, it should be enacted that any person knowingly driving along the roads, or exposing for sale, any animal suffering from disease, or having recently been in contact with a diseased animal, should be liable to fine or imprisonment.'

Colonel PARKER said his experience—which, however, was not, perhaps, so great as many in that room—was that some restrictions were necessary. He could not understand the propriety of withdrawing the restrictions and throwing the responsibility of taking action upon the shoulders of others than those whose business it was to see that diseased cattle were not moved about from place to place. If the law was inoperative, or was not so stringent as it should be, let it be altered. It seemed to him necessary that there should be restrictions as to the inspection of markets and other places, and that it should be the duty of the inspector to bring the law into operation in cases where it was being offended against. The regulations which were drawn up the other day by the Executive committee seemed to him to be wise and moderate, and there was, at least, nothing in them so sweeping as the suggestion which was now made to the Chamber. There were, no doubt, difficulties attending the whole matter, but that was no reason why steps should not be taken to prevent as far as possible the spread of the disease.

Mr. THORNHILL said he thought some addition ought to be made to Mr. Rodwell's resolution, to the effect that tracks, market-places, &c., should be from time to time thoroughly cleansed.

Mr. HENRY STANLEY expressed his apprehension that the effect of the resolution would be to check importation of cattle, which would, of course, be a great evil. It had been admitted that there was a great difficulty in detecting the disease in its early stage, and it not unfrequently broke out in course of transit, and if persons were to be liable to fine and imprisonment it would be considered dangerous to move stock into the country, and the result would be to check importation of cattle into the country.

Mr. RODWELL replied that in no case would a man be convicted unless he knowingly moved diseased cattle from place to place.

Other gentlemen having spoken on the subject,

Mr. MAXFIELD moved an amendment to the effect—"That the regulations issued by the Executive Committee should be adhered to with the exception of striking out farcy under the head of contagious diseases."

Mr. STANLEY seconded the amendment.

The CHAIRMAN put the amendment, and three voted for it and ten against. It was therefore lost, and Mr. Rodwell's motion was carried, thirteen voting for and three against.

Mr. GEG. GAYFORD, sen., then brought forward the subject of Mr. Clare Sewell Read's resignation. He said he had some conversation with the President on the subject, and he (Mr. Gayford) having expressed his opinion that it ought to be taken up as an agricultural question by an agricultural chamber, Mr. Biddell suggested that it should be brought forward at to-day's meeting. He (Mr. Gayford) therefore now brought it forward as a tenant-farmers' and an agricultural question. A few years since it occurred to the farmers that they ought to be a little more independent politically, not having, as a class, been fairly represented. The farmers of Norfolk took the initiative in sending a man of their own class, one who well understood the practical parts of agriculture, and what were the requirements of the farming community. They chose Mr. C. S. Read as their representative, and they soon discovered that they had taken the right course, and that they had chosen a man who could represent them honestly and well. He soon began to make his presence felt in the house, and those who held the reins of power said by their actions, if not in actual words, "Thus Mr. Read will become a troublesome man, so we must put him into some snug little box, and keep him there, so as to prevent his talking about the farmers' grievances." Mr. Read had declared that he only accepted office on condition that he should be at liberty to act as he thought proper, and according to his conscience on agricultural subjects. After a time Mr. Read spoke a little more plainly than some of his chiefs liked, and he was rebuked, and he was told that he was not to talk quite so plainly. It was just possible that Mr. Read spoke more plainly and warmly upon one subject which affected the agricultural interest than he would do if he had his time over again. He was, no doubt, a little perplexed about the Tenant-Right Bill, and the question discussed when he was in office was whether the measure was to be permissive, or that nasty word, compulsory—or, in other words, whether it was to be of use or no use. That was shipped over, and he did not think Mr. Read's conscience was quite quiet about that. When he got

to work again, he said, "I'll be a farmers' man, and I'll give up the position I occupy." There were few men who were so thoroughly honest as Mr. Read was, and there were very few who would have been prepared to make the sacrifice which that gentleman had done. Most men would have said, "It is only my one voice, and my one vote, and I shall put tons of £1,400 or £1,500 into my pocket." Mr. Read, on the other hand, said, "I am sent here to represent the farmers' interest, to advocate the farmers' independence, and no money shall tempt me to swerve from my duty." He was rebuked a second time, and then he determined to have no more of it, and tendered his resignation. Now was the time for farmers to unite and show they would support honest men, men who would work for the farmers' interests, and he hoped this Chamber would take some steps to show Mr. Read that the farmers of the neighbourhood highly approved of his conduct. Some notice ought to be taken by those interested in agriculture to testify their approval of Mr. Read's course of action. As to whether it should be done by a testimonial, or in what form the recognition should be made, he (Mr. Gayford) would leave for the Chamber to decide. He had done what he thought was only right under the circumstances, in having introduced the matter to the Chamber.

Mr. RODWELL said he regretted that his friend Mr. Gayford should have brought this subject before the Chamber. He also regretted that Mr. Read should ever have resigned, because they had now drifted somewhat into a discussion as to Mr. Read's merits. He was in hopes that this kind of discussion might have been spared, and that these expressions of opinion would not have been called for; but he thought he should not be acting frankly and fairly if he did not say at once that he concurred in a great deal that Mr. Greene had said in this matter. He (Mr. Rodwell) did not think Mr. Read had any enemies, and no one could detract from his merits as an inextinguishable member of the House of Commons, and that he was a gentleman who discharged his duties thoroughly and honestly towards his constituents. But as to the matter in question, he (Mr. Rodwell) declined to sit in judgment as to the motives which induced Mr. Read to resign. It might have been a little bit of temper—he was not here to say it was not, and he did not lose sight of this fact when he heard so much said with reference to Mr. Read's independence. For the life of him (Mr. Rodwell)—and he made the remark in consequence of Mr. Gayford's statement—he could not understand why Mr. Read should have retired from office on a minor and unimportant question in which his office was not so much concerned when he sat through the whole of the Session and voted to a certain extent against—that was to say, voting for a measure which was against his own conviction, and which Mr. Gayford and Mr. Read was the promoter of in the Chamber of Agriculture. I do say this, continued Mr. Rodwell, that Mr. Read has, to use his own words, been paided throughout the country against his own wish and inclinations; and nothing more generous and more handsome than Mr. Read's disclaimer of any wish contrary to the wish of the present Government was ever uttered. He has said "I have quarrelled with the chief, and though I leave the Government, it is the Government I will uphold when I go to Parliament, because I know a Conservative Government is the only Government we as agriculturists can look to for help." He has taken pains to let the public know that he is well inclined towards the present Government, and he has let the world know that he will be an active supporter of the present Government. I think he has shown the most generous behaviour under the temptation to which he has been exposed. Who do I find are the principal patrons of Mr. Read? who are those who are upholding him as a martyr? who are they that are using Mr. Read's name so freely? Why, they are the political opponents of Mr. Read. I defy anyone who has been watching the newspapers to be otherwise than satisfied, as I am, that the opposition or the Liberal party have commiserated with the landed interest in this county, the tenant-farmers and others, and have used Mr. Read's name and held him up as a martyr much against Mr. Read's own wish. At least, that is the way I read it. Mr. Rodwell proceeded to say that he honoured Mr. Read because he knew he would not lend himself to a movement which he (Mr. Rodwell) believed emanated from a general moral from political opponents, who wished to weaken the Conservative party by sowing discord and division into its ranks. I should be ashamed of myself, Mr. Rodwell continued, if I

did not frankly say what my feelings upon the subject are, and I do not think I stand alone in this opinion. The subject will be talked of more soon, and I think you will see that my words are prophetic. I think you will see in the course of the next three months whether this is not all got up for the purpose of weakening our party—not because they love Mr. Read, but because they hate the Conservative party. That being the view I take of the matter, why am I, living out of the county which Mr. Read represents, to assist my political opponents to make political capital out of a man who does not like it himself, and who repudiates and complains of being paraded throughout the country as a martyr? In conclusion, Mr. Rodwell said if there was any man who had a right to admire the courage and independence of the tenant-farmers, it was himself, and he would be the last person to do anything or to say one word which would suggest that he was an individual

what the tenant-farmers had done; but, after all, the tenant-farmers must recollect that there were other large interests which a Government had to attend to in its dealings with public affairs. Let it be borne in mind that Mr. Read had said that the Conservative party was the only party to which the landed interest could look for help, and Mr. Read would be the last person in the world who would wish anything done which would tend to weaken the party of which he had been, and would continue to be, so firm and strenuous a supporter.

After some farther discussion the matter dropped, it being understood that gentlemen wishing to subscribe to the testimonial to Mr. Read could do so by handing subscriptions to Mr. Henry Stanley, or paying them into Mr. Huddleston's bank in that gentleman's name.

The meeting then broke up.

## THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

At the last half-yearly meeting of the Highland and Agricultural Society, there was a large attendance of members. The Earl of Glasgow occupied the chair, and was supported by the Duke of Buccleuch and the Earl of Mar and Kellie.

The Earl of GLASGOW said that, in the absence of his Royal Highness the Prince of Wales, it fell to him, as one of the vice-presidents, to take the chair. He would not trouble the meeting with any introductory remarks from the chair, as they had a long and important programme of business before them, and he would at once proceed with it.

124 new members were then ballotted for and elected.

The SECRETARY read the following list of new office-bearers in place of those retiring by rotation: *The Presidents*.—The Earl of Strathmore; the Earl of Kintore; the Earl of Aberdeen; the Earl of Eile, K.T. *Ordinary Directors*.—Sir John Marjoribanks, of Lees, Bart.; Jas. Cochran, Little Haddo, Aberdeen; Robert Copland, Mill of Ardethen, Eilon; Thomas Ferguson, Kinlochtry, Coupar-Angus; Andrew Gillon, of Wallhouse; Alexander Forbes Irvine, of Drum; James Townshead Oswald, of Dunblair; Adam Smith, Stevenson Mains, Haddington. *Extraordinary Directors*.—The Lord-Provost of Aberdeen; Sir James Horn Burnett, of Leys, Bart.; Sir John Ogilvy, of Invergarthly, Bart.; Sir William Forbes, of Craigievar, Bart.; Sir James Dalrymple Horn Eplinstoune of Horn; and Logie Eplinstoune, Bart., M.P.; Sir Thomas Gladstone, of Fasque, Bart.; Robert William Duff, of Peterross, M.P.; Lieutenant-Colonel George Ferguson, of Pitlochry; John Gordon, of Cluny; Lieutenant-Colonel William Murray, of The Bath.

The list of office-bearers as proposed was then agreed to.

Mr. MURRAY, of Dolerie, submitted the account of the Society for the year 1874-75, which were approved of.

Admiral MATTHEW DOUGAL laid on the table the accounts of the Argyll Naval Fund for 1874-75, which were agreed to.

Mr. ORD MACKENZIE read a report suggesting the purchase of an eligible site in the New Town, on which to erect a suitable hall and chambers for the Society.

After some conversation, it was agreed by a large majority that the Society should remain in its present premises.

Mr. GILLOM (Wallhouse) read the following reports regarding the Glasgow, Aberdeen, and Edinburgh Shows at "Glasgow Show, 1875.—After the full reports which appeared in the newspapers at the time, it is unnecessary for me to occupy the time of the meeting by any lengthened statement. It may suffice to report that, from the accounts which have just been submitted to the meeting, it will be observed that the Glasgow Show proved in a financial point of view a great success; indeed, I may say by far the most successful ever held under the Society's auspices, the estimated surplus being no less than £3,316. In other respects I may state shortly that the show was also very prosperous, the stock generally being of a superior character, and many of the implements very creditable; while the forage-yard on this occasion was stated by all parties to be admirably supplied by Mr. Buchanan, Glasgow. I have now the pleasure of moving a series of resolutions of thanks to the nobleman and gentlemen to whose co-operation and exertions the Society is so much indebted. 1. That the thanks of the Society be given to the Most Noble the Marquis of Bute, vice-president, for

his attendance at the Glasgow Show, and for officiating as chairman at the president's dinner in the unavoidable absence of his Royal Highness the Prince of Wales. 2. That the thanks of the Society be given to the right hon. the Earl of Glasgow, vice-president, for acting as croupier on the same occasion. 3. That the thanks of the Society be given to the Commissioners of Supply for the counties of Lanark, Ayr, Argyll, Renfrew, and Bute, for the liberality with which the auxiliary fund was provided. 4. That the thanks of the Society be given to the Hon. James Bain, Lord Provost, and to the magistrates and Town Council of Glasgow, for the excellent accommodation afforded for the show-yard by the free use of the Green, and for the liberal contribution of £200 in aid of the auxiliary fund. 5. That the thanks of the Society be given to Sir Michael R. Shaw Stewart, of Blackhall, Bart., croupier, and to the other members of the Committee of Superintendance, for their very efficient co-operation in the duties devolving upon them. *Aberdeen Show, 1876*.—I have further to report that the arrangements for the Aberdeen Show, so far as yet completed, are in a highly satisfactory state. The premium list and regulations, as prepared by the General Show Committee, and approved of by the directors, were submitted to a meeting of members, held at Aberdeen, on the 17th of December, and again to a meeting of the board, when premiums were agreed to to the amount of £2,422, or £522 above what was offered at Aberdeen in 1868. That list is now upon the table. The competition for the premium of £50, offered by the Society for the best thoroughbred stallion, to serve in the district of the show, will take place in the market stance, King-street, Aberdeen, on Friday, the 4th day of February. All entries must be made on or before the morning of the Show, with Mr. Alexander Yeas, secretary of the Royal Northern Society, 89, Union-street, Aberdeen. The only matter of regret I have to bring before you is in regard to the date of the Show of the Royal Agricultural Society of England, which has this year been fixed to be held at Birmingham from the 19th to the 24th July, both inclusive; while the Aberdeen Show takes place from the 25th to the 28th July, both inclusive. The matter was carefully considered by the board on the 5th of January, when it was resolved to adhere to the date fixed for the Aberdeen Show, believing that any alteration to a later date would not be advisable. I may add that if the Show is held the week following, it will clash with the Irish and Yorkshire Shows. *Edinburgh Show, 1877*.—I have finally to report that the directors some time ago received applications, numerous signed, from members and others in the three Lothians and in the city of Edinburgh, requesting the Society to hold the Show for 1877 at Edinburgh. The directors have pleasure in recommending for the approval of this meeting that the Show for that year should be held in Edinburgh. The classes of stock for which premiums will afterwards be offered were named by the General Show Committee. The list was subsequently laid before a meeting of members, and after some emendations received the approval of the board at its meeting on the 5th of this month. That list as adjusted I now have to lay before you; and beg to move that the recommendations of the directors be adopted, and that it be remitted to them to make the usual arrangements. I may add that the directors received a circular from the Mayor of Carlisle proposing that the

English and our Show should be held together at Carlisle in 1877, but after careful consideration the directors deemed it inexpedient to entertain the proposal."

The reports were adopted.

Mr. A. CAMPBELL SWINTON gave in the report in regard to district competitions. It stated that the money premiums awarded in 1875 amounted to £152, besides 10 silver, 246 medium, and 182 plough medals; and that the premiums to be offered in 1876 consisted of: Four districts for cattle at £20, one silver and three medium silver medals each, £89 10s.; three districts for cattle (intermediate year), one silver and three medium silver medals each, £7 2s. 6d.; six districts for stallions at £25 each, £150; four districts for mares at £8 and one medium silver medal each, £34 2s.; five districts for colts and fillies at £19 and four medium silver medals each, £105 10s.; six districts for sheep at £18, one silver and four medium silver medals each, £125 8s.; six districts for sheep (in intermediate year), one silver and four medium silver medals each, £17 8s.; special grants—Edinburgh Christmas Club (£50 and medium gold medal), £56 2s.; Glasgow Agricultural Society, for thoroughbred stallion, £50; Ayrshire Association, £20; Uist Society, £10; Westray Society, £3—£89 2s.; medium silver medals, sixty districts, £100; ploughing competitions, £50—making the total amount offered £518 2s. 6d.

In reply to a question by the Hon. G. WALDEGRAVE LESLIE in regard to encouragement to be given to get the best breed of Clydesdale horses.

Mr. CAMPBELL SWINTON said that the committee would be glad to receive suggestions in regard to the carrying out of the report.

Mr. H. M. INGLIS gave in the report in regard to competitions for cottages and gardens. It was as follows: "*Awards in 1875.*—The money premiums awarded amount to £16 10s., besides 16 medium silver medals and 18 minor silver medals, making the total amount expended £30 6s. *Premiums to be offered in 1876.*—The directors suggested the following grants for 1876—viz., 7 parishes at £3 and 4 medals each, £29 8s.; 10 districts at 2 medium silver medals each, £19 10s.; 2 gold medals for improving existing cottages and building new cottages, £20—making the total amount offered, £59 18s."

The report was adopted.

Mr. HOWATSON (Douel) brought forward a motion, of which he had given notice, with regard to the issue of the Transactions. He stated that the whole of the members, especially those who joined the Society since 1866, joined it on the distinct understanding that they would be supplied with these Transactions. He moved, "That the recommendation of the directors in their report on the chemical department and agricultural education, to the general meeting in January last, relating to the discontinuance of the free issue of the Transactions to the members, be rescinded, and that the gratis issue to members on application be continued."

Mr. MARTIN, jr. (Auchendunn) seconded the motion. He thought that if they were able to give £5,000 for a new hall, they could continue to give the Transactions free to members.

Provost DUNCAN (Rothesay) thought the Transactions should be sent to all members of the Society who paid their subscription. There were many of the poorer and more backward members who would not think of sending for the volume, and would yet be glad to get it. It would be much valued in the country, where books were few enough, and so tend to popularise the Society, as well as to increase its resources.

Mr. MILNE HOME (Wedderburn) said that he agreed with his brother-directors on this question, although he had differed from them on other matters. The committee appointed to ascertain how the expenditure of the Society could be economised and the funds liberated for other purposes, found that there were £131 a year being spent on the Transactions, and they recommended that they should be reduced to £200 or £250. The directors approved of the report, and submitted it to the general meeting in January, 1875, which also approved of it. Again, at the last general meeting in June, 1875, Mr. Irvine, of Drum, stated that if no objection was taken the free distribution of these Transactions would cease from that time or shortly after. No objection was taken, so that they would require to proceed with considerable caution in a proposal to upset the opinion of the directors and two general meetings. Their object was to apply these funds to greater purpose—such as the establishment of experimental stations,

libraries for education, and other things—than distribution of the Transactions, which contained no original papers, but merely reprints of essays which received premiums, and proceedings of the Society. If there was any value in these Transactions, those who got them should not grudge the 2s. 6d. which they cost, especially when they saw that it put the Society in the possession of £250 additional income.

Mr. M'LAGAN, M.P., said that this was one of the few societies in the country that compelled its members to pay for a copy of their own Transactions. The societies of England and Scotland all distributed these gratuitously to their members, and he did not see that the members of the Highland and Agricultural Society of Scotland should be put to a disadvantage as compared with the members of the Royal Agricultural Society of England, and compelled to pay for their Transactions.

Colonel INNES, (Learney) pointed out that this was not a recommendation of the directors that was dealt with. What they were really wanted to do was to rescind a resolution of last general meeting. The directors were by no means unanimous on the matter.

The Duke of Buccleuch also called attention to the fact that there was an error in the motion. They might rescind their own decision on any matter, but they could not rescind a recommendation of the directors or a committee.

The resolution was then put as follows, and carried by a large majority: "That the resolution of the general meeting in January last, relating to the discontinuance of the free issue of the Transactions to members, be rescinded, and that the gratis issue to members on application be continued."

The SECRETARY said that in consequence of the decision of this meeting he had to intimate—(1) That the volume will be sent to all members who hitherto have received it, without further application; (2) that it will be sent to those who have for the first time made application by returning the recent circular; (3) that those members who have paid for the volume will immediately receive back the amount in postage-stamps; (4) that all members who have never made application for the Transactions at all will receive the volume if they apply before 1st February; (5) that back-numbers or volumes will be supplied to members on application to Messrs. William Blackwood and Sons, 45, George-street, Edinburgh, at the following rates: Fourth Series, 1866-71, six numbers, 4s. each; 1872-75, four volumes, 5s. each.

Mr. IRVINE of Drum reported that Volume VIII. of the Transactions was partly in type, and that as many of the prize essays which will be announced to-day will be included as, with the Proceedings and the Premium List for 1876, will make the volume the usual size.

Mr. COLIN MACKENZIE (Portmore), in absence of Sir Thomas Hepburn, read the report of the directors of the Chemical Department. He remarked that a great deal of acerbity had been introduced into this matter, and much had been said out of doors about the propriety or impropriety of the steps they were now taking. He begged to assure the meeting that whatever the Society, after mature deliberation, entrusted to the directors, they would loyally carry out; and it was only of anxious consideration that they had come before the Society, and again asked it to reconsider its decision. He concluded by moving that the meeting authorise the directors to organise such experimental stations as they may find practicable with the funds at their disposal, and appoint a properly qualified chemist as an officer of the Society.

Professor BALFOUR seconded the motion. They could not get on well, he said, unless they followed this arrangement, and he was quite sure that they would get an efficient chemist for the purpose at the sum they proposed.

Mr. GREG (of Messrs. Fowler and Co.) doubted the competency of the committee bringing up this question again, seeing that it was not remitted to them at the last meeting.

A MEMBER: The whole matter was remitted to them.

The Hon. GEORGE WALDEGRAVE LESLIE: Will this chemist have to give his whole time to the Society, or will he be allowed to do other work?

Mr. BINNING HOME (Agaty) asked how these experimental stations were to be conducted? Were they to be conducted by individuals who were to undertake farms under the direction of the chemist, and have the results reported to him; or was it the Society that was to undertake the working of these experimental farms? He could not see how it was possible that such experiments could be worked to any extent without a

monstrous outlay. Such experiments, made under the auspices of the Society, would no doubt be a great blessing to the country at large; but if they were confined to small patches in given places, he could see no benefit that would accrue.

Mr. MACKENZIE: These are matters of detail that can be more properly dealt with after we have got the machinery.

The Hon. G. WALDEGRAVE LESLIE: I should like to get an answer to my question—whether the chemist would give his whole time to the Society, as Dr. Voelcker gave to the Royal English Agricultural Society?

Mr. MACKENZIE: We think that should be so.

Colonel INNES (Garnay) said that a good deal of the difference of opinion that had for several years prevented their coming to a conclusion on this matter had arisen from the want of a distinct understanding as to what the duties of this person who was called a scientific chemist should be. He pointed out, from the facilities now existing for obtaining analyses, that there was not the same necessity now as there was in the earlier period of scientific agricultural chemistry for the Society engaging a scientific chemist to analyse manures to protect farmers from imposition; and then went on to ask, What is the benefit the directors expect to have from a chemist? They had an example of what had taken place in an association formed in the county of Aberdeen. They had engaged a scientific man, whose duties were to organise and superintend the conducting of these experimental stations, and afterwards, by analyses and scientific investigations, to bring out the results. That was, he understood, what the directors were to engage this official to do. The question therefore was, whether his duties should be limited to these functions or not? If the Highland and Agricultural Society established experimental stations, to be conducted directly by their own officials, they would fall very far short of what was necessary if they did not also take steps to generalise and compare the results they obtained themselves with the experiments obtained by other associations. Differences would arise from circumstances of climate and of soil, and the various observations would exhibit very considerable variation. It no means were taken by a previous arrangement to get at the average results of these different experiments, they would, instead of arriving at any useful conclusion, only obscure and mystify the results. It might be necessary for them to take the sanction of a great national society, and bring into one common focus the experiments instituted in all parts of the country. That would be quite sufficient employment for any one man. If they offered to any competent man of high attainments such employment as that, and gave him a certainty that it would last for a certain period of years, he had no doubt a comparatively small direct payment of salary would secure the services of the man they wanted, because the conduct of such experiments on such a large scale, and the character he would establish by obtaining large and useful results, would of itself be a great reward. He moved, "That the meeting approve of the report of the directors, subject to the condition that the engagement of a chemist shall be for a limited period, and shall embrace the entire services of the person employed, and that his employment shall be limited to the organisation and management of the stations established by the Highland and Agricultural Society, and to the arrangements which it may be necessary to make with other associations, and the necessary analyses and scientific investigations required; and further recommend that the application of the Aberdeenshire Association for aid may receive early and favourable consideration."

Mr. WILSON (Edingon Main) said that they were now discussing this question under different conditions from what were before them at last meeting. Some who opposed the proposal then had the idea that they were to go on the old footing of appointing a chemist at the salary of £300 a year, who was only to devote a certain portion of his time to the services of the Society, and was to have very much at his own choice the time he was to give them. They tried that system for a whole generation and the result was literally nothing. He had no doubt that a chemist of the Society would furnish to the individuals who sent him samples a reliable report; but there were local associations employing chemists, who not only afforded the individuals applying to them the result of their analyses, but sent a confidential communication to every member of the association, making them aware of the whole facts; and when any fraudulent sales were reported among forty or fifty farmers in a locality, it made the district too hot

for the scoundrels, who had to betake themselves elsewhere. The Highland Society could not do more. The directors had hitherto shown very prudent caution in doing what the English Society did—publishing through the papers the number of fraudulent transactions that came to their knowledge. They were like the canny Scots, trying to keep themselves on the windy side of the law. He could not much blame them for that. But there was the work being done in the important districts of Scotland by these associations, and it would be a work of supererogation altogether for the Highland Society to appoint a man for what could be done otherwise. It seemed to him that the proposal put before them was self-contradictory. They were, as he understood, to set apart £700 a-year for these joint purposes; and then, in administering the £700, they began by appointing a chemist at £300 a-year, and another functionary, whose duties he did not well understand—a practical agricultural inspector—who was to get £150, and another £50 for travelling expenses. There was £500 of the sum gone. It reminded one of Eul-tal's intolerable deal of sack to a halfpennyworth of bread. To eat up £500 in salaries, and start experimental stations with £200 a-year, was ludicrous altogether. Mr. Lawes, of Rothamsted, had been devoting for some time past £2,000 a-year on these experiments. Fancy the idea of the Highland Society gravely proposing to go into these experimental stations, and expending on them the magnificent sum of £200 a-year! He thought they had better employ the whole £700 in subsidising those Aberdeenshire friends who were setting themselves to work on their own resources, and apparently conducting them with prudence and energy, as was their wont. The proposal to squander two-thirds of the money to be devoted for this purpose in the payment of salaries appeared to him futile. He would far rather see the Highland Society letting its funds accumulate for some years, and then, when they took up the matter, take it up to good purpose. The present proposal for going into the thing would seem to be a practical embodiment of "how not to do it." It would be something worthy of the Highland Society if they were to take a decided step in advance with regard to experimental stations. Much of their proceedings as practical farmers were taken in the dark. When they spent large sums of money on manures there was no man who knew with any confidence what the results of these were to be; and it would be most important if they could proceed with anything of the confidence which arose from an assured basis of fact. It was only by experiments proceeding in the way indicated by those experimental stations that these matters could be cleared up. What the Society had hitherto been doing in the way of awarding premiums for stock and other things were well enough in their way, but they really had had no connection with the progress of agriculture. Reference was often made to the progress of agriculture, and it was attributed to the Highland Society. Progress would have gone on although the Highland Society had never existed ("No"). He admitted that the Highland Society had done well in regard to its annual show, which was important as a means of education. Young farmers could go there and see in one day a representation of the live stock in the county, and of implements and machines in use which they could not afford time or money to see for themselves in detail. But as to its having to do with the improvement of stock, to that he demurred altogether. He questioned whether it had not done a good deal of damage to the breeding of stock, and whether the excess ve over-feeding of animals had not a very serious effect as to the improving of some breeds. He concluded by moving that the resolution at the meeting of the Society in June last be altered to.

Mr. MILNE HOME, in seconding the amendment, said that there were several points of complete agreement between the general body of the Society and the directors. The only point in dispute was whether or not the directors should be authorised to appoint a chemist for life—a permanent chemist, as it was called in the report—or left free to choose a chemist for any particular duty for which the chemist should be required. He felt surprised that the directors should have referred to the experience of the last twenty-eight years. Any one who looked back on what had happened during that time should have avoided proposing such a scheme again. Dr. Anderson was an excellent chemist and excellent man; but, according to his own admission, his field experiments were an entire failure. He was so occupied with work in the laboratory that he had not time to attend to them. Then, for the last three

years they had to give him £900 or £1,000, for which the Society got no value. They appointed another chemist, Mr. Dewar. What service did he render to the Society, except come there twice a year and read a report occupying five minutes? They had paid £150 for these two reports. He did not know what other service Mr. Dewar had rendered. As to the Society established in Aberdeenshire and the stations appointed there, he was at one time most anxious that this national society should have the prestige of starting these stations. It was, he proceeded, a very remarkable fact that the directors had organised a scheme for their stations; and would it be believed that during the whole of that time they never consulted Mr. Dewar at all? Let them look at what had been done by their friends in Aberdeenshire. They did not employ a chemist in the first place, but they organised their five stations, and that being done, they then set to work to get a chemist to make analyses of manures and soil. Then why appoint a chemist for life? Let the directors choose the best chemist they could get; but instead of giving a salary, they might give fifty guineas, which would be enough to get all that was required. He had received a letter from the Marquis of Huntly, who at one time was anxious for the appointment of a permanent chemist, but who was now of a different opinion. That was the view of a noble lord whose opinion was worth attending to, as he had given the matter great attention. He himself had consulted Mr. Lawes, of Rothamstead, and a gentleman at the head of agriculture in Ireland, both of whom thought the appointment of a permanent chemist was most injudicious.

The Duke of Buccleuch said he found from looking at the charter that they could not do such a thing as appoint a permanent official. They would have to submit for appointment annually the name of the chemist, the same as that of the secretary.

Mr. D. MILNE HOME said he knew it was not competent to elect any officer for more than one year. But it was understood that a promise should be held out that the appointment would be renewed.

Mr. ROUGHHEAD (Haddington) said he thought at one time that a permanent chemist should be appointed, but from what he had heard his views had been a little altered. He thought that, before setting the experimental farms on foot, a deputation should go to Germany to see the same kind of farms there. In Pomerania, he believed, they had got a large profit from the experimental farms.

Mr. FERGUSON (Kinmudry) seconded the motion of Colonel Innes.

Mr. SMITH (Whittingham) said he thought that they should postpone the matter until they were able to go on with the business in an efficient manner.

Provost DUNCAN (Rothsay) said he thought it would be wrong if the Society were to step short of the modest proposal of the directors. The real fact was that the proposal of the directors was the only common-sense view of the subject that had been brought forward.

Sir THOMAS GLADSTONE said he would suggest an addition to the motion, to the effect that the appointment of the chemist should be provisional and experimental, in order to find out how it worked.

Colonel INNES said he was prepared to adopt the suggestion of Sir Thomas Gladstone, to the effect that the appointment of the chemist should be provisional.

Mr. WILSON said that in that case he was quite willing to withdraw his amendment, and give his support to the proposal of Colonel Innes.

Mr. MACKENZIE withdrew his motion.

The motion of Colonel Innes, as amended, with the addition of the word "provisional," was then unanimously agreed to.

Mr. HUNTER (Thurso) reported that, in accordance with the bye-laws passed at the annual general meeting in January last, and confirmed by the general meeting in June, respecting the bursaries established by the Society, the first examination was held on the 16th November last, when Mr. Alex. Sutherland, Rampyards, Watten, Golspie, from Gersay Public School, passed for a bursary of £20. By the regulations, Mr. Sutherland requires to take the classes at the Edinburgh University necessary to qualify for the Society's certificate or diploma. The subjects of examination were the elements of botany, geology, and physical geography, and the examiners were Professors Balour and Wilson, and Dr. W. Stirling, of the Edinburgh University. He added that, at the

general meeting in June, 1874, the Society authorised a memorial to be addressed to the Committee of Council on Education, and that an answer has been received from my Lords according to the Society's suggestion that the science of agriculture should be added to the list of subjects towards instruction in which aid is granted by the Science and Art Department, on the understanding that it is an experiment, and that the continuance of agriculture on the list of sciences aided by that department will depend on the number of candidates for grants in that subject. A syllabus, it is stated, will shortly be issued.

The report was adopted.

Captain TOD reported that the preliminary examination in botany, chemistry, and anatomy, for the Society's veterinary certificate, took place on the 13th and 14th July, when thirty-two students entered their names for examination—viz., 13 from the Edinburgh Veterinary College, 16 from the New Veterinary College, Edinburgh, and 3 from the Glasgow Veterinary College, and that 16 had obtained the certificate.

Mr. IRVINE (Drum) reported the following awards in 1875, and premiums to be offered in 1876: £30 to James Macdonald, *Scotsman* reporter, Aberdeen, for a Report on the Agriculture of Fife; the Gold Medal or £10 to Thomas Farrall, Aspatria, Carlisle, for a Report on the Ayrshire Breed of Cattle; £15 to George Armatage, The Bank, Hertford, for a Report on the Causes of the Septic, Anthrax, or Carbuncular Fevers amongst Horses, Cattle, Sheep, and Pigs; the Gold Medal or £10 to George Armatage, The Bank, Hertford, for a Report on Vaccination as a means for the Prevention of Pleuro-Pneumonia; the Gold Medal or £10 to Gilbert Murray, Elvaston Estate Office, Derby, for a Report on the Management of Grass Lands in England; the Gold Medal or £10 to David Robie, Lonsdowne Terrace, Bedford, for a Report on the same subject; the Medium Gold Medal or £5 to Mrs. Roger, 33, Union-street, Dundee, for a Report on how to Raise and Cultivate the Potato; the Gold Medal or £10 to Gilbert Murray, Elvaston Estate Office, Derby, for an Improved Cattle Truck.

PREMIUMS OFFERED IN 1876.—*Subjects connected with the Science and Practice of Agriculture*: On the Agriculture, &c., of the Counties of Edinburgh and Linlithgow, £30; on the Agriculture of the County of Argyll, £30; on the Agriculture of the Counties of Ross and Cromarty, £30; on the Physiologic Distinctions in the Condition of the Scottish Peasantry in different Districts, £30; on Agricultural Experimental Stations, £20; on the Advantage of Ploughing-in Manure at once on being spread, £5; on Manures produced by Different Kinds of Feeding, £20; on Manure made with and without Cover, £20; on Improved Varieties of Agricultural Plants, £50; on Cultivation of Cabbage as a Field Crop, £10; on Vegetable Productions of India, China, and America, £10; on the Best Modes of Housing Fattening Cattle, £20; on Different Descriptions of Food for Stock, £20; on the Breeding of Horses for the Road or Field, £10; on the Adaptability of the various Soils to the Breeding and Rearing of Horses, £10; on the Effect of Sewage upon the Animal System, £10; on the Comparative Return from Capital invested in Cropping, Grazing, or Planting Land, on Hill and Moorland, £20; on Rural Economy Abroad susceptible of being introduced into Scotland, £10. *Estate Improvements*: On the Cultivation of Land of Inferior Quality by Proprietors or Tenants, £200 and £150; on General Improvements of Estates by Proprietors, £10; on most approved Farm Buildings by Proprietors, £10; on Reclamation of Waste Land by Tillage by Proprietors or Tenants, £10, £10, and £5; on Improvements of Natural Pasture without Tillage by Proprietors or Tenants, £10, and Minor Gold Medal *Machinery*: On the Invention or Improvement of Implements of Husbandry, £50; on Machine for Cutting Turf by Steam Power, £20; on an Improved Cattle Truck for Feeding and Watering Animals in Transit, £20.

Dr. CLEGHORN reported the following Forestry awards: The medium gold medal of £5 to John Nisbet, junior, Assistant or Conservator of Forests, British Burma, for a report on the Value for Economical Purposes of the Corsican Fir; the medium gold medal of £5 to Robert Hutchison of Carlowie, Kirkliston, for a report on the Pinus pinaster or Cluster Pine; the medium gold medal or £5 to Robert Hutchison of Carlowie, Kirkliston, for a report on the effects produced on the various Species of Forest-trees by Smoke from Public Works; the medium gold medal of £5 to Christopher Young Michie, forester, Cullen House, Cullen, for a report on Thinning P



ties. *Premiums Offered in 1876.*—On Extensive Planting by Proprietors, £10; on the General Management of Plantations by Practical Foresters, £10; on Planting on Peat Bog, £5; on Forest Trees of Recent Introduction, £5; on the Management of *Picea Nordmanniana*, or Red Wood, £5; on the Cutting and Transport of Firewood, £5; on Charcoal-producing plants, £5; on the Perthshire Woods, Forests, and Forestry, £10; on the Ros-shire Woods, Forests, and Forestry, £10; on the Utilisation of Waste Products of Forests for making an Artificial Fuel, £10.

The SECRETARY, in the absence of Mr. Dundas of Arniston, reported that, pursuant to the instructions from the last general meeting, a deputation from the Society waited upon Lord Henry Lennox, M.P., the First Commissioner of Works, at the House of Commons, for the purpose of presenting a memorial and asking for a Government grant to complete the unfinished survey of Scotland. Among those forming the deputation were: the Earl of Galloway, Lord Elphinstone, Sir Graham Montgomery, Bart., M.P.; Sir James Elphinstone, Bart., M.P.; Sir H. Dowie, Bart., M.P.; Mr. Baillie Cochrane, M.P.; Mr. Charles Dalrymple, M.P.; Mr. R. W. Duff, M.P.; Mr. Orr Ewing, M.P.; Mr. Fraser Mackintosh, M.P.; Mr. Malcolm, M.P.; Mr. John Ramsay, M.P.; Mr. Mark Stewart, M.P.; Mr. Dundas of Arniston, Mr. Erskine of Cardross, Mr. Watson Lyall, and Mr. F. N. Menzies, secretary. At the reading of the memorial, and some remarks by Mr. Dundas, Mr. Malcolm, and Mr. Ramsay, the First Commissioner, said the subject of the memorial would have his best attention. A letter from the secretary to the Commissioner of her Majesty's Works was then read, in which was the following: "The cost of replanting the counties in Scotland referred to, containing an area of 3,330 square miles, is estimated at £51,680; and, for the reasons already stated, the First Commissioner would not feel justified in appropriating to that object at present any portion of the ordinary grant for the surveys of the United Kingdom. The Lords Commissioners of her Majesty's Treasury are averse to sanctioning any special addition to the vote for the purpose in question, inasmuch as Yorkshire and Lancashire, containing an area of 7,528 square miles, have an equally strong claim to be replanted; and their Lordships could hardly consent to an addition to the vote in respect of Scotland without making a corresponding or even still larger addition in respect of the greater area included in the two English counties. Under these circumstances, the First Commissioner regrets that he is unable to depart from the decision arrived at in the matter by his predecessor. He desires me, however, to invite the attention of the Highland Society to the fact already stated, that the survey of Scotland is conducted in no exceptional manner. It is being carried on under precisely the same orders and regulations as the survey of the other parts of Great Britain, and there has been no interruption to the publication of the plans of Scotland."

Captain TOD (Howden) then read the following memorial to Government on the subject of the foot-and-mouth disease: "Unto the Right Honourable the Lords of her Majesty's most Honourable Privy Council, the Memorial of the Highland and Agricultural Society of Scotland, incorporated by royal charter, in general meeting assembled, sheweth. That your memorialists, as representing the landed proprietors and tenant-farmers of Scotland, have for many years taken an active lead in all veterinary matters connected with Scotland, and have a deep interest in whatever conduces to the preservation from disease of the farm live stock of the kingdom, and have closely watched the operation of existing legislation in regard to foot-and-mouth disease, the rapidly-increasing losses by which they observe with alarm. That your memorialists have carefully considered the subject, and are of opinion that the present existing laws have proved insufficient to eradicate the disease or prevent its spreading, and that there is a want of a proper system of organisation enforcing uniformity of action, whereby the present diversity of practice among local authorities in neighbouring towns and counties might be averted, and a more stringent, uniform, and regular system enforced. That your memorialists are agreed, and fully believe, from evidence and experience, that foot-and-mouth disease is largely introduced by the importation of foreign cattle, and they are of opinion that all imported sheep and cattle should be either slaughtered at the port of debarkation or undergo such a period of quarantine as to prove them healthy, and thus prevent disease being spread by them. That your memorialists would further call attention to the number of outbreaks of this

disease amongst cattle brought from Ireland to Scotland, and would humbly suggest that a more complete inspection of steamboats carrying cattle and sheep be adopted, and a thorough cleansing and disinfecting insisted on. Your memorialists therefore humbly pray your Lordships to take this most important subject into careful consideration, and to issue such orders or take such measures as may be expedient for remedying and extirpating this growing evil.—Signed in name and by authority of a general meeting of the Society, held at Edinburgh on the 19th day of January, 1876. (Signed), GLASGOW, chairman."

The Hon. G. WALDEGRAVE LESLIE said that as this was the last part of the proceedings of the day, he hoped that the directors would press this subject strongly on the attention of the Government.

Principal WILLIAMS suggested that, in the memorial it should be stated that the disease referred to was got wholly from abroad.

Mr. FERGUSON (Kilmundy) said that in Aberdeenshire many cases of disease had occurred in which there had been no communication with animals from abroad.

Mr. F. N. MENZIES, secretary, said that in framing the memorial he thought it better to treat these matters in general terms.

Mr. ELLIOT (Laighwood) said that in Glasgow market, where the Irish animals were put in day by day, they caught the disease.

Mr. MAXWELL said he thought that active steps ought to be taken to have the ground cleaned into which the animals were brought.

The memorial was then adopted.

On the motion of the Hon. GEORGE WALDEGRAVE LESLIE, a vote of thanks was given to the Earl of Glasgow for presiding; and the meeting separated.

MR. BRIGHT ON THE TENURE OF LAND.—To THE EDITOR OF THE STANDARD.—Sir,—With reference to the statement made by Mr. Bright at Birmingham, may I be allowed, as a land agent, and, therefore, one not unacquainted with the land question, to state that, as a matter of fact, the supply of land which is *bona fide* in the market is always in excess of the demand; at the auction mart alone, in 1872, within a few of 120,000 acres changed hands, and I think we should not be far wrong if we assume that double that amount was sold in other parts of Great Britain, either by public auction or private contract; thus it would appear that 360,000 acres could have been purchased by the "people" if they had desired them. Mr. Bright is as well aware as I am that in consequence of foreign competition and the increased rate of wages farming, unless conducted on an extensive scale, and with the assistance of machinery, is a profitless undertaking; and I venture to say that if Mr. Bright would take the trouble to inquire, he would find that the position of an artisan was immeasurably more desirable than that of a small struggling farmer—for I conclude he expects the people to cultivate the land when they have acquired it, as the rate of interest which it yields—viz.,  $\frac{1}{2}$  to 3 per cent., is so small that they could hardly be expected to buy as an investment. Mr. Bright forgot to inform his constituents what proportion of the 5,000,000 acres in Scotland are said to be in the hands of 21 owners was barren rock and moor land, utterly unfit for producing food for man. The fact is, land is now a luxury which only a rich man can indulge in, and whilst the desire of successful traders (many of whom spring from the ranks of "the people") to acquire it is ever on the increase, their numbers augmenting with the population, the area of the country remains the same. Let me, therefore, suggest that Mr. Bright should provide himself with another stalking-horse before he again addresses his constituents.—Yours faithfully, ONE OF THE PEOPLE. London, W.C., Jan. 25.



## FOOT-AND-MOUTH DISEASE.

## NEGLECT OF VETERINARY HYGIENE.

At the annual meeting of the Devonshire Chamber of Agriculture held at Exeter, Earl Fortescue in the chair, Dr. BLYTH, the County Analyst, read a paper on Foot-and-Mouth Disease, but before proceeding to the consideration of this subject he wished to say a few words on the large subject of veterinary hygiene, or sanitary science, as applied to the animal world. Veterinary hygiene was, to the cost of this country, much neglected, and its first principles appeared either to be altogether unknown or ignored. This was the more curious if the value of the annual amount of stock raised in the country was considered; in 1872 there were in Great Britain 38,343,318 horses, cattle, sheep and pigs, and if were added to these the poultry, dogs, and cats, the number could not be much below forty millions, but the money value of all this stock it was not easy accurately to obtain. On what ground did he base his opinion that veterinary hygiene was neglected? Surely showed the great predominance among animals of parasitic disease—life feeding upon life. Whilst in human disease this class was subordinate, in animal plagues the parasitic class held the first place. Sheep died from flakes, horses from worms floating in the blood itself, fowls were suffocated by living red threads in the windpipe, and the strongest and most robust animals were constantly falling a prey to despicable creatures immeasurably below them in the scale of creation, but which were enabled in some mysterious way to prey on the very centres of life. This predominance of parasitic diseases was due almost entirely to the common neglect to provide a fairly pure supply of water. He did not mean an absolute chemical purity, but water free from weeds and mud, and protected from the pollution of the cattle themselves. Many people seemed to imagine that any filthy shallow pool was quite good enough for cattle, and would use as an argument the fact that horses frequently turned from a clear running stream and drank out of a turbid pond; the explanation of this was mainly the temperature of the two, horses preferring water of a moderate temperature, however polluted, to water that was extremely cold. He would not give a list of the cattle diseases mainly due to impure water, but he would mention one or two instances. Liver rot in sheep was a parasitic disease, and its origin was the opalina, a little animal which could only live in impure water, but when drunk up by sheep it, by a marvellous series of transformations, developed into the fluke, which inflicted the liver of sheep and caused death. Another thing due to cattle drinking impure water was the existence of little cysts, the existence of which necessitated in India in 1868 and 1869 the destruction of 17,500 pounds of ration beef, for these cysts, if swallowed by man developed into tapeworms. The almost unchecked disastrous diseases which swept the face of the country from time to time showed the utter neglect of veterinary hygiene. Let them look, too, at the dark, humid, unventilated stables attached to nine-tenths of the inns in Devonshire. Then again look at the farms. There were two methods of farming—in one the farm-yard was neat and clean, and there was found nothing in any way offensive or repulsive, whilst in another kind of farm might be found an immense cess pit into which pigs and cattle, ducks and dogs wallowed, a pit into which every drain emptied, and which, in short, was full of filth unmentionable. One or the other of these systems must be wrong—which? It would hardly be suggested that this was a good condition of things for the health of man, and there was abundance of facts to show that conditions which operated unfavourably on men had a similar operation on animals, and that judicious sanitary improvements which prolonged the life of the former also prolonged the life of the latter. The same effects that was seen in the eyelids of children kept in a crowded and unventilated schoolroom was developed in the eyelids of pigs kept in close filthy styes, and when they came to kill the animal they found, as the effect of such keeping, that the flesh of the pig was more watery, it was flabby and less nutritious than that of pigs kept under healthier conditions. In 1830 to 1836 the mortality of the Foot Guards was found to be much greater than that of the Household Cavalry, and was deemed to be due to bad hygienic conditions—especially overcrowding. This

was remedied, and the mortality decreased. In 1830 the horses in the French Army were crowded together much as English horses were now crowded together on market days. Increased air and space reduced the mortality, as also did it in the case of the horses of the English Royal Artillery. All those cases were very much alike, and due to the same reason—impure air. Leaving out any higher consideration, it was well to consider this matter from a monetary point of view as affecting the pocket of the individual and the national wealth. It was marvellous how few of the infectious diseases of animals could be transmitted directly to man, and it was merciful that this was the fact, for if it were not so, what with our own epidemics and the disease of the animals around, the human race would almost become extinct. Men were, however, not altogether exempt—glanders and hydrophobia were common to both men and animals. Modern researches were constantly bringing to light some new and unexpected relation between the diseases of the two. An example was the curious discovery that mice were infected in a most intense manner by a skin disease caused by fungus; this was caused by the cat feeding on its prey, and from the cat was propagated to children, becoming in them that loathsome disease—the honeycomb ringworm. To complete the outline of the bearings which veterinary sanitation had upon the human race, it only remained for him to allude to the well-known serious influences which diseased meat had upon the health of men—tapeworm from eating meat affected with cysts, and trichinosis from eating that affected with trichina, a little worm which multiplied in the muscles of the human body, and not unfrequently caused death. This branch of public health was, therefore, not trivial, subsidiary, nor unimportant, whether it was wished to prevent that class of diseases in man which came from eating morbid animal food, from contact, directly or indirectly, with diseased animals, or whether they looked at the tremendous money loss from preventable diseases among the live stock of the country. The veterinary hygiene belonged first to the farmer, then to the legislator, not *vice versa*. It was the farmer who must take the initiative—cleanliness, like charity, must commence at home—and all the Government could do would be worse than useless if the individual in his homestead willfully disregarded the common-sense and first principles of pure water, clean sheds, proper drainage, healthy food, sufficient room, and did not take care to disinfect any animal which by mischance might become affected with disease. He was about to treat of the foot-and-mouth disease, but no special measures devised to combat a particular disease in any way took the place of the general measures he had indicated, but were merely additional. As to the history of the foot-and-mouth disease, evidence existed that for the last three hundred years it had seriously prevailed in Germany, Holland, and France. The insular position of England long protected it from both foot-and-mouth disease and the more fatal rinderpest, and it was not until 1839 that the former malady appeared in England, when—though reasons existed for hiding the origin—it was, doubtless, imported with foreign cattle. Since 1839 it had prevailed seriously and extensively, and the present epidemic had rivalled in severity and extent those of former years. The disease might be called panzootic, for there was no animal in which foot-and-mouth disease could not be induced, either artificially, by inoculation, or by contagion. Indeed, man himself had contracted the disease on several occasions by accident or experimental inoculation, or by drinking infected milk. It was an eruptive fever, of which the living germ was taken into the body, where it underwent multiplication to an incredible degree. It was not a mere local malady of the mouth, or of the feet, the lesions found on these parts being merely the local expressions of a general disease. He had proved this by experiments of his own. Mr. G. Cann, of Discombe, having kindly selected a steer for the purpose, he (Dr. Blyth) injected into the tongue some of the active liquid taken from an animal in the very height of the disease. The steer was isolated both before and after the experiment. Thirty-four hours after the injection the mouth was quite healthy and natural in its appearance except a slight

redness at the seat of the inoculation, but the feet had numbers of vesicles on the coronary surface and between the digits—in other words the first appearance of the disease was in the parts most remote from the seat of inoculation. The course of the malady was as follows: The animal inhales into its lungs or swallows into its stomach, or is inoculated in some way or other by the specific poison derived from a pre-existing case, though for twenty-four to forty-eight hours, after this occurrence, there may be no sign whatever of any alteration in the health of the animal, but at the end of that period, the temperature rises. *The rise of the temperature precedes every other symptom.* This may reach 107 deg. or 108 deg., F., the normal temperature of the ox being about 101 S. deg. F.; this rise of temperature is soon followed by the appearance of vesicles, either in the mouth, on the gums, dorsum of the tongue and muzzle, or on the feet, especially the hind ones between the digits, and on the coronary surface—these vesicles sometimes appear on the mouth first, sometimes on the feet first, and sometimes simultaneously. In the cow, vesicles also form on the udder and on the teats, and in a few cases recorded in the German epidemics, the eruption has covered the whole body, but this is extremely rare. The disease may be so mild that it may pass unnoticed, a few vesicles on the feet, or one or two on the tongue without loss of appetite, lameness, or constitutional disturbance, may be the only effects of the contagion, or the disease may be extremely malignant, pustules and ulcers may form along the whole length of the intestinal canal—beginning at the mouth—the hoofs may be shed, the very bones loosen, the udder inflame and slough, and the animal die from the severity of the symptoms; between these two extremes there are various gradations. The fever in mild cases was an extremely brief one, the temperature, as before stated, rose four or five degrees above the healthy standard; but on the day following the first appearance of the vesicles it again sunk to the healthy standard, or nearly so. A similar phenomenon was observed in some eruptive fevers of the human subject. The vesicles rapidly form and burst, those in the mouth might be of very large size, those on the feet were usually small, they contained a pinkish albuminous fluid, which held in suspension very minute particles; but the tests of the chemists, or the skill of the microscopist, discovered little in it to account for its marvellous properties. Yet this fluid contained locked up all the mystery of the disease, and when tested with the living body of a bullock, speedily showed its properties of zymosis and life. The vesicles once burst left ragged ulcers and erosions, which had to heal up gradually, and thus in bad cases recovery might not take place for a fortnight, or more; whilst in the milder cases the whole malady did not last above eight days—the average, perhaps, was eleven or twelve days. Whilst speaking of the propagation of the disease, he would say a word or two upon the milk of foot-and-mouth disease. It was in the very height of the last outbreak, examining microscopically and chemically samples of milk taken the third day of the disease, he observed elongated, flattened, highly-refractive bodies, from 1-800th to 1-1,000th of an inch in length, floating in the milk in countless numbers. Besides this, even to the naked eye, the milk had an unnatural appearance, for on standing it separated into two parts—the lower almost as transparent as water, the upper a thick white curd; and the fat, instead of being five or six per cent., was almost entirely absent. Experiment proved that the fluid was of a poisonous nature, for, on being given to kittens, it caused death, and a *post-mortem* showed intestine congestion of the bowels. It was only a few milks which had these marked characters. It, however, had often been observed in our own epizootics, as well as in those of Germany, that the milk of the cow during the first three days of the malady was often fatal to pigs and calves—a fact both curious and important. He said "occasionally" fatal, for this result only occurred in a few cases, but in all these the symptoms were remarkably similar. The animal, in the midst of apparent health, was as suddenly taken ill, and the illness was followed by death, as if a dose of a violent poison had been administered. It appeared that the warm milk acted first as a local irritant, and then the specific germ of the disease was carried into the blood, and determined to the lungs, kidneys, and tongue; there was an excessive outpour of fluid into the bronchial tubes, and the animal died, for the most part suffocated, but partly also from the impure blood circulating in the nervous centres. Deaths of this kind in the animal world were indeed analogous to those occurring in the

human race in times of pestilence. He had alluded to the milk of foot-and-mouth disease, for it was a subject attracting much attention, as it appeared to induce a disease in men. He would not go into the evidence, except to state his belief that it was fairly proved it caused in children diarrhoea and aphthae, one or both, and in adults aphthous ulcers in the mouth, slight fever, and general malaria. As to the propagation of the foot-and-mouth disease by other means, no one who had watched an ox affected with ordinary severity, would have failed to notice a continual frothing at the mouth, which fell in great flakes on the field, the surface of the road, the hedges, or gates. But this was not the only infectious discharge; there was a continual oozing at the feet, and in cows a dropping from the udders. A bullock infected with the disease distributed in twenty-four hours a bucketful of infectious discharge, and the feet of men, dogs, poultry, the feet and fur of rabbits, in going through infected pastures, took up the discharge, and carried the infection for miles; the insect world, too, played its part in conveying the infection by aid of the colony of parasites and flies which attach themselves for a time to an infected animal. Another important and frequent method of propagation was running water—cattle stood in it, not only to drink, but to bathe their sore and heated mouths and feet, and a regular stream of infection was created. It was possible also for the infectious discharges to be dried up and carried by the sun, but he thought this a rare occurrence. But by the fact of the shepherd, the inspector, the butcher, the sportsman, by denizens of the air, by the physical agency of water, and by a thousand and one devious channels, by the most dissimilar agencies, was this disease propagated. Yet it was wonderfully under control. The main carriers of the disease were the feet of men and animals and water, the infection carried by birds, insects, and wind being but occasional and exceptional. In this disease they had to deal with a poison of remarkable power. If a wisp of straw that had passed through an infected animal's mouth was so much as touched by another, it might catch the disease. The run of an infected hare or rabbit through a pasture formed a line of intense infection, and whether a sheep, goat, or bullock browsed upon it, it was almost sure to get the disease. The infection was not alone intense, but it was one that also endured a long time, and he mentioned an instance in which it was conveyed from one farm to another by means of ordinary field feeding racks. Coming to the practical part of his paper, as to how the propagation of the disease was to be controlled, Dr. Blyth recommended the following action: Directly an animal was affected, separate him from the rest of the cattle in the field, tether him by a rope or chain round the horns to a firm stake in the ground, and surround him with a fence, which must at least be five yards off the farthest length of the tether. A ring a yard broad of coal tar and ashes must be placed around on the outside and inside of the fence, and wetted daily with carbolic acid and water. Fodder is to be thrown in without touching the fence, and water given in a trough, filled daily. In no case should any animal be put in a pasture with access to running water; if there was a stream it must be fenced off, and in all cases a separate and distinct water supply must be provided. In cases where it was most convenient to isolate the cattle in sheds, they should stand in saw-dust, which must be regularly burnt. In all cases the tar mixture must be diligently applied an inch or so in depth to the ground in front of the cow-sheds. All in attendance, whether veterinary surgeons, farmers, &c., should, before seeing the animals, be provided with either goloshes or a pair of shoes large enough to go over the ordinary ones, and on arriving at an infected place, and before leaving, the soles should be scraped and dipped in some disinfectant. In the case of death from the disease, the animal must be immediately buried and not given to dogs. These rules were capable of extension, but they indicated the direction which must be taken if an impression on the disease was to be made at all. His views of the propagation of the disease were either true or false. Their value might be tested by experiment, which he confidently challenged, but which, being too costly for private individuals, must be instituted by the Government or public bodies. Should his views of the propagation of the disease be correct they would stand, and it would follow as a strict logical sequence that the method of inspection hitherto followed had not alone been useless, but had also, to a great extent, disseminated the disease.

Mr. MORTIMER said he was sure the members of the Chamber must feel deeply indebted to Dr. Blyth for his v. lu-

able paper. It had been his good fortune never to have experienced the disease on his own farm, but still the paper was one most deeply interesting to him, and he had sufficient confidence in the author to believe that if his instructions were carried out the spread of the disease would be in a great measure prevented. He had much pleasure in proposing a vote of thanks to Dr. Blyth for his able paper.

Mr. URCOTT seconded the motion.

The CHAIRMAN, in supporting the motion, said the paper contained not only the result of much scientific research and practical experiment, but it also gave them much practical instruction, and he regarded the reading of this paper as a great fact in the history of the Chamber. From it he thought practical men would see that there was much practical and useful information to be obtained by members of this Chamber. Dr. Blyth had rendered them much good service, such service as was entitled to the grateful recognition of the Chamber, and he suggested that the Council should be requested to consider in what manner best consistent with their rules they could elect him an honorary member.

Mr. MAY suggested that the paper should be printed. He should like to read it through. There were some things in it with which he did not agree, especially the insinuation that the tenant-farmers kept their farms in a very bad state. He thought the condition of farms was due very much more to the landlords than the tenants, for the former should give the latter suitable buildings and proper accommodation. He thought the paper had as much bearing upon the cattle plague as the foot-and-mouth disease, but it was a very elaborate and well-got-up paper, and he should much like to have it in his hands.

Dr. BLYTH said he should have no objection to the publication of the paper. In acknowledging the vote of thanks he remarked that the kind reception given his remarks was an ample reward for any little trouble he might have taken. He had omitted to state the money loss from feet-and-mouth disease. The last attack in 1872 cost the country £32,000,000. Now if this was like anything correct he thought the Government might very well spend a couple of thousand pounds in experimenting on anything at all reasonable that had been supported by experiment and argument.

Earl FORTESCUE said he quite agreed that the blame for the filthy condition of so many of our farmyards did not exclusively rest upon the tenant, nor, on the other hand, did it exclusively rest upon the landlord. A great deal might be done by both to improve the present state of things. He remembered in one place seeing a heap of garbage and all nastiness placed directly under the window; he thereupon asked the tenant if he was legally bound to put this refuse on this spot, and suggested that if he was not tied down strictly to this spot by the words of his agreement he should remove his refuse to some other spot. There was some room for improvement left for both landlords and tenants, the former for providing proper buildings and drains, and the latter by turning them to account.

On the motion of Mr. ROACH, seconded by Mr. URCOTT, a hearty vote of thanks was given to Earl Fortescue for his services as president during the past year, and for the active interest he had always shown in the affairs of the Chamber.

The proceedings then terminated.

**THE AGRICULTURAL CHILDREN ACT.**—To the EDITOR OF THE LINCOLN MERCURY.—Sir,—If you are not inundated with correspondence upon the above subject at this juncture of magisterial interposition, will you favour me with space for a few observations? I have been greatly interested in reading the discussions of the Lindsey and of the North and South Holland benches of magistrates upon the enforcement of the Act. I think their discussions were laudably cautious and temperate, evidently showing their desire to carry it out in as unobjectionable a form as possible. I am one of those who think that more time should yet be given for its voluntary working. There is something un-English in the word "com-

pulsion" as applied to true Englishmen, and I don't like its too early application to this Act. My back always rises a little when I think of the poor man who has a large family being compelled to send all his children to school, although he may have several workers capable of aiding in their maintenance. I could not myself find such a man for an almost necessary transgression of the law. To my mind it is a real positive wrong done to the poor parents of large families to compel them to send their children who are well able to earn their subsistence to school. To this class I would hold out every inducement and facility to gain instruction, but I would leave much to the discretion of the parents. I am willing to adopt strict enforcement of the Act for all poor children not exceeding ten years of age; they can scarcely be better taken care of, and can learn much. I think a child commencing at four years in the infant-school and working up to ten years in the higher schools can attain a sufficient educational standard to fit him for "that station in life in which it has pleased God to call him." If not, I can only say the child must be a veritable dunce. Boys—yes, and girls too in my district—can at very early ages earn sufficient wages to provide themselves with ample food—a most substantial help to a poor family. I recollect my early days: I lived in the war times. Boys then had almost to do men's work. I did myself stack my first stack (of 30 qrs.) of wheat ere I reached my thirteenth year. What boys did then they are able to do now. From what I observe in these magisterial discussions, I gather that they would be very reluctant to enforce fines in such exceptional cases, and I thank them for it. Well, I hope matters will be let alone a while longer yet. Mr. Forster himself said in the House of Commons that the omission to provide for the enforcement of the Act was almost intentional, in order that time might be given to test its operation. In Lincolnshire the population is comparatively thin and widely dispersed. In the fens and marshes it is almost impossible to carry it out; in most cases it is inconvenient owing to the intersecting of parishes. I really think all is working very creditably by the poor, who well appreciate its advantages, but deeply feel its hardships. Now, let me say a word on behalf of the employers of "agricultural children" and their unfortunate position incurred through the passing of the Education Act of 1870. In the parish in which I live we soon adopted the Act, and formed a School Board. Our population being divided some three miles apart, necessitated two separate establishments, so that we had to provide for two masters and four mistresses, whose salaries and other sundries amount to about £600 per year. The parish is agricultural, and contains 9,313 acres. Large breadths of roots—*i.e.*, potatoes, mangolds, turnips, &c.—are grown. An illustration of "their unfortunate position" I take one farm on which was grown last season 53 acres of potatoes and 25 acres of mangolds, all to be harvested in good time. Prior to school Board Regulations, very much of the work in harvesting these crops was done by boys and girls working with women at moderate wages. Now the farm is deprived of the services of these children, and has to pay to the women from 30 to 40 per cent higher wages, and to employ instead men in such work. In addition to this, he has to pay a heavy School Board rate of sixpence-halfpenny in the pound, amounting to £18 17s. 6d. annually, for which he gets no return in rent or otherwise, so that he loses the benefit of the cheap children's work and has to pay the above for their schooling. This is only one of thousands of cases in degree. I always contend that this School Board rate is wrong, and is a gross imposition upon the rateable property of the kingdom (which amounts to £110,000,000) instead of upon the £326,000,000 assessed to the Income-tax, or that the education of the poor should be the burden of the Consolidated Fund. One word more, and I have done. I wonder in what "business" our police will next be engaged. I was indignant when they were made gamekeepers. I think now my back will "set up" when I see one of them come amongst my potato-pickers to take down the various ages of the young pickers. Well, I don't envy Captain Bicknell. It is a high and most important responsibility to be imposed upon any one individual. I have every confidence in Capt. Bicknell. He will do his best, I am sure; but what a wide field for his superintendence! How is he to decide justly as to the cases he would recommend for prosecution? Policemen are not all discreet. I hope it will be a long time yet before I read of one prosecution. Apologising for the length of the letter, I am, yours sincerely, J. S. CLARKE.—*Long Sutton, January, 1876.*

## ROMSEY LABOURERS' ENCOURAGEMENT SOCIETY.

The twenty-second annual distribution of the premiums of this association took place on Monday, and this was preceded by the usual dinner to the successful candidates.

The President, Mr. COWER-TEMPLE, having discharged the pleasing duty of presenting the premiums, said: "They were rather later this year than usual with their meeting, and he hoped they were not disappointed. There was an old saying, 'Better late than never,' and he thought, perhaps, in this instance it was better late than earlier, for no doubt they would recollect at their last meeting, when the Bishop of Winchester showed so much sympathy and interest in their proceedings, and when he gave them such good advice, that they had snow on the ground, and it was a cold, bitter day, with a leaden sky, while that day they had the sun to give them a warm welcome for those who had invited them there. They all felt a little more cheerful that day in consequence of the bright weather. That society, year after year, brought before their notice those who had been distinguished by skill in the different businesses in which they had been employed in agriculture, and those who were recommended in respect of their good conduct and for their general character. In short, they had those who came before them year after year, who were a sort of model men and women—a very pleasant thing to see, and he hoped those models would be followed, and that the younger generation would take note of the respect paid to those who were older in years, and who showed by their skill and good conduct that they were entitled to receive the respect entertained for them. He thought there were many pleasant features in the society, and one was in having these model men and women, for at the present time there was much and general complaint made of the falling off, of the deterioration of the working people of all descriptions, whether it was the mechanic or the agricultural labourer. And people were apt to feel that the rising generation would not do that work—that steady and persevering work, done by those who had gone before them. Indeed, they saw, as the result of all businesses, the want of really good, steady, persevering work. They found among bricklayers and carpenters, masons, and also on farms, that often the place of foremen went a-begging just because unhappily they were unable to get those men who were thoroughly trustworthy, and in agriculture, as well as other occupations in life, there was a good opportunity for any one man who would like to strive to advance in the business he had undertaken. But he supposed that at the present day young men found a great deal in a direction away from their homes. They were apt to get restless, and thought they could do a great deal better by going further off. Some went to London and other towns, and there they had higher wages than they could get in the country. But while this was true it was only half of the truth, because they had to consider not only the better wages but also the way in which the money went out. In London wages were larger than they were in the country, and so far so good. But then there was an increase in the expenses although they had greater wages. As far as he knew 15s. per week as an average in the country would give as many comforts, and possibly more enjoyment, than 18s. or £1 per week would in London. Just let them recollect the difference there was in house rent. In London a man who wanted to live in two rooms in any comfort and decency had to pay 6s. or 7s. per week for them, but in the country they could get a capital cottage for one shilling per week—or perhaps two—so that they would thus see that the rent in London made a considerable hole in the larger wages. Then there was another thing—they had a lot of enjoyment in the country which they had not in London. And this was not only so with the labourers, but with their richer neighbours, as the landowners did not get so much money out of their land as they might if they went into another business. If a person bought land he did not generally get more than 2½ per cent. for his investment, whereas if he put it into some other business he would get a great deal more than that. But then he saw there was something besides the mere money gain—he had the enjoyment of living in the country, he had health, he had the opportunity of living different, and of helping in the promotion of the happiness and welfare of his

tenants and the people who were dependent on the land. He got so many enjoyments out of the land that he was willing to take a little less money for a little more pleasure. And the farmers did not get so much money out of their occupations as they would if they went into some trade or commercial enterprise in the great towns. He supposed if a farmer were a successful man—and he spoke in the presence of many farmers, and who were better judges than he was—that he did not get more than 8 or 10 per cent. on his capital, but with the same amount of intelligence, capital, and skill applied in another business he might get double or treble the amount of interest for his money. But then he felt there was something worth his while to do this. He had the pleasure of living in the country; he had his horses and an agreeable mode of life—in short he had what a country gentleman liked, a variety of occupations, and he found it worth his while to do it. And so it was with the labourers. They had the advantage of living in the country, and which they could not have in the large towns. Let them look at the different modes of life of those who lived in the country and in London. The labourer in the latter place got up to go to his work in the morning, and instead of seeing the sun shining gloriously, perhaps he had to encounter a dark red-yellow fog. He went out to his work a long way off—through dingy, dark, and dirty streets, and saw nothing but red bricks—not very often red, but a sort of brown, or he might say dirt colour. He saw the same sort of thing day after day; he had no variety, and when he returned home at night, instead of finding his wife cheerful, she was overdone with the work and the bad air, the children were pale and wan, they were ill, and a long doctor's bill waiting for him. He found, perhaps, the room full of clothes, hung up to dry. He had no garden or place to hang them out—no drying-ground or place of that kind—or garden to go to of an evening, whereas the labouring man in the country went out in the morning into the fresh air; he got his health, for he always had pure air; he had a pleasant walk over fields; he went to a variety of occupations, as he was not always doing the same thing; and when he came home at night he found a clean and comfortable cottage; he had more health among his children; he had a garden where he could go to of an evening; and his meal was made the more pleasant and agreeable by the skill he brought to bear in the produce from his garden. A great deal was to be made out of the proper cooking of the vegetables. Then they must recollect the temptations of the towns. Men living in London and other great towns had very little pleasant occupation of an evening. They had not got a comfortable place in which to sit down. Many were obliged to live in a single room, and this room had to serve the various purposes of the family. Under these circumstances it could not be expected but that men went from their homes to the public-house, which seemed to be the only refuge for some, and although they might be naturally temperate, still they had to drink for the goodwill of the house, and these were the foundation for or the beginning of habits which led to the ruin of men's health and their moral character as well. If they went into a union or workhouse in the town, and asked, perhaps, the master, "How is it I see men here who have had a good position in life, men who have been steady in their day, men who have had the opportunity to lay by against this?" probably the master of the workhouse explained all in a monosyllable. He just said "Drink." If they went to a goal and saw men who had filled responsible positions in life, and if they asked how it was these men were there working on the treadwheel or shut up in a cell, the governor of the goal answered "Drink." If they went to a lunatic asylum they would see men there born by nature healthy, with good brains, clever minds, by nature sane—they asked, "How came these men in this demented state, that it requires that they should be confined in the walls of this asylum?" and again the head of the establishment would give them the same monosyllable—he answered, "Drink," it was that that brought him there. He was sorry to think that two-thirds of those who were confined for lunacy were so shut up by drink. He said that when they were comparing the town with the country they must recollect the great advantage

of fresh and pure air. Many persons really took to drinking in towns because the air was so foul, so depressing, and so injurious to men's minds, that they felt bound to take some stimulant, and they got into a habit of taking them really because they were quite unable to resist the pressure of the air. Some of these things they had not to bear in the country. They had fresh air, which gave them health and strength, and therefore that temptation did not exist. He lately had in his house a very distinguished gentleman, as his guest, who had been accustomed to press upon people's minds, through books he had published, the great necessity there was for men and women who lived in those days by their brains of also doing something with their hands, and he also urged upon those who had to live by their hands taking a little exercise for the brain. Mr. Cowpe-Temple explained this was Professor Ruskin, and having explained how he got some undergraduates at Oxford together, and went far with them with pickaxe and shovel to mend the roads and drain a swamp, so as to turn a village into a comfortable place, he proceeded to tell his hearers that it was of the utmost importance that they should give their children the best education they possibly could. There could be no complaints now about the school being too far off. They had now a school in nearly every village, the greatest distance from a school being two miles—that was the greatest distance they would have to walk. Then there was another enactment—the Agricultural Children Act—by which children employed in agriculture were to attend school during the time of year when they were not specially wanted for agricultural work, but the children had to leave school so early that their education could not be honestly and fairly carried out without an evening school, which he hoped to see more widely diffused in that neighbourhood and country. If these were established they could do much good, as young men could learn a great deal at them after they had done their work. What they got at the first school was not quite enough; therefore something more was needed, and that could be supplied at the evening school. He was glad to find prizes were still given for the cottages and cottage-gardens. He did not know anything more interesting to see than the way in which some women lived in a cottage, although there were many difficulties in the way. Sometimes it must be very difficult for a woman—the wife, the mother of a good many children—to keep her cottage generally as she would like to see it, and make her children and husband comfortable, and he was sure there were a great many women living about there who commanded their sympathy and respect for what they had done. And there were ways in which the wife could help to enlarge the wages of the husband. There was one thing by which they might do so, and it was by knitting wool. A great quantity of the knitted wool sold in their shops was sent from Germany by females. The wool was manufactured in England—in Lancashire and other places—and sent over to Germany, where it was distributed about the villages and towns, and knitted by young women and children into various articles, sent back to London and all over England, and sold at very good price, and if it was worth while for the German people to knit these articles he could not see why it could not be done by our own cottagers at home. Then there was something else out of which he thought a little might be got for the cottage—and it was poultry. If any one went into the Southampton Docks they would see cases upon cases coming out of the ships—millions of eggs, in fact he was afraid to say how many, as he should certainly astonish them. These eggs were from the fowls reared by the peasants and labouring classes in France, who found it worth while to keep poultry, which laid the eggs, which brought them a remunerative price in addition to the charge paid for taking them to England. He sometimes thought a little encouragement might be useful to a person in this way, and enable him to eke out a living by keeping poultry and selling eggs. And then he thought the making of soup in a cottage would be a very beneficial thing to a man coming home on a cold day. Some of the vegetables not wanted at the table might be put into the soup. There was, perhaps, some difficulty about it, but his friend Mr. Briscoe Eyre had published a book which would show them how to make a capital bowl of soup out of things which were now thrown away. He (Mr. Cowpe-Temple) wanted to see more labourers having a cow. There was some difficulty about it, but it might be overcome. It would be a great convenience if a man could get a run for a cow. If a man saved a little and got a start with a cow, his

wife could milk it—but he was afraid there were not many who knew how to milk—and he thought by a little arrangement the cow could be got over with very little help indeed. He had to do it with one of his men, and had given him a bit of grass for his cow. He found it to do exceedingly well, and there was very little difficulty about it. He was renouncing them just now that when the Bishop of Winchester was there he dwelt on the necessity of kindness to animals, and how important it was, particularly with children, that they should be prevented from getting into habits of thoughtless cruelty and torture to animals. They did not think much of it at the time, but it resulted in a bad habit and feeling, and if they were unkind to animals they would be to others as well. They had two classes in the society—shepherds and teammen—men who had a great many animals dependent upon them. He did think that the teammen about there, as a whole, were very considerate and kind to their animals, and they deserved credit; but there were a few exceptions, and they ought to be looked after. He was often pained to see a horse unable to draw a load in a cart because the tight bearing rein kept his head high in the air, and he was unable to throw his neck into the collar. He hoped he should find fewer bearing-reins, and where they were necessary, that they should be loose enough for the horse to have his head, and put his shoulder to the collar. Having alluded to the donkey show recently held in London, and the presentation of a donkey to the Earl of Shaftesbury, the right hon. gentleman said they should lead their children to respect animals, look to upon them as God's creatures, and they should be treated properly. He was pleased to find that the skill of their ploughmen, rickmakers, thatchers, seedsmen, and drillmen were quite up to former years. He was glad also to have the pleasure of giving away premiums for long service in certain families. He liked to see those ties kept up between master and servant. Those relationships were fast passing away, and were becoming less than what they were before. Respect was gained for the master by his kindness, consideration, and his willingness to help his servant in various ways, and respect for the servant was obtained by kindness, by study and looking after the master's interests, and doing all he could to make the ties between them stronger and stronger. But now there seemed to be a change in this matter. There was not so much friendly relationship, but the servant and the master looked upon each other in another light—the man seemed to be looked upon as worth a certain price, and the master was thought to be only an employer for a time—it was a bargaining, a mere buying and selling. The man gave so much work, and the master so much money. A servant came, and if he did not like a place he tried another and another, and thus there was a loss of that feeling which should exist. He thought this was a misfortune for both parties, for he believed a good master made good men, and that very often good men would make a good master. He hoped the prizes given there would remind them of the feeling between master and man—between employer and employed—which ought to exist. It was very pleasant for him to see there James Mills, who for the last 57 years had been on the estate at Broadlands, and under the late Lord Palmerston, who was as good a master, and as considerate a man as we could desire to see. As each year passed away they had the same cases. They had George Bell, who had been 35 years in the service of one family, and who had not lost those happy ties between master and servant. Let them all cordially encourage these mutual relationships; let them each feel that they were so many members of one family; and if that Society did nothing else than improve the relations between master and man, he thought the Society would have done a good work. The right hon. gentleman then resumed his seat, amidst much applause.

OVER BRED AND OVER FED STOCK.—Doubts begin to be expressed pretty freely as to whether high breeding has not already been cultivated to excess. It appears to be admitted on all hands that Shorthorn cattle, for instance, have decreased in size, while it seems also certain that the fecundity of these highly-bred animals is not so great as it was; for it is said that certain tribes have become celebrated for the barrenness of their females, while at the same time a delicacy of constitution has been developed, which unfits them for "roughing it," and requires luxurious arrangements to preserve them in health. As in our racehorses we have, according to some authorities, sacrificed stoutness of constitution

and capacity of endurance over long courses for the sake of obtaining high speed over a short distance, so in our cattle the desire for fineness of bone and rapid development of meat has brought into fashion animals which have lost many of the valuable properties of their ancestors. Such breeds cannot exist when subjected to the rough weather which prevails on the exposed hill-sides and moors which are so valuable as breeding-grounds and nurseries for stock; and, perhaps, it is for this reason that Ireland, which is prolific in cattle-rearing without shelter, fails to send us anything which can obtain a place in our exhibitions. No doubt Ireland possesses first-class cattle; but these are bred, sheltered, and fed under the same conditions as those to be seen at Islington. And the consumers have

something to say also in the matter, as there is beef and beef. They prefer, and justly prefer, the meat of the Devon or the Scot, whose young days are spent in cropping the scanty herbage of the moor or mountain, because the meat has more flavour than that of the rapidly-forced stall-fed ox, which has been crammed with corn and linseedcake from its calfhood. So that, even if it be true, as the breeders of the delicate animal contend, that their meat can be produced more economically, because more rapidly, than those of other races, let them remember that in losing stamina they restrict the area upon which the beast can be reared, and that we want flavour in our meat, even if we have to pay a price for it.—*The Saturday Review*.

## THE TAX ON COLLIE DOGS.

A meeting of the members of the Penrith Farmers' Club was recently held to discuss the subject of the Dog-tax, Sir II. R. Vane, Bart., presiding.

After some preliminary business had been transacted, Mr. TYSON proceeded to read his paper—"The Dog-tax, with Special Reference to Collies." He said: "To adjust the burdens of taxation to the backs of the bearers, to tax luxuries instead of necessities, to ease the springs of industry, to give every freedom to agriculture, manufacture, and commerce, and to facilitate locomotion by the repeal of repressive duties, are the principal tendencies of our legislation; and in these respects we may well be proud as a nation for what has already been accomplished. Still there are many matters that require alteration, and I beg to express an opinion that the dog-tax is one of them. Previous to 1866 this tax underwent various mutations, to which I need not refer; suffice it that then the impost was 12s. per dog, and the duty assessed and collected by an antiquated system that afforded great latitude for evasion, especially when coupled with the just and proper immunity of farmers' and shepherds' dogs. This exemption opened the door for a great amount of fraud, but the fault was in the system pursued in levying and collecting the tax. At the time I have just mentioned, the late Lord Derby's Government came into office, and found a bill prepared by their predecessors transferring the incidence of the tax from the cumbrous assessment of, and uncertain collection by, the assessed tax commissioners to the sharp and decisive licence system of the Excise, reducing the tax from 12s. to 5s. per dog, and abolishing all exemptions, which latter was so much abused that apparently half the dogs in the country, exclusive of "collies," escaped taxation. The bill was taken up and passed with little more than this variation, that the present Premier licensed the owner, while the late Premier wished to license the dog, by causing it to wear a stamped collar. For the financial year ending April, 1866, the dog-tax realised £219,313, equal—allowing for compounding—to about 370,000 dogs, and for the twelve months ending April last the licences issued numbered 1,371,938, and produced £317,984 10s., a difference of £98,671 10s. in amount, and 901,938 in number. This extraordinary increase may be ascribed to, 1st, the salutary change in the method of collection; 2nd, the reduction of the tax from 12s. to 5s.; 3rd, the abolition of all exemptions; 4th, the increase in the number—over two millions—as well as the prosperity of the great body of the population. If we take a look at the annual returns of our imperial revenue, we find that about half the amount is derived from the taxation of two luxuries, or what a great number of well intentioned people would call unnecessary—viz., liquor and tobacco; and this fact is the more remarkable if we consider the ratios of the cost of production of these articles of such immense consumption, and the taxes levied upon them, especially with regard to the "irragrant weed," which might be sold at about a tenth of its present price if free from duty. And the equanimity with which we permit our luxuries to be taxed affords a strong contrast to the fierce fight for the so-called "cheap breakfast-table," as instanced by untaxed bread, sugar, and, sooner or later, tea and coffee. Now, I beg to raise the question, Is the keeping of a dog a luxury or a necessity? With a majority it is the former, with a minority the latter, and this last embraces the principal and essential portion of the agricultural community. In these days of dear beef and mutton anything that tends to foster, aid, and assist the breeding, rearing, and transit of cattle should receive

every encouragement. In the mountainous districts of Scotland, Wales, and our own North country, from whence we derive such large supplies of ovine food, the collie is absolutely indispensable, and I scarcely think I shall be deemed rash in venturing an opinion that if the breed of collies became suddenly extinct, one-third, if not one-half of our annual supply of mutton would become extinct too. From the nature of their hard work, collies are short lived, and the number required to be reared, and kept causes the tax to fall very heavily upon sheep-farmers in fell districts. We are informed that a very distinguished financier and ex-Chancellor of the Exchequer has recently been employing some of his leisure by indulging in the practice of wool-cutting. What a desirable consummation it would be if this gentleman's immediate successor could spend a week or ten days of his leisure on a large Highland sheep farm! Sir Stafford Northcote stated in his last budget speech that he had a horror of increasing taxation, and to a deputation that waited upon him in respect to this tax that there was some difficulty in distinguishing dogs that were sheep preservers and sheep destroyers. I do not suppose he would destroy the equilibrium of his next budget by doubling the tax upon dogs kept for pleasure and sport, and abolishing it on those kept for agricultural purposes; and his other objection would be met by a declaration that the applicant for a free dog-licence mainly and generally followed one or more of the occupations of farmer, herdsman, shepherd, butcher, or drover, and that his dog was of the well-known expressed and defined breed of collie or shepherd; a false declaration to be punished by either fine or imprisonment. Doubling the tax would soon free us from the swarms of half-starved mongrel curs that invest both town and country, reduce the frightful and incurable malady of hydrophobia, and greatly tend to promote purer breeds of the canine race, whilst the abolition of the duty on collies would be a boon to the agricultural world and indirectly to the consumers of beef and mutton. This matter is one that appertains to the great question of local taxation, for if you tax an assistance to production you not very indirectly tax the laud. It may be said by some that the tax is only a small matter, and of the nature of a sentimental grievance, but it will be found that sentimental grievances are the cause of far more disturbances in this world of ours than material ones. A noble poet wrote—

"But the poor dog, in life the firmest friend,

The first to welcome, foremost to defend;

Whose honest heart is still his master's own,

Who labours, fights, lives, breathes, for him alone."

This may be mostly true of a Scotch collie, but certainly not of the thousand and one pampered pugs and poodles you meet with; though I am here reminded that our friend is now the reigning canine favourite in the world of fashion. Many a "Luath" has recently been transported from his native heath and the cottage home of his whelpdom, and exchanged the glee-esome fondlings of the shepherd's barnies for the soft caresses of fair mistresses of patrician abodes. If I need any excuse for introducing this matter to you, I beg to refer to the very recent utterance of a statesman who enjoys the confidence of all classes of his countrymen to a greater degree than any one, Lord Derby who stated at Edinburgh on Friday last, "Since we must have taxes, taxes that fall upon luxuries are probably the fairest of all." My arguments are therefore fortified by the inferential opinion that "taxes that fall upon necessities are probably the unfairer of all." He concluded by moving the

following resolution: "That in the opinion of the Club, the tax upon collies or shepherd-dogs, solely employed for the purpose of agriculture, should be remitted!"

Mr. HASKETT: He doesn't increase the tax on the other dogs.

Mr. JAMESON: No; he is silent upon that.

Mr. TYSON: I have merely suggested—

Mr. HASKETT seconded the motion, and, in doing so, said he had to congratulate the Club on the very able paper read by Mr. Tyson in favour of the poor unfortunate collie dogs; though at the same time he didn't think that if the collie dogs were extinct we should lose one-half of our supply of mutton. He thought we would still have a fair proportion of mutton without them, though he must admit they were useful animals in the hilly districts, especially in Scotland; and it would be a great boon to shepherds if the tax were removed. The only difficulty he could discover in the matter was that the Government were liable to be imposed upon.

Mr. SPENCER felt that the motion was a very good one, and he quite agreed that the farmers ought to have their dogs free. When he said dogs, he meant dogs that would be useful upon the farm; but there ought to be a line drawn, because if a farmer had a small farm one dog was quite as many as he had work for; but many small farmers kept two or three dogs. He would also make a distinction as regarded stock and corn farms, and the number of acres in each.

The SECRETARY: How many dogs would you allow to the acre?

Mr. SPENCER: I shouldn't allow one to the acre. If one dog was enough, let one be kept, and no more.

Mr. JAMESON: How would you arrive at that?

Mr. SPENCER: Some farmers keep dogs to please their sons, and some to please their daughters.

Mr. HASKETT: And some to please themselves.

Mr. SPENCER: What I want is, that a farmer may be allowed to keep dogs that are useful upon his farm, and not have them taxed.

Mr. THOMPSON said it would be most difficult to draw the line in regard to these dogs, and he was entirely opposed to exemptions where there was difficulty in defining them. In fact, the gentleman who had just sat down seemed to show clearly that the difficulties would be almost insuperable. How would he draw the distinction between cur and shepherds' dogs? If a dog was useful, 5s. per annum would not be an excessive charge for it; whereas if they abolished the tax it would doubtless lead to a great amount of unpleasantness, which would neutralise any advantage the farmers might obtain from the abolition of the tax. He saw no reason why they should be relieved of the dog-tax. Shepherds' dogs were useful animals; and that was another reason why owners should not feel the burden a heavy one.

The SECRETARY, having alluded to Young Norval of the Grampians as a great authority on the matter, said he believed the shepherds of Scotland provided their own dogs. In that case, the abolition of the tax would be a relief to the very poorest of the Norvals. Perhaps Mr. Thom might be able to enlighten them.

Mr. THOM thought the tax a very great hardship upon the farmers and shepherds. He took a different view from Mr. Thompson on this subject, and thought sporting dogs ought to be taxed at a much higher rate than they were. As Mr. Robinson had said, in Scotland the shepherds found their own dogs; and it fell very heavily upon a poor man when he had to pay for five or six collies which were necessary to him in his work. A farmer in the country had to pay just as much for a sheep-dog as a great gentleman had to pay for a sporting dog, and the ladies' dogs about which Mr. Tyson had been speaking. It appeared to him that the present was a very favourable opportunity for ventilating the subject, because the present Government put on the tax. If they did their duty they would take it off again, and he should certainly vote for its being taken off. Mr. Thom then referred to sporting dogs, and the dogs kept by navies for poaching purposes, which roamed about the fields, and did an incalculable amount of damage. He thought that instead of such dogs paying 5s. they ought to pay £1, because they were the animals which did the most damage to the farmer. They worried his sheep, made the ewes cast their lambs, ate the young sheep, and sometimes the poachers took a fancy for a lamb themselves.

Mr. JAMESON: I believe before the last dog-tax collies were exempt?

Mr. TYSON: Yes.

Mr. JAMESON said he believed that other dogs then paid a higher duty. He was not certain who it was that made the tax payable for all dogs.

Mr. THOM: It was the Government now in power.

Mr. JAMESON: No, no. I believe it was found that great inconvenience arose from the exemption of sporting dogs from the tax, and a uniform tax of 5s. per dog was put upon. Now, they were simply wanting to go back to the old system, and that seemed to him rather odd.

Mr. TUCK: I cannot see that collie dogs ought to be exempt from taxation. If we exempt collie dogs, we are particularly useful, other people would say "I don't know how useful in their calling as shepherd dogs," and "I don't know" by ratcatchers were useful dogs; so were those kept to guard over a house, or chained to the cart of a carrier, to protect property. Another question arises—What time of day? Any one might say his dog was a collie if it would run after sheep. The present tax was a very light one; and if other particular dogs were so very useful, owners could hardly be heavily burdened with a tax of 5s. per acre upon them.

Mr. BOWSTEAD said when shepherd's dogs were exempt from the tax the collection of the money was a source of very considerable inconvenience; and now that it fell upon a large number of individuals, it would be felt very heavily indeed. Mr. Tyson had said that luxuries were not necessary, and he (Mr. Bowstead) thought the matter had been somewhat reduced that it would hardly be possible to increase it.

Mr. TYSON reminded the gentlemen who were in the room that there were only 370,000 dogs taxed when the shepherds' dogs were exempt; but now there were about a million and a quarter. He had no wish to reply further to the opinions of the different speakers. He had been urged to bring the subject before the club by several farmers, not because he (Mr. Tyson) was a farmer, but because they felt the tax to be a grievance. He had no interest in the matter, as he was not a practical farmer, and did not keep a shepherd's dog. Therefore he was not actuated by pecuniary interest; and he hoped after they had heard the discussion those gentlemen to whom he had referred would pocket their grievances.

The CHAIRMAN spoke in support of the tax.

On the votes being taken there were twelve for Mr. Tyson's motion and 7 against.

On the motion of Mr. HASKETT a vote of thanks was passed to Mr. Tyson; and on the motion of Mr. H. J. HOWARD, a similar compliment was made to the chairman.

## CHEESE FACTORIES IN AMERICA.

The factory system of making butter and cheese, an industry of great and growing commercial importance, and the history of which is full of interesting and useful lessons, has grown up in this country within the last quarter of a century from small beginnings. Prior to 1851 Herkimer and Oneida counties, in Central New York, had become somewhat famous for their cheese products, their dairies being then managed by individual owners, with varying and somewhat uncertain success. Jesse Williams, a dairyman, living near Rome, in Oneida county, had achieved a reputation for making cheese of the best quality, and when, in 1851, one of his sons was married and went to live on another dairy-farm in the neighbourhood, Mr. Williams endeavoured to contract for the sale of cheese made by his son at the enhanced price paid for his own products. He recognised the fact that to secure this the cheese must be as good as his own, and he determined, after some consideration, to have the milk from his son's dairy brought to his own place, there to be manufactured into cheese. This was the origin of associated dairying, and for three years Mr. Williams and those who took their milk to him were the only ones who profited by a system that secured uniformity in the product, the concentration of skill, and a great reduction in the cost of labour and supplies. But, the success of the system once assured, the growth was quite rapid, and in 1866 there were more than 500 cheese "factories" in operation in the state of New York. Cheese-making, once monopolised by the rich counties of Central New York, has since then spread to other parts of the state, and the factory system is now adopted in some degree in Illinois, Wisconsin, Michigan, Iowa, and other Western



states, Pennsylvania, Vermont, Massachusetts, Maine, and Canada, and has even spread to England and Russia. In 1873 Canada manufactured 20,000,000 pounds of cheese by the American method. The scheme of the Oneida farmer of 1851 to secure uniformity in the products of two dairies has reproduced itself in several thousand establishments, employing an estimated capital of twenty-five millions of dollars, and producing each year one hundred and fifty millions of dollars' worth of the manufactured article. The receipts at New York from the interior amounted in 1863 to 281,318 boxes of cheese, in 1874 to 2,204,493 boxes. The exports from New York in 1863 were 38,577,357 pounds; in 1874 they were 95,834,691 pounds. This return will give some idea of the rapid growth of the industry, and of its great importance to the commerce of the country. A committee of the New York Butter and Cheese Exchange estimates the annual product of butter in the country at 140,000,000 lbs., of which 53,333,333 lbs. are exported. These statistics of the trade derive their chief interest from the fact that the enormous business they represent has grown up from the earnest efforts of a single man to make large quantities of a good article which he was already making in small quantities. If he had resorted to trickery and deception, he might have achieved a temporary success, but he could never have laid the foundations of such a great industry with any other corner-stone than that of honesty. A very full and readable description of the processes of making butter and cheese is published in the November number of *Harper's Monthly Magazine*. Of these we can only say that they have been the subject of study by chemists and practical dairymen of the highest culture, and that, although the latter know how to make good cheese, neither they nor the chemists understand precisely how it is done. One hundred parts of milk are made up of about eighty-seven and one-half parts of water, three and one-half parts of butter, three and one-eighth parts of casein or pure curd, five and one-eighth parts of sugar, and less than one part of mineral matter. In cheese-making the design is to harden the casein or curd, and to do it in such a way as to imprison globules of butter-oil in the curd. To coagulate the milk the cheese-maker pours a solution of "rennet" into the milk, and then begins the operation he does not understand—the "digestion" of the milk. The curing of the cheese is regarded as a further process of digestion. Cheese factories, as they are now built, are great buildings supplied with steam power and steam heating apparatus, and are altogether unlike the dairies of a quarter of a century ago. The cheese-maker is an educated workman; his associates, the dairymen, are scarcely inferior in knowledge, and it is said that the treasurer of a "factory association," himself a dairyman, must attain such mathematical accuracy as to be able to demonstrate that it took 9 7/16-1000 pounds of milk to make a pound of cheese, and that he who delivered a pound of milk to the factory is entitled therefore to 1 274-1003 cents, at the then ruling price of cheese.—*Philadelphia Ledger*.

## BREEDING OF CLYDESDALE HORSES.

For some years past the number of stallions of the Clydesdale breed imported into Ireland has been steadily increasing, and last year several valuable animals of this class were purchased for service in this country at the stallion show of the Glasgow Agricultural Society. Those horses were purchased on private account; but in Scotland it has become the rule that local farming societies subscribe a sum, varying from £60 to £100 and upwards, which, with a guaranteed number of mares at a fixed rate, is offered for the hire of a stallion to travel during the season in each society's district. A deputation of the members of each society attends the stallion show at Glasgow, selects a horse, according to the means at their disposal, and arranges with the owner.

In this way a vast improvement has been effected of late years in the breed of agricultural horses all over Scotland. This is a matter of great importance to farmers, owing to the very high rates which are now current for horses suitable for heavy draught. Even raw, unbroken colts of the Clydesdale breed fetch as much as £80 to £100, while fillies that promise well for breeding realise much higher rates. £800 to £1,000,

and up to £1,500, have been paid for first-class Clydesdale stallions, and there are horses of that description at present in Scotland which the owners would not part with even at the highest figure we have named.

The next annual stallion show of the Glasgow Agricultural Society has been advertised in our columns. It will be held on 22nd February, and no less than £150 is offered as the Society's premium, along with a silver medal, for the best stallion, foaled before 1st January, 1874, and not above ten years old, which will be exhibited on that occasion. The unusual amount of the prize is a sufficient indication of the estimation in which first-class stallions of the Clydesdale breed are held in Scotland.

We have no doubt but that on the 22nd of next month there will again be persons from Ireland in Glasgow on the look-out for Clydesdale stallions of a useful class. We sincerely trust they may be successful, but no one need go to Glasgow expecting to get a stallion for a song. It will take "a fatful of money" to buy even a medium horse. Nevertheless, in good hands it will pay; and breeding horses fit for heavy draught is a far better speculation than breeding weeds, which are never good for anything except to feed hounds.

We know that the Scotch plan of hiring the services of a stallion for the season has been a good deal discussed in several parts of Ireland, particularly in the South, where there are already some very useful Clydesdale stallions; but we have not learned whether any society or private company of breeders has decided to try the plan this year. At all events, people who are interested in the matter should go over to the Glasgow show: they will learn much at it, and the knowledge so acquired will be an ample equivalent for their expenses. One of the grandest sights we ever saw was the parade of Clydesdales on Glasgow Green, when the Highland Society's show was held there last July. It was worth going a thousand miles to see. We know there are some persons who pooh-pooh the idea that draught horses are worth looking at; but such folks have a deal to learn; so, by way of affording them, as well as others, a little information on the subject, we avail ourselves of some remarks which appeared in the *Glasgow News* on the occasion of the last stallion show of the Glasgow Agricultural Society. The writer, who is remarkably well posted up in this particular matter, referring to the show, said that "the prosperity of this feature of the Society's work has really been most astonishing. But a few years ago it had scarcely developed into the form of an exhibition at all—a number of breeders, according to advertisement, merely bringing forward their stock, from which the committee tried, on behalf of the Association, to select an animal suitable to travel the district. By-and-by, Clydesdale horses increased in value, English and colonial farmers began to appreciate their suitability for draught purposes, premiums were increased, and the result was keener competition. In time dealers came about the show-ring and made large purchases, and the spring show of draught stallions developed into a large and important hiring and selling fair for breeders. Looking at the central position of Glasgow as regards the Clydesdale breeding district, and the great commercial demands of the city for draught horses, this exaltation is not to be wondered at. No doubt the rapid and cheap means of railway transit has almost neutralised the importance of horse fairs and cattle trysts; but the dealing and hiring of stallions is quite a different trade from that which is carried on at this ancient style of market. A single entire horse may serve one-half of a county; so there is not, after all, a great home demand for Clydesdale stallions. At the district shows, therefore, which are held from time to time, the competition is almost entirely confined to the local breeders, and so holders of mares who desire an infusion of new blood into their stock have their eyes directed to other counties. To ask breeders to bring horses perhaps two or three hundred miles to compete at such small shows, with the prospect of having their animals, perhaps, defeated by 'home-breds,' would be a little too much; so the custom has originated of sending out deputations to examine horses, and, if suitable, make selections thereof. The Glasgow show was naturally, therefore, the field most generally in favour; and so from the two or three representative bodies who, four or five years ago, originated the system, the number annually increased, till, yesterday, no fewer than 31 deputations were present, many of which had come from England. The directors of the Glasgow Agricultural Society, it must be said, were not slow to recognise the



advantages of the situation, and encouraged by every possible means the development of their exhibition, which may now well be described as 'the best spoke in the wheel' of the Association. The premiums have been raised from time to time, as also the service fee; so that to have the selected

horse of the Glasgow Society means not the scoring of a mere barren honour, but a direct pecuniary gain, with steady-flowing interest from the stamped reputation of the stock."—*Irish Farmers' Gazette.*

## THE SOCIAL ASPECTS OF AGRICULTURE.

### THE CONTAGIOUS DISEASES (ANIMALS) ACT.

#### PART I.

A history of the Contagious Diseases (Animals) Act down to the present time, with the practical effects of its various clauses and provisions as they came into force, would afford useful negative information to the agricultural world, and, at the same time, prove an interesting chapter of sociological study. This, however, is no part of our present intention; but simply, as part of our subject, to endeavour to point out the persistency with which the Privy Council, past and present, have disregarded the existence of evils that have given rise to daily comments, constant protests, petitions, and deputations, and that have been denounced by hostile criticism as a disgrace to any administration for at least ten years past. Whilst, therefore, public opinion is directed to the bearing of this Act upon the meat supply of the country at large, the metropolis, and the densely-populated manufacturing districts of England, by the significant action of the member for South Norfolk (who is also member for agriculture in general, having a constituency that comprises all between John-o'-Groat's and Land's End), the consideration of the social aspects of agriculture may opportunely be initiated by placing in juxtaposition the state of affairs existing at the close of the year 1872 relative to the suppression of the contagious diseases of animals; and the state of affairs existing at the end of the year 1875 with regard to the same subject. It is not within the scope or intention of this paper to recount instances of the working of an Act which has come to be painfully familiar to all connected with agriculture, and a single impress of public opinion at each date will suffice for our present purpose.

In the *Contemporary Review* for January, 1873, in an article foreign to any agricultural question, one of the greatest thinkers of the day (Mr. Herbert Spencer), after pointing out various instances of incapacity or neglect on the part of authorities holding public offices, remarks, on page 172, "That the State which fails to secure the health of men even in its own employ should fail to secure the health of beasts might, perhaps, be taken as self-evident, though possibly some, comparing the money laid out on stables with the money laid out on cottages, might doubt the corollary. Be this as it may, however, the recent history of cattle diseases, and of legislation to prevent cattle diseases, yields the same lessons as are yielded above. Since 1843 there have been seven Acts of Parliament bearing the general titles of Contagious Diseases (Animals) Acts. Measures to 'stamp out,' as the phrase goes, this or that disease, have been called for as imperative. Measures have been passed, and then expectation not having been fulfilled, amended measures have been passed, and then re-amended measures; so that of late no Session has gone by without a bill to cure evils, which previous bills tried to cure, but did not. Notwithstanding the keen interest felt by the ruling classes in the success of these measures, they have succeeded so ill, that the foot-and-mouth disease has not been 'stamped out,' has not even been kept in check, but during the past year has spread alarmingly in various parts of the kingdom. Continually *The Times* has had blaming letters, and reports of local meetings called to condemn the existing laws and to insist on better. From all quarters there have come accounts of ineffective regulations and incapable officials—of policemen who do the work of veterinary-surgeons, of machinery described by Mr. Fleming, veterinary-surgeon of the Royal Engineers, as 'clumsy, disjointed, and inefficient.' In

a note, page 173, he further remarks, "Let me here add what seems to be a not-impossible cause, or, at any rate, a part-cause of the failure. The clue is given by a letter in *The Times* signed 'Landoner,' dated Tollesbury, Essex, August 2nd, 1872. He bought 'ten fine young steers, perfectly free from any symptom of disease,' and 'passed sound by the inspector of foreign stock.' They were attacked by foot-and-mouth disease after five days passed in fresh paddocks with the best food. On inquiry, he found that foreign stock, however healthy, 'mostly all go down with it' after the passage. And then, in proposing a remedy, he gives us a fact of which he does not seem to recognise the meaning. He suggests 'that instead of the present quarantine at Harwich, which consists in driving the stock from the steamer into pens for a limited number of hours,' &c. If this description of the quarantine is correct, the spread of the disease is accounted for. Every new drove of cattle is kept for hours in an infected pen. Unless the successive droves have been all healthy (which the very institution of the quarantine implies that they have not been) some of them have left in the pen diseased matter from their mouths and feet. Even if disinfectants are used after each occupation, the risk is great, the disinfection is almost certain to be inadequate. Nay, even if the pen is adequately disinfected every time, yet if there is not also a complete disinfection of the landing appliances, the landing-stage, and the track to the pen, the disease will be communicated. No wonder healthy cattle 'most y go down with it' after the passage. The quarantine regulations, if they are such as are here implied, might properly be called 'regulations for the better diffusion of cattle diseases.' This is how matters stood, from a disinterested outsider's point of view, three years ago. Passing over the interim, let us see how they stand at the end of the year 1875, taking for our guide the impress of public opinion in *The Mark Lane Express*, of December 20, 1875. We find therein an account of a speech made by Sir W. Bartleot, at an agricultural meeting at Arundel, in which he is reported to have said, speaking of the foot-and-mouth disease, "I know that at Chichester, which is the best market and the largest in the South of England, every precaution has been taken, so far as human knowledge can go, to prevent and to stop any infection in that market. Their inspector has visited most minutely all the animals coming into that market, they have disinfected all the places where animals are penned, and they have done everything they can to stop the spread of the disease. But, nevertheless, and I am bound to say it, because as sensible men, we are bound to own, with both these facts in the face, that the disease is not stopped, and is still spreading. Now, the other day a Government inspector came down to Chichester, and most minutely examined all the animals coming into that market, and on their way from Cosham to those lairs in the neighbourhood of Chichester, where they generally stay the night before the market. He also most carefully examined all the animals in the market, and he pronounced that never in his life had he seen animals so healthy as those he saw there. That was on Wednesday, Nov. 3rd. What happened? Those very animals, many of them that had been inspected by the Government Inspector, were sold to different persons in that and other localities, and our inspector was called in to see them, when, on the Saturday following, they were down with the disease. If I mistake not, there is an hon. friend of mine in this room who bought as many as three lots on that day, and I believe they were all affected by the disease. Now, I mention this to show how difficult it is to know when animals are infected, and it shows us that unless we can stop this disease at the fountain head, it is utterly impossible to overcome it." A few days after this meeting at Arundel there was one held at Chichester, at which the Lord President of the

Council, the Duke of Richmond, is reported (on the same page of *The Mark Lane Express*) to have said—speaking of the foot-and-mouth disease—"In consequence of the representations made to me that a considerable number of diseased cattle were brought over from Ireland, I thought it would be desirable to have a better inspection of cattle vessels trading from that country, and I determined that, in addition to the ordinary inspectors, there should be a travelling inspector, whose duty it should be to go about to inspect lairs, pens, and trucks, and cattle-carrying ships. Such an inspector was appointed, and what has been the result?" His Grace here details certain penalties imposed on various railway companies, &c., who have, through the instrumentality of inspection, been caught, *in flagranti delicto*, and goes on to say, "Therefore, without ascribing too much to myself, I think that in this matter of additional inspection I adopted a very practical mode of checking the progress of the disease." After reviewing several proposed remedial measures, the Lord President continues, "The result of all this must, I think, be to show you how very difficult it is to deal with this foot-and-mouth disease, and that the country is not prepared for more restrictive measures than are now in operation. I believe that better inspection, better cleansing, and better disinfection, are about the best means of putting an end to the disease. As I have already mentioned, the travelling inspector whom I appointed last year, did a great deal of good; and that being so, I thought that if I could have four travelling inspectors, I might at least quadruple the good effected by one. I went to the Chancellor of the Exchequer, and I suppose my experience was not peculiar when I found that a demand for money was received by my right hon. friend with a very long face; but he allowed me to appoint the additional inspectors, of whom two have already been appointed." It will be refreshing at this stage of our enquiry, and before offering any comment on the proceeding, to refer once more to the *Cattle-plague Review* for January, 1873, and at page 176 to listen again to Mr. Herbert Spencer. Generalizing upon the data he has supplied, he says, "Yet as fast as there come proofs of mal-administration here some demands that administration shall be enhanced. Just as, in societies made restrictive by despotism, the people clamour for the evils and dangers brought about is still more despotism; just as, along with the failing power of a despotic power, there goes, as the only remedy, a re-assertion of popular inability, with emphatic obligation from a central power, to set right the misdoings of the agency, the people always demand more of the agency. When, after long continuance of coal mine inspection, coal mine explosions keep recurring, the cry is for more coal mine inspection. When, after long continuance of railway inspection, notwithstanding the oversight of officials, and by law to see that railways are safe, the vehemence of demand is for more such officials. Although, as Lord Salisbury lately remarked of governing bodies regulated by the State, they do it by being enthusiastic and extravagant, and they are very apt to end in being wooden-rough, through the Press, and by private conversation, men of paper are reminded that when it has ceased to wield the power, each deputy governing power tends to become a king, and a king, each deputy governing power tends to become a king, and a king does mischief, or a king-log that does mischief; yet more deputy governing powers are asked for, with an encumbering faith. While the unwisdom of officialism is daily illustrated, the argument for each proposed new department is put out, and the postulate that officials will act wisely. For either demands on the confusion and apathy and delay of Government offices, other Government offices are advocated. After another article of red-tape the petition is for more red-tape." And now, at the expiration of three years, it is interesting and instructive to find the truth of Mr. Spencer's words in the fact, that in the face of innumerable proofs of the ever-increasing and worthless of inspection, *per se*, as a preventive, curative, or even palliative of any contagious, infectious, or epidemic disease amongst animals, we are semi-alarmedly told by the head of the department that what we want, and all we want is "*more inspection!*" He wants it quadrupled, and has already got it doubled. *The Times* of Dec. 30, 1876, describes the question as being simple in the extreme; and says it is this very distressing simplicity that has been used a smothering-block to the Privy Council; be that as it may, Mr. O. S. Real has declared that otherwise innocuous department, to be "utterly unfit to order and regulate anything connected with the flocks and herds of this country," and we believe him, fully and completely. At this juncture, it will be convenient to assure our readers that no political bias has

dictated any of the foregoing remarks, nor will in any way influence our further consideration of this subject; in proof of which we commit ourselves to the opinion that, if by any combination of circumstances the question should assume a political instead of a social aspect, the apathy of the past would be charged—*in actu oculi*—into an enthusiasm which might astonish all but the driest and most sceptical of philosophers.

We have seen, then, that epizootic apathy, commonly called foot-and-mouth disease, exists and spreads, and is likely to spread; we may also learn, if we care to do so, that it was not known in England until 1830; that like all other, or at least many other, epidemic and epizootic diseases, it had an Eastern origin, and was known on the Continent before it reached us. Professor Brown, in an article on this disease, in 1839, published in the Bath and West of England Society's *Journal*, tells us that "the channel through which it came to our shores has never been satisfactorily ascertained . . . and a critical investigation of this part of the subject is not likely to repay the inquirer." Now, that we have it throughout the length and breadth of the land, it is useless to spend time or attention in ascertaining how we came by it, other than as a guide to us in our attempts to get rid of it; on this point the professor informs us: "In 1831 the malady appeared in Hungary and lower Austria, and spread to Bohemia, Saxony and Prussia; taking a north-easterly direction it entered Germany, and thence advanced to Holland and France, reaching England in August, 1839." It is then plainly shown that the disease was not engendered in England. In tracing its progress through years of greater or less severity, we come to the cattle-plague time, and the professor tells us that "hundreds of cattle affected with this malady were seen in the beginning of 1866, but when the restrictions upon cattle traffic were carried into effect, with an increasing degree of stringency, as the cattle-plague made incursions to new districts, foot-and-mouth disease and pleuro-pneumonia declined; and when the imminence of danger led to the almost total stoppage of fairs and markets, and the movements of cattle all over the country, these diseases almost ceased to exist, or, at least, assumed proportions which prevented them being specially observed. For a period of six months, in the summer and autumn of 1867, eczema was seldom seen; and the cattle in the Metropolitan Market and the fairs were free from the affection, and a like immunity from its attack was enjoyed by animals all over the country. Isolated cases might be met with, but it is certain that at the time of the cessation of the cattle plague, the live-stock of the United Kingdom were more entirely exempt from infectious diseases than they had for many years." So, then, in stamping out the more serious disease called cattle-plague, the lesser evil of foot-and-mouth disease was incidentally stamped out too, or nearly so. Surely, in this we have a clue to its successful treatment in 1876. But, let us quote the professor again, we cannot have a better or higher authority. Speaking of preventive measures he says: "Sanitary regulations of the most stringent character are necessary in respect of foot-and-mouth complaint, in consequence of the short period which elapses between the time of infection and the declaration of the disease, which allows but little opportunity for the action of prophylactics. The means which are available for the purpose of arresting the spread of the affection, have reference to the introduction of diseased animals, either from the Continent, or from any part where the affection may prevail, and the regulation of the movement of such animals; with the establishment of a system of isolation and disinfection. The first essential is the separation of diseased or infected animals on the premises where the affection exists. Considerations of convenience or profit have no place whatever in a discussion of the sanitary aspect of the question, and it is idle to attempt to reconcile things which in their nature are opposed. It may be true, at least it need not be disputed, that restrictions upon the free movement of animals are inimical to the interests of commerce; it is, on the other hand, absolutely and demonstrably true that free movements of infected animals means unlimited extension of disease. The present inquiry does not refer to the best means of extending the cattle trade, but to the most certain method of preventing disease, and the argument cannot conveniently be encumbered with collateral considerations, which are foreign to the main issue. Isolation of all diseased and infected animals in the locality where the disease is detected is the first necessary

precaution, in the neglect of which all others are ineffectual . . . . It must be distinctly enunciated, that by just so much as the severity of the necessary precautions is relaxed the danger of the spread of disease is increased." So said Professor Brown, as Veterinary Inspector to the Privy Council in 1859, and so he has recently said, as Chief Inspector to the Privy Council in 1875, before a Committee of the House of Commons. But the opinions of the professor and his colleagues appear to have but little weight with the department to which they are the professional advisers, so far at least, as home regulations are concerned. Mr. Forster, M.P., tells us that the committee, of which he was chairman, which sat two years ago on this cattle disease question, came to the conclusion that with regard to any home action in respect to foot-and-mouth disease, "the only measures that would be really effectual would be such an interference with trade, and a stoppage of affairs in the market that the remedy would be considerably worse than the disease; in fact, it could not be stamped out without almost as much interference as was done in the case of the cattle-plague. It was felt that the producers would not think that worth while. Consequently the recommendation of that committee was that there should be no attempt to interfere with the disease amongst the home or English cattle, except if they were found travelling." And so it came to pass, that when the Lord President of the existing Council took office, there were, as he tells us, "no restrictions." Speedily, however, there came deputations, pointing out the only one thing, as his Grace remarks, upon which all parties are agreed—viz., the *existence* of the disease. They made suggestions, showed cause for action of some sort, and the result was an Order in Council, putting strong powers into the hands of the local authorities, to be used at their discretion, as occasion might require through the agency of an inspector, or any officer they might authorise. The enumeration of these powers, when duly considered in connection with the known capacities for discrimination possessed by local boards, and the universally acknowledged high intellectual status of their authorised officers—the police—is startling in the extreme. One almost feels thankful they are seldom carried out! and then only in an imperfect manner. In fact, being discretionary, they are worse than useless, in some instances causing serious inconvenience: for instance, his Grace tells us of a gentleman, within his own knowledge, who "could not take his dogs out with him when he wanted them for sporting purposes, because they had been kept in a place where there was a cow which had been attacked with foot-and-mouth disease." This clearly cannot be within the meaning of any reasonable Act, neither can the country be expected to put up with monstrosities of this kind. After this comes another difficulty. Ireland to the front again! Foot-and-mouth disease is said to be there, and said also to be sent here free of duty or inspection. Mr. Read says so; Professors Brown says so; so does Dr. Williams; so does Mr. Waller; and so does the Lord President of the Council. And yet, when inquiries are made, Ireland indignantly denies the imputation. The Lord President disregards this statement, and, in spite of difficulties (*mado only to be surmounted*), notwithstanding that Irish Orders in Council proceed from the Irish Privy Council, and the Irish Privy Council belongs to the Irish Government, and the Irish Government is in Dublin, and Dublin is (alas!) in Ireland, and Ireland is difficult to deal with: notwithstanding all this his Grace has declared that such things ought not to be, and that he will deal with Ireland—*to-morrow!* So far, then, we have had a bird's-eye view of the way in which we have dealt, and are dealing, with foot-and-mouth disease, now we have got it, and quite independently of fresh or continuous sources of supply. These may be classed simply as two—Irish and foreign. For Irish cattle there exist no restrictions at all: they do not come within English jurisdiction until they get to England. This is charmingly simple. When the disease arrives here we may at once deal with it as the law provides and directs—viz., if part of the cargo be found infected, such portion is detained or slaughtered, the remainder being free to any market in England. For foreign cattle there are, and have for some time been, far different conditions. When a cargo arrives they are inspected. If no disease exists, or rather is apparent, they are free to proceed to any market in England; but "if of, say, 500 animals landed in this country the disease is found to exist in

any one of them, the whole must be slaughtered at the port of debarkation." This is the Lord President's statement, and it is highly important to notice that to it he appends the definite opinion that it "appears a severe restriction." Now, this being a crucial point, and strange to say, next to the Irish difficulty, the most vexed part of the question, we are fortunate in having Mr. Forster's opinion. He tells us that, "if the difference in the treatment of the seller of foreign cattle and the seller of home cattle is so great as to throw the burden of proof upon the foreign importer too much, the present provisions cannot be kept up;" but, in a consideration of the question, it must not be overlooked that "every animal with the disease is a centre of infection"—which may be fairly interpreted to mean that, in the face of so many apparently conflicting interests, he would rather not say what he really did think. It remains to inquire, What are the consequences of this disease? There is great diversity of opinion on this point. Some say it results in the loss of millions sterling, whilst others think it so trifling as not to be appreciable. One agricultural speaker says, "if the animals do not get over it in four days they *ought to*." Another says that usually it causes "no loss," the animals are "not a penny the worse for it," and "pick up ground faster than they lose it." Our own practical experience has been that animals do not usually die of the disease, but they do not infrequently die, or have to be destroyed, from its effects. When they are in good condition, and are in circumstances of comfort and plenty, with careful, judicious management the loss and inconvenience may obviously be reduced to a minimum; but when the disease affects stock in low condition, and its tendency to become virulent is fostered by unsuitable food, exposure, unintelligent treatment, and culpable neglect, then the result may reasonably be expected to be a loss which in some instances would be lessened by the animals dying outright. We have had it amongst dairy cows. In some the secretion partly ceased, in others entirely so; some have lost one quarter of the udder, one had to be destroyed. We have had it amongst bullocks that were being stall-fed, and nearly ready for market. They had it in a comparatively mild form, and yet they lost flesh, they lost "touch," and the market for which they were intended. The extra time and food was thrown away; they lost time and money. More than this, they consumed food that was intended for others, thereby throwing all our arrangements out of gear. Let us hear what Professor Brown says (in 1859): "Although mouth-and-foot disease is not in its ordinary form a fatal malady, an animal affected with it in its virulent form is a pitiable object; and there is no doubt that the amount of suffering endured is often excessive, from the partial separation of the hoof, and the extensive excoriations of the membrane of the tongue and mouth. Even when the vesicles are neither numerous nor large, there is often present an irritable condition of the mucous membrane, accompanied with exudation beneath the epithelium, causing it to become loosened and fall off, leaving the sensitive parts exposed. A painful instance of this accident occurred a short time ago. While the attendant was endeavouring to secure a diseased animal's tongue, in order that it might be examined, the entire cuticular covering of the anter or part of the organ came away in his hand, leaving the bleeding membrane exposed, and causing the animal to tremble with pain. . . . Between the mild form of the disease, and the most virulent, there are an infinite number of grades which depend upon constitutional peculiarities and variation of surrounding circumstances. Sometimes the bursting of the vesicles is followed by ulceration and extensive loss of structure. The hoofs slough off, and even the ligaments of joints in the vicinity of the foot become disconnected from the bones, causing open joints. Deep abscesses form in the mammary gland, the secretion of milk is almost or even entirely suppressed, and the acute disease degenerates into a low fever, which continues for a long time, inducing debility and extreme emaciation, and in some cases ending in death. . . . In ordinary instances the duration is not more than a week, but after the disease has begun to decline, there is a period of convalescence of some length, during which the animals suffer from debility. When the appetite is quite restored the improvement is very rapid, and, as in the case of febrile diseases generally, the recovered animals thrive more than the healthy beasts which are placed under similar circumstances of feeding and management. A second attack of the disease is not an uncommon occurrence. . . . Some animals have been known to suffer a third time

. . . To prove how great a loss is constantly being sustained in consequence of the ravages of this malady, it is only necessary to refer to its effects. First, there is the diminution of the quantity of the milk, which varies according to the severity of the attack. . . . The general loss will vary from one-third to two-thirds the usual supply. . . . Again, the deterioration of the quality of milk, and its poisonous action upon young animals, are even more serious than the diminution of quantity. . . . Loss of condition is another ill consequence which affects the grazer even more than the dairyman. The excessively infectious character of the disease, and its rapid extension to nearly all the animals on a farm—cattle, sheep, pigs, and poultry—must be placed among its objectionable peculiarities, and the list is completed by the addition of certain *sequæ*, which often render valuable animals entirely useless; for example, loss of hoofs, sloughing of ligaments, mortification or induration of the udder, or a portion of it, inflammation of the tongue (*glossitis*), and sometimes induration of that organ. In fact, taking a comprehensive view of all the circumstances, it may be asserted with truth that no disease of the lower animals is more deserving of serious attention than is the mouth-and-foot complaint." These results are certainly serious, if regarded only in a monetary point of view, but there is a social point of view, that we have not yet considered. If the statements we have just read are as applicable to the disease as it exists now as they were to the disease as it existed when they were written in 1869 (as may be affirmatively proved any day, and if it can be proved that from that time to the present, and at the present, no earnest, practical, exhaustive attempts have been made to root it out, as results prove affirmatively, then the legislature have been guilty of a neglect which has entailed results which are a disgrace to humanity. This will probably be regarded as mere sentiment. Very well, let us take another social aspect of the question that perhaps will not be considered open to that objection—the public health. May the flesh be eaten with impunity? Experience, so far, says yes, providing always that it be properly cooked, a proviso which necessitates meat being exposed to a temperature at which morbid products of disease, (*psorosperms*), and even the cysts of that dreadful parasite, *Trichina Spiralis*, are practically found to be rendered innocuous, or destroyed. This question is entirely out of our province, and we leave it in the hands of professional men who are giving their attention to it. But there is, or appears to be, sufficient of *prima facie* danger in the fact of a febrile fever having raged in the blood of an animal to make us uncomfortable about its flesh, even when properly cooked. One cannot help being frightened even at shadows after the awful disclosures of Dr. Spencer Cobbold with regard to internal parasites. At all events there is sufficient of *doubt* about the matter to warrant us in saying it should at least act as an incentive toward the extirpation of the disease. Then there is milk. It will be needless to recount the very many ways in which milk plays a conspicuous part in the economy of nature. How greatly the rate of mortality amongst children is in direct proportion to the conditions of its supply. How necessary it is to the invalid. How largely it is an absolute necessity to rich and poor, and how greatly our well-being, comfort, and to some extent luxury, depends upon it. A shortened supply, then, becomes something more than an inconvenience, and an expense. But how shall we estimate the deleterious effects of *impure* milk? Listen again to Professor Brown. "Specimens of milk obtained from cows in various stages of the disease have been submitted to microscopic inspection repeatedly, for the purpose of ascertaining, if possible, whether or not any change seems in the constitution of the fluid likely to be injurious to the health of those who partake of it. . . . There were invariably found large granular cells, or white corpuscles, having the general character of the pus globule. The milk from one cow was examined from the commencement to the termination of the disease, and for three weeks after recovery, and it was observed that the pus-like bodies remained during the whole time. At the worst period of the affection the bodies were numerous, and as the disease declined they became fewer in number; but some were seen on the last examination, three weeks after recovery. Mounds and Bacteria were also detected in every specimen, and these bodies remained unaffected, either in their form or rapidity of movement, by boiling. . . . Milk taken in the evening from diseased animals, gave evidence of the commence-

ment of decomposition on the following morning; this was, in some measure, due to the high temperature which prevailed during the time the observations were made. When boiled the milk remained good for four-and-twenty hours, under the same circumstances, and at the same time. . . . What influence the numerous pus-like globules and granular cells, with the living organisms in the form of Mounds and Bacteria, may exercise upon the health of the human subject, it is impossible, in the absence of direct experiments, to determine; but the evidence in respect of its effects upon the young of the lower animals, is very conclusive. Professor Simonds lost three valuable calves in one day by allowing them to suck a cow suffering from the disease in an early stage. He also produced eczema in pigs, by giving them milk immediately after it has drawn from a diseased cow. Continental observers also allude to instances of the poisonous action of the milk on young animals. . . . There is too much reason to apprehend that, to the young of the mammalia in general, the milk from cows affected with foot-and-mouth disease is highly deleterious. . . . The abnormal condition of the secretions may be a subject full of interest to the pathologist, but it is sickening to know that such morbid matter is used to swell the general bulk of the morning and evening *quantum* of milk which is supplied to the population, who, if any suspicion is aroused are quite reassured by the dairyman's entirely romantic statement, that 'when cows have the disease all the milk dries up.' Surely, "Simpson" is preferable to milk from diseased cows, provided both sources of that compound be pure, perhaps under any circumstances, for it would be hard to show the water to be the most dangerous of the two. Be that as it may. Much has been written about the matter since 1869, and what we wish to point out to our readers is the undeniable fact, that the Privy Council had this identical information before them from that time to the present,—that Professor Brown is still their professional adviser—and that foot-and-mouth disease *remains*. Is nobody to blame for this? Now, by way of reporting progress, we have seen, so far,

- 1st. That foot-and-mouth disease *exists*.
- 2nd. That there are certain restrictive measures in operation in England under control of the Local Authorities.
- 3rd. That we may obtain a fresh supply of it from foreign sources, provided there is no indication of it when the animals arrive here.
- 4th. That we may obtain *infected* animals *ad libitum* from Ireland. *Affected* animals being allowed only so far as the port of debarkation.
- 5th. Inspection has failed even to check it.
- 6th. *Ergo*—Inspection is to be relied on in future!

Thus far we have not taken into consideration any of the difficulties attending legislation on this question of foot-and-mouth disease. But we have not ignored them, and it is our wish to give the attention that is their due. In doing so, we shall have to notice anomalies of quite as startling a character as those already specified, and perhaps the greatest anomaly of all is that the interest of the community at large cannot in this matter be seen to be the true interest of the individual. It is not to be supposed that any one class directly interested should willingly and voluntarily offer themselves up as a sacrifice for the benefit of society, neither do we see that such a thing is necessary; but we do see that it is the duty of all classes concerned to submit promptly and cheerfully to such share of inconvenience as may be awarded them by a thoroughly effective measure for the public weal. If all were ready and willing to do their duty, very little of difficulty would remain; but, instead of this, we have abundant proofs that in very many instances the vociferous appeals to the Privy Council are dictated by party-interest alone, and sometimes in direct antagonism to the public good. For instance, London is largely dependent on foreign supplies of meat. Meat to the consumer is dear. When cargoes of infected animals are slaughtered at Deptford certain parties are inconvenienced, and, under existing circumstances, certain losses accrue to consignors. When this is represented to be one of the principal causes of the high price of meat, a loud wail is at once set up by the daily press, and the Privy Council is clamorously petitioned to allow *infected* animals to go throughout the length and breadth of the land, slaughtering only the *affected* portion of the cargoes at Deptford. Can such a proposal as this be dictated by a desire for the good of the *community*? We should think not; certainly not if the probable result were clearly understood.

And yet men of high position and unquestionable honour and integrity of purpose listen to this proposal. Mr. Forster is undecided about it; at least, we attach that meaning to his words in good faith. The Duke of Richmond says distinctly that he considers the restriction a severe one. But if a cargo of 500 animals contains one affected animal, how are we to form an opinion which animal or animals out of the remaining 499 are free from infection, or if any of them are? Will inspection do it? Not unless it is of a very different kind to that with which we have become acquainted. We believe it to be out of the power of the best possible inspection. Again, can it be for the interest of the community that diseased cattle should be allowed to come here from Ireland without restriction? Another anomaly will be found in the fact that English agriculturists are divided in opinion, to an incredible degree, respecting the matter. Some are satisfied with things as they are, others would have all restrictions removed, so as to have perfect free trade amongst animals and disease too; but several classes are represented by the term Agriculturist. Then, again, we shall find classes with directly opposite intentions and apparent interests, fighting madly against each other, and shouting the same battle cry, "Cheap meat!" whereas, if that really be their desideratum, they are obviously seeking it in diametrically opposite directions. Cheap meat—that is, meat at a price proportionately lower than other articles of food—has had its day in England. We consider what is called the "high price of meat" is due to the demand for it having increased in a disproportionate ratio to its supply, and that foot-and-mouth disease can only be charged with being accessory in a very much smaller degree than is generally supposed. But of this we will speak presently. Let us consider the various classes who are directly interested in the matter, regarding the community at large, as consumers, to be indirectly interested, yet as being directly interested in any question that exerts any influence whatever on the price of food. Beginning at home, there is the breeder. The man who spends his time, money, and intellect in the breeding and rearing flocks and herds, cannot reasonably be supposed to sanction any measure that would be likely to bring disease to his premises. He is a seller and producer of animals, not a buyer beyond the requirements of a change or replenishment of blood. He does not endanger his neighbour's property, and simply asks that his neighbour shall not be allowed to endanger his. He considers himself of sufficient importance to his country to be entitled to protection from foreign evil, and as far as possible from home danger too. Breeders dispose of their produce at periodical fairs mainly, therefore fairs are a necessity and a convenience to them. If it could be shown that fairs and markets must be temporarily closed as part of an effective measure to stamp out the disease, would these men—this class—be likely to agree to it? We think yes, almost to a man. Next come graziers, and stall-feeders, occupiers of grass farms and arable farms. We may take the two together, as one class. They are buyers of home and Irish bred store stock in the spring and autumn (we were not aware, until reading the speech of the Lord President of the Council, that foreign store stock occupied any appreciable position in England, except as dairy animals). These men buy and sell largely in fairs and markets more or less throughout the year; it is, therefore, of the greatest importance to them that markets and fairs, and ships and trucks, and inspectors, should be free from infection. They know them all to be saturated with it; but would they agree to a stoppage of fairs? We expect some would and some would not; just as they might be situated at the time of the proposed cessation. They are all pretty much of an opinion about Ireland, and have all an idea that we should not import any more disease at present from abroad; still, we are inclined to think that, as a body, they would agree to it. Next come cattle-dealers, and, as they are very frequently graziers as well, we may consider them as representing a divided interest. In case of a cessation of fairs and markets, the larger dealers would do about the same business as before, acting as commission-agents, inasmuch as animals would change hands to about the same extent as before. We are not supposing a stagnation of trade, therefore we may suppose the comparatively few large dealers would vote for such a measure, and the great bulk of smaller men would vote against it. Butchers we may divide into town and country. The town butcher has virtually but one market, and very naturally he is opposed to any measures which tend to give him an uncertain supply in that market. Hand-to-mouth, regular supply, at times price, is the foundation upon which he builds

his trade. He cares nothing about disease, very little about price—he can charge accordingly, all he wants is a regular supply. He will not object to any measure, for any purpose, so long as you fill his market regularly; you may draw a cordon round it, and stop all the country fairs and markets; but if there is any uncertainty with regard to his supply, he will object to everything. The country butchers, remembering with fond regret the good old times of the cattle plague, would probably not object to having things a little more in their own hands for a short time; but farmers are getting better generals than they used to be, their pockets have become lighter and their wits keener, and auctioneers and salesmen have become butchers' bankers, in consequence of those butchers who did not retire after the cattle plague era not having had an opportunity of doing so since. We may safely say that, as a class, both in town and in country, they are greatly averse to restrictions, and very apt to evade them if possible. Salesmen coming between the farmers and the butchers, and having to study the interests of both, may reasonably be supposed to be in favour of temporary restriction, however severe, with the ultimate view to the removal of all impediments to the trade. During the time they would still be the agents of both classes, but in a different manner. Foreign consigners of cattle are, of course, anxious to secure a good market; they cannot be supposed to be in favour of measures which cause them loss or inconvenience. They would not be affected by our internal regulations, but we are decidedly of opinion that arrangements for the slaughter of all foreign stock at the ports of debarkation would be favourably regarded by consignors. These, then, are the classes who are interested in the provisions of the Contagious Diseases (Animals) Act, and we have endeavoured to form an opinion as to how they would be likely to regard any very restrictive measure. All classes alike are consumers, and, as such, are on common ground, and should be alike subservient to the common good. Should the breeder be disregarded to serve the interest of the butcher and dealer? Should the latter be impeded in their business, harassed and annoyed by needless and vexatious half-measures? Should the consumers in large towns and manufacturing districts be considered to the detriment of the consumers in the country—the country at large? We think not. And yet this is what many are asking for. The farmers, as a whole, desire in some way to be protected from the disease; but a portion of their number do not care very much about it, and would rather let things remain as they are than be put to any very great inconvenience. The other classes engaged in the trade in animals may, as a whole, be said to be averse to restrictive measures; and the public—those who are not directly interested either in agriculture or the trade in animals—do not care about the matter at all, excepting that they have been by contending parties persuaded that something must be done before they can expect to have "cheap meat." The other day a deputation waited on Mr. Forster, M.P. They wanted to know why meat was so dear. The right hon. gentleman told them he could not exactly say. He was not at all surprised at the question, and should rather like to know himself. But one thing he tried to impress upon their minds—viz., that "he did not believe any one of the restrictions upon the foreign importation of cattle had so much to do with it as was generally supposed, nor did he think the particular restriction of slaughtering at Deptford had as much to do with the rise in the price of meat as was imagined." With this sentiment we most cordially agree. Mr. Forster points out, that in proportion to late years the importations have not diminished, and this is a significant fact. Yet it is openly said that foreign supply is checked, and home producers have raised the price of their article in consequence. This is quite out of the producers power to do. When his animals are ready they must go. They make the times price, which depends upon supply and weather. The difference between town and country in this respect is very great, and one of the most patent of all the anomalies of our subject is that London conditions of supply and demand being daily ventilated by the press, are in consequence, taken to represent the country at large. A most erroneous impression prevails respecting the relative proportion foreign meat bears to that produced at home, in respect to the total consumption of the country. We have often asked the question, and have found replies to vary from a moiety to three-fourths. This idea obviously is derived from metropolitan returns. In the absence of positive information, we may obtain an approximate idea by estimating the total

foreign supply to be equal to the total consumption of London. This would make it about 12 per cent. of the whole. But we doubt that it would do so, and are inclined to think 10 per cent. considerably in excess of the actual truth. London has many claims upon the provinces, but not we think to the extent that the agricultural interest of the entire country should be sacrificed to feed her four millions of people. That is what it really amounts to. The country, *per se*, is self supplying, and does all it can to supply London and the manufacturing districts. These markets are to be supplied; and the demand now is, that if a portion of the supply of London can be spared for the manufacturing districts it is to be sent—*disease and all*. In other words they ask to be allowed to send a portion of a diseased cargo, all over England! May the Privy Council forbid! Let us look into this London trade a little. Those who want statistics and averages can see them every week in *The Mark Lane Express*, and other papers. We need only speak generally. There is a sufficient, and tolerably even supply of live stock from home districts and foreign ports according to the various seasons of the year. A large proportion of the carcasses to be seen every morning in the Dead Meat Market is slaughtered in London. Bought alive, and sold dead by the meat salesman. Dead meat is sent from various parts of England and Scotland; also from Holland. There is always *enough*, sometimes too much. Now, how does the country producer stand affected by this state of things? We can speak from experience. We have ready, say a score of good bullocks. We watch our chance as well as we can. We take advantage of promising weather, and we send them for the following Monday's market. Monday comes, and so does a mild choking fog. The Dead Meat Market is full we are told, and we know meat won't keep. The butchers buy dead meat largely at low rates, and live cattle sparingly; until late in the day their offers are accepted; and next morning we receive a cheque from the salesman about £50 less than we expected, and an assurance from him that he has done the best he could for our interest, which we do not for a moment doubt. This does not always happen, but it *does* happen, sometimes oftener than we like, and it *may* happen any market. Take another instance. The Lord President's hypothetical cargo of beasts arrive at Deptford. There are 500. One is affected. All are slaughtered there (where there is every convenience and accommodation). What is the result of this? Mr. Forster says they are simply slaughtered *there* instead of at various other *abattoirs* in and around London. And this is the simple truth. The supply of food they represent ultimately reaches the consumers at exactly the same price it would have done had the animals reached the Metropolitan Market alive. But there is a loss. Oh yes! Large contractors and salesmen step in, buy "the lot" at emergency price, and butchers are shut out. Butchers and consignors lose this time. Contractors and salesmen win. In the former instance butchers and contractors won, and *we* (country consignors) lost. We contend that in neither case do the public, as consumers, reap either advantage or detriment. A short time ago, to our certain knowledge, when a dismal cry was being raised by the London press about the price of meat, and the prospect of the future, *at that very time*, supplies were so good *numerically*, and the weather so bad, that anything short of the prime quality was worth very considerably more in the country than it was in London. And such is frequently the case. In fact, the demand being strictly hand-to-mouth, and subject to the influence of the weather, any violent fluctuation of supply brings a corresponding fluctuation of prices. These variations do not affect the consumer, and as a rule the retail price of meat is fairer than in the country, inasmuch as there is a quarter difference between the price of prime and rough. To sum up, those who are engaged in supplying London with live stock or dead meat, meet with serious losses, and as a rule "do not get very fat at it." We have heard it called a "cruel trade," and certainly do not consider the term a misnomer. In the country, on the average, meat is as dear as in London. Labour of all kinds is paid for at a higher rate than formerly, and more animal food is consumed. Not only so, but the classes who used to be purchasers of inferior joints, now buy the best, because (especially in the country) it is the cheapest. Steaks without bone, and chops with superfluous fat trimmed off, is the class of meat most in request by the artisan class. When what may be termed the working classes can afford to pay the butcher to trim their mutton chops, and charge them a price that enables the trimming to be sold for tallow at a price rarely exceeding 3d. per lb., we

may fairly ask the question if the butcher cannot send his inferior joints to gentlemen's houses what is he to do with them? Depend upon it there are causes operating on the price of meat that do not appear on the surface. Country towns, then, with the exception of certain large centres of industry, are dependent on the home resources of the country, and have not the advantages of a foreign supply. If their markets are glutted, the superfluity is sent home again to wait another demand. Nearly thirty millions of people are fed in this way. Are their requirements to be disregarded while providing for the convenience of London? During the last few years adverse seasons, and the fear of disease have had the effect of sending a large bulk of our home-bred stock to market in an unfinished condition. This is a great loss to the consumer, and if the present price of stores is any criterion we have quite as many as we can do with. Sheep are an exception; good stores are very dear, being constantly sent forward as three-parts-done mutton at a high price. But sheep are produced more rapidly than bullocks, and a turn in the tide may shortly be expected. Therefore, with due deference to the opinion expressed by the Lord President of the Council, we may safely leave out of consideration, for the present, any question relative to the importation of foreign store cattle.

We have not as yet referred to pleuro-pneumonia, and a short notice will suffice. It appears to have been imported in the year 1842. In 1865 Professor Murray says, respecting it "having been introduced into Australia, the legislature of Victoria has lately passed an Act authorising the Government inspectors to slaughter all cattle affected with pleuro-pneumonia, and it is to be hoped that the success of the measures adopted in Australia may lead to some method being adopted in Britain, to extirpate, if possible, a disease which has caused such immense loss to agriculturalists." We quote this for its significance. The cattle plague came, and its machinery has been since used with certain modifications for pleuro, with tolerable success, so far as home centres of the disease are concerned. Affected animals are slaughtered, and their infected companions isolated. Ratepayers make good part of the loss occasioned thereby. But importations of pleuro-pneumonia from foreign ports stand on the same footing as foot-and-mouth disease, and from Ireland we can and do obtain any amount of it without the slightest difficulty. *The Times* characterises this as a simple "defiance of reason and justice," in which sentiment most of our readers will agree. Diseased animals are allowed to be sent to us from Ireland, and when we get them, we have to pay for their being destroyed! If this were not monstrous it would be almost laughable. Mr. Read tells us that nearly nine-tenths of the animals grazed in Norfolk are of Irish origin, and that £6,000 was paid last year in Norfolk alone for compensation. The Lord President of the Council and Mr. Forster both attach great importance to this malady—they both say so. It is interesting and instructive to know that in Ireland, at the present time, there exists a machine for dealing with pleuro, and it is worked—Heaven bless the mark!—by a policeman! The Duke of Richmond tells us that "in Ireland the persons who carry out the Act are not gentlemen selected for the duty in consequence of their veterinary knowledge, but policemen. The Irish policeman is the authority who gives the order for an animal to be slaughtered, and the compensation for all animals slaughtered by order of the policeman comes, not out of a local, but out of a general rate." Before commenting upon this startling information, it will be well to remember that in England there exists a Contagious Diseases Act other than that for animals, and this terrible engine is also driven by a policeman—a man chosen for his inches and not for his intellect. Surely the next step may likely be to set him to direct and control the Bank rate of discount!

Our subject cannot be closed without a retrospective glance at the cattle plague. It made its appearance in 1865, and Professor Simonds, who knew it well, at once sounded the trumpet of alarm, and—was laughed at! It spread with fearful rapidity. "2,000 cows perished before it was a month old." People were frightened. The Privy Council, goaded to madness, issued order upon order, like *bulletins* from the sick chamber of a king. They began to slaughter all animals affected with the disease. No avail. The plague emptied cow-houses, destroyed herd after herd of animals—the work of many a man's lifetime. The Privy Council were in despair, and advised a commission to ascertain *the origin and nature of the disease!* Meanwhile it raged with increased fury. The commission reported and advised; the Privy Council, as



usual, were afraid to act; so they transferred the power to local authorities, exactly as the Privy Council have recently done with regard to foot-and-mouth disease, and the result was a cessation of action, and fearful increase of disease. It began to double, like the old story of the nails in a horse's shoes. Then came curative measures. All sorts of things were tried, from homoeopathy to onions. Still it increased! 12,000 cases per week! And then came the simple remedy—the poleaxe for affected cattle and infected centres—a short reign of terror—blood and cold steel. Grass grew in the market-places, and the cattle plague became a thing of the past. May it long remain so! We have condensed this report from an excellent article on the cattle plague written by Mr. Howard Reed, and published in the Royal Agricultural Society's *Journal*, 1866, and our own recollections are vividly refreshed thereby, although we were not sufferers. He must have had a presentiment of future evil when he remarked that he was writing, "not only for the present inquirer, but also for him who years hence may find ready access to the pages of this *Journal*, when Orders in Council, Acts of Parliament, and the ephemeral publications of the day are thrust into a corner, and buried beneath the dust." We have seen, in our consideration of the working of the Contagious Diseases (Animals) Act, that nothing short of a national calamity will incite the Privy Council to energetic effective action. In the case of the cattle plague the country suffered measurable loss before they adopted the simple remedy that was pointed out to them from the first; and in the case of the so-called lesser evils of pleuro-pneumonia and foot-and-mouth disease effective measures have never yet been taken, in spite of experience, warnings, and entreaties. The supposed interests of *land-revellers* agriculture have always gained the day. We can account for it no other way. The idea of culpable neglect is ungenerous, and we trust unjust. Yet we cannot shut our eyes to facts and results; we must be just as well as generous. If they can explain, we will gladly listen, provided they *do something* meanwhile. Their professional adviser said, *several years ago*, "If a tithe of the energy which was displayed in extirpating the cattle plague had been directed to the eradication of the foot-and-mouth complaint, we should long since have ceased to regard it as one of the inevitable disabilities of grazing and dairy farming." Shall it be said, then, that the evils of to-day are the result of a want of energy? If so, it is a shame and a disgrace to the nineteenth century. Mr. C. S. Read has spoken out on this matter, and got rebuked for it. He dared to make manifest some very unpleasant truths, which apparently were not wanted, especially Irish truths, and altogether proved himself an *enfant terrible* in the Government "little party," and the course he has taken has met with the acknowledgment and approbation it deserves from agriculturalists. We believe that the first step should be the compulsory slaughter of all foreign fat stock supplies at the ports of debarkation, as Mr. C. S. Read advises. This course was adopted at the cattle plague era, and again and again has it been urged upon the Legislature ever since. This, with efficient inspection, disinfection, and careful management of hides and refuse would keep us practically free from imported disease. Convenient *abattoirs* should be built at the various ports, or enlarged where they already exist. Proper rolling stock should be provided by the various railway companies for the conveyance of carcasses. Special rates for special markets would follow, and we believe that the dead meat would travel both winter and summer, with less actual loss than accrues from the transit of live animals, whilst the advantages of foreign meat would be extended to every town in England where it might be required. The consignor would also secure a certain market. Butchers would object on the score of offals, but offals will travel as well as carcasses, and special rates must be provided for them. Sooner or later we believe this must come. Why not at once? It must not be forgotten that these are not mere postulates—it has already been done, so that there is no question as to its possibility. But when the cattle plague ceased the trade drifted back into its old channel. There was the mistake: it should never have been allowed to do so. With regard to pleuro-pneumonia, we would suggest that not only affected animals should be slaughtered, as at present, but that the infected centres should also be destroyed, and so stamp it out like cattle plague, both in England and Ireland. For foot-and-mouth disease we believe that, simultaneously with the stopping of the inland transit of foreign cattle, should be a complete cessation of fairs

and markets throughout England, Scotland, and Ireland, excepting London and certain large towns where such *centres* should exist that should be found effectual. No half-measures nor half-time. Then go to the Lord President of the Council for inspectors. Let us have as many new booms as may be found necessary to make a clean sweep of it. Let them not be policemen but "gentlemen selected for the duty in consequence of their veterinary knowledge." Let them be appointed by the direction of the Veterinary Department of the Privy Council, and not selected by any local authority whatever. Let them have a sufficient staff of competent assistants, and then let no animal be removed without a clean bill of health—not only as regards the animal or animals themselves, but the farm or place from whence they are to be removed—value not less than fourteen days—signed by the inspector of the district. Then let us have more of the Lord President's travelling inspectors, not only four, but as many as are needed (with a staff of assistants) to see that ships, cattle trucks, pens, wharves, &c., are thoroughly cleansed, and the manure from lairs and all hides and slaughterhouse refuse from *condorned* markets properly disinfected; and let all parties concerned give their hearty co-operation towards the carrying out of the restrictive measures, discarding Lord Kinaird's advice and example, in turning animals "into an infected field in order to catch the disease." Quarantine is most effective when carried out at home. This would be provided for, but in the case of Irish stock cattle a further quarantine and isolation should be carried out after importation. If foreign stores of any kind were needed, during the time, and at all times, there should be certificates of quarantine previous to their starting, and of the thorough cleansing and disinfection of the ship, or they should not be allowed to land. When at their destination they should undergo a period of isolation and quarantine as in the case of Irish cattle. Inspection is of the greatest value, used rightly, but it is worse than useless to spread disease and then *inspect* it. The measures we have suggested are severe, but we believe they would be effectual. At all events, they would not fail for want of being *thorough*.

We have tried to lay the subject before our readers in its entirety from a belief that it is of far more importance to the country at large than is generally supposed, and because we regard it as a very prominent feature in the Social Aspects of Agriculture.

January 1st, 1876.

G. T. T.

WARWICKSHIRE CHAMBER OF AGRICULTURE.—A meeting of the members of this Chamber was held at the Shire Hall, Warwick, Mr Robbins (the chairman) presiding. On the proposition of Mr. Muntz, seconded by Mr. Horley, the chairman and vice-chairman were appointed annual deputies to the Central Chamber. A brief discussion arose as to the course deputies ought to pursue at the Central Chamber meetings. It appeared that in some instances they had recorded their votes against the decision of the chambers which they represented. No resolution was passed upon the subject, but there was a general opinion to the effect that deputies ought to sink their own views at the meetings of the Central Chamber, and support the views of the chambers which they represented. On the motion of Mr. G. F. Muntz, seconded by the chairman, Mr. Scriven, of Wormleighton, was elected on the Business Committee of the Central Chamber. A letter was read on the subject of local taxation from Mr. Arthur Startin. Some little discussion ensued, after which the following resolutions, which are to be discussed at the approaching meeting of the Central Chamber, were approved: "That, in any reform of local government, it will be desirable in every district to bring all Poor-law, sanitary, and highway administration under one authority, and to constitute in every county a Representative Provincial Board. That, in all elections of local authorities administering rates, the voting qualification shall depend on the payment of rates by the electors, and that the scale of voting shall be that adopted in the Act 7 and 8 Vic., cap. 101." On the subject of contagious diseases amongst cattle, the Chamber expressed its opinion that the rules and regulations in force for the prevention of such diseases should be uniform throughout the United Kingdom. Lord Leigh moved the

following resolution, which had been proposed by him at a former meeting, but not carried: "That further encouragement, by grant, should be given to night-schools, and that attendance at such schools should be equivalent to attendance at day-schools, in the case of children over ten years of age." This was seconded by Mr. G. F. Muntz, and adopted. The following resolution was also carried, on the proposition of Mr. B. Congreve, seconded by Mr. T. Horley: "That the s

Chamber considers the step taken by Mr. C. S. Read, in resigning the office he held in connection with the present Government, because he considered that the interests of the tenant-farmers of England were suffering materially from the action of the Government on the subject of cattle disease, was highly creditable to him; and this Chamber trusts that its members will subscribe generally to the testimonial which it is intended to present to him."

## THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

MONTHLY COUNCIL: *Wednesday, Feb. 2, 1876.*—Present: Lord Chesham, President, in the chair; the Duke of Bedford, Earl Cathcart, the Earl of Lichfield, Lord Skelmersdale, Lord Vernon, the Hon. W. Egerton, M.P., Sir Massey Lopes, Bart., M.P.; Mr. Amos, Mr. Aveling, Mr. Aylmer, Mr. Booth, Mr. Bowly, Mr. Cantrell, Mr. Dent, Mr. Druce, Mr. Evans, Mr. Frankish, Mr. Brandreth Gibbs, Mr. Hemsley, Mr. T. Horley, jun., Mr. Hornsby, Colonel Kingscote, M.P., Mr. Leeds, Colonel Loyd-Lindsay, M.P., Mr. McIntosh, Mr. Martin, Mr. Milward, Mr. Pain, Mr. Pole-Gell, Mr. Ransome, Mr. M. W. Ridley, M.P., Mr. Rigden, Mr. Russell, Mr. Sanday, Mr. Stratton, Mr. G. Turner, Mr. Wakefield, Mr. Wells, Mr. Whitehead, Mr. Wilson, and Professor Simonds.

The following new members were elected:

Baird, Jonathan P., Chipperfield, Rickmansworth.  
 Bell, Thomas, Hedley Hall, Marley Hill, Durham.  
 Brook, Samuel Edwin, Park Farm, Ryde, Isle of Wight.  
 Cardus, John, Town Hill, West End, Southampton.  
 Carlisle, Thomas P., Merlewood, Grange-over-Sands, Carnforth.  
 Cattle, James, Warter Wold, Pocklington, York.  
 Cook, Thomas, Taddington, Wincoboe.  
 De Vitre, Rev. George Edward Denis, Keep Hatch, Wokingham.  
 Dickinson, William, Riccall Hall, York.  
 Drewitt, William, Lea Farm, Bramley, Guildford.  
 Fawkes, Algernon, 2, Seymour-street, Portman-square, W.  
 Feuton, John, Frenchfield, Penrith.  
 Gow-Stewart, Herbert J. S., Fowler's Park, Hawkhurst, Kent.  
 Grainger, Francis, Fir Tree Bank, Abbey Town, Cumberland.  
 Green, James John, Great Parndon Harlow.  
 Griggs, James, South Creak, Fakenham.  
 Hall, Jonas, Low Field, Pierce Bridge, Darlington.  
 Hart, George, Cones, Harlow.  
 Heath, Admiral Sir Leopold George, K.C.B., Austie Grange, Holnwood, Surrey.  
 Hodges, James O., Penny Hill, Bagshot.  
 Jefferson, Joseph J. G., Dunnington, Thicket Priory, York.  
 Jones, Henry, Apeshall House, Littleport, Cambridge.  
 Kendall, James, Harbarrow, Ulverstone.  
 Kent, John, Whyke, Chichester.  
 Lee, Henry, Emsdon, Shrewsbury.  
 Lyon, Charles Edward, Johnson Hall, Eccleshall, Staffs.  
 Lytton, the Hon. Robert H., Hagley Hall, Stourbridge.  
 Mackay, Hugh, 155, Fenchurch-street, E.C.  
 Marshall, James W., Blanch Farm, Pocklington.  
 Morris, Edwin John, Gwernaffell, Knighton, Radnorshire.  
 Noakes, Charles, East Farleigh, Maidstone.  
 Satchwell, Thomas, Hernefield, Knowle, Birmingham.  
 Startin, John, Brizlincote, Burton-on-Trent.  
 Taylor, Richard, Sidney House, Wellington, Salop.  
 Tindall, Charles William, Aylesby Manor, Grimsby.  
 Tomlinson, James, Luton Marsh, Long Sutton, Lincolnshire.  
 Trevilian, Edwin C., Correy Rivel, Taunton.  
 Trehewy, Henry, jun., Slscoe, Amphill, Beds.  
 Turnbull, Thomas John, Wimborne, St. Giles, Salisbury.  
 Venning, John, Treblethick, St. Mabyn, Bodmin.  
 Wearing, Allen, Birkby Hall, Cark-in-Cartmel, Grange-over-Sands, Carnforth.  
 White, John, Morthen, Rotherham.  
 Williams, William, Blacon House, Chester.  
 Wudus, Edward Ernest, Passmore, Great Parndon, Harlow.  
 Woolnough, Charles, Ceres Iron Works, Kingston-on-Thames.

FINANCES.—Col. Kingscote, M.P. (chairman), presented the report, from which it appeared that the Secretary's receipts during the past two months had been examined by the Committee, and by Messrs. Quilter, Ball, and Co., the Society's accountants, and were found correct. The balance in the hands of the bankers on January 31 was £1,078 9s. The balance-sheet for the quarter ended December 31, 1875, and the statement of subscriptions and arrears were laid upon the table, the amount of arrears then due being £684. The Committee reported that 99 members had given notice of withdrawal during the year 1875. The report was adopted.

JOURNAL.—Mr. Dent (chairman) reported that the spring number of the *Journal* will be ready for distribution in the course of the present month. The Committee recommended that the *Journal* of the Society be exchanged with the editor of the *Annales Agronomiques*, a quarterly journal of agriculture, published under the auspices of the French Minister of Agriculture and Commerce. This report was adopted.

EDUCATION.—The Duke of Bedford (chairman) reported the recommendations of the Committee as follows: (1) That the next Senior Examination of Candidates for the Society's prizes and certificates shall take place at the Society's rooms in Hanover-square, on Tuesday, April 11th, and four following days; and (2) That the regulation, No. II., relating to the Junior Examinations, shall be "That ten scholarships, of £20 each, shall be given on condition that the scholar spend the ensuing year at a school, or with a practical agriculturist (to be approved by the Education Committee), or at one of the Agricultural Colleges (such as Cirencester, Glasnevin, or the Agricultural Department at Edinburgh), or partly at a school and partly at an agricultural college, or with a practical agriculturist. This report was adopted.

GENERAL BIRMINGHAM.—Lieut.-Gen. Viscount Bridport (chairman) reported that the roads leading to the main entrances to the Birmingham Showyard were being completed by the Local Board of Health; that the Secretary of the Local Committee had made an arrangement with Messrs. Swindon and Sons, of Temple-street, Birmingham, to supply a striking clock to the main entrances free of cost to the Society; and that the Secretary of the Local Committee had been requested to open a register of lodgings to be let during the period of the Show, and to inquire for a suitable house for the stewards. The Committee recommended that the Secretary of the Society be authorised to let the refreshment-sheds as usual. This report was adopted.

CHEMICAL.—Mr. Wells (chairman) reported that the quarterly report of the Committee had been read, and its further consideration postponed until the next meeting of the Committee. With reference to Mr. Randell's motion, it was stated that under the resolution adopted at the last Council meeting the following gentlemen were expected to attend on the 3rd and 4th inst., to give evidence on the subject of valuation of manures and feeding stuffs—viz., Mr. Lawes, Mr. Squarey, Mr. Huskinson, Mr. Bomford, and Mr. Martin. This report having been adopted, Mr. Wells added that the Committee had been deprived of



the advantage of Dr. Voelcker's attendance in consequence of the recent sudden death of his eldest son, and that, at the request of the Committee, he had written to Dr. Voelcker to express their sincere sympathy with him in the severe loss which he had sustained. The President and members of the Council unanimously concurred in expressing their sympathy with the consulting chemist, and in endorsing the letter written by the Chairman of the Chemical Committee.

**SHOWYARD CONTRACTS.**—Mr. Randell (chairman) reported that certain fittings had been purchased from Mr Penny, to be added to the permanent plant, instead of being hired annually, at a cost of £73 12s. 8d. The conditions of contract and form of tender had been revised, and finally settled; and advertisements had been ordered to be inserted in *The Times*, *Midland Counties Herald*, *Baitler*, *A Choice*, and *Building News*. Tenders to be delivered on or before the 23th inst. It was also recommended that another cloak-room be added to the Society's plant, and that an office for the steward of general arrangements be provided as shown on the plan. The surveyor had reported that the new passenger-station near the showyard at Birmingham is nearly completed, that the land required for the goods siding had been secured, and that the other works are progressing satisfactorily. This report was adopted.

**STOCK PRIZES.**—Mr. Milward (chairman) reported that the Committee recommended that a circular be sent to each exhibitor of cattle at the Bedford Show, asking for his opinion as to the date from which the ages of cattle exhibited should be calculated—viz., from January 1st, July 1st, or any other date. This report was adopted.

**VETERINARY.**—The Hon. W. Egerton, M.P., Chairman, reported that the following letter had been received from the Clerk to the Privy Council:

Privy Council Office, Veterinary Department,  
January 29, 1876.

My Lord, I have submitted to the Lords of the Council your letter of the 10th inst., addressed to the Lord President, applying for a special exemption from the pleuro-pneumonia regulations for the purpose of making scientific investigations. I am directed by the Lords of the Council to inform you that they have no power to sanction the movement of animals affected with pleuro-pneumonia, or of animals that have been herded with animals so affected, such movement, except for immediate slaughter, being contrary to the provisions of the Contagious Diseases (Animals) Act, 1-69. I am to add, however, that their Lordships would be disposed to entertain a special application for the suspension of Article 32 of the Animals Order of 1875 in the case of any specified animal affected with pleuro-pneumonia which the Society may desire to retain alive for the purpose of scientific investigations.—I am, my Lord, your Lordship's obedient servant.

C. L. PEEL.

The President of the Royal Agricultural Society  
of England, 12, Hanover Square.

The Committee recommended that this letter be referred to Dr. Burdon-Sanderson, and that he be desired to report upon it, as well as upon the practicability of carrying out the proposed scientific inquiries, by hiring a shed containing animals affected with pleuro-pneumonia, purchasing those animals, and obtaining permission from the Privy Council to keep the animals there without slaughter, and at the same time carrying on investigations upon the diseased organs of animals at the Brown Institution.

Professor Simonds' report upon the Health of Animals of the Farm to the end of the year 1875 was received, and the Committee recommended that it be published in the forthcoming number of the *Journal*.

The Committee received deputations from the Governors of the Royal Veterinary College, and from the Council of the Royal College of Veterinary Surgeons. The latter

propounded a scheme for the examination of students in cattle pathology, which should produce a competition between the best men educated in Scotland and England. The Committee recommended that before accepting this proposal they should communicate the terms to the Directors of the Highland and Agricultural Society, and ascertain whether they were willing to contribute half of the expense.

**BOTANICAL.**—Mr. Whitehead (chairman) reported that the report of Professor de Bary had been received, and will be published in the next number of the *Society's Journal*. This is a most valuable and exhaustive report, giving a complete history of the potato fungus and of its allies, with a critical examination of the observations and opinions of Mr. Worthington Smith. The series of experiments which has been carried on during the last two years by Professor de Bary at the instigation of the Society are fully recorded with their bearings on the cultivation of the potato. The results of his experiments and observations established that the disease persists in a dormant state during the winter in the potato tubers; and that the spores for the propagation of the disease have been produced by the mycelium growing in the potato-plants produced from such tubers. The Committee recommend that the balance due to Professor de Bary—viz., £50—be paid to him, and that the secretary of the Society invite Professor de Bary to communicate to the Society any further discoveries he may make in connection with this disease. The editor of the *Journal of Botany* having asked permission to reprint Professor de Bary's report, the Committee recommend that this be permitted, after the publication of the *Journal* of the Society. This report was adopted.

Mr. DENT then moved the following resolution, notice of which he had given at the December Council: "That at the Birmingham meeting the full catalogue shall be placed in the hands of the judges." He expressed his satisfaction that the question was now to be discussed before a full meeting of the Council after ample notice; and he had taken the responsibility of again bringing it before the Council, because last spring he had withdrawn it, upon the motion that the resolution to the same effect should be rescinded, because it was stated that the question had been decided at a small meeting of Council without proper notice. Since then the experiment had been tried in Yorkshire with complete satisfaction to all concerned—exhibitors, judges, and officials; and he felt that after the defeat of Mr. Stratton's attempt to get rid of the rule stipulating for four crosses of pedigree blood in the Shorthorn classes, it was absolutely necessary that every information should be put in the hands of the judges. If it is desirable that animals should have four crosses of blood, the judges ought to know what those crosses are; and he could not help thinking that if the judges were put in possession of full information, it would discourage the exhibition of over-fat animals at a show of breeding stock. For many years there had been as much objection taken to public judging as there now was to placing the catalogue in the hands of the judges; and so far as he could judge, it was chiefly the Shorthorn breeders who objected to the resolution which he now moved.

Mr. MILWARD agreed with all that Mr. Dent had said. He had long held the same opinion, and many years ago he had seconded a similar resolution, when it was brought forward by the late Mr. Torr. In addition to the arguments advanced by Mr. Dent, he urged that there was no exhibition where some of the judges do not know nearly all the animals, and, therefore, he was in favour of putting them all on an equality. The success of the experiment which had been made at the Yorkshire Society's show was very great, and he had not heard a

single objection taken to it. He concluded by seconding Mr. Dent's resolution.

Mr. JACOB WILSON regretted that the question had been brought forward again so soon, as, although a similar resolution had been passed last year, it was in the report of a Committee presented to a small Council. If it had been a substantive resolution placed upon the agenda, there would have been a larger attendance, and the resolution would have been rejected. Therefore, last year he felt justified in moving that it be rescinded, whereupon it was withdrawn. The feeling of the members at the general meeting in May last year was also very strongly against it; and if the Council represented the members of the Society, they ought to consider their opinions upon such important subjects. He felt sure that the judges themselves would much rather not have the catalogue; and if the exhibitors at Taunton were asked the question, he felt equally sure that there would be a majority of two to one against the motion. He also asked what would be the effect upon the smaller societies, 400 or 500 in number, which looked to the Royal for guidance. In his opinion, it would be ruin to one-half of them, as they could not afford to get judges from a distance, and the result of placing the catalogue in the hands of the judges would tell rather against their friends than in favour of them. As regards judges of Shorthorns, they could not go very far wrong, whether the judges had catalogues or not; but in the case of horses, some breeds of sheep, and pigs, there was very great jealousy. The present system had worked very well for 30 years, and he was in favour of letting well alone; at any rate, he wanted some stronger reason for adopting the proposed plan than that it had been adopted by the Yorkshire Society.

Mr. BOWLEY supported Mr. Wilson. He held that the bulk of the exhibitors were against the proposal; and he would be very cautious about altering rules against the opinion of those whom they most concern. He would rather put the exhibitors' servants out of the yard, and have the animals led into the ring by strangers.

Mr. WAKEFIELD had a very strong feeling on this question, and he rejoiced that it was now fairly before them at a large meeting after due notice. He held that to adopt Mr. Dent's proposal would be a most retrograde policy. The only reason which had been given for such a course was that the judges, or some of them, possessed partial information. It was unfortunate that this was the case, but they ought not to make it still more unfortunate by aggravating the evil. In the courts of law the juries were told to dismiss from their recollection everything that they had heard of the case, and to come to its consideration with their minds like a blank sheet of paper. The Society ought to give their judges the same kind of advice, and tell them to judge of the animals as they were brought before them. The smaller exhibitors have not the same knowledge of the judges that is possessed by larger men, and are apt to impute or fear motives, although the Council know that none exist. The experiment in the Yorkshire Society had been tried only one year, and in his opinion the result was not quite so satisfactory as others believed it to be. He felt sure that if the opinions of exhibitors and judges were taken, there would be 10 to 1 against Mr. Dent's motion, so he should support Mr. Wilson.

Mr. RANDELL appealed on behalf of the small exhibitors, as he considered that if the motion were carried, it would deter them from exhibiting. The judges ought to decide entirely upon the merits of the animals brought before them. If pedigree is of any value it should show itself in the animals. The Society ought to encourage new exhibitors; but the passing of Mr. Dent's motion would give the idea that old exhibitors would have some advantage.

Col. KINGSCOTE was in favour of Mr. Dent's motion; and he held, contrary to Mr. Randell, that if he were a small exhibitor, he would prefer that the judges should have the catalogues in their hands. The Society ought to give the judges every information, or insist upon their having none; but the latter course was impracticable, as good judges cannot help knowing half the animals that are brought before them. As a frequent judge of horses, he preferred having the catalogue given to him, even though he might not have occasion to look at it. In conclusion, he deprecated the course that had been adopted by a member of the Council, of sending out circulars on his own responsibility, asking the opinion of exhibitors in reference to a motion about to be discussed at the Council. Such a proceeding should, in his opinion, be authorised by the Council and done officially, or not at all.

Mr. STRATTON stated that he was the member of the Council to whom Col. Kingscote had alluded, and he saw nothing derogatory in the course he had adopted. He had collected the opinions of exhibitors for his own information, and he could not understand any objection being taken to it. As an exhibitor he had the greatest possible objection to the judges having the catalogues placed in their hands, and his correspondents were three to one against the proposal. If Mr. Dent's motion were carried, he felt sure that it would spoil the show. It was true that the experiment had been tried one year at the Yorkshire show, but most of the exhibitors did not know that it would be, or some of them would not have exhibited. He wanted to know in what manner a knowledge of the pedigree of an animal would assist the judges in awarding it a place according to its individual merit.

Earl CATECART agreed with Mr. Wakefield that the judges ought to know nothing of the animals except what is officially placed before them. If the catalogue formed part of that information, they would be more like librarians than judges. At the Yorkshire show last year, it was stated that one judge put the catalogue in his pocket, while another threw his over the hedge. All these questions were matters of expediency, and he held that whatever the Council did they ought to try and carry their subscribers and exhibitors with them.

Mr. RIGDEN, as nearly the oldest exhibitor, stated that if the proposed rule had existed when he first exhibited, he would have thought himself very badly treated as a young exhibitor.

Mr. DENT, in reply, thought that Mr. Wilson had not given him his due in reference to his withdrawal of the motion after it had been carried last year. He had pursued that course because he felt that there was some ground for the complaint that the matter had been brought forward rather suddenly; but when he withdrew it for the time, he stated that he should bring it forward again. With regard to the small societies he maintained that the influence of the large exhibitors at such shows was now a scandal; and as to the argument drawn from the procedure in courts of law he urged that the juries act upon all the information that can possibly be placed before them, and if the counsel, on either side, omit a point, the judge takes care that their omission shall be rectified and full information given. With regard to pedigree he held that in breeding animals it had great value; but he could understand that Mr. Stratton, and those who supported him in his motion brought forward last December, would wish to exclude pedigree from the consideration of the judges.

On a division Mr. Dent's motion was lost by 22 yeas against 13 yeas.

A letter was read from the Secretary of the Glamorganshire General Agricultural Society, enclosing the following resolution:

At the Annual General Meeting of the Glamorganshire General Agricultural Society it was proposed by Major T. Picton Turbervill, seconded by Mr. D. H. Davies, and carried unanimously, that a sum of £10 be granted from the funds of the above Society, as a contribution towards a grant of £500 made by the Council of the Royal Agricultural Society at their meeting on December 8, to the Veterinary Committee for special scientific inquiries into pleuro-pneumonia and foot-and-mouth disease, to be carried out by Dr. Burdon-Sanderson, the Professor-Superintendent of the Brown Institution.

The Secretary was instructed to return the thanks of the Council for this expression of the importance which the Glamorganshire Society attached to the proposed investigation.

A letter was read from the Earl of Dunmore, calling attention to the fact that the date fixed for the Society's meeting at Birmingham would prevent animals being sent from there to the Highland Society's show at Aberdeen, and the secretary was instructed to reply, that the date of the Society's meeting was published in November, that the prize-sheets have been already printed and largely circulated, and that the bye-laws prohibit any alteration after the monthly Council meeting in December.

Letters from Mr. H. Rigden and Mr. F. Murion, in reference to prizes for Romney Marsh or Kentish sheep, and from Mr. W. C. Spooner, in reference to prizes for cart stallions, were referred to the Stock Prizes Committee for consideration in drawing up the prize-sheet for 1877.

A letter was read from the Secretary of State for Foreign Affairs enclosing documents relating to an agricultural and horticultural exhibition to be held in Algiers from April 15 to May 1.

A copy of the Regulations, for the Agricultural Department of the International Exhibition, in Philadelphia, was laid before the Council, from which it appeared that the live stock will be exhibited as follows:

Horses, mules, and asses, from September 1 to 15.

Horned cattle, from September 20 to October 5.

Sheep, swine, goats, and dogs, from October 10 to 25.

Poultry, from October 23 to November 10.

The following suggestion, made by Mr. W. Stratton, of Kingston Deverill, at the general meeting of members in December, was laid before the Council: "That, in revising the rules of the Society, it is most desirable that every member be provided with a cheap and simple mode of voting at the election of the Council."

Mr. Dent explained that schemes having the same object as Mr. Stratton's suggestion had been drawn up by two or three members of the Special Charter and Bye-laws Committee, and submitted to the Society's solicitors and to Mr. Kingdon, Q.C.; but it appeared that under the existing Charter the Council had no power to give facilities of that nature; and the Council had decided that it was inexpedient to move for a new Charter for the purpose.

Communications were read from the Mayor of Liverpool and the Town Clerk of Preston, cordially inviting the Society to hold the country meeting of 1877 in those localities.

A letter was read from Mr. W. C. Worsley, resigning his seat on the Council.

A communication was received from the Secretary of State for the Colonies, enclosing a copy of the report of a commission appointed to inquire into the best means of providing agricultural and technical education in South Australia.

The following letter was read from Mr. Walter A. Wood, withdrawing his protest against Messrs. Hornsby and Sons' mowing machines, lodged on July 12 at the Taunton meeting:

36, Worship-street, E.C., Dec. 18, 1875.

Mr. H. M. Jenkins, Secretary, Royal Agricultural Society.

Sir,—I beg to withdraw the "protest" I lodged, July 12, at

Taunton, against your Society's paying to Messrs. R. Hornsby and Sons the prizes awarded, and regret giving you the trouble in this matter, with the simple explanation that at the time I fully believed my patent, on which I had paid H. M. Patent Office £175, was valid; but after much expense and labour it has been invalidated by the finding a small drawing amongst the U. S. Patent Office Reports, of which I, as well as all others, was ignorant of until very recently. I am, sir, very respectfully, yours, &c.,

WALTER A. WOOD.

A deputation was received from the Council of the Agricultural Engineers' Association, consisting of Mr. Samuelson, M.P., Col. Griffin, Mr. R. C. Ransome, Mr. Aveling, Mr. Murton, and Mr. G. Y. Yapp (Secretary).

Mr. Samuelson read the following document, giving some explanatory remarks, and statistics furnished by Col. Griffin:

Memorandum of the Council of the Agricultural Engineers' Association, to be submitted to the Council of the Royal Agricultural Society of England, February 2, 1876, in conformity with the resolutions of the Association at a special general meeting held on November 2, 1875.

1. Whilst we are aware that it is one of the objects of the Royal Agricultural Society to bring before the farmers of every district, including the more remote, the best types of agricultural machinery, we are of opinion that it is not unreasonable to expect that agriculturists should avail themselves of the great facilities for travelling rapidly and cheaply, which now exist in every part of England, to come to the larger centres of population. However this may be, the organisation of the implement trade by the aid of local agencies no longer compels manufacturers to rely upon the shows of agricultural societies in order to introduce their implements. Moreover, a large and increasing proportion of that trade is now transacted with foreign countries and through foreign agents: these cannot afford the time required to visit remote localities—especially in July, which is the harvest month of a large portion of Europe. The manufacturers are reluctant to incur a heavy expenditure in places where the returns are inadequate, and where they cannot expect to meet their most important English and foreign customers; and unless their interests are consulted in the choice of the localities for holding the annual shows of the Royal Agricultural Society, it must be expected that their willingness to exhibit will begin to diminish. Proposals have been made to the manufacturers more than once by responsible persons to hold a summer show in the vicinity of London; but, although they believe that their interests would be promoted by an annual or biennial metropolitan summer exhibition, they are indispensed to multiply shows unnecessarily, or to take any action which might detract from the interest of those held under the auspices of the Royal Agricultural Society.

2. The charges imposed on the exhibitors of implements as compared with the expenses incurred on their behalf, when contrasted with the corresponding receipts from the exhibitors of stock and the expenditure on their account, appear to be unduly onerous to the implement exhibitors, and the Association would suggest that at least the charge for entry in the catalogues, and space allowed for descriptions, should be modified to the advantage of the manufacturers. When this conference was solicited, the Council of the Association was not acquainted with the new regulations of the Royal Agricultural Society, as to the time for admission of implements not intended to be tried during the show. These regulations meet our views to a great extent, but we regret that the show days should have been fixed so as to detain the servants of exhibitors over two Sundays. It has been made a subject of complaint by purchasers that they have to pick out the agricultural machinery exhibited from amongst the miscellaneous articles. It would be a convenience if the Royal Agricultural Society would adopt as rigid a separation of the two classes as is done at the Christmas show of the Smithfield Club.

3. The manufacturers gladly acknowledge the great pains taken by the judges and consulting engineers of the Society in order to award its prizes fairly; but they are convinced that trials extending in the whole for each implement over an area, or occupying an aggregate time, not exceeding one-fourth part of an ordinary day's work, cannot afford such data as to enable the judges and engineers to arrive at accurate conclusions on the respective merits of the implements

tried. And as regards construction, the manufacturers are frequently compelled, more especially in field implements, to resort to compromises of advantage and disadvantage in order to meet difficulties, with which they are more familiar than a consulting engineer without the same amount of practical experience can possibly be—and for which, therefore, he does not make the proper allowance. In many instances implements have been presented, and have obtained the highest honours, which could not have been produced for anything like the price at which they were entered in the catalogue. It is the opinion of the Council of the Agricultural Engineers' Association that no judgment should be pronounced on any standard agricultural machine unless it has been at work, performing its ordinary duty, for a considerable time under the eye of the judge. This would be most satisfactorily accomplished by placing the implements in the hands of experienced agriculturists for at least a whole season, on the conclusion of which they might be submitted to dynamometric trial. After such probation, it would be sufficient if an accurate and detailed report were given of the duty performed and condition when ceasing work. Steps should also be taken to compare implements so tried as to their construction with the ordinary commercial productions of the same exhibitors.

4. The new regulation of the railway companies imposing additional charges on the conveyance of articles exhibited will, in the opinion of the manufacturers, tend to reduce their number, and to a certain extent diminish the attractions of the shows. The Association would be glad to co-operate with the Royal Agricultural Society, if the latter should be disposed to make an effort to get those regulations rescinded or modified.

After a conversation, it was moved by Mr. Whitehead, seconded by Earl Cathcart, and carried unanimously, "That the questions brought before the Council by the deputation be referred to a Committee consisting of the Implement Committee, and the Chairmen of the Standing Committees, and that the members of the deputation be invited to attend their meeting."

### SHORTHORN SOCIETY OF GREAT BRITAIN AND IRELAND.

A meeting of the Council of this Society was held at the Society's Rooms, 12, Hanover Square, on Tuesday, the 1st inst. Present: Lord Skelmersdale, in the chair; Colonel Kingscote, C.B., M.P.; Colonel Loyd Lindsay, M.P.; Mr. Hugh Aylmer, Mr. H. W. Beauford, Mr. T. C. Booth, Mr. E. Bowly, Mr. D. McIntosh, Rev. J. Micklethwait, Mr. H. Chandos Pole-Gell, Rev. T. Stanforth, Rev. J. Storer, Mr. G. Murton Tracy, and Mr. Jacob Wilson.

The following new members were elected:

Alexander, S. M., Roe Park, Limavaddy, Londonderry.  
 Baugor, Viscount, Castle Ward, Downpatrick.  
 Brundell, Richard Shaw, Leicester House, Doncaster.  
 Cather, George, Carrichue, Londonderry.  
 Culshaw, Joseph, Towneley, Burnley.  
 Easton, Thomas, Storrs Farm, Windermere.  
 Foster, Samuel Porter, Killhow, Mealsgate, Carlisle.  
 Hargreaves, Thomas, Haslingden, Lancaster.  
 Lacer, Thomas, Grenaby, Ramsey, Isle of Man.  
 Lofthouse, Thomas G., Boroughbriaze, Yorkshire.  
 Lucas, Thomas, Eastwick Park, Leatherhead, Surrey.  
 Mason, John, Dishforth, Thirsk, Yorkshire.  
 Maxwell, William Perceval, Moore Hill, Tallow, co. Waterford.  
 Murchison, Kenneth Robert, Ashurst Lodge, East Grinstead.  
 Reed, Lancelot, Elm, Wisbech, Isle of Ely.  
 Shepherd, William Frederick, Douthwaite Lodge, Kirby Moor-side.  
 Sutton, Sir Richard, Bart., Benham Park, Newbury, Berks.

Tankerville, Earl of, Chillingham Castle, Alnwick.  
 Thurnall, Henry, Royston, Cambs.  
 Walesby, John Saul, Ranby, Wraiby, Lincoln.  
 Wood, James, Humbleton Hall, Hull, Yorks.

EDITING COMMITTEE.—Mr. H. Chandos Pole-Gell reported that the Committee had considered several questions concerning the entries of cows, and directed answers to be sent to the several queries. That the publication of vol. xxi. of the "Herd Book" was progressing favourably, and the Committee hoped that at the next meeting of the Council they would be able to report that the volume would very shortly be issued. The Committee recommended that entries of animals calved previous to January 1, 1876, be now received. Forms of entry can be obtained by application to the Secretary, and the Committee earnestly request breeders and others to attend to the regulations and instructions for entering pedigrees on these forms, especially paragraphs 6 and 7,\* as very great trouble in compiling, and delay in publication, have occurred in the forthcoming volume through the inaccuracy and incorrectness of pedigrees sent for registration. That the Committee further recommended that no entries for vol. xxii. be received after May 1, 1876. This report was adopted.

GENERAL PURPOSES COMMITTEE.—Lord Skelmersdale reported that the Committee had examined and passed the Secretary's petty cash account for the months of December, 1875, and January, 1876, and also his receipts for the same period. The Committee also reported that they had received a communication from the London and Westminster Bank (Stratford-place branch), stating that the Bank had much pleasure in opening an account in their books with the Society. The Committee had received the following report from the treasurer:

"At the meeting held on February 1, 1876, the treasurer reports that the Society's banking account at the Birmingham and Midland Bank, Stourbridge, has been closed, in accordance with the order of the Council to that effect, and the balance, £545 17s., has been transferred to the Stratford-place branch of the London and Westminster Bank.

"The Secretary will present the Bank-book, written up to the present time."

The Committee examined the bank-book, and reported that the amount standing to the credit of the Society on the 31st ult. was £595 13s. 6d. The Committee recommended the payment of several small accounts. On the proposition of Mr. Jacob Wilson, the Committee recommended that a "Suggestion Book" be kept, in which members of the Council may enter any alterations or suggestions that may occur to them for the conduct of the Society's business, subject to the approval of the Council before being carried into effect. This report was adopted. On the motion of Mr. Jacob Wilson, seconded by the Rev. T. Stanforth, it was resolved that a book-case be provided for the Council-room, and that a complete set of the "Herd Book" be bound and kept in the Council-room for the use of the members of the Council or any member of the Society who may wish to refer to them.

\* The following are the regulations 6 and 7 above referred to: 6. Breeders and others are most earnestly requested to fill up, as far as practicable, the particulars required on each form of entry under the head of "Reference to Pedigree in former Vols.," giving the volume and page where the pedigree can most readily be traced. 7. It will greatly facilitate the preparation of the work if persons sending up pedigrees for insertion will write them legibly and correctly, and also be careful in filling up on the form of entry every particular required. If care is taken in these points, much inconvenience, delay, and correspondence will be avoided.

## AYRSHIRE FARMERS' CLUB.

The quarterly general meeting of the members of this Club was held in the Ayr Arms Hotel, Mr. R. Wallace (Brechin), president of the Club, occupied the chair.

The CHAIRMAN said the subject to be discussed to-day was the Agricultural Holdings Bill. There was some times a delicacy in discussing certain questions here, but there need be no delicacy in discussing this Bill, as it was a question of politics. It was their duty, however, to discuss it in a liberal spirit. They ought to put themselves, as far as possible in the position of those opposed to them, so that they might be able to give an unbiased opinion about it. Proprietors and tenants were equally interested in a question like this being equitably settled. Mr Cunningham, Shields, had kindly agreed to open the discussion.

Mr. R. M. CUNNINGHAME (Shields) said: Gentlemen, we are indebted to the Government for providing us with a paper on an agricultural subject, which we have met to discuss this afternoon; but before addressing ourselves to the Scotch bill, it may be interesting to revert for a little to the measure which was passed during last session of Parliament, professing to give certain rights and privileges to the occupiers of land in England. I have said *professing* to give, for practically it gives nothing. No doubt the bill sets forth in a somewhat imposing form the various privileges which tenants should have on farms, and that they should be paid for improvements they had made; but, unfortunately, it fails to put them in possession of all these good things. It is a mere shadow that is dazzled before their eyes, lacking the substance, for it is only a voluntary or permissive measure, which interested parties may adopt or not, as they think fit, and a contributor to the *Ayr Advertiser* tells us that "a number of the large proprietors have given notice that they do not wish to come under its operations." But supposing they had agreed to come under the Act, what benefit would accrue to the tenants as it is framed? Comparatively little or none. Had the bill been passed into law, with Clause 5 remaining as it was in the original bill when introduced by the Duke of Richmond, with its leading principle in which the tenants' rights to compensation for unexhausted improvements were so fully recognised, it would have afforded some tangible security to the occupiers of land, but after the bill was received into the House of Commons, the Government quietly eliminated that valuable clause therefrom, and substituted what Mr. Disraeli called "a principle giving compensation for unexhausted improvements with machinery," said machinery being so complicated and adjusted that in its working it secures the major part to the landlord; and, further, it provides such a fruitful field for litigation that few farmers would care to enter or bear the expense, irritation, and annoyance for all they were likely to get at the end. Indeed, in its present shape, to use the expression of another, "with its machinery giving a right to compensation so limited in its endurance and circumscribed in its range as to render it extremely doubtful whether under it the occupier would pocket more than a mere moiety of the compensation it professes to secure." I would have no hesitation in advising tenants to contract themselves out of the bill, for it is a sham and a delusion. No wonder, sir, that the righteous indignation of Mr. Plimsoll was aroused when the Government postponed legislating for the better safety and preservation of our sailors, and wasted time tinkering at this bill which nobody wanted and few will have. Well, gentlemen, what we have said of the English bill is equally applicable to the Scotch one, for they are drawn on the same lines, the same principle runs through both. There is the same quasi acknowledgment of certain privileges which tenants should have for unexhausted improvements, but no power is given to us whereby we may obtain the same. Our claims for compensation rest entirely with the will of another, whether he liked to accede to them or not. As has been well said by some one else, "This was no law, it was merely a bundle of suggestions which they could suggest privately without a bill." Well, gentlemen, I do not think you can call this very honourable treatment we are receiving at the hands of the Government, in regard to those agricultural grievances which they themselves acknowledge to exist; and I make bold to say that they dare not have treated any other class of her Majesty's sub-

jects in this cavalier fashion. Just look for a moment what it involves. The Government in introducing this bill, come forward and say (at least in substance), "Well, gentlemen, we admit that you ought to have greater security for your capital, and that you have a just right to compensation for such and such improvements, but nevertheless we will take all ways and means to prevent your obtaining the same." Is not that at the short and long of the whole matter? In case some of you should think that I am too sweeping in my conclusion, just look for a little at Clause 5 of the bill, where it is said that all improvements in the first class shall be deemed to be exhausted at the end of twenty years. Now take for example the erection of buildings. Suppose, Mr. Chairman, that you had, at the beginning of a lease nineteen years ago, erected a cottage for a ploughman (and such buildings are very much wanted in this county, *vide* Commissioners' Report, 1871), at a cost of £100. Well, I believe that said cottage, if you were to sell it at present, would bring £150, but we shall put it at £100, for which the bill says that you are only to receive one-twentieth, or a five-pound note, whilst the landlord is to get the hundred-pound house. Surely that is class legislation with a vengeance, and as near as may be to the present unsatisfactory state of things. Then, as regards the third class of improvements, you will observe that we are scheduled down to two years, or get nothing at all, if a crop of corn or potatoes has been taken. Could anything be more ridiculous? A tenant may have laid out a great deal on labour and manure during the lease to improve the condition of his farm, but he is only to get payment for the last two years. Then we here in Scotland are in the habit of applying with the green crop the manure intended to keep up the fertility during the whole rotation of four or five or more years, and so if we take a crop after application of the manure, according to this precious bill we are to get nothing, in fact, to be snuffed out altogether. This is in striking contrast to Clause 14.—*viz.*, the landlord's compensation for waste or breach of contract—which embraces the whole length of lease, in fact, is unlimited, and as it at present stands, might be ruinous to a tenant. Such, gentlemen, are a few samples of the legislation which is proposed for us under this bill, and I hope it will be found that the members of this Club do not consider it to be in any way calculated to give that measure of relief which the tenant-farmers of Scotland require, and which in common fairness they are entitled to receive. Now I think we ought to make it plain to the Government that no bill, however equitably framed, shall be satisfactory to the occupiers of land unless it gives them a legal claim for all unexhausted improvements which add to the letting value of the subject; in other words, we want a compulsory measure, without which it will be valueless; but we are told with an air of solemnity that this cannot be, for that would be interfering with private contracts. Sir, this phrase, *freedom of contract*, has become of late very sacred in the mouths of some people, who tell us that they are prepared to support any well-considered measure for amending the land laws, but there must be no interference with freedom of contract. Now what is freedom of contract? Have you got it now? It may be interesting to look at these points for a little. Freedom of contract implies that both parties in making a bargain are on equal footing. Is that so at present? I trow not, for first, there is the law of hypothec, which gives the landlords an enormous leverage against the tenants, who are placed at an unfair disadvantage in making the contracts. Then there are those laws which enable the landlords to secure all buildings and permanent improvements which have been performed by the tenants, without payment. Do you call that freedom of contract? I call it freedom to confiscate the just rights and property of the tenantry of Scotland. To say that there is freedom of contract when the landlord has the sole power to dictate the terms of contract, is to say what is not in accordance with truth, and I say again that there can be no true freedom of contract until all those laws of privilege and unequal presumption adverse to the producers of food are effectually removed out of the way. There is just one other point to which I would refer in order to correct an erroneous opinion which has gone abroad, and which had

been promulgated by the landlords, that this measure which is proposed to be passed by Parliament is solely to the advantage of the tenantry. I deny that *in toto*. I was sorry to see that the Duke of Richmond himself gave prominence to that view. When speaking at an agricultural meeting recently, he said: "I am proud that in the House of Lords—an assembly composed principally, if not entirely, of landlords—there should have been such unanimity in favour of such a measure. On both sides of the House of Lords only one feeling was shown, and that was a desire to make the bill as perfect as possible, though it was one not in the interest of the landlords, but in that of the tenantry of the country." That is a most erroneous view of matters. I am astonished that landlords should be so shortsighted, for past experience shows that there is no improvement in agriculture, whether it be the improvement of implements and machinery, or the introduction of new fertilisers, but ultimately tends to the advantage of the landlord. What we want, Mr. Chairman, is righteous legislation and righteous dealing with one another, for the great Lawgiver and Judge of all the earth says it is righteousness that exalteth a nation.

Members having as usual been called upon for their opinions, Mr. D. CUNNINGHAME (Chapelton) agreed with a gentleman who said to him lately that it would be a great misfortune to Scotland if such a bill were to pass. He felt confident that the Government were not in a position to pass a bill to the advantage of the Scottish agriculturists. Farmers had all the Acts of Parliament in existence bristling against them—the Law of Entail, the Game-laws, and the Law of Hypothec; and it was impossible until these were removed or adjusted—and two of them should be removed, and the Game-laws might be adjusted—for anything effectual to be done for the benefit of the farmers of Scotland.

Mr. J. C. MONTGOMERIE (Lessnessock) said the discussions that had already taken place on this subject had shown that farmers were not to be imposed upon by this one-sided and imperfect measure. The grand principle of compensation had been admitted somewhat tardily, and they hoped, although at present encumbered with conditions that almost annihilated its utility, to see a bill passed soon that would be worthy of their acceptance, and of this nineteenth century. This country had been too long burdened with the dying embers of feudalism; and it was high time that those commissioned by the country to dispense constitutional and righteous acts should have their misty vision cleared! "Freedom of contract" was the great cry that had been sounded by the supporters of this Act. But what in general were the products of this boasted freedom of contract? Was it that a landlord could use his property in a way detrimental to the interests of the nation? Was it that he could bind his tenant by restrictions and conditions which fettered him like a slave, and hampered the natural laws of progression in the cultivation of the soil and production of food for the people? Was it that enterprise and energy should be crippled by a system of sporting tyranny? Was it that the tenants' means should be invested without security, and appropriated by greedy and grasping landlords? These had been, and were, the too common products of contract in land; and was this a state of things that could exalt the nation, or increase the national prosperity? There were, however, many generous and philanthropic landlords who acted on the golden rule, and they hoped their numbers might be increased by force of public opinion, if not by Act of Parliament. The *a priori* principle of the Agricultural Holdings Bill was right, but why not at once give the farmer his due? Clause 42 excluded current cases from its provisions; and clause 41 allowed unscrupulous landlords to act in a way directly opposite to what the Act declared to be just and right. Well might the Marquis of Huntly say that the bill would satisfy reasonable landlords, who already gave their tenants as much as it would afford them, and that it would also satisfy immoderate and unreasonable men, who would snap their fingers at it. Clauses 5 and 6 enacted that if the tenant built a house, drained the land, made fences, reclaimed waste land, &c., such improvements were to be deemed to be exhausted in twenty years, and should then revert to the landlord gratis, while it was a well-known fact that such improvements lasted a life-time. Again, if they sowed crushed bones, or limed the land, these were deemed exhausted in seven years; if it had been fourteen years it would have been nearer the truth. If they sowed dissolved bones or other fertilisers, and took a corn or potato crop, said crop was deemed to have exhausted the manure. In order to show the falacy of this

enactment, he would state the case of two farmers: A, an energetic and improving tenant, takes a farm of 200 acres for 19 years, on landlord B's estate, at a rent of 40s. per acre, and continues to treat the land liberally with artificial manure, &c., till the end of his lease; on asking a renewal he is informed that it has been valued at 49s. per acre, and he may have it at that if he chooses. On the other hand, an unenterprising man takes the neighbouring farm, similar in every respect to tenant A's, and at the same rent, and applies little or no manure but what he produces on the farm, and at the end of his lease he is also informed that his farm has been valued at 43s. per acre. Now, in looking at both these farms, it was evident that in the first instance there had been a gradual increasing productiveness over the second, through the liberal treatment received at tenant A's hands; yet, in the face of this well-known fact, this bill declared nothing shall be given in compensation for the use of artificials if a crop had been taken, although the farm had been improved to the extent of £60 a year. This was a very mild case, and had he wished many might have been quoted of public notoriety. Clause 9 enacted that no compensation could be had for improvements made without the proprietor's consent. This might do very well for improving landlords, but why leave the vast majority to go on as they have been doing heretofore, appropriating that which did not justly belong to them? Why not submit such cases of improvements to arbiters to say whether such and such would be an improvement or necessary adjunct to the farm. He was thoroughly convinced were a more liberal and just measure brought into law agriculture would receive an impetus greater than they could at present conceive, and till that there would be little hopes of much being done in the further development of agriculture by the application of capital and skill. On the whole, he thought the measure now before them was drawn in such a one-sided way as to be entirely useless, and therefore unworthy of their acceptance and support.

Mr. WILLISON (Maxwelltown) said he agreed with every word Mr. Cunningham had said. He regarded this bill as a very bad bill, and hardly worth discussion. And even though the bill had been a good one, it wanted the very thing which would make it of any use, by not being compulsory. There were two kinds of permissive bills: there was a permissive bill which allowed individuals to do what they could not do before, and there was some sense in a bill of that kind. The Artisans' Dwellings Bill was one of that sort, but the Agricultural Holdings Bill was not. Landlords might have done 50 years ago what this bill permitted them to do; but they had never done it. What would be thought of legislation which said it would be right and proper to keep the eighth commandment, but you might break it if you liked. What good would the Factory Bill have done if it had been permissive? And why had Parliament so much more tenderness for landlords than for manufacturers? Was it that they were more subject to moral suasion? He was not sure that they had proved themselves to be so? Or was it that land was of trifling consequence and partial interest? They certainly were born upon this land of theirs, not from any choice of their own, and must either live upon it or starve upon it. Certainly of all things in this world that he knew of, land was of most general interest. They were all interested in it, and especially in having it turned to good account in cultivation. It might appear to many of them that their progress in land reform was very slow, but they should be patient and of good courage. All great and substantial movements were necessarily slow, and although they did not see their movement going on just now, it was going on for all that. Their opponents might retard it for a little, but they could not stop it; and from its very slowness it would be the more substantial, and they would get reforms which, when they began this agitation, they never dreamt of. He agreed with Mr. Cunningham in what he said about Parliament not daring to offer such a humbug, sham, and tinkering bill to any other class of her Majesty's subjects. But he believed there was some good even in this. They all knew what a red rag was to a bull; and he thought all this tinkering, sham work would open the eyes of some whose eyes would not be opened otherwise. He believed it would have the result very soon of placing 150 tenant-farmers in Parliament, and if once there, he did not think there was any power that would put them out again. They need not be frightened by the ridicule attempted to be cast on them, and the nonsense that was talked about them. It was said by some that they wished leases done

sway with, and that they wanted sub-foreclosure, which he believed meant perpetual tenancy. Now they might just as well have said that they wanted the possession of the land altogether; but for his part, he never heard anything of the kind proposed by tenant-farmers either in joke or earnest. But supposing this bill had been compulsory, he would say that the compensation that it offered was most shamefully and dishonestly inadequate. Mr. Cuninghame had truly said that a house built 20 years ago was worth considerably more now than it was then; and a good stone wall or good thorn hedge was worth still more than it was 20 years ago. He believed there were some drains upon some lands, if they were properly executed, that were worth very near as much this day as they were 20 years ago. They should make short work of this bill; in fact, they should just say that it was a bad bill, and that they would not have it.

Mr. YOUNG (Kilkenzie) said there was one small matter of detail which was important as showing the spirit in which the bill was prepared. A farmer, if he was going to make a claim, must do so several weeks before the expiry of the lease; but if the landlord was going to make a counter-claim, he did not require to do so till fourteen days after the tenant had left the farm. He was surprised that any body of men whom he was inclined to believe were actuated by what was right in the abstract, should have drawn up such a bill. He did not think so badly of the bill as some of his friends, as he thought there were some things in it of considerable importance. But the 41st clause damned the whole bill in his estimation, as under it either a bad landlord or a bad tenant could get rid of the bill by giving notice to that effect. That being so, it was a pity that the time of Parliament should be expended on a measure which it could be shown to demonstration was not worth having. At present a good landlord and a good tenant would do what was right, and this bill did nothing for them. It was for those who did not come under that designation that it was required, and they were the very ones who would not come under it. A good measure in this direction was of such importance to agriculture, that he was sorry one had not been introduced. He thought it possible that a measure fairly drawn, and holding the scales even between landlord and tenant, might do as much for agriculture as Free Trade had done for trade and commerce. With regard to freedom of contract, Parliament had already interfered with it in every other respect except as between landlord and tenant, and he had yet to learn that there was anything so peculiar in their relations that they should be an exception to the general rule. But he believed Parliament would yet come to see matters differently. It was not many years since very few of their public men believed in doing away with the law of hypothec; but when public opinion became so strong in Scotland that no one could get into the House of Commons who was not prepared to vote for its abolition, nearly every candidate declared himself ready to abolish it. He suspected it would come to be the same with freedom of contract.

Mr. BRUCE (Auchengate) said what was wanted was a good and equitable measure equally fair towards landlord and tenant, and binding upon both. It must be compulsory. That some such measure was needed was clear from the increasing imports of grain and cheese. The competition of foreign nations would force landlords to consider a wise and just measure.

Mr. J. LINDSAY, thought the Club were indebted to Mr. Cuninghame for bringing the subject so ably before them. He indicated his concurrence with the views that had been expressed.

Mr. REID (Clune) thought the bill was rendered valueless by not being compulsory.

Mr. DALGLISH (Templand Mains) said that this much could be said in favour of the bill, that it was quite harmless, which was a very good thing coming from the people it did come from. It was needless to discuss such a bill, for it was not worth the paper it was written on. They would just have to go on as they had been doing, independent of Government measures, and embrace every opportunity of introducing improvements, especially those that would give remuneration in a very short time. There was much talk about land being in the possession of certain parties who had as much right to freedom of contract as other merchants. But land was not like any other commodity; it was made for general purposes, and affected everybody, and everybody had certain rights

bound up in the land. It would have been a great mistake in the Creator, he apprehended, if He had made man, and hadn't given him room to stand upon. They had compulsory Acts of Parliament affecting land in other ways, such as by railways, canals, and roads; and it was just as necessary that they should have them with regard to its tenure. There should be as much security for those who cultivated the land as for those who occupied it for other purposes.

Mr. KERR (Milton) thought it was a good thing that the bill was not compulsory, for it had been made for the benefit of the landlord and not for the benefit of the tenant, and therefore it was well that they should not be forced to adopt its provisions. If the Scotch bill was to be like the English one, they would be better without it. He thought the bill might be drawn that would be beneficial to all parties, though he did not say that he could frame it; he, like others, might be too much actuated by self-interest. The landlords undoubtedly had a right to look to their own interest, for there were tenants who would be hurtful and destructive to land, just as some landlords would be hurtful to their tenants. But in the meantime they had no bill before them that was worth having.

After some further conversation, the following resolution was unanimously adopted: This meeting is of opinion that any measure which fails, as this bill does, to give effect to the principle of the Duke of Richmond's Bill, as originally introduced, by a compulsory measure to secure to the tenant in a fair and equitable manner compensation for his unexhausted improvements and manures, will not prove acceptable to the farmers of Scotland, or beneficial to the public.

The meeting then adjourned.

IRISH TENANT-RIGHT.—An Irish land agent, writing to the *Times*, says, With regard to this question I have never been able to understand how it is that a landlord can now appropriate a tenant's improvements by screwing up his rent. "The case stands thus: Supposing a landlord desires to raise the rent of a yearly tenant, and the tenant objects to pay the increase, the tenant remains in possession at the original rent until the landlord takes steps to enforce it. This can only be done by serving the landlord with notice to quit, accompanied by a notice to inform him that the landlord has no wish to disturb him if he will agree to his terms. The case then comes for hearing before the Chairman at Quarter Sessions, who has the benefit of experienced and skilled witnesses on each side; and if the weight of evidence goes to show that the proposed new rent is a fair one, and the new tenant should still refuse to pay it, he then must be paid by the landlord on eviction the outside value of his improvements on the farm. If, on the other hand, it shall appear from the evidence that the rent demanded from him is unreasonably high and the landlord should still insist on it, he must then receive, in addition to the value of his improvements, the number of years' rent prescribed by the Land Act as the penalty for disturbance. Now, in which of these alternatives can the landlord appropriate the tenant's improvements, or even screw up his rent beyond the value of the land? If the same thing occurs at the expiration of a lease, the tenant must still be paid the value of his improvements as determined by the Court; and if he does not also receive the amount of penalty, it is because he has covenanted in his lease to deliver up the quiet and peaceable possession of the farm at the termination of it. As a question of business, the practice of determining the price which a landlord shall receive as rent for his land by valuation appears as absurd as a proposal to determine the price which a tenant shall accept for his heifer in a fair in the same way; but landlords in Ireland, through the ignorance and cunning of their customers, are compelled to submit to this clumsy and exploded remnant of Protection. The day, however, cannot now be far distant when the truth of the principle will be brought home to the tenant that the only test of the value of land, as of any other commodity, is the price it will fetch in the open market."



## CENTRAL CHAMBER OF AGRICULTURE.

The first Council meeting for the present year was held at the Salisbury Hotel; Mr. W. B. Beach, M.P., chairman for 1876, presiding. The attendance was somewhat larger than usual.

The CHAIRMAN, in opening the proceedings, said that was the first opportunity he had had of thanking the Chamber for the honour they did him in electing him Vice-president for last year. He understood that no formal vote was necessary to instal him in the chair; but he should like to make a few observations before the business commenced, as that was the first meeting of the year. It was only through such support as the President had always received that he would be enabled to guide their proceedings in such a manner that they would reflect credit on the Council, and he hoped that during his year of office those proceedings would be characterised by ability and order, and that gentlemen who took part in the discussions would do so in a spirit of moderation, and confine themselves to the rules laid down for the conduct of debate. There were several important questions which would have to be considered. He was not in the secret of her Majesty's Ministers, but ere many hours had elapsed they would be put in possession of the subjects to be dealt with in the course of the present Session of Parliament. He thought he should not be wrong in saying that there were certain matters which could not be entirely ignored, and one of these, he trusted, was local taxation. Whether that was included in the Queen's Speech or not, it was doubtless a subject that must form an important topic of discussion. The Local Taxation Committee, over whom his hon. friend Mr. Pell presided with so much ability, would no doubt be fully adequate to look after that matter. Then, with regard to the question which Capt. Craigie introduced at the last meeting of the Chamber—viz., "The constitution and areas of local authorities," that was intimately connected with the same subject, and would form a part of the proceedings of the Chamber. Lastly, there was that very important question the contagious diseases of animals, with which their friend Mr. Clare Sewell Read was so capable of dealing. That, too, was a matter to which attention would have to be directed; whilst the representatives of provincial Chambers would have opportunities given to them of bringing forward other objects of interest (cheers).

Mr. C. S. READ, M.P., had great pleasure in proposing that the Right Hon. Earl Fortescue, of Castle Hill, South Molton, Devon, be elected vice-Chairman for the current year. This proposal he was sure would be carried by acclamation, for the noble lord was not only distinguished as a good scholar and a good landlord, but possessed another virtue which, though he (Mr. Read) did not admire it in the abstract, was an additional reason why he should be elected; that was, the noble Earl was a Liberal (laughter).

Mr. T. WILSON having seconded the motion, it was put from the chair, and agreed to amid cheers.

Earl FORTESCUE said he felt very sensibly the kindness with which his hon. friend Mr. Read had proposed his nomination. He could not stand there under false colours. He had been a Liberal ever since, indeed before, he came to man's estate. As long ago as when he was at Cambridge University he was one of a small body of Liberals there, and he was not at all inclined to change his colours now. But he accepted the office which had been so flatteringly conferred upon him with the more satisfaction because he had long been of opinion that the institution of Chambers of Agriculture was most useful, and he might add that the establishment of the Devonshire Chamber was initiated by himself. That Chamber had gone on fairly well up to the present time, and he was very hopeful of its prospering still more in the future. It seemed to him most desirable that there should be agricultural institutions in which the owners and occupiers of land might meet in frank and friendly counsel upon matters non-political and practical affecting the landed interest. A good deal of misunderstanding between them might be removed by each becoming aware at their meetings of the fact that there was rather more to be said on the other side than the tenant-farmer, on the one hand, might learn from conversation at the market table, or the landowner, on the other, could learn

from conversation with landowners at the club. In fact, he believed that nothing tended more to promote a good understanding than frank and fearless reasoning and statements of facts in the presence of those who were not altogether inclined to agree with one; and upon that ground, politics entirely apart, he regarded local Chambers of Agriculture, and that central body, including representatives from them all, as in themselves most valuable institutions calculated to facilitate a good understanding and mutual co-operation between those interests which though not in all respects identical must to a large extent be identical—namely, the owners and occupiers of the land.

On the motion of Mr. E. HICKS (Cambridgeshire), seconded by Mr. H. NEILL (Cheshire), Mr. C. Clay, of Waiton Grange, Wakefield, was re-appointed Treasurer, with the thanks of the Council for his services during the past year; and, on the proposal of Mr. J. RESSON (Worcestershire), seconded by Mr. ADKINS, Mr. J. Algeriou Clarke was re-appointed Secretary, at the same salary as before. The Standing Committee, for general business, was afterwards elected; and on the motion of Mr. G. F. MENTZ, seconded by Mr. NEILL, the bye-law relating to the monthly meetings of the Council was amended, by providing that when the first day of the month fell on a Tuesday the Council should meet on the Tuesday following.

Mr. PELL, M.P., as Chairman of the Local Taxation Committee, presented and moved the reception of the following Report:

The opening of a new Session of Parliament presents an opportunity which it is important not to lose for directing the attention of the Legislature to the claims of the ratepayers for relief from exceptional burdens. The annual returns of local taxation just issued by the Local Government Board amply justify the more general recognition now accorded to many of the anomalies of local finance. These statements show that English local authorities accounted in the year 1873-4 for a revenue of no less than £77,419,000, an expenditure of £36,371,000, and a debt of £84,000,000—figures which would have been still greater had the most recent School Board returns been included on this occasion. Notwithstanding the many new charges successfully resisted by your committee, very nearly £24,000,000 of this revenue has been raised by rates alone. It is, therefore, clear that ratepayers have had good reason for opposing new objects of local expenditure. Their special taxes are rapidly increasing. The Sanitary and the Education Acts have very largely added to the exceptional liabilities of rateable property. Nor has the apparent rise in the value of that description of property been by any means commensurate with the increase of burden. The six years between 1868 and 1874 have shown even on the higher assessment now returned an increase of 1d. in the rate in the £; and this has coincided with a remission of income-tax amounting to 3d. in the £ on the general incomes of the country. Altogether a net reduction of imperial taxation to the extent of £17,000,000 has taken place since the hardship of the local taxpayer's case was brought before Parliament in 1868, while more than £3,000,000 of new rates have been imposed in the same period. Your committee fail to see the justice of thus abandoning important sources of imperial revenue, while neglecting opportunities of defraying the cost of imperial services from imperial funds. Admitting that the heavier rates now returned may be in part attributed to voluntarily-incurred outlay for purposes of local convenience, it cannot be disputed that local taxes have been of late largely increased for objects unremunerative in character and national in obligation. Pauperism, notwithstanding a diminution of 166,000 in the number of persons receiving relief, involves a larger outlay than it did six years ago, and this during a period when £500,000 has been saved in the cost of outdoor relief. A rise of 18 per cent. in the salaries and rations of officers, of 23 per cent. in unclassified expenditure, and of more than 26 per cent. in the cost of pauper lunatics, goes a great way to account for this general advance. Few heads of local expenditure show a more alarming increase than that of lunacy generally. While but £902,000 was returned in 1868 as expended on asylums and lunatics, a total of £1,250,000 is now thus accounted for. The votes of the current year, no doubt, contain a subsidy of £30,000 in aid of this rapidly developing charge. That sum, however, not only falls far short of the proportion of one-half, which Parliament was in 1872 disposed to grant, but falls even to replace the ratepayer in the position he stood as to liability six years ago. Much of the general increase of local charge arises from the growing cost of the police. National in its



character, and virtually controlled already by the State, the policy of England cost the ratepayers £2,112,000 in 1874, as against £1,702,000 in 1868—an advance which in this case also very nearly balances the whole additional contribution just made by the Treasury. Your Committee have repeatedly pointed to the many collateral advantages which an entire removal of this charge from the local category would secure, and they hope that this course may be urged on the Government, not only in justice to the overburdened ratepayer, but in view of the great facilities it would afford for detecting and preventing crime. Especially at this juncture would your committee desire to direct particular attention to the continued imposition of the heavy liabilities on the local rates entailed by the cost of the administration of justice. They cannot forget that, although included in the resolution of the House of Commons on Sir Massey Lopes' motion nearly four years ago, no attempt has yet been made to effect relief in this direction. On more than one occasion they have indicated the waste and absence of economy which distinguish the present system of scattered local goals and extravagant prison staffs. They would urge, therefore, a thorough reform and a direct transference of the whole of this charge to the State, as a necessary condition of any effective legislation, such as it may become the duty of their chairman to press for in the House of Commons. Your committee await with anxious interest any announcement which the Government will feel called on to make with reference to a subject which they have themselves declared to be of the highest national importance, and which, it is now admitted, cannot in any sense be represented as affecting only a section or a party, but which is of equal interest to urban and metropolitan, as to rural ratepayers. Relying on a continuance of that support which they have so largely received both from chambers of agriculture and individual ratepayers, your committee propose also to continue with vigilance a discriminating resistance to all new additions it may be proposed to make to the catalogue of local burdens. It is now generally agreed also that, without relaxing any of their demands for direct financial aid, the pressing question of administrative reform should be energetically recommended to the attention of Parliament. A better adjustment of our irregular and interlacing system of local areas and authorities would afford some relief to the payer of local taxes. The proposed formation of representative provincial assemblies charged with the general supervision of local administration, although in itself providing no remedy for unfair taxation, could not fail to strengthen local government. Asserting, as they have ever done, the proper priority of relief to reform, and convinced that the application of national funds to national duties has yet to be still further developed, your committee believe that the case of the ratepayers for an ultimate fairer apportionment of local charges, and a better distribution of local revenues, would be strengthened by early attention to Local Government Reform. The report concluded with a list of further contributions.—ALBERT PELL.

The motion for receiving the foregoing Report having been seconded by Mr. Caldecott (Warwickshire), was agreed to with a rider, proposed by Mr. Muntz, that copies of the Report should be circulated among the provincial Chambers.

The next business on the agenda paper was the adjourned discussion on Capt. Craigie's motion—"That in any reform of Local Government it will be desirable, in every district, to bring all Poor-law, Sanitary, and Highway Administration under one authority, and to constitute in every county a Representative Provincial Board." On this subject the Secretary read resolutions passed by several of the local Chambers. Amongst them the Newbury Chamber was of opinion that there should be one authority in each district for poor-law, sanitary, and highway purposes, elected for three years; that county finances should be controlled by representative boards; that there should be one basis for imperial and local taxation; and that the definition of gross value should be altered to the annual rent which the property might be expected to produce if let upon advantageous terms. The Herefordshire Chamber considered that the cost of the police, prisons, and asylums should not be borne by rates paid on one description of property, but be an imperial obligation; and that all poor-law, sanitary, and highway administration should be under one authority. The Northamptonshire Chamber were in favour of reform in the direction indicated by Captain Craigie's resolution. The Essex Chamber held that any general reform of local government should be directed towards the establishment of representative county boards. The Warwickshire Chamber requested its representatives to support the resolution of Captain Craigie, and that of which Mr. J. S. Gardiner had given notice—viz., "That in all elections of local authorities administering rates, the voting qualification shall depend on the payment of rates by the electors, and that the scale of voting shall be that adopted in the Act 7 and 8 Vic,

cap. 101." The Lincolnshire Chamber's view was, that it was desirable to consolidate the administrative authorities and constitute representative boards; whilst the West Riding Chamber entertained doubts as to the expediency of uniting the administration of the poor-laws, highways, and sanitary laws under one authority.

Mr. F. S. CORRANCE, while generally supporting Captain Craigie's proposal, urged the meeting not to lose sight of the necessary preliminary to the establishment of representative boards—namely, the equalisation of the standard on which local rates are at present paid.

Professor BUND considered that as long as the greater part of the expenditure was controlled by statute, county boards, if formed, would really be nothing better than highway administrators. What was wanted was a board which should have some voice in deciding what should and what should not be done within its own area.

Mr. CLARE S. READ, M.P., thought the latter part of Captain Craigie's resolution more important than the first. If they were to wait for county boards until such time as all minor grievances were redressed, and all conflicting areas were rectified, in all probability they would have to wait until doomsday. If, however, good county boards were established most of the desired results would speedily follow. All questions concerning cattle disease should occupy the attention of such boards, which should also be the valuation boards of the county. Then the maintenance of the public thoroughfares and bridges should be within their province. They should also deal with lunatics. Those were all matters which might fairly be taken from the Courts of Quarter Sessions. He would not, however, interfere in any way with the judicial prerogatives of magistrates at Quarter Sessions. County boards should have the superintendence of medical officers of health, and he thought arterial drainage might also engage their attention. In the matters he had pointed out there was ample work for a county board to do, and the sooner it was obtained the better, because every year new conflicting authorities were springing up. He did not think there could be any very great difficulty in obtaining county boards, and he hoped before the present Session of Parliament passed away something definite would be heard from the Government about county boards, and that a measure to establish them would be passed.

Mr. TRASK could not agree to the formation of a county board which would have the administration of the poor-law; but was contented that it should have the management of the highways and county rates.

Baron DIMSDALE had acted as a member of the Finance Committee for his own county for the last 16 or 17 years, and he thought the present system was an eminently unsatisfactory one. If there were central boards they would be a power sufficient to enable them to contend against a central authority which at present they could not do. It could not be a good system for the management of county finance in which the owners of the land were ranged on one side, and the occupiers on the other. One of the most important questions that could be brought under the management of boards, such as it was proposed to establish, was that of roads. He was not altogether satisfied with the adoption of the Highway Act, so far as regarded small areas. If the power therein conferred was granted to a board representing a large area, they would be a body more independent, more free from little local influences. With regard to arterial drainage, they had in Hertfordshire been pestered with the Conservancy Act, one of the greatest disadvantages of which was that it imposed stringent provisions on particular localities—a thing which must be avoided in a general scheme. As to the constitution of this county board, he thought a separate representation of owners and occupiers would be a mistake. An artificial separation would be injurious to the interests of all parties. If they trusted to the representative system they would find the best owners and the best occupiers of land freely elected by the ratepayers, and he would be prepared to advocate these views before the Chamber he represented. Members of Parliament frequently expressed themselves in favour of a county board, but was not the time come when the views which they advocated should be carried out? In the capacity of an owner of land, and one taking the deepest interest in the welfare of occupiers, he supported Captain Craigie's resolution. If during the ensuing Session some measure in the direction indicated were passed, it would be of great interest to the agricultural community,

and redound to the credit of the Government, which was supposed to have the confidence of that community.

Major PAGET, M.P., said the resolution was comprehensive and complete. Looking the difficulties of the question fully in the face, they must be convinced that to do half or quarter what was proposed would tax the efforts of the strongest party in the House of Commons. Success must be achieved in detail, and therefore such matters as highways and turnpikes were the particular details which afforded the most satisfactory ground for advancing in the direction desired. For these purposes it would not be a matter of very great difficulty to form a board of management, and one could judge from its working how a board with more extended powers would comport itself. By pressing for too much they were in danger of of altogether losing a useful reform.

Mr. PELL, M.P., considered the views of Captain Craigie in accordance with the majority of the Chamber and of those who had given much thought to the question. In one matter, and that of a sanitary nature, they had found great difficulty in the county which he represented in bringing together persons interested in such affairs so as to take united action in the appointment of officers to have the general control over sanitary matters in the county. This a central board would remedy. The Local Government Board was in considerable difficulty with regard to training ships, simply because they knew not to what authority to entrust them. Finally they handed them over to the only body competent to take them in charge—the Metropolitan Asylums Board. With regard to the term "local authority," it was made use of in the Endowed Schools Bill in 1868 or 1869, and the idea which they were now considering was mentioned in what was, probably, the most valuable part of that bill. One provincial authority dealing with the poor-law would be one body dealing with numerous others on the same principle as had been found so successful in London. It might be then possible to re-arrange our workhouse and compel them to take charge of the poor and aged imbeciles. If such authorities as these had been established some time ago, the demand made on the rate-payers for new infirmaries in workhouses might have been avoided, for the unoccupied portions of existing workhouses might have been better used. This was as important a question as financial redress, because that would follow administrative reform. It would, therefore, be his duty to press forward in the House of Commons in the old lines in which Sir Massey Lopes had so gallantly fought. It would be the business of the Local Taxation Committee to endeavour to make Government either contribute more largely for the administration of justice or to take the entire charges of that department of state. If in the Queen's Speech there was no reference, or no satisfactory reference or promise in the direction they all desired, he would take the earliest opportunity, probably that night, of giving notice that he should ask the attention of Parliament to the continued imposition upon rate-payers.

Earl FORTESCUE had heard with great satisfaction the discussion, and had read with great pleasure Captain Craigie's valuable statement on this subject. He most unfeignedly rejoiced that the very important question of local administration was engaging the attention of such an influential and practical body as the Central Chamber of Agriculture. He agreed with Mr. Read that it was desirable to have some organisation out of a most disorganised system, or rather practice, for he could scarcely dignify it by the name of a system, and that the first preliminary step, which was most likely to lead in the speediest manner to the reform of the rest, was that of establishing a county representative assembly. The principles on which it might be organised were very simple. He could not agree with Baron Dimsdale that there was in principle any objection to some separate representation of the landowners and land-occupiers, because it was found to work extremely well in the administration of the Poor-law. He did not find in that board which he had zealously attended for more than thirty years, that *ex-officio* members differed among themselves, or that there was so much difference amongst those who attended board of guardians as, *à priori* and theoretically, might be imagined. The ratepayer was too apt to wish to get things done as cheaply as possible, making shift for the time being and ignoring the future, and the interest of the landowner was to get things well and permanently done. It was advisable that both these elements should be represented in an assembly that was to do both present and permanent work. Under either system they should get an enormous improvement on the pre-

sent state of local administration. Not that he believed it would be so much more economical or better, but it would be stronger in the confidence, respect, and affection of the people of the county and of the public generally. Thus they would not merely be able to do their work, but they could always rely on the support of public opinion, and so stem the silent but rapidly-advancing encroachments of centralisation. He was speaking with grey hairs on his head, and when he contrasted the state of things now with what they were forty-one years ago when he entered Parliament, he was quite startled. The degree of minuteness with which Government inspectors meddled with affairs by virtue of their office—and they were bound to prove that their services were required—would, if yielded to passively, tend to make local bodies mere registrars of the decrees from Downing-street, instead of independent and efficient local administrators. Unless administrative bodies were trusted, they were rarely found to be trustworthy; and if this of which he complained were continued, they would get that meddlesome and irritating interference which he was often pained to witness among foreign nations. Provincial authorities would be emasculated, and there would be a habit cultivated of looking to the Metropolis and executive Government for everything. M. Guizot said, in a very profound remark, "You can find no support in a body which can oppose no resistance." In one instance a Government inspector had ordered each pauper child in a certain workhouse to have a separate basin and a towel. It was then ascertained that not only had the elected guardians not themselves enjoyed this privilege, but a number of the *ex officio* guardians had not either. This and similar instances were but straws thrown up to show which way the wind blew, and he was sorry that they as Englishmen were beginning passively to submit to such things. One advantage of a county assembly was that it would be strong enough to face Downing-street; highway boards and such-like were not sufficiently strong to hold their own against opposition. His desire was to see something of the hierarchical principle—to have provincial authorities for the road, high-ways, Poor-law, and sanitary administration, and there would be wanted a central authority to ensure something like unity of principle. The first step in this seemed to him to be the establishment of representative county boards. He rejoiced to find so important a body as the Central Chamber, representing agriculture throughout the country, speaking strongly out as to the necessity of improving our chaotic local administration, and that it seemed disposed to give full prominence to the establishment of representative county boards.

Mr. HODGES said that, with regard to Earl Fortescue's remark as to the representative system, he thought that system pure and simple should be relied on. Speaking as a tenant-farmer, he said it would be an extreme discouragement to that class if, after spending considerable time and labour in informing themselves on subjects, and extending their influence, their decisions were set on one side by *ex officio* members whose visits were infrequent. On boards of guardians such members were very useful; but in such assemblies as were proposed the proper thing was to have representatives freely chosen from both classes of agriculturists.

Earl FORTESCUE said he never contemplated that all the magistrates should be *ex officio* members of the county board, but only that they should have the power of electing a certain number out of their own body. In Ireland one-third were elected on Poor-law boards, and he thought that was a fair number.

The PRESIDENT said they had had an interesting and instructive debate on the question, and they were much indebted to Captain Craigie for his valuable contribution to the cause of local government. That every detail should be carried out was more than could be expected, for, naturally a subject of this importance induced a number to form their judgment upon it before an opinion could rightly be formed. Some had doubted whether the whole should be carried out, or whether it was desirable to proceed by details. If a provincial board were to be formed in the county, they must get a good deal to do, else it would be scarcely worth forming. Unless trunk-road, disused turnpikes, and such like, were under county management, they could not hope for any imperial contribution towards their support. Yet it was right that such a contribution should be made, because formerly the expenses of turnpikes were entirely borne by the general public. As the ratepayers now had to support them, it was

only fair that they should have some power over them. Cattle disease might come under such a board as was proposed, and police, finance, and other matters. The management of finance by provincial representatives was so entirely in harmony with the dictates of justice and fairness that he thought in theory it could scarcely be controverted. There were great difficulties in carrying out the scheme suggested, but as they had fairness and right on their side, no great time could elapse before it was effected.

Captain CRAIGIE, in reply, said that, if his remarks were rightly understood, it would be seen that the suggestion that the proposed county board would have little to do could scarcely be correct. He proposed to increase, rather than diminish, county functions, except in one direction, which was purely imperial, and should be managed by Crown officers, for which the Crown should pay. Contrary to Major Paget, who said that one of the first objects of such a board would be road management, he imagined that one of its most essential provinces would be valuation and assessment. He strongly protested against the forming of a new board for every administrative function. As Mr. Corrance had pointed out, if the subject was now surrounded with difficulties, those difficulties would be greatly increased in the course of two or three years more. One point he would call their attention to—namely, the unnecessary contests forced by some individuals at the expense of the ratepayers for the School Board elections. By the establishment of county boards there would not be a great change in the persons who administered the finances, but there would be a great change in principles. As to police, he thought they should be entirely left under the management of Government.

The motion was unanimously adopted.

Mr. J. S. GARDINER moved, "That in all elections of local authorities administering rates, the voting qualification shall depend on the payment of rates by the electors, and that the scale of voting shall be that adopted by the Act 7 and 8 Vict., cap. 101." He said that this Act, passed in 1844, was entitled "An Act to Regulate Vestries," and was based on a preceding Act. It enacted that an owner of property should be entitled to vote in local elections once, if his property were rated at less than £50; if less than £100, two votes; and so on until, if over £250, he were entitled to six votes. Under this Act were elected churchwardens, waywardens, and guardians, according to the good old English axiom, that they who contributed the money should have the power of spending it. The School Board Act reversed all this, and the lowest people were now found to put forward their creatures, and often they were elected. For instance, he held twenty-two cottages in a village, and each of the tenants occupying those at a School Board election had a vote, while he, the owner and large ratepayer, had only one also.

Mr. ELLIS, who seconded the motion, said he had seen the same thing carried out in his own district.

Professor BUND moved the following amendment: "That in all elections of local authorities administering local rates the voting qualifications shall depend on the contributions to the funds of such authorities by the electors, and that the scale of voting shall be that adopted in the Act 7 and 8 Vict. cap. 101." He agreed with the principle enunciated by Mr. Gardiner, but objected to the sweeping character of his motion. They wanted to unite the small ratepayers and the large ratepayers, and this might have a directly contrary effect, in the event of a combination among the former.

A conversation ensued, in which Mr. Nield, Mr. Gardiner, Earl Fortescue, Mr. Jabez Turner, Professor Bund, and Mr. Muntz took part.

Sir THOMAS ACLAND, M.P., remarked that, with the recollection of the recent introduction of the ballot, they should not be in a hurry to give expression to their opinion on so important a subject.

Mr. E. HICKS said all Mr. Gardiner asked was that the abstract principle should be affirmed, that the rates should be expended by the men who contribute the money.

Earl FORTESCUE repeated the advice of Sir Thomas Acland. The motion proposed to alter the system of election for every municipal corporation in England. In land drainage the principle was recognised in a large succession of private Acts, and every one was convinced of its justice; but it was not recognised in their political constitution. It was scarcely seemly for that Chamber to lay down a principle which comprehended all the municipalities of the kingdom—London,

Dublin, Edinburgh, Liverpool, and so forth. It, therefore, thought the subject was worth being more fully considered.

After a few remarks from Mr. Stratton, Mr. H. Biddell, Mr. Neville-Grenville, M.P., Mr. Duckham, and Mr. Corrance, who thought the Council was dealing with a subject hardly within its province, the motion was carried by 21 votes to 8.

Mr. STRATTON said that with regard to the question of contagious diseases all they could at present do was to pass a vote of thanks to Mr. C. S. Read. He, therefore, proposed that they should offer that gentleman their hearty approval of his honest and consistent conduct in sacrificing office in order to uphold the trust reposed in him by the agricultural interest.

Mr. DUNN seconded the motion, which was cordially adopted.

Communications were received from various chambers, in which approval of Mr. Read's conduct was expressed, and uniform treatment advocated in relation to diseases.

Mr. JAMES S. GARDINER moved "That law 24, relating to payment of railway fares of elected Council members, be rescinded." A discussion followed, but the consideration of the question, upon being put to the vote, was adjourned until the annual meeting in December.

Several subjects were proposed for future discussion, among them being "Contagious Diseases," "The Anomalies of Local Taxation and Local Government," and "The Education Question." It was eventually decided to leave the settlement of subjects for discussion to the Business Committee.

The Chamber then adjourned.

#### THE AGRICULTURAL CHILDREN ACT AND THE

TENANT-FARMERS.—At the county petty sessions Mr. William Lenton and Mr. George Green, both of Alconbury, farmers, appeared to a summons charging them with having, on the 6th of January last, employed certain children above the age of eight years in the execution of agricultural work, whose parents had not obtained and exhibited the certificate of school attendances in the form set forth in the schedule annexed to the Agricultural Children Act, 1873, or a form similar thereto. A number of farmers were in court, as invitations had been sent by post asking them to attend. Both defendants pleaded guilty. Mr. Green said that the boy he had employed was not a regular boy, having been at work for him only a week. The Act, he said, made a difference to him of £3 per week, and recently he had ten horses lying still because he could not get one to go with them, which entailed a still further loss of £12. His land was of no use to him, and the landlords, who made the laws, would have to occupy the farms themselves, or make fresh arrangements with their tenants. It was a very unfair law. The Chairman (the Rev. R. P. Rooper) said they, as magistrates, had only to put laws in force as they were. Mr. Green said they must do as they would, but they would soon have the land on their own hands, and the sooner the better. Mr. Lenton said he knew many farmers who at the present time were keeping their sons away from school, because they could not get boys to go to plough. The Chairman: We do not make the laws, and we know that we must incur some unpopularity by having to carry out this law, which we are bound to do. Mr. Lenton: I think you can repeal it. The Chairman: No, we are not the House of Commons yet. As you have pleaded guilty, there is nothing left but for us to convict. It is the first case that has come before us, and we will make it as light as we possibly can by putting a nominal fine of 6d. and remitting the police fees. The expenses, therefore, will be 9s each. Both the defendants declared that they would not pay, and distress warrants will be issued. Mr. Newton, of Alconbury, requested permission to ask a question. At the present time, he said, the only three boys his father had driving plough were under 12 years of age. They were making one attendance at school per day, but had not completed the required number. He wished to know whether in such cases the law would be carried out, as if so his father would be without a boy to drive plough. The Chairman said that of course it was an infringement of the law, and that was all he could say. It was very far from the wish of the magistrates to strain the Act in any way. Mr. Newton: You are not compelled to employ the police to give information. The

Chairman: That was done in quarter sessions. Superintendent Marson said that other occupiers had complained that boys they had discharged had been employed by other farmers. Mr. Newton said the Act pressed hardly upon farmers in general, and landlords would find out that it will affect the rents. His own ploughed land costs him 6s. per acre more to

cultivate than it did three years ago. The father of the boy employed by Mr. Lenton said the Act was as hard on families as on farmers. He used to have 13s. per week for seven of them to live upon, and now he should have only 10s. He hoped the magistrates would alter the law if they could. Perhaps they might, he said, if they "rit up to Parliament."

## S M I T H F I E L D C L U B .

A Council-meeting was held at the Agricultural Hall, on Tuesday, Feb. 1st. Present: The Right Hon. Lord Cliesham, President of the Club, in the chair; his Grace the Duke of Bedford, the Right Hon. Lord Walsingham, Vice-Presidents; Edwd. Bowly, Thos. Brown, A. Crosskill, A. F. Milton Druce, Josh. Druce, Thos. Duckham, Walter Farthing, Henry Fookes, John Ford, Robt. Garne, John Giblett, Thos. Horley, jun., Chas. Howard, Robt. Leeds, R. J. Newton, Henry Overman, R. C. Ransome, W. Rigden, H. Trethewey, H. Woods; B. T. Brand-ash Gibbs, Hon. Sec.

The minutes of the last Council meeting were read and confirmed.

The report of the Veterinary Inspector respecting the health of the stock at the last show was read.

Mr. Hugh Corringe (of Shoreham, Sussex), and Mr. F. M. Jones (of Christall Grange, Saffron Walden), were elected Stewards of Live Stock for the ensuing three years.

Mr. Josh. Druce and Mr. Robt. Leeds were re-elected Stewards of Implements for the present year.

The report of the Prize Sheet Committee was read, and the following decisions were come to. That the following special rules be continued for this year's Show:

- 1.—That no animal (cattle, sheep, or pigs), exhibited at any other show within one month previous to the 1st of December, 1876, be allowed to be exhibited at the Smithfield Club's Show this year.
  - 2.—That each exhibitor be required to certify that any animal to be sent by him for exhibition at the Smithfield Club's Show this year has not been, and will not be, shown at any other exhibition within one month previous to the 1st of December, 1876.
  - 3.—That the exhibitor shall send with each animal a certificate that it has not been, for fourteen days previous to its leaving home for the Smithfield Club's Show, in contact with any animal suffering from contagious or infectious disease.
  - 4.—That all animals undergo a veterinary examination previous to being admitted at the doors of the Agricultural Hall; and that suitable covering be constructed over the outer yard to enable this to be properly carried out.
- That the Extra Stock Cattle be abolished, and that the following classes be established in lieu thereof:

1st.—For steers or oxen not qualified to compete in any of the other classes, and that the age be restricted to 4 years and 6 months, first prize, £20; second, prize, £10. In this class, if the breeders' certificates are not obtainable, the exhibitors must produce such evidence as shall satisfy the Stewards of Live Stock that the animal does not exceed the prescribed age.

2d.—For heifers or cows not qualified to compete in any of the other classes; heifers not having had one live calf not to exceed 4 years old; cows above 4 years must have had at least one live calf; first prize, £20; second prize, £10. With the same rule respecting the breeder's certificate as the preceding class.

It was resolved:

That in the Cattle Classes exhibitors be allowed to make two entries in any one class.

That in all the Heifer and Cow Classes the same condition be introduced—viz., that any cows shown above 4 years old must have had at least one live calf.

That the breeders' medals be given only to such breeders as are not the exhibitors of the animals winning the first prizes, and that no breeders' gold medals be given.

That the Extra Stock (Sheep) for one single sheep be abolished.

That exhibitors be allowed to make two entries in the Sheep Classes.

That all the classes for 2-year old sheep be abolished.

That the prizes in the Lamb Classes be increased: first prize, £5; second prize, £4.

Several alterations were made in the wording of the rules and regulations, so as more clearly to define their intention.

It was resolved:

That no animal having once won the Champion Plate, or any of the cups, can compete for the same again.

It was also resolved:

That there be a class for a single pig of any age, in place of the Extra Stock.

Resolved:

That the removal of animals after the Show shall commence at six o'clock in the morning of the Saturday after the close of the Show, and go on up to six o'clock in the evening, except animals going by train on Friday evening, in which case they must be removed in charge of the exhibitors' own servants. Any other animals not removed between the prescribed hours on the Saturday must remain till the Monday following, and be removed between the same hours.

It was resolved:

That there be an office provided for salesmen.

It was resolved as follows:

1. That each distinct set of Judges of Cattle be requested to select an animal which, in their opinion, is best calculated to compete for the Champion Prize.
2. That, after the three animals have been selected, each set of judges shall depu'e one judge from their own body to assist in making the final award.
3. That similar regulations be adopted for awarding the Champion Prizes in the Sheep Classes.

That in future the judges be furnished before commencing with the weight of all animals, pigs included; also, that all pigs be sent in crates, and that the stewards be requested to make the necessary arrangements as to weighing machines, &c.

The Trustees were empowered to sell out £300 from the reserved annual income to meet the excess of last year's prizes, &c.

It was resolved to continue the fines for the non-exhibition of live stock entered but not sent for exhibition; that the Show be held according to the usual rule, which will bring the first day this year on Monday, Dec. 4th.

Various letters were read, and were referred to the Stewards or Committee under whose department they came, and replies ordered to others.

Mr. Crosskill's name was added to the Committee for making Arrangements for Cattle Conveyances.

The Implement Committee was re-appointed, with the addition of the name of Mr. R. C. Ransome, and with the same powers as heretofore.

The following were elected members of the Club: Edwd. Baunton, West Kington, Dorchester; Jas. Case, Testerton, Fakenham; T. Case, Street-place, Hurstpierpoint, Sussex; Thos. Chambers, Colkirk, Fakenham, Norfolk; Henry S. Coleman, Chelmsford, Essex; Jas. Culverwell, Classey Farm, North Petherton, Bridgewater; Sylvanus Eddington, Chelmsford, Essex; R. England, Benham, Wells, Norfolk; Douglas Henty, West Gate, Chichester; Samuel Kidner, Bickley Farm, Milverton, Somerset; Edwd. Marshallsay, Perrysfield, Oxted, Surrey; Alfred G. E. Morton, Chelmsford, Essex; William Newton, Preston, Crowmarsh, Wallingford; Geo. Oakley, Lawrence End, Welwyn; Jonah Ostler, Bloxwood House, near Horsham; Charles Walter Schroeter, Teuford House, Billinghurst; Edwd. Tingey, Rudham, Brandon, Norfolk.

It was resolved :  
That the collection and publication of the dead weights of animals be discontinued.

The meeting then adjourned till three o'clock on Thursday, May 4th, unless the date should be altered by order of the President.

## ON THE ATMOSPHERE IN SOME OF ITS RELATIONS TO ANIMAL LIFE.

At the annual meeting of the Hexham Farmers' Club the President (Major NICHOLSON) read the following paper :

The globe which we, in common with the lower animals, inhabit is a mass of matter suspended (if I may use the expression) in space by a form of attraction existing among the planetary bodies. While our earth is maintained in its place in the solar system by this great power, it has an attractive influence of its own by which it confines its component parts within its own sphere. This terrestrial force is the "attraction of gravitation," which is exerted on all things found on its surface. Hence the atmosphere is held in its place as an aerial envelope to the globe, in opposition to the law of repulsion existing in, and characteristic of, all gases. The atmosphere is calculated to be about forty-five miles in height, and to press with a weight equal to about fifteen pounds on the square inch, at the level of the sea. In ascending high mountains the weight decreases, and in descending far below the surface a corresponding increase, of course, is observed. If it be remembered that the atmosphere is kept in its place by the attraction of the earth, and that this force is exerted in the inverse ratio of distance, you easily understand that it will become thinner and lighter as you ascend. The composition of the atmosphere has been frequently ascertained by well-managed experiments, and it is now looked upon as one of the settled facts of physical science. Atmospheric air, freed from moisture and carbonic acid, consists of nitrogen and oxygen, in the proportion of 79 of the former to 21 of the latter. Nitrogen and oxygen are the essential components of the air we breathe. But you can have no doubt that a medium which receives the emanations from the soil, the evaporation from seas and their tributaries, the exhalations of animals, and the smoke of combustion, must contain several other elements beyond those I have mentioned. Hence, in addition to the oxygen and nitrogen, we find watery vapour and carbonic acid gas invariable constituents. Nitrogen, oxygen, watery vapour, and carbonic acid gas may be, then, assumed to be the ordinary elements of atmospheric air, and to be in the following proportions: Nitrogen 78.8, oxygen 19.7, watery vapour 1.3, carbonic acid 1. Though the first two are invariable in their quantities, the watery vapour and the carbonic acid are liable to some slight variation, dependent on circumstances of a local nature. Such are the proper constituents of the air; but it is to be borne in mind that it occasionally and not unfrequently contains other elements, due to decomposition, and the putrefaction of organic substances, such as nitric acid, ammonia, and sulphuretted hydrogen. They are, indeed, found only in very minute quantities, and to be regarded as extraneous and foreign to the atmosphere itself. They are important, nevertheless, in as far as they may be offensive to smell, or productive of disease; and some of them are recognised as contributory to vegetable development and growth. Without further notice, however, I pass them over as rather belonging to the domain of sanitary science and vegetable physiology. In like manner I pass over ozone, which is but a modified condition of oxygen. On examining the atmosphere as a part of our terrestrial constitution, we see many circumstances which are intimately concerned in the existence and protection of animal life. One of these is the weight with which the aerial mass presses on each individual at the earth's surface. It will appear somewhat incredible to him who has not before heard of the fact, that his body is bearing a load of atmosphere equal to about 14 tons, provided that he is of ordinary stature. He can make the calculation for himself. He has only to multiply the inches of corporeal surface by 15 (15 being the number of pounds of atmosphere on the square inch), and the result will be the entire weight of atmosphere resting on his body. But by far the most important matter belonging to the subject now under discussion is the process of respiration—a matter which embraces the chemical action of the air on the blood, the dependence of life on the blood's aëration, and the deterioration of atmosphere produced by it. The process of respiration consists of the alter-

nate movements of inspiration and expiration, by which fresh air is admitted, and vitiated air is exhaled. It is necessary to premise that the nutrition of the animal body is accomplished by a sufficient supply of arterial blood; and that this fluid becomes altered in its vital as well as in its physical properties, when it has gone the round of the circulation. Hence the difference in what is called arterial and venous blood; the former being on its way to supply nutrition to the tissues; the latter, the same fluid, on its way back, after it has done its work. It is in the lung that arterialisation is effected, which is the admission of atmospheric oxygen, and the removal of carbonic acid. The two conditions of blood are distinguished by the colour they present, and take their special names from the vessels by which they are contained and carried. What, then, are the purposes of the absorbed oxygen in the animal system? It is to be conveyed to all parts of the body by the blood, and to enter into combination with those combustible elements, presented to it, in every part of the frame, for the production of animal heat. This is one of the most beautiful of the many provisions known to be constantly at work in the economy of the animal machine. The food on which the animal lives contains not only such components as maintain the fabric of the living frame, but also those which are required to evolve heat, on meeting with the oxygen of respiration. Thus, in every respect, is there an analogy between the function of respiration and the act of combustion, as seen in the common fire. The combustible elements placed in the grate or furnace, like the combustible matter in the blood or tissues, unites with the oxygen of the air, and, as happens in the animal organisation, heat and carbonic acid are produced and evolved. And while the fire is the means of house or chamber ventilation, the lungs, through respiration, effectually accomplish the "ventilation of the blood." If then, we have such indubitable evidence of a fixed and determined relation between oxygen and carbon in producing carbonic acid, there must also be an existing relation between the requirements of the animal economy and the surrounding atmosphere. Man breathes, in an ordinary way, from 15 to 20 times in a minute, and at each inspiration a definite quantity of oxygen is taken up. This act can only be interrupted for a short time without danger to the life of the individual. Hence the importance of ventilation. Each respiration is accompanied by the same result—viz., the evolution of carbonic acid. But the quantity contained in the expired air is contingent on the time consumed in the act, and the purity of the surrounding medium. Observation, however, shows that 100 volumes of expired air, in normal respiration, contain from 3.5 to 5 volumes of carbonic acid, and from 16 to 15 volumes of oxygen. In the change effected, the air has lost, according to these figures, one-fourth or one-fifth of its oxygen, and put carbonic acid in its place. If the same air continued to be breathed for a longer time it would, at this rate of deterioration, soon become a negative poison, and unfit for animal respiration. We may find an approximation to the amount of fresh air required by a healthy person, by ascertaining the average quantity admitted into the chest at each inspiration, at the same time bearing in mind the relation this has to the deterioration effected by breathing, as just shown. Reckon 15 respirations in the minute, and the inhalation of 30 cubic inches of air each time. On the supposition that fresh and pure air is inhaled at each inspiration, there will pass through the lungs about 360 cubic feet of the medium breathed every 24 hours. The amount of carbonic acid exhaled during this period, according to this computation, will be about 19 cubic feet. "In a closed space," says Liebig, "eight feet high, nine feet long, and eight feet wide, a man could not breathe for 24 hours without uneasiness. At the end of that time the air would have the composition of expired air, and if the patient remained longer in the same air, a morbid state, and finally death, would ensue." Ignorance of such facts has produced the most fearful and cruel consequences. I may cite, for example, the serious

accident which befel the unfortunate prisoners, huddled together in the Black Hole of Calcutta, in 1756. 146 persons of both sexes were shut up in a prison, consisting of a cube of 18 feet, walled on all sides, to the almost entire exclusion of fresh air. They were confined in this place from evening until daybreak; and when the door was opened, it was found that 123 had died during the night, of suffocation. This sad event is narrated by one who escaped this horrible death, by the accident of being near to a small opening, through which a little air was admitted. To comprehend, therefore, the arrangement necessary to avert such consequences is of first importance to every one anxious to protect health and life. Let us then turn to the subject of ventilation, which naturally suggests itself at this point of our subject. The product of respiration and combustion is, in every instance, carbonic acid—an element specifically heavier than the atmosphere. Does it accumulate where it is generated? is a question which stands in our way and requires explanation. Without consideration of the attendant circumstances, we would be led to answer in the affirmative; and the apparently natural inference is supported by the amount of this gas found in old wells, in ill-ventilated mines, and at the bottom of the brewer's vat. But in these instances it is evolved nearly pure, and is left for a time to obey only the law of specific gravity. Where, however, carbonic acid has once mingled with a considerable proportion of atmospheric air, it does not again separate from the gases with which it has blended in consequence of its greater weight; nor yet is it removed except by the presence and operation of some strong chemical agency capable of developing its peculiar attraction. To which, then, of these conditions does the vitiated air of respiration belong? Certainly not to the former; for I have already said that it issues from the chest in a state of mechanical but intimate admixture with oxygen, nitrogen, and watery vapour. It, therefore, obeys not the "law of gravity," but "the law of the diffusive power of gases." Water is amenable to the same law of diffusion, though we describe it, as we find it, to be a fluid of some density and stability. It rises in continual evaporation, until it loads the air to saturation; and then condensation ensues, which returns it to the earth as rain, hail, snow, or dew. The analysis of the atmosphere also demonstrates the presence of carbonic acid in the highest regions attained by balloon ascent. This could not be if the diffusive powers of the gas did not overcome its tendency to fall according to its own preponderance of weight. And what would be the result if carbonic acid fell according to its specific gravity? Inevitable death; for a stratum of it would settle down on the earth's surface, as is found at the bottom of the *Grotto del Cone*, in which neither animal nor vegetable life could exist. Nature in this, as in all things else, displays the foresight and design of creative skill. While the gas is separated from the economy of man and the lower animals as a noxious excrement, it is taken up by the atmosphere, to become afterwards the food of plants. Such instances as this contrast strongly with the greatest efforts of human contrivance; for

In human work, though laboured on with pain,  
A thousand movements scarce one purpose gain;  
In God's one single can its end produce,  
And servo to second, too, some other use.

Having thus briefly, but I hope intelligibly, explained the manner in which the carbonic acid of respiration spreads itself through the atmosphere, I next proceed to the conditions required to remove the vitiated air from the apartment in which it is generated. It is necessary that movement of the air is produced. This is the point on which the whole question of practical ventilation rests. All the apparatus invented and employed for the removal of vitiated air act by putting it in motion. You are aware that the air which has been breathed is, in reality, heavier—*caleris paribus*—than the pure air of the atmosphere; hence, an influence must be in operation at the time it passes out of the mouth to counteract its tendency to descend. This agency is heat. The vitiated air of respiration is heated by the lung, and, when expelled, being lighter on that account, it rises in the colder atmosphere until it reaches a point where the medium is of its own weight. The application of heat to gases immediately produces an increase of volume; in other words, they are thereby rarefied. Rarefaction, consequently, is employed to occasion motion in the air of a building, in order that the vitiated atmosphere may by its greater lightness be withdrawn, and a purer medium made to take its place. In those buildings where fire-

places and chimneys exist, as in dwelling-houses, there can be no difficulty in their perfect ventilation, because the fire heats the air in the chimney, which becomes rarefied, and escapes as smoke. The fire draws to itself; and, as nature abhors a vacuum, fresh air is admitted into the apartment by such apertures as are found to exist. But where a building is on a larger scale, ventilation must be secured by a separate arrangement. Take, for example, a church or theatre. There must be a contrivance for the admission of air, and one for its exit. It is true, where you have a crowd of people, the heat evolved by them will be sufficient to cause the air about them to ascend. But when it reaches a certain point it would accumulate to a dangerous extent, if there were no contrivance by which the motion could be continued and the air removed. A heating apparatus is usually so placed as to produce an ample column of rarefied air, with a chimney to secure its escape. The large chandelier seen at the top of the theatre serves the double intention of light and ventilation; for the high temperature generated by such a brilliant and powerful illumination is sufficient to heat the upper air and make it escape by an aperture provided for the purpose. The ventilation of farm-buildings is a matter in which the members of this Club have a special interest. Where cattle and horses are housed there are no fireplaces, or any other means at hand by which the air can be put in motion by artificial heat. To secure a proper and sufficient supply of fresh air to such building, many appliances have been invented, some of them entirely useless. The "fan," so often seen in the windows of stables, is of this category. The ventilation of this class of building is to be effected almost solely by the rarefaction of the air of the place, consequent on the action of the heat generated and given off by the bodies of the animals present. The vitiated atmosphere is thus made to ascend to the upper part of the building, where there ought to be a proper arrangement to enable it to escape. At the same time, there must be a carefully devised scheme for the admission of fresh air, to take the place of that which is escaping. The fresh air must gain the interior of the building at a point not much above the level of the floor, and must be so admitted as not to be felt as a "current of cold air" blowing on the animals. This system of ventilation by heat is an exemplification on a small scale of the great "principle of ventilation" employed by nature in the ventilation of the universe. The winds which blow are currents produced by the quick expansion of air at some point; and, like water seeking its own level, the atmosphere on all sides rushes to fill the partial void, with a force and velocity proportioned to the acting influence. The well-known "trade winds" blow from the poles to the equator, with only such variation as is given to them by the rotation of the earth on its axis. The occurrence depends on the smaller degree of obliquity with which the sun's rays fall on the equatorial portion of our globe. The air which finds itself over the equator is thus heated and made to mount the highest strata of the atmosphere. This is replaced by tresh portions of the surrounding air, which come under the same influence, and ascend in like manner. In this way is a constant ascending current established at the equator, and air is made to stream in from the more temperate regions, both north and south, to supply its place. On the other hand, while our senses are cognisant of the trade winds blowing with impetuous violence from the poles to the equator, we are led by inductive science to infer the existence of counter-currents in the upper region of the atmosphere, blowing with like force, and bearing with them their heat from the equator to the poles. You easily understand that it is essential that nature should possess the power to restore atmospheric equilibrium, which is constantly liable to be disturbed by causes in operation at the earth's surface, and it is equally important that the air should be in frequent motion. I need not tell you that a stagnant atmosphere would be destructive in time to all forms of life. Under such circumstances, there could be little advantage in the elements having peculiar affinities and attractions, because they could only be exercised to a very limited extent. In conclusion, gentlemen, the student of nature is aware of the extent to which one force is balanced by another, and that the laws of the universe maintain equilibrium by natural action. If expansion were not the general result of increased temperature, and diminution of weight the consequence of expansion, there would be an accumulation of heat where it is generated, while other parts would suffer from its absence, so that death would result from intensity of heat in

the first case; and in the latter there would be a condition of coldness incompatible with vital existence. Elaborate and perfect, therefore, is creative skill in the means adopted to accomplish the distribution of temperature and the maintenance of atmospheric composition. Not less conspicuous is the adaptation of the atmosphere to the requirements of animal

and vegetable life. And in profound admiration and astonishment we should be anxious to learn the lessons of the Creator, and to study with ardour and intent the open book of nature; for

'Tis sweet to muse upon His skill displayed—  
Infinite skill—in all that He has made.

## THE AGRICULTURAL HOLDINGS ACT.

The statement of Sir William Harcourt to the effect that the land agents of the country almost without exception had advised their employers to set aside the Agricultural Holdings Act, appears to be in course of verification. At a recent meeting of the agents in Lancashire, representing the owners of nearly 300,000 acres of land, a brief account of which we gave in these columns a fortnight ago, the following resolutions were passed: 1. "That this meeting, though fully recognising the principles of the Agricultural Holdings Bill, that outgoing tenants are, under certain conditions, to be paid for unexhausted improvements, yet considers it would be more advantageous to regulate the terms of that compensation by private agreement." 2. "That this opportunity should not be lost of insisting that tenants who have no written agreements should take one embodying the principle of the Act, and that the clause respecting unexhausted improvements, where not already existing, should be inserted in present agreements." 3. "That a committee of twelve, with power to add one to their number from each hundred, be appointed to decide on the best clause with regard to unexhausted improvements, and to suggest any other clause which they deemed possible to be universally inserted in Lancashire agreements." Another resolution was moved by the chairman, Mr. Halifax Wyatt, agent to the Earl of Selton, which, as it denotes the view taken by a considerable minority of the agents present, we also reproduce: "That the choice of being under private agreement, or being under the Act, be offered to the tenants, with the distinct understanding that, if they elect to be under the Government Act, it will necessitate a large portion of their farms being re-valued, as a basis for any future arbitration." It is well that this resolution, with its ungenerous threat, was rejected by the majority of the agents present. As farming goes at the present time, we are by no means sure that tenant-farmers need dread a re-valuation of their occupations. Certainly if rents were fixed in proportion to farmers' profits there should be a reduction throughout the whole country; for, with expenses of all kinds enormously increased, and with prices of the produce of arable land seriously diminished, the profits of farmers have for some time been getting small by degrees and alarmingly less. But there is no doubt that the threat is supposed to be a terribly deterrent one, and we are afraid that its effect would be as great as expected. Rising rents have been so much the rule in recent times, that tenants who have an attachment to their homes and their holdings are possessed with a nervous dread of a re-valuation. Taking this fact into consideration, we are almost inclined to think that the Agricultural Holdings Act has come upon us a few years too soon. Another decade like the last will undoubtedly reduce the premium at which the occupation of land has so long stood, even if something of the nature of a land panic does not occur. If our markets are to continue to be flooded with foreign corn, whether our home harvest be good or bad, and if our flocks and herds are to be decimated by virtually unchecked disease, it is absurd to suppose that the demand for the occupation of land

will not be greatly diminished. However unable the present generation of farmers may be to find any other way of getting bread and cheese than by farming land at a great and increasing expense, and selling the produce at reduced rates, it is certain that they will not long continue to train their sons to the same unremunerative business. The advance of education already helps them greatly, and will in the future do so still more considerably, in choosing a more advantageous career for their boys than is offered by modern farming. If, then, the tenant-farmers of Lancashire could read the signs of the times, they would hardly scruple to accept the challenge which Mr. Wyatt proposed to them, and elect to have their farms re-valued, and to come under the Agricultural Holdings Act. It may be objected that we are making too much of the threat of a re-valuation of farms, seeing that the resolution which contained it was not passed at the Preston meeting; but any one who has read a full report of the speeches made, as reported in the local papers, will have seen that although the majority were gracious or discreet enough to reject the resolution, it was generally agreed that a re-valuation must precede the adoption of the Agricultural Holdings Act as a whole. Why? "As a basis for any future arbitration," we are told; but the Lancashire land-agents must have studied the Act with but little intelligence if they have not noticed that the principle of compensation under it altogether ignores the letting value of land, excepting in the case of limited owners. Improvements are to be valued in relation to the unexhausted proportion of their cost, and not in proportion to the increased value which they may have given to the farm. The principle is the same with respect to land owned by limited owners, only in their case there is the additional proviso that if the unexhausted proportion of the cost of an improvement exceeds the increase of letting-value which it confers upon an occupation, the excess is not to be reckoned. It is clear, then, that there is no necessity for a re-valuation "as a basis for any future arbitration."

A rather curious admission was made by Mr. Wyatt in the excuse which he gave for not having called the meeting sooner. It should have been held, he said, three months ago; but he "thought the landowners themselves would probably have taken the initiative," and he considered it "quite right and courteous that the opportunity should be given them." "Both your courtesies," we fancy the Lancashire landowners would say if they lived in the Palace of Truth, and were thus under the necessity of always speaking their thoughts; "What do we keep agents for, except to do our disagreeable work for us?" The landlords are wise not to court unpopularity by taking the initiative in setting aside an Act passed admittedly as a bare measure of justice to the long-wronged tenants of this country. It is well for them that the obloquy of the proceeding should be by courtesy supposed to rest in the first instance upon the agents who, with the natural hardihood of men who have nothing to fear as long as they please their employers, "advise their clients" to contract out of the Act.

We congratulate the Lancashire landowners upon their representation by such able diplomatists as Mr. Wyatt



and his followers. It was wise to "recognise the principle of the Agricultural Holdings Act" with or without "certain conditions," since no one has the hardihood to deny its justice. It was prudent to insist that all future farm agreements should be in writing, because, without a written document as a preservative, a landowner might at any time find himself a victim of the terrible Agricultural Holdings Act. We should even say it was generous to urge that a clause respecting unexhausted improvements, where not already existing, should be inserted in present agreements, if we had any reasonable assurance that the clause would be fairly drawn. But how can we have any such assurance when we see that no farmers were invited to be present at a meeting which was to decide upon their fate as tenants, and that the proposal of one gentleman, to the effect that the tenants should have a voice in the matter, fell flat as dish-water, and met with no response? The Committee that is to draw up the clause to provide compensation for unexhausted improvements is to consist exclusively of land agents, and the tenant farmers, whose capital, as Mr. Forrester remarked, 'they had to get at after all,' are simply to open their mouths and shut their eyes, and see what the bountiful providence of agents will send them. What the measure of that providence will be we have little to enable us to judge; but if the remark of the Chairman of the meeting be any indication, we should not imagine that it will be of too lavish a nature. After recommending that a private arrangement between landlord and tenant should be made before the latter commenced to carry out any permanent improvements, he added, "And I think when you have made that arrangement you need not be bound to twenty years—particularly in the matter of drainage—when you know, and the tenant himself knows, that the draining of one field will be recouped or repaid in five or six years, while that of another may not be repaid in ten or twelve." What has been repaid to do with compensation for unexhausted improvements? The true principle of Tenant-Right is that a man should be paid for what he leaves behind him when he quits an occupation, not for so much of his expenditure as he has failed to get back. If a tenant, with the consent of his landlord (necessary under the Act) carries out at his own risk improvements of a permanent character which the landlord should make but does not, surely it is hard enough to limit his compensation to that proportion of the actual cost which it is assumed will not have been exhausted within a given period arbitrarily imposed, without further limiting the extent of remuneration for a wisely directed expenditure of capital under an estimate of the probable period within which that expenditure will have been returned. In the supposed instance if the tenant's investment turns out badly he alone will be the loser as long as he holds the farm, although he has made it with his landlord's consent, and probably to some extent under the super-

intendence of his landlord's representative. If, then, the investment happens to be profitable, it is palpably unfair to deny him any further remuneration than a bare return for his outlay. In these columns we have always insisted that the landlord, and not the tenant, should carry out improvements of a permanent character. But if a landlord deposes to his tenant a duty which he is unable or unwilling to perform, then we maintain that the fairest arrangement would be for the former to say, "You may carry out this improvement at your own risk; if you fail, you alone will be the loser, and if you succeed you shall reap the full advantage." The Agricultural Holdings Act does not go so far as this in its recognition of the true principle of compensation for the unexhausted value of tenants' improvements. It imposes an arbitrary term within which an improvement is supposed to be exhausted, and then consistently makes the landlord as well as the tenant responsible for the success of an investment which the latter can only carry out (with a view to compensation under the Act) with the consent of the former. This is not all that we could wish. It is a hap-hazard expedient, imposed for the sake of convenience, and possibly unfair to one of the parties concerned. But it is at least better than a principle of so-called "compensation" restricted to the payment of just so much of the cost of an improvement as it is estimated the tenant has not recouped himself for within a given period. People do not usually invest capital with the expectation of merely getting it back again without profit. The man who invests capital always risks it; and if he runs the chance of loss, he ought to have the full benefit of the gain.

But, after all, it is the exclusion of the farmers of Lancashire from their due share in the arrangement of the future code of Lancashire farm tenancy that is chiefly to be objected to; and if our criticism of the proceedings at the meeting of the land agents be thought to be unnecessarily severe, the reason of that severity is thus to be accounted for. We can quite understand that a land agent may honestly believe that he can draw out a farm agreement more fair to landlord and tenant alike than the arrangements of the Agricultural Holdings Act would provide. If tenants had an equality of contracting power with their landlords, we should say that they could easily make better terms for themselves than the Act will secure for them. But when a union of land agents in a county meets to arrange the terms on which the land of their 'clients,' the landowners, shall in future be let, without deigning to admit a single tenant to share in their deliberations, we do say that the prophecies of those who advocated a compulsory Act are fully verified. They said that a permissive Act would be set aside, and that the landlords would dictate terms of letting to their tenants. This the landlords, through their agents, are already doing, and the argument for compulsory legislation has thus been provided with a new illustration.

## THE AGRICULTURE AND TRADE OF SERVIA.

Among the provinces of European Turkey Servia forms nearly an independent Principality, governed by its own hospodar, or prince, and owing but a nominal subjection to the Porte. The whole of its surface belongs to the basin of the Danube, and is roughly estimated at 20,000 square miles. The whole country is very mountainous, being traversed by the ramifications of the three great mountain-chains of the Carpathian, Balkan, and Dinaric Alps. The summits seldom exceed 3,000 feet, except on the frontiers, where a height of over 4,000 feet is attained.

Between these mountain-ranges are many narrow and

several wide valleys. The whole country has a general slope towards the north, and in that part of the Principality near the Save and Danube plains of considerable extent occur. The soil of Servia is fertile and productive, is well adapted for the vine, for cotton (in the warmest spots), for tobacco, rice, maize, hemp, flax, and for the common cereals almost in every quarter; but three-fourths of its surface are uncultivated. The mountainous districts are generally covered with forests of excellent timber-trees, among which the walnut is conspicuous. In the valleys and plains, especially those open to the south and sheltered by the hills to the north, the climate is warm;



but the changes of temperature are both frequent and great. In winter the thermometer ranges from 6 degs. to 14 degs. Fahr. The country is well watered by the Danube, Save, and other rivers, with their numerous branches. Many of these streams might be turned to valuable account, both for agricultural and manufacturing purposes; but almost every branch of industry is in a backward state.

It appears that no information with regard to the commerce of the Principality has appeared since the year 1869, when a review of the trade to 1865 only was published; but from a series of consular reports we find that the pig trade amounts to nearly one-half of the value of the whole exports of the country. In 1864 the number of pigs exported was 158,745; in 1865 it was 251,777; in 1870 it reached 368,313. Compared with former years, the exportation of 1872 in this, the chief industry of the country, shows much improvement, the number exported being 472,700, valued at £636,702. The value of these exports, it appears, may vary with the condition in which the animal, whether fat or lean, may reach the depôt at Steinbrück, near Pesth, in Hungary, where more than 500,000 pigs from various parts are fattened yearly. According to a report published by the Hungarian Company, to whom the feeding-place belongs, there were fattened there in 1870 a total of 546,820, the whole valued when killed at 35,385,000 Austrian paper florins, or about £3,000,000 sterling. All these pigs were melted down for their fat. They are not what is called a "flesh" race, and so are useless for salt pork for the navy.

Pigs, such as the Russian, Polish, and English races do not seem to be appreciated in these countries, the pigs being simply valued for the quantity of lard they can be converted into. Most of this fat is consumed in the

Austrian Empire. The Servian pig seems to hold its place well, as, though there is more bone and offal comparatively than with finer breeds, still it seems to fat a better, taking into consideration the weight and quality of the food. Age also may have something to do with it, as the pigs are generally two years old when exported from Servia. During September, October, and November the pigs are fed on acorns; but their chief food, when a scarcity occurs, is such pasture as the fields afford during the remaining nine months. They are also fattened on maize when the season is favourable.

In such a large extent of country, with a fertile and productive soil and great navigable rivers, the commerce ought to be very extensive; but these advantages offered by nature are too often frustrated by injudicious regulations, and the want of population, native skill, and industry. The exports of grain during 1872 amounted only to a third of the total exports, but the importation was three times larger. Of the imports of corn and flour, four-fifths are flour which has been sent to be ground in the mills on the Austrian bank of the Danube. A few mills, working by steam-power, have lately been erected in Servia, which are likely to cause a great improvement in this department of trade. A good harvest does not generally increase the exports of grain, as the surplus is consumed by the pigs. Wool is largely exported, but it is of a middling quality, and unwashed. Honey, sheep, cheese, dried plums, &c., are included among the exports, but for a very small amount. Servia is very rich in minerals, including argenteiferous copper, lead, and iron. In ancient times silver was worked, and there is still some gold-washing on the banks of the rivers Timok and Pek. The copper-mines of Maidanpek belong to an English company, and are now producing about £13,000 worth of copper yearly.

## CATTLE DISEASES AND THE SUPPLY OF MEAT.

Mr. James Howard's paper, read before the Farmers' Club, is a valuable contribution to a question that is just now attracting a large amount of attention, not only amongst farmers and cattle dealers, but also amongst the great body of consumers. It was a source of great regret to the members of the Club, assembled in their new quarters for the first time in unusual force, that Mr. James Howard was unable to be present; but his place was ably filled by his brother, Mr. Charles Howard, who, in any case, would have undertaken the physical labour of reading the paper. It is generally known that Mr. James Howard is suffering from what every one will hope is only a temporary failure of his vocal powers, so that although if the weather had been favourable he would have been present at the meeting of the Club, he would not have been able to read his own paper.

In most respects there is a striking similarity between the views upon the cattle disease question advanced respectively by Mr. Howard and a contributor to our columns, whose article we published in our last number. There is, however, this important difference, that whilst our contributor would treat Ireland as a foreign country, as far as our mode of dealing with her cattle sent to this country is concerned, Mr. Howard would treat her as an integral portion of the Kingdom, and subject her farmers and dealers to precisely the same regulations and restrictions as he wishes to see established here. Upon this point of the question we do not hesitate to say that we agree with Mr. Howard; but probably the apparent difference between the two writers only arises from their regarding the difficulty to be met from different points of view. Our contributor is no doubt right in proposing to

treat Ireland as a foreign country as long as she is virtually in the same position as far as our regulations for the prevention of the spread of disease are concerned, and we are satisfied that he would agree with Mr. Howard in wishing to treat her as a part of the Kingdom with respect to the removal of cattle, provided that she were subjected to the same restrictions as England.

Although Mr. Howard commenced his paper by enlarging upon the conditions of the supply of and demand for meat in the past as compared with the present, the chief interest of his essay centres in his remarks upon the cattle disease difficulty. Very properly he prefaced his remarks upon this branch of his subject by exposing the fallacy advanced by ignorant and interested persons to the effect that in opposing the importation of cattle disease the farmers of this country are in an underhand way fighting against free trade. Never was a more unfounded aspersion promulgated; and it cannot be too strongly protested that what British farmers oppose is not an unrestricted supply of foreign meat, but an unchecked propagation of foreign disease. All the best authorities agree that the slaughter of foreign fat stock at the ports of debarkation would in all probability rather increase than diminish the supply of meat from abroad; while, as for the asked-for quarantine of foreign store stock, if that would diminish the supply, it is certain that English graziers would be the chief sufferers, and only the breeders, a small minority of the farmers of this country, would be benefited. Mr. Howard also administered a just rebuke to Mr. Bright and Mr. Rylands by stating that they did not understand the subject they were talking about when they endorsed the fallacy to which we have just drawn attention. It really seems that the

farmers have been able to overcome their former prejudice against free trade more easily than the survivors of the anti-Corn-law leaguers, and their modern friends can clear their minds from a sense of antagonism to everything that is advanced in the interest of farmers. This survival of the ill-feeling created by an old feud is very discreditably to such men as Mr. Bright and other politicians, who on most questions are clear-sighted and unprejudiced. Protection in this country is "as dead as Queen Ann," and all attempts to conjure up the ghost of it with a view to frighten the ignorant masses, who can so easily be induced to believe in it, are to be attributed either to an ignorance which should keep a man's mouth shut, or to interested motives which render utterance obviously disgraceful.

For an account of the measures for the stamping out and keeping out of cattle disease advocated by Mr. Howard, we must refer our readers to his paper, printed on another page of this journal. Stringent as they undoubtedly are, we are inclined to think that the farmers as a body, in their present state of alarm at the terrible prevalence of disease, would not object to have them tried at least for a time; but if their consent were gained we fear that the ignorant clamour of the people of the towns, as manifested, for instance, at the meeting in Exeter Hall, reported in our last number, and the selfish objections of an interested clique, would frighten the Government from their adoption. Every one admits that the existing regulations are almost useless—that with a maximum of expense and inconvenience, they effect a minimum of good; and Mr. Read's demand for stringent restrictions, or the abolition of all restrictions, is endorsed by the great majority of the breeders and graziers of the country.

Let Mr. Howard's propositions be fully discussed in our agricultural clubs and chambers, and improved upon, if possible, and then we shall see if the farmers of this country can for once come to a substantial agreement upon a question that so seriously concerns their interests. We are unable to enter into a detailed examination of those proposals on the present occasion, because we deem it of especial importance to make a few remarks upon a prominent feature of the discussion that ensued upon the reading of the paper.

If the evidence cited by Mr. Howard and our own contributor to show, first, that pleuro-pneumonia and the foot-and-mouth complaint are of foreign origin, and secondly that these diseases are, as far as we can judge by careful observation, propagated solely by means of contagion, does not produce conviction, we despair of producing it. The origin of these diseases in this country has been clearly traced, and it is admitted that they were not known here forty years ago, and that many non-importing countries and districts are still exempt from them. It is further admitted that when these diseases were unknown in this country cattle were much more overdriven, exposed, and in all respects more badly treated than they are now. Yet we find two of the most eminent members of the Farmers' Club, Mr. Meehi and Mr. John Thornton, giving their countenance to the fallacy of the spontaneous generation of these diseases by means of over-driving and exposure. We are not so much surprised at Mr. Meehi's remarks, because it is well-known that in his agricultural discourses he is always more concerned to "point a moral" in support of his own views than to sift evidence in an impartial manner, and the lesson which he was endeavouring to inculcate the other evening was the waste and danger risked by turning animals out in the fields, instead of keeping them warmly housed—useful teaching enough, if not pushed to an unpractical extreme, but altogether foreign to the question of the best means of preventing the spread of contagious diseases. But we must confess

that we were not prepared to find Mr. Thornton taking the same line of argument. Of course every one agrees with these gentlemen that it is a bad practice to keep cattle in a stifling atmosphere on board ship, and then, immediately on their landing in a heated and exhausted condition, to run them rapidly over the rails, through the cold air, in open trucks. Such treatment is injurious, no doubt, and should be improved upon; but has it ever been known to produce a case of pleuro or foot-and-mouth disease where the conditions of contagion were demonstrably absent? No such case has ever been substantiated; and until one has been, it is simply trailing a red herring across the path to enlarge upon these evils as possible causes of disease, when known causes, sufficient to account for all the disease that exists, are being discussed, with a view to their removal. Mr. Read simply administered a deserved rebuke to Mr. Meehi when he said that, although that gentleman prided himself upon his faith in science as the most reliable directress of agriculture, he was entirely unscientific in his treatment of the question under discussion. Every scientific authority who has studied the nature and incidence of pleuro-pneumonia and foot-and-mouth disease has come to the conclusion that they are propagated solely by means of contagion, and have never been known, at least in this country, to arise otherwise. The experience of practical farmers who are old enough to remember the time when these diseases were unknown here supports the same conclusion. It is idle to ask how these diseases first originated, and to say, as Mr. Meehi and Mr. Thornton said, that they must have had a beginning. To inquire how a contagious disease first came into existence is about as profitable as to discuss the origin of evil, or to spend time in debating whether the egg or the hen came first in the order of creation or evolution. We do not know how measles or small-pox originated; but we do know, as certainly as we can know anything, that now they are propagated solely by means of contagion; and the evidence is just as conclusive in the case of pleuro-pneumonia or the foot-and-mouth complaint. All that Mr. Meehi and Mr. Thornton advanced on the opposite side is pure theory, without a tittle of evidence to support it; and, by taking the course which they have adopted, these gentlemen are, no doubt unintentionally, placing a hindrance in the way of cattle-disease prevention, and playing into the hands of men who, like Professor Rogers, Mr. Odger, and Mr. Jacob Bright, would, by abolishing all restrictions, let disease run riot amongst our flocks and herds, and so diminish most lamentably the meat supply which, in their ignorance, they vainly imagine they are working to increase.—*Mark Lane Express.*

**THE EGGESFORD PERIODICAL CATTLE SALE AND MONTHLY MARKET** of Wednesday met with more than an average supply of fat and store cattle and sheep. A lot of fat bullocks were sent in by Dr. Budd, of North Tawton; Mr. J. Risdon, Monkokehampton; Mr. R. S. Luxton, Brushford; Mr. Milton, Kingsnympton; Mr. Webber, Stone, Chulmleigh; Mr. Drake, Mr. Challice, and others; good Devon cows and calves, supplied by the Earl of Portsmouth, Mr. Wills, of Colleton, Chulmleigh; 20 hogg wethers were sold by auction by Mr. Hannaford, for Dr. Budd, 30 ditto for Mr. R. G. Luxton, and 21 Cheviot sheep, ditto for Mr. G. Luxton, Winkleigh. Prices may be quoted as follow: Fat beef 13s. to 13s. 6d. per score, fat wethers 9½d. to 10d. per lb., fat ewes 8d. to 8½d., barreners from £10 to £19, steers £12 to £22 each, cows and calves from £15 to £22. A cart-horse was offered by auction for Mr. Seldon, of Bondleigh, £55 being refused, consequently not sold. Wheat 5s. 6d. to 5s. 9d., barley 4s. to 4s. 3d., oats 2s. 9d. to 3s. per bushel, wool 1s. per lb. There was a large attendance of cattle dealers, corn and manure merchants, implement makers, &c., and business was brisk. Upwards of £600 worth of stock was sold by auction.

## C O U N T R Y      D O C T O R S .

The life of a country doctor is too commonly one of either stagnation or overwork. If he has a small practice and no private property, he is a poor man, and his life is dull although not necessarily unhappy, since leisure and quietness are to some natures the greatest of blessings. He may be a naturalist or a literary student, and then his time is pleasantly occupied. He may even devote himself to some extent to sport; but it would injure his professional prestige if he went out too often, and would also involve reciprocal hospitalities and other expenses which he cannot afford. Too probably he is a disappointed man, and one who has lost a great deal of the zest of living through the failure of his hopes. Perhaps he was deceived when he entered into his practice, or has missed some local appointments which he expected to obtain. In such a case, with a growing family and the barest possibility of increasing his income to any considerable extent, it is no wonder if he takes a gloomy view of things. When once he has got into that state, there is but little to divert him from his cares. His poverty shuts him off from social pleasures, the few amongst his neighbours with whom he has got kindred tastes and interests being chiefly wealthy people, who are too apt to look down upon the poor professional man, and with whom were it otherwise he could not visit on terms of reciprocity. If he surrenders himself to drink, his course down hill is rapid; he soon loses the few paying patients that he has, and his only course then is to take an assistant's place, and that he can only keep by giving up his evil habit. It is seldom, however, that the poor medical man becomes a drunkard. In the great majority of instances he just manages to gain a livelihood, and, by dint of much pinching, to give his children a fair education. If he is clever in his profession and attentive to his duties, his earnings are at least not likely to diminish as he grows older and his expenses increase, whilst the death or removal of a popular competitor may open the way for better things; but it is tedious work at the best to increase a country practice, especially as the etiquette of the profession prohibits anything like pushing or trenching upon a rival's ground. A young surgeon, therefore, cannot be too earnestly warned against making a bad start in so unpromising a field. On the other hand, the country doctor with a large practice often earns what in the country is considered a handsome income, though he has had to work hard for it. Out at all hours of the day and night and in all weathers, either driving in an open vehicle or riding on horseback, he needs a good constitution to stand the strain, and many break down under it. The roads are too bad, the distances too long, and horseflesh is too dear to allow of his taking his ease in a close carriage as his well-to-do town brother may. As it is, he often knocks up three or even four horses in the twenty-four hours when work comes all of a heap, as it so frequently does to the medical man; so that driving a pair—which the use of a close carriage would necessitate—is quite out of the question with a country practitioner who has no other resources than his professional earnings to rely upon. It is true that he has not to live in so much style as the fashionable town doctor, and his house-rent is lower; but he has to keep more horses, and horse-keep is so very costly an item in the present time that he is obliged to economise it as much as possible. He can, and commonly does, keep an assistant; but the best of his patients expect the principal to attend them, so that it is not until he becomes old and independent that the country doctor can insist on taking a fair amount of rest and leisure. The most harassing contingency of a doctor's work is that he never knows when it is done. After going his entire round, having been out perhaps from ten till four, it often occurs that he has only just made up his medicine, and is about to sit down to dinner, when his presence is urgently called for in some distant farmhouse or cottage, where he may have to stay the whole night. Then he must hastily swallow his meal and hurry off on his cheerless drive. If he has a few friends to

dine with him it is all the same; he must leave them to entertain each other. Life or death may depend upon his prompt attention to the case to which he is summoned, and considerations of personal comfort and the claims of hospitality sink into comparative insignificance. When it is so, he does not grumble at the sacrifice he has to make; but when the call that takes him from his fireside and his friends is merely the result of a nervous and baseless fear, or morbid fancy, as it very frequently is, he finds it hard to keep his temper.

It is natural that patients who, ignorant of physiology and pathology, never know when the symptoms of their complaints are dangerous or trivial should have little consideration for the comfort or convenience of their medical attendant. Their life is important to them, or at least they think it to be so, and they cannot afford to risk it. The more ignorant a patient is the more nervous he commonly feels about himself, and thus it happens that the poor are much more troublesome to the doctor than the rich. A club-patient, who pays the magnificent sum of eight shillings a year for medical attendance and medicine for himself and his family, is more likely to summon the doctor in the middle of the night on a needless errand than the patient who pays a hundred pounds within the same period. This too is natural, and not to be complained of, for the poor labourer's life is his all, just as the rich man's is his. Generally enjoying robust health, such a man is all the more put out of his reckoning when he feels sick, and a sharp attack of indigestion is so unaccustomed a phenomenon to him that it may cause him to fear that he is at death's door. Similarly, when any member of his family is in pain he knows not in the least what degree of danger there may be, still less how to relieve the symptoms. Better educated people are commonly their own doctors in the case of a trifling ailment; but the labourer's medicine-chest generally contains nothing besides pills and epsom-salts; and these he usually doses himself with when he is in perfect health, resorting to the doctor's advice and medicine when he really requires to be dosed.

The post of health-officer under the Sanitary Acts is a new one open to the country doctor, but it is a mistake ever to allow a general practitioner, who relies chiefly upon private practice for his income, to take the appointment. If he does his duty, he will be certain to get into "hot water" and to lose patients. There is nothing which more certainly rouses the anger of the squires and farmers than anything which threatens to add to the rates, and of course all sanitary improvements have that result. Before the recent Sanitary Acts were passed—before even the old inspectors of nuisances were appointed—the country doctor, as the only man in the parish having any knowledge of the laws of health, often felt it his duty to expose some flagrant instance of disease-breeding filth; but he seldom did so without raising a storm about his ears that most men would shrink from calling forth a second time. The old race of farmers thought a "good stink" was rather healthful than otherwise, and would often triumphantly tell how they, their fathers, or their cottagers had lived for sixty or seventy years in the best of health with a ditch-drain of the most odiferous character close to the back-door; evidence conclusive, they thought, of the baselessness of the new-fangled fancies of the medical man. Since then the schoolmaster has been abroad, and the motto 'Sanitas sanitarum omnia sanitas,' has been promulgated; but there is still the same indisposition to increase the rates, and a very sluggish appreciation of the benefits of cleanliness and pure air.

Socially, the country doctor is to some extent a link between the cliques, if not between the classes, into which country society is divided. If he is an agreeable companion, is well-to-do, and especially if he is a good shot, he commonly visits not only with the clergy, but also with those who either by right or by courtesy are styled the gentry of his neighbourhood, whilst at the same time he is on friendly terms with the more cultivated of the farmers; and when he entertains, in his turn, the gathering is generally of a more composite character than is to be found in any other house in the parish. Thus it happens

that people who would not otherwise visit each other are brought together at the doctor's parties, and get their prejudices dissipated by finding that they have more in common than they had before supposed.

As a guest, the country doctor is most unsatisfactory. Ask him to a shooting-party, and the chances are that he comes too late for the best of the sport; or if he is by rare good fortune able to come in fair time, it is a mere toss-up as to

whether he will not be sent for before the day is over. Invite him to a snug little dinner, and, in spite of his acceptance, he may at the last moment be prevented from keeping his appointment. When he does come, however, there are few visitors more welcome at the country house than the country doctor. He always knows all the local gossip, whilst on topics of more important interest he is generally one of the best informed of those present.—*The World.*

## IMPORTANT TO POTATO MERCHANTS.

*Supreme Court of Judicature, January 18: Court of Appeal. Howell v. Coupland.*

This case raised a curious and important question as to failure to complete a contract in consequence of some disturbance of nature. The defendant, a farmer at Whaplode, in Lincolnshire, in March, 1872, agreed to sell to the plaintiff, a potato merchant at Holbeach, 200 tons of Regent potatoes, grown on his land in Whaplode, at a certain price, to be paid on delivery in the autumn. At that time the farmer, the defendant, had 25 acres actually sown with potatoes and 43 acres ready for sowing. The 43 acres were afterwards sown, and the whole together were amply sufficient in ordinary circumstances to produce 200 tons. In August a great part of the crop was injured by disease, and the farmer could only deliver 80 tons. The plaintiff sued for non-completion of the contract to deliver 200 tons, and at the trial before the late Chief Justice Bovill at the Lincoln Spring Assizes, in 1873, it appeared that in July the plaintiff selected two of the defendant's fields in Whaplode from which to take the 200 tons. In August heavy rains occurred, accompanied by thunder-storms, which produced a disease among the potatoes, and, among others, the defendant's potatoes were attacked. The plaintiff took the whole of the marketable potatoes produced upon the defendant's fields at Whaplode, and the defendant also allowed him to take the potatoes produced on his land in Holbeach, with some exceptions, but the whole of the potatoes received did not exceed 80 tons. The jury found for the plaintiff for £132 damages, the price per ton being £3 12s. 6d. The Court of Queen's Bench, on appeal, constituted of three Judges—Mr. Justice Blackburn, Mr. Justice Quain, and Mr. Justice Archibald—were of opinion that the defendant (the farmer) was excused from the complete performance of the contract by *vis major*, or the act of God. The contract, said one of the learned Judges, "is subject to the condition that a sufficient quantity of potatoes shall be produced on the land, and, if from some cause which comes within the description of *vis major*, or the act of God, the potatoes are not produced in time to satisfy the contract, the defendant is not liable;" and so the Court gave judgment for the defendant. From that judgment the plaintiff appealed.

Mr. Digby Seymour, Q.C., and Mr. Waddy, Q.C., appeared for the plaintiff in support of the appeal; Mr. Herschell, Q.C., and Mr. Beasley appeared for the defendant in support of the judgment appealed from.

Reliance was placed by the counsel for the plaintiff (the appellant) on the older cases, which are very rigid as to the obligation to perform a contract being legally binding in spite of any obstacles or natural impossibilities intervening—our law being very strict on this subject. But the authority of these old cases was to a great extent got rid of by a recent judgment of the Queen's Bench in the case of a music-hall which was burnt down, and the lessee of which was held to be relieved from his contract by the destruction of the subject matter.

Lord Coleridge pointed out that this decision established distinction on the ground of an implied understanding that the subject matter of the contract should continue to exist; and it was admitted that, if this decision applied, it was against the plaintiff.

Lord Justice James said the contract here was for the crops of particular fields, and if they failed was the farmer responsible?

Lord Coleridge: The contract was for the delivery of the 200 tons of potatoes grown on this land if they should exist, and if they did not exist then the principle of the recent case is applicable. Was it not an implied condition of the

contract that 200 tons of potatoes should be produced from this land?

It was urged on the part of the plaintiff that there was an implied warranty that the land would produce that quantity, and that the potato disease was so common that it was a contingency which must have been foreseen.

Lord Justice James and Lord Justice Mellish, however, observed that it was expressly stipulated that the potatoes were to come from certain particular land of the plaintiff's evidently because he did not mean to enter into a positive contract for a supply of the specified quantity of potatoes, but only in the event of that quantity being produced by that land of his.

Lord Justice Mellish: In the case of a man selling all the apples of his orchard, they being then on the trees, in the event of their being destroyed by a storm or disease before the time of delivery it is clear that, according to the recent decision, the party would be excused for non-delivery. And can it make any difference that the apple-trees are only in blossom?

After hearing the counsel for the plaintiff fully,

The Court consulted together for a few minutes, and without calling on the counsel for the defendant proceeded to give judgment in his favour, affirming the judgment of the Court below.

Lord Coleridge, in giving judgment, said the contract was for potatoes to be grown on certain land of the defendant, either actually sown or about to be sown, and amply sufficient under ordinary circumstances to supply the quantity contracted for. The potato disease, which no skill or care could guard against, attacked the crop in the autumn and destroyed the greatest part of it, and it was too late to produce another. The Court below decided that the defendant was excused on the ground that it was an understood condition that the potatoes should exist to be delivered. They had existed, but were destroyed by causes over which the defendant had no control, so that it was impossible for him to deliver them, and that was the true ground of the decision. There was not an absolute contract to deliver 200 tons of potatoes, but only to deliver them if they should be produced on the plaintiff's land, and this judgment was quite correct.

Lord Justice James concurred. It was a question of the construction of the contract, and it was a contract not with a warranty that the quantity should be produced, but to deliver that quantity if they should be produced.

Lord Justice Mellish concurred. There was no warranty that the potatoes should be produced. If there was a contract to deliver a specific article, and it was destroyed by the act of God, the contractor was excused. Such would be the law clearly if the potatoes had existed at the time of the contract, and it could make no difference that they were only sown or about to be sown.

Lord Justice Baggallay also concurred, as the contract only related to the produce of particular land.

Baron Cleasby likewise concurred, observing that he preferred to put the decision rather on the construction of the contract than on the doctrine of the "act of God" rendering performance impossible. He doubted whether the "act of God" would afford a defence if the contract was absolute; but here it was not so, and both parties understood that it was conditional on the potatoes being produced on the particular land of the plaintiff.

Judgment of the Court below affirmed in favour of the defendant.

## THE SOCIAL ASPECTS OF AGRICULTURE.

## PART II.

## AGRICULTURAL PRODUCTS.

We have somewhere seen a statement to the effect that crime has increased and decreased *pari passu* with the increase and decrease in the price of bread. If this can be proved a natural sequence, we may look to the Mark Lane and provincial markets as barometrical indices of the moral atmosphere of England. But man, in the aggregate, in England, does not live on bread alone, and if Mark Lane be in any way guilty, Islington cannot be wholly innocent. Leaving such questions as these to those who may choose to make them their study, we may safely assert, without fear of contradiction, that proper and sufficient nutriment is essential to the efficient discharge of our mental and physical functions. To the large majority of the inhabitants of England, at least, bread is literally the staff of life, whilst to children, and in connection with milk, it may be said to be life itself. The present aspect of the wheat market, with its indicative future, is therefore a leading feature of agricultural sociology. If the cumulative experience of the last ten years has taught one truth more clearly than another, it appears to us to be that the extent and quality of the growth of wheat in Great Britain has very little to do with the price of our daily bread. The value of wheat in England is in direct proportion to the quantity and quality of the real and estimated supply from foreign sources. We import yearly whatever we require in excess of our home growth, but the price of our home produce is decided and regulated by foreign stocks. The quantity, quality, and market value of the wheat crop of 1875 should be sufficiently convincing, and yet, so strongly implanted in the agricultural mind does the belief that "wheat must be dearer again by-and-by" seem to be, that we seriously think a second decade of adverse experience would be insufficient to eradicate it. Be that as it may, the shadow of coming events has fallen upon England, and her wheat-growing days we presume to be numbered.

In the impression of *The Mark Lane Express* for December 27th, 1875, a correspondent brings statistical information to prove his argument that it would be "madness to grow barley instead of wheat" in England for the future. His figures show that during the last 30 years we have imported 162 millions qrs. of wheat, the yearly imports increasing from less than one million qrs. to ten million qrs.; that during the first period of ten years the imports were 30½ million qrs., and the average price per qr. 51s. 6d.; during the second period of ten years the imports were 52 million qrs., and the average price 53s. 8d.; and during the third period of ten years the imports were 79½ million qrs., and the average price per qr. 54s. 4d., proving that, with enormous increase of imports, we have had an increase in price as well. But we learn a very different lesson from these figures, taking their accuracy for granted. An increase of 22 million qrs. in the second period brings an increase of the average price of 2s. per qr., whilst an increase of 27 million qrs. in the third period brings an increase of only 8d. in the average price per qr., proving, as we take it, a ratio of supply and demand which would, if continued for another similar period, bring the supply to be in excess of the demand. Therefore, leaving for the present any reference to the advisability of substituting barley for wheat, we learn from this fact alone that England must ultimately play a losing game, in competing with the world at large, at wheat growing. We have recent experience to guide us in forming an opinion on this question. The imperial averages for six weeks ending December 25th, 1875, show a regular decline in the price of English wheat from 47s. to 45s. 9d. per qr., this in the full and complete knowledge of the badness of quality and shortness of quantity of the crop in 1875. Subsequent markets have had a downward tendency, equal to 10d. per qr. on the averages; as news of large floating cargoes, and bountiful harvests at the Antipodes, have come to hand, notwithstanding higher rates obtained in Australia. Nor can we see reasonable grounds for the expectation of any permanent improvement in the value of bread corn in England, either at the present, or in the future. England's climatic conditions render her barely within Nature's northern

limit to the growth of wheat. A humid atmosphere, cloudy sky, and low summer temperature are inimical to the perfect development of this cereal, and although in the Eastern and South-Eastern Counties these adverse conditions are reduced to a minimum, we have, even in these localities, to contend with many difficulties in its production. On the other hand, Australia, New Zealand, California, Canada, the United States, Chili, Southern Russia, and many other wheat-exporting countries have climates suited to its production. The vast areas are yearly becoming more and more devoted to its cultivation. Their sparse populations cannot consume it. As civilization advances, the means of transit are increased and improved. Roads, canals, railways, and navigable rivers speedily convey the grain to the seaboard; steam ships and sailing ships bring it to our ports, and the electric telegraph tells us when they start and the quantity they carry. When we think of all this, and reflect on the immense resources of undeveloped and partially-developed wheat-growing countries in various parts of the world, the fact of England persisting in devoting her chief agricultural energy to the growth of wheat seems to us an anomaly, while we have money to pay for that and (as a nation) all other wants. We do not, however, ignore the cause of this, which we apprehend to be, primarily, the inefficient capital employed on the land, which, speaking generally, necessitates the growth of bread corn as a ready-money crop. This paucity of capital we shall consider under another division of our subject. The agriculture of the past we consider to have been based on the principle of what a farm would produce naturally, without extraneous assistance; that of the future we anticipate will be based on what a farm can be made to produce artificially by the employment of capital upon it. This will surely necessitate the striking out of our rotations a crop which cumber the ground for eleven months in the year, and cannot even then be profitably grown unless for its *straw*, but this cannot be done without a far more radical change in our agriculture than appears on the surface. To leave off growing wheat implies being able not only to do without the ready money it produces, but also being able to buy stock to eat the *cattle food* produced in its place. Instead of taking, say, £500 on a small farm, that sum will require to be expended before realizing ready money. This means double capital at least, and as farmers have not as a rule been increasing their capitals during the last five years, the change, if wrought by them, must be one of time. Come it must, sooner or later, in our opinion; and unless some unforeseen and unexpected turn in the tide sets in, we see no help for the painful conclusion that wheat-growing and wheat-growers will disappear simultaneously, the capitalist taking the place of the average tenant farmer of England. We say this because we believe the change will come before farmers, as a class, are ready for it. Not as alarmists, but as careful observers of the transition state of British agriculture unquestionably existing at the present day. These opinions will probably be unpalatable, but they are honestly given as the result of much anxious thought, assuring our readers we are literally of the class we have described as being unprepared for the change we firmly believe to be inevitable.

The statistical returns published in the *Mark Lane Express* Jan. 3, 1876, imperfect though they must necessarily be, are of great value in giving a reliable outline of the proximate proportions of the various crops of 1875 to an "average." The deficiency throughout is very great, and, coming after so many unprofitable years must, we fear, prove disastrous to many struggling farmers. If the bulk and quality of our home growths decided the market values, we might reasonably expect exceptionally high rates to obtain at the present time. But the reverse is actually the case. The pulse crops were all bad, the peas especially, being probably the worst in the recollection of most of our readers; yet, from a fair relative value, we have recently had a fall of 1s. 6d. per qr. Wheat at 40s. per qr. (5½ lbs. per bushel) is probably the cheapest of all feeding stuffs. Good

bright even samples of malting barleys will always be correlatively dear so long as the Malt-tax exists, because we cannot as yet import that particular article. Although this cereal has a wider range of cultivation than any other, may be cultivated almost in every climate, our home-grown samples are superior to those we import. This is, doubtless, due to an advanced agriculture rather than to climate. The *bulk* of our otherwise malting samples were discoloured last season, greatly reducing their values, and bringing them down to the level of "weight for money" as feed corn. Our humid climate is particularly suited to the growth of oats, and some of our varieties, the winter oat especially, cannot be equalled by any foreign country. Still, as with barley, an enormous *bulk* can be imported, sufficient to determine the price of our superior productions. If then, in the case of barley and Oats, their growth not being hindered by climatic difficulties, their market values are ruled by importations, to how much greater an extent must the same principle apply to the growth of wheat where these difficulties do exist?

As we have before stated, the less wheat we grow in the future, the more animal food we shall produce in its place, so that we come naturally to the consideration of that part of our subject. Our meat supply is one of the leading agricultural questions of the day. The English are a meat-eating people, and the working classes certainly avail themselves of the opportunity to make use of more animal food which higher wages affords, so that the demand is increasing, and likely to increase. The production of beef and mutton in England is likely to be much greater than it is at present, whenever capital may be applied to the land with reasonable safety; and the wants of a rapidly-growing population may thus be partially met. At the same time, we are bringing animals to an earlier maturity, economising time in their production. But the rapidly-increasing demand, added to the cost, in time and money, of meat production, taken in consideration with the difficulties attending foreign importation, indicate that no permanent reduction is likely to take place for some time to come in the price of the article. The same causes which have operated in England upon the market value of animal food are operating with more or less rapidity in continental countries. Progress of civilisation, increase of population, and development of trade, will probably be found advancing in at least an equal ratio with the production of meat; and the time may not be very far distant when those who now send us their samples will themselves require extraneous assistance. We must therefore look to undeveloped countries for any large increase in our future supply of meat. Australia and South America have immense resources, but the distance renders them, as yet, unavailable. The potted meats of the former are useful, and the trade has greatly developed, but no sort of preserved or cooked meat will satisfy the English people. They must have the carcass as it comes from the butcher. Nothing else will do. Frozen meat will doubtless keep for ages, but directly it thaws it decomposes. The reason of this is obvious, and should of itself be sufficient to check all efforts in that direction. Ice, occupying greater space than water, breaks up the tissues: directly a thaw takes place a pulpy disintegrated mass in the result, and decomposition at once sets in. Even if it were not so, the enormous expense of process and transit would, we think, effectually prevent the success of the undertaking. On the other hand, the recent importations of carcasses from New York appears to have about it the elements of success. Cold, dry air and ten days' transit may, we think, be found effectual, during part of the year at least, and we may ultimately get sufficient from this source to affect our markets. The great problem to solve is how to get live cattle from some country where they are comparatively cheap. Australia is too far off, even with improved steamships and the Suez Canal, and the tropical heat to which cattle would be subjected puts this outside consideration. The vast resources of the La Plata States appear to us to be our only hope. The big, coarse, half-wild bullocks taken in at Buenos Ayres and Monte Video by our mail steamers live on deck as far as Lisbon (eating little, and sometimes too frightened almost to drink), provided the passage is favourable and sufficient water is thrown over them when under a tropical sun. If these animals were improved, and bred in domestication, made as good as the Spanish beasts were—say, ten years ago—they would undoubtedly reach England in safety, and to a profit, in steamships specially constructed for the purpose. They would, at all events, easily come to Spain and Portugal,

and, after a time, on to England. The great difficulty seems to be preventing them from rolling about. Sheep being of lighter weight and capable of being closely packed, will endure long voyages. We have seen English Down sheep that had been from Liverpool to Peru and back. Milch cows on the mail packets sometimes make many voyages; so that we can probably fetch bullocks from Monte Video and Buenos Ayres as soon as they have them fit to send. Our foreign supply at the present time comes from Holland, Denmark, Belgium, the Netherlands, the North German States, &c., &c., and Spain. France has of late begun to send us a few cargoes: formerly many excellent bullocks came from that source. The qualities of these imports have greatly improved the last few years. Those who remember the old coarse Oporto bullocks that used to come to Southampton ten years ago, as "contractors," cannot fail to notice the finely-bred, well-finished four-year-old beasts that may be seen on Messrs. Giblett's stand almost any Monday morning. France has used our best blood both for beef and mutton, and great improvement has of late years been made. The same may be said of the North German and Dutch sheep. The time may come when our agriculture, being at higher pressure than at present, we may find it cheaper to buy our stores from the Continent than breed them to so great an extent ourselves; but they must have vastly improved before that becomes practicable. These foreign supplies come to London and certain other ports for some of the large towns and industrial centres of England. To the country at large they form a very small part, if any, of our meat supply. As may be readily understood, the metropolitan markets are subject to violent fluctuations from the uncertain nature of these imports. One of these occurred on the 17th inst. Prices went down to an alarming extent, causing the most serious losses; and the trade has received a shock that will take some time to wear away. Our home stocks are the same, our resources of winter fodder are the same, good animals are just as scarce; the meat, to the consumer, is exactly the same price, and likely to be. What, then, was the cause? Unfavourable weather, a lot of dead meat, 743 foreign bullocks and 6,223 foreign sheep in excess of the importations for the corresponding week last year, 600 beasts at Deptford, and a good supply from home districts. This is very simple. London was *overdone*, and the *country* suffers for it. The actual loss on the *bulk* of our home supply was altogether in excess of the market quotations. Carcase-butchers and salesmen had to clear the dead-meat market before they bought again, except at their own prices. People are asking the butchers why they do not lower their prices: they might as well put on their summer clothing because the sun shone yesterday. In the face of this, we hear day by day reiterated appeals and entreaties to the Privy Council to remove the restrictions at present existing with regard to the full and complete free-trade importations of foot-and-mouth disease, that foreign supplies of cattle may not be thereby unduly hindered from coming to our half-fed, badly-supplied Metropolis! Slaughtering at the ports of debarkation is the first step to be taken, both for the prevention of disease and establishing a regular market for foreign imports. Weather will always cause fluctuations in the meat markets; but we are inclined to think, judging from the supplies we now receive from foreign sources with an uncertain market, they would increase with a comparatively certain one. There seems little doubt the chief object of agriculture will before long be the production of meat and milk, and that corn-growing will be a secondary consideration. Quality, too, will have to be attended to to a greater extent than at present. The high prices of the day have taught all classes that the best is by far the cheapest. Smallness of bone, thickness of flesh, and early maturity are the desiderata for which we must strive. The consuming value of the carcass of a Southdown sheep is very considerably greater than that of a Lincoln, because the one is small-boned and thick-fleshed, and the other large-boned and full of fat. It is quite evident the two breeds we have mentioned are in a great measure the natural products of their respective *habitats*, and in neither locality could the other be bred; yet it appears to us equally apparent that wool and tallow are articles which, like wheat, we are able to import at a price rendering their home production comparatively unremunerative. We cannot, of course, grow mutton without growing wool and tallow at the same time; but we can aim to reduce the production of these two

articles to a minimum, and in our opinion time will render the advisability of such a course apparent. The value of a sheep in South America is simply that of the wool and the "grease" which can be obtained from it. In Australia the surplus is reduced to the same level. Russia is a fruitful source of tallow. The result is that our home produce, consisting of mutton, eauls (beef, ton, in the summer-time), strippings of the *viscera*, and *trimmings of mutton chops*, &c., &c., classed together as "rough fat" is at present worth 3½d. per lb., being about 2d. per lb. in excess of its hitherto normal value. It appears to us, therefore, this product of our rank rich pastures is an unprofitable one. With regard to its concomitant, wool, the markets indicate a supply quite equal to the demand, and here again quality is the order of the day. Advices from Australia show us our market is no longer sufficiently remunerative, and they intend seeking others. Judging from the productive capabilities of Australia and South America in this respect, we venture to predict another rock a-head for British agriculture. If a lesson can be learned from these considerations, it is, we think, that the attention of our flock-masters and ram-breeders will have to be directed to the production of mutton *versus* wool and tallow, under the various conditions of soil and climate with which they have to contend. As far as our own experience goes, we feel justified in saying that in just so much as we seek to increase the clip of our flocks, we sacrifice the quality of the carcase. We cannot grow a heavy fleece and good mutton on the same animal, and we consider the efforts of many of our cross-breeding flock-masters have been hitherto in the direction of long or medium wool and heavy carcasses, rather than the reverse; whereas we are of opinion that three animals of ten stone, each cutting 5 lbs. of wool, would be of more value to the consumer, and ultimately of greater profit to the producer, than two animals of 15 stone, each cutting 10lbs. of wool.

The production of milk must always take high rank in the economy of the farm. The important place it takes as an article of diet, and the ever increasing demand for it as towns grow and fresh centres of industry spring up, necessitate the utmost care and attention towards effecting a good and efficient supply. As milk cannot be imported, the country must be self-supporting. Both cheese and butter have already given way to the demand for milk. With regard to the former, America has taken the lead, and under the factory system is already able to supply us with "whole-milk" cheeses at prices very little, if any, in excess of those at which we can produce "skim." At home, the superior conveniences and appliances of the factory over the farm-house have enabled the former to produce a better and cheaper article. Private enterprise being thus discouraged, many cheese-making farms now send their milk to London and other large towns. Butter making seems destined to share a similar fate, though not to so great an extent. Transit is not so easily effected as in the case of cheese; still we can, and do, obtain a good supply from the Continent, at lower rates than we can produce it at home. Then, again, we read of successful attempts to manufacture a precisely similar article from animal fats, which we hail with pleasure, inasmuch as it is likely to prevent a portion of the waste of which we spoke when treating of tallow, and also to provide a useful and innocuous article of diet. Providing the animal fats are clean and wholesome, we cannot see any objection to this new (?) kind of butter, beyond that of prejudice, which certainly goes a long way in England. We also read of "oleomargarine skim-cheeses," but of this novelty we have not as yet had ocular demonstration. Another product of the old-fashioned dairy has fallen off to a great extent—pork. As a bye-product of cheese making and butter making it must virtually share the same fate. The price of well fed small pork is now nearly equal to that of beef and mutton. The cost of producing it we consider quite as great. There will always be a proportionate demand for it, but when it ceases to be relatively cheaper than other meat, we anticipate the consumption will be less than it has hitherto been. Pigs must always hold a place in the economy of agriculture as scavengers and as breeders of pork, but our bacon comes from Ireland, Hamburg, and America. Waterford has already rivalled Calne, and Chicago will soon rival Waterford. We import salted "middles" of pork from America which we dry in warehouses specially adapted for the process, the article being presented to the public under the name of small "dry salted home-cured bacon." And very good it is. With these several causes operating in one direction, we have yearly an increased

bulk of milk to meet the increased demand. In this case the supply *must* in some way be kept equal to it, for the bulky and perishable nature of the article precludes the possibility of a foreign supply, and our agriculture must in some way be moulded and adapted to this obvious necessity. Its effect has already been felt. Young cattle are reared artificially on arable farms instead of naturally on the pastures. The most superficial observer must see that arable land, under high pressure farming, has far greater productive powers, within a defined area, than pasture, and while many cold, intractable, "discouraging" clays may probably be more remunerative under grass than under cultivation, any undue laying down of our arable lands must, we think, inevitably be attended with a diminution of its meat-producing capabilities. It is inconsistent with the object of these papers to enter into any question relative to the *modus operandi* of agriculture, but we must here point out that breeding and milk-selling combined appear to us to be incompatible with a proper and regular supply of milk to the town dairymen. The milk-walk system adopted (perforce) in towns, can be extended to the country with yet greater advantage. First-class meat-producing and milk-giving animals can, under these circumstances, be fed highly, and milked just so long as may be found profitable, then dried, and finished for the butcher, their places being at once filled up by others. By these means only, can a given quantity of milk be supplied with regularity throughout the year. Not only so, but something like an equivalent will be returned to the land in the manure, for nothing robs a farm so much as the selling of milk from an ordinary grazing dairy. Milk, then, is the only agricultural product we cannot obtain from extraneous sources, and its importance can scarcely be over-rated, so greatly does it contribute to our health, comfort, and even luxury.

The market value of hides must, to a great extent, depend on our foreign supplies. The price of good English ox hides is still comparatively high when considered in relation to the price of the meat. The greatly-increased importation of tanned leather from the United States is the latest feature of the trade.

The production of eggs and poultry seems to be in direct proportion to the number of homesteads. The requirements of an advanced agriculture have a decided tendency to reduce their number, and no system of poultry breeding other than the old barn-floor plan seems to answer. On the contrary, the numerous small holdings on the Continent are naturally favourable to this branch of rural industry. It requires a care and attention which cannot be extended beyond the homestead, so that a large farm is not better able to produce poultry than a small one, excepting when half-grown chickens can be purchased from cottagers and others. The debtor and creditor account of "poultry and eggs," with which we are favoured *ad nauseam* by suburban fanciers and small freeholders, have no bearing that we can discern on ordinary farming. There will always be a good market for fresh-laid eggs, and at present, at least, we can obtain a good supply of fair quality from Ireland and France.

There is yet a subject for consideration, and that is the wasteful and unintelligent manner in which food is prepared for use by those to whom its cost is the one great matter of their lives. Of this we are quite unable to treat, but are nevertheless sensible of its great importance. Many very useful lessons may be learned of our Continental neighbours in this respect, and many able writers have pointed out the way in which our labouring classes might live better than they do now, at the same expense.

We have attempted merely an outline of the social questions arising out of our present and future supply of food so far as they concern the English farmer, to whose careful consideration we now commend them. G. T. T.

Jan. 25, 1876.

[The publication of this series of articles has been unavoidably delayed, which will account for the market quotations, etc., not being down to the latest date.—EDITOR.]

THE IRISH CATTLE TRADE DEFENCE ASSOCIATION passed a resolution concurring with the proposal of the Government to make regulations regarding the slaughter of cattle afflicted with pleuro-pneumonia uniform for the United Kingdom.—*Globe*.



## TENANT FARMERS AND THE AGRICULTURAL HOLDINGS ACT.

A general meeting of the members of the Lancashire Farmers' Club and Chamber of Agriculture was held at the Lion Hotel, Warrington, to discuss the Agricultural Holdings Bill, and "particularly to express opinion on its compensation clauses and on the period of notice to quit." Mr. G. C. Hale (Knowsley) presided. The following letter was read from Mr. William Forrester (Leyland):

"As I do not expect to be with you on Wednesday, perhaps you will kindly allow me to allude to the subject of the meeting. You are aware that there has been a meeting of agents, &c., lately at Preston, upon the same subject, in its application to landlord and tenant, and that it was remitted to a committee to report to them upon it. The committee has met and, though it has not yet reported, the result will be as follows: They recommend a total entry upon the 2nd February, and they recommend a twelve months' notice to quit; also they adopt the clause of the Agricultural Holdings Act for compensation as far as the first two are concerned, but the third does not quite meet the case, and must be remedied in the cropping clauses. They will recommend freedom of cultivation under certain safeguards and limitations, and they consider the landlord should arrange with the outgoing tenant and also with the incoming one. If the Chamber should see its way clear to support the above ideas, it will certainly be a step in the right direction."

The CHAIRMAN said the committee appointed at Preston had endeavoured to arrive at a general practice which might be adopted throughout the country; they wished to secure uniform entry and a uniform practice in the country, so that a

farmer who was moving from one part of the country to another might know what he was going to undertake. Their inquiries in this county had shown them that it was almost impossible to bring a general Act to bear upon all parts of the kingdom, and that some modifications were necessary in order to make it workable in this county. It was, however, premature to discuss the action of the sub-committee until the general committee had adopted the report. There were certain parts of this Act which were not applicable to this county.

Mr. HENRY NIELD moved the following resolution: "That this meeting recognises the Agricultural Holdings (England) Act as a valuable encouragement by Parliament of the principle of Tenant-Right being conceded to agricultural tenancies, and legalised by statute." He protested against some remarks which were made at the meeting of agents at Preston, and said he looked upon this Act as an evidence of an earnest desire on the part of the Government to do justice to the tenant-farmers. They now had obtained legal security for their property, and it remained for the landlords to give them freedom of cultivation. The Act was being made a battle-dore and shuttlecock of; and he considered that it was very unjust for a body of gentlemen to make it of non-effect.

Mr. W. ROTHWELL seconded the resolution, and it was supported by Mr. SCOTSON (Aigburth) and Mr. WHALLEY (Bold), who expressed a hope that a better feeling would in future exist between tenant-farmers and land-agents.

The motion was carried, and the meeting adjourned, after transacting some other business.

## THE AGRICULTURAL RETURNS OF GREAT BRITAIN FOR 1875.

To the Right Honourable the Lords of the Committee of Privy Council for Trade.

MY LORDS,—I have the honour to submit to your lordships the Agricultural Returns of Great Britain for the year 1875, the principal details of which were collected, as in previous years, by officers of the Inland Revenue Department, and under the direction of the local authorities in the Isle of Man and the Channel Islands. The usual summary of the returns, affording a comparative statement of the total acreage of the principal crops, and of the total number of each kind of live stock, as returned upon the 25th of June, 1875, and the previous two years, was published in the London newspapers upon the 13th of September. The publication of the summary was followed in about three weeks by the distribution to the principal country newspapers of the results of the returns for each county, as collected in 1875 and 1874. The leading facts, as to the cropping of the land for the year, and the available stock of animals upon the 25th of June, are thus widely circulated by means of the newspapers within a period of about four months after the date fixed for the collection of the information from more than half a million of occupiers of land, not all of whom, unfortunately, are willing to give the particulars for which they are asked by the Board of Trade. With the view of assisting to remove objections to filling in the forms for the returns, arising sometimes from misapprehension as to the nature and object of the returns, a short abstract of the returns for 1874 was sent, enclosed in the forms for the returns for 1875, to a large number of occupiers of land. It is desirable to repeat the explanation that the agricultural returns for Great Britain are ordered to be obtained for every separate holding of cultivated land above one quarter of an acre in extent, with the exception of land attached to houses as garden ground, and of detached allotments held and

cultivated by agricultural labourers and artisans. It should be remembered, in connection with the number of returns obtained from occupiers of land, that some occupiers of land have more than one holding, and therefore the actual number of persons holding land cannot be ascertained from these returns. The total number of returns obtained from occupiers of land in 1875 was 559,263 against 561,185 in 1874. The difference, which is not large, occurs chiefly in some of the English counties. In 1875 the collecting officers were directed to prepare an additional and special return to show the number of holdings of different sizes, the total acreage occupied by each class of holdings, and the number of horses, cattle, and sheep thereon. As particulars for holdings of various sizes under 50 acres have been given in former years, the classification in the present return begins with all holdings up to that average, and shows various divisions for the larger-sized holdings. An abstract table which precedes the special return gives the results and their percentage proportions for each class of holdings in England, Wales, and Scotland respectively. This abstract exhibits figures rather opposed to the not uncommon impression that farming, especially in England, is chiefly conducted upon a large scale. So far as relates to the number of holdings, it will be seen that the proportions of what may be called small, medium, and large-sized holdings are nearly the same in England, Wales, and Scotland. The small holdings, or those of and under 50 acres, amounted to 71 per cent. in England, 70 per cent. in Wales, and 70 per cent. in Scotland. The holdings of medium size, or those of from 50 to 300 acres, amounted to 25 per cent. in England, to 29 per cent. in Wales, and 27 per cent. in Scotland. And the large holdings, or those above 300 acres, were not more than 4 per cent. in England, 1 per cent. in Wales, and 3 per cent. in Scotland. Of the total acreage under crops, fallow, and grass, in each division of Great Britain the proportions which belonged to each class of holdings were: to holdings of and under 50 acres, in England 15 per cent., in Wales 23 per cent., and in Scotland 14 per cent.; to holdings of from 50 to 300 acres the proportions of the total acreage were—in England 56 per



cent., in Wales 63 per cent., and in Scotland 58 per cent.; and to holdings of above 300 acres, there was not more of the total acreage than 29 per cent. in England, 9 in Wales, and 28 in Scotland. The horses used solely in agriculture, and those still unbroken to work, were distributed amongst the different classes of holdings in the following proportions: Upon holdings of and under 50 acres 19 per cent. in England, 27 in Wales, and 26 in Scotland; upon holdings of from 50 to 300 acres there were of such kinds of horses 57 per cent. in England, 67 in Wales, and 57 in Scotland; and upon holdings of above 300 acres 24 per cent. in England, 6 per cent. in Wales, and 17 per cent. in Scotland. Of the total stock of cattle of all ages, the following were the percentage proportions upon the different classes of holdings. Upon holdings of and under 50 acres there were 23 per cent. in England, 30 per cent. in Wales, and 27 per cent. in Scotland; upon holdings of from 50 to 300 acres there were 57 per cent. in England, 63 per cent. in Wales, and 57 per cent. in Scotland; and upon holdings of more than 300 acres, the percentage proportions of the stock of cattle were not higher than 20 per cent. in England, 5 in Wales, and 16 in Scotland. As regards the distribution of sheep upon holdings of different sizes, it must be observed that the proportion for sheep upon the small holdings are much larger in Wales and Scotland than in England, owing to the occupiers of small holdings in Wales and Scotland having in addition to their cultivated acreage, which is alone included in the Agricultural Returns, tracts of rough pasture upon which they keep a large number of their sheep. Subject to this explanation, the percentage proportions of sheep upon holdings of different sizes were, upon holdings of and under 50 acres, in England 9 per cent., in Wales 28 per cent., and in Scotland 33 per cent.; upon holdings of from 50 to 300 acres the proportions were 51 per cent. in England, 63 per cent. in Wales, and 40 per cent. in Scotland; and upon holdings of more than 300 acres, the proportions were 40 per cent. in England, 9 per cent. in Wales, and 23 per cent. in Scotland. These results show that, whilst in each division of Great Britain the number of small holdings, or those of the class of and under 50 acres in extent, largely predominate over the medium and large-sized holdings, it is the occupiers of holdings of from 50 to 300 acres who cultivate more than one-half the land, and who own more than one-half of each description of live stock. A special return of the number of garden allotments detached from cottages or other houses, and of the quantity of land occupied by allotments, was obtained and published with the Agricultural Returns for 1873, when the total number of allotments in Great Britain amounted to 246,358, and the total extent of land held in allotments was 59,631 acres. The total quantity of land returned in 1875 as under all kinds of crops, bare fallow, and grass, amounted for Great Britain to 31,116,000 acres. For Ireland the returns obtained by the Registrar-General show a total of 15,775,000 acres; and the returns collected in the Isle of Man and Channel Islands show totals of 92,000 and 31,000 acres respectively. Thus for the whole of the United Kingdom the cultivated area in 1875 was 47,314,000 acres, exclusive of heath and mountain pasture land, and of woods and plantations. This total is larger than it was in 1874 by 171,000 acres; and between the years 1868 and 1875 1,659,000 additional acres were returned as under cultivation in the United Kingdom. The chief part of this increase, to the extent of 1,460,000 acres, was returned for Great Britain, in the proportion of 1,074,000 acres for England, 192,000 for Wales, and 194,000 for Scotland. It cannot, however, be reckoned that so much waste or previously uncultivated land has actually been added, within the period named, to the area used for agricultural purposes, as an allowance must be made for more correct and complete returns by occupiers of land in the more recent years. But after allowing for an increase of acreage from this cause, a not unimportant addition to the productive area of the country must have been made within the last seven years. The officers who collect the returns are able by their own observations and inquiries in many counties to notify an increase of acreage by the inclosure and reclamation of waste lands, although they cannot report the actual extent of the increase. The total acreage returned for Great Britain in 1875 comprised 18,104,000 acres of arable and 13,312,000 of permanent pasture. The figures for the arable acreage in 1875 were about the same as in 1874, but they show a decrease of 523,000 as compared with the figures of 1872, up to which

year, from 1863, there was an increase in the acreage of arable land. Permanent pasture shows an increase of 134,000 acres in 1875 over 1874, and of as many as 736,000 acres since 1872; much of this increase was, however, due to more correct returns and to new inclosures of down or open pasture lands. The high prices of meat and dairy produce, and the increased cost of labour are not so frequently alluded to as causes of the conversion of arable into grass land in the reports of the collecting officers in 1875 as in 1874. A table of the acreage of arable land and permanent pasture returned for each division of Great Britain for each year from 1865 to 1875 is given in the Appendix to this Report. Of the total quantity of arable land in the United Kingdom in 1875, 11,339,000 acres were devoted to corn crops of all kinds (including peas and beans); 5,957,000 to green crops (including potatoes); 570,000 to bare fallow; and 6,337,000 to rotation grasses. The corresponding particulars, with their percentage proportions for each division of the kingdom, will be found in the first table of the Returns. Of the 11,339,000 acres under corn crops in the United Kingdom in 1875 there were 3,514,000 acres appropriated to wheat, 2,751,000 to barley or bere, 4,176,000 to oats, 65,000 to rye, 575,000 to beans, and 318,000 to peas. The principal corn crops occupied the following percentage proportions of the land used for corn in the several divisions of the kingdom. Wheat was grown upon 41 per cent. of the corn land in England, 22 per cent. in Wales, 7 per cent. in Scotland, 8 per cent. in Ireland, 26 per cent. in the Isle of Man, as much as 53 per cent. in Jersey, and 44 per cent. in Guernsey. Of the land under corn the percentage proportions for barley were: in England 28, in Wales 39, in Scotland 19, in Ireland 12, in the Isle of Man 25, in Jersey 5, and in Guernsey 27. Oats were grown upon 19 per cent. of the corn land in England, 46 in Wales, 71 in Scotland, 78 in Ireland, 46 in the Isle of Man, 19 in Jersey, and 23 in Guernsey. The land under green crops in the United Kingdom in 1875 which amounted to 5,957,000 acres, was thus divided: For potatoes 1,432,000 acres, turnips and swedes 2,485,000 acres, mangold 405,000 acres, cabbages 29,000 acres, cabbage, kohlrabi, and rape 231,000 acres, and lucerne, lucerne, and any other green crop, except clover or other artificial grasses, 483,000 acres. The acreage of the several kinds of green crops in each division of the kingdom will be found in the second table of the Returns, as well as the percentage proportions, the principal of which may be quoted here: Upon the land used for green crops of all kinds, potatoes were grown to the extent of 11 per cent. in England, 34 in Wales, 23 in Scotland, 66 in Ireland, 30 in the Isle of Man 55 in Jersey, and 36 in Guernsey. Turnips and swedes were grown to the extent of the following percentage proportions: 55 in England 54 in Wales, 73 in Scotland, 24 in Ireland, 66 in the Isle of Man, 24 in Jersey, and 6 in Guernsey. Mangold was grown in England to the extent of 12 per cent. of the acreage under green crops, which was more than double the proportion for any other division of the kingdom. As to other kinds of green crops it may be observed that for cabbage, kohlrabi, and rape the percentage proportion of acreage was about half that for mangold in England, and but very small in other parts of the kingdom. The percentage proportions of the acreage under vetches and lucerne may be said to have been about the same as the proportions stated for mangold, except in Guernsey, where nearly one-half of the green crop acreage was returned as under vetches and lucerne. The extent of orchards in 1875, or of arable or grass land returned as used also for fruit trees of all kinds, was 154,584 acres, of which 150,600 were in England, 2,585 in Wales, and 1,429 in Scotland. The quantity of land returned in 1875 as occupied by market gardeners for the growth of vegetables and other garden produce was 35,364 acres in England, 712 acres in Wales, and 2,881 acres in Scotland. And nursery grounds for growing trees, shrubs, &c., occupied in 1875 2,837 acres in England, 463 acres in Wales, and 1,742 acres in Scotland. The extent of land occupied by woods and plantations is stated for Great Britain in 1875 at 2,187,000 acres, according to the Return obtained in a former year, the means used for ascertaining annually the particulars of agricultural land being available for wood-land. The acreage of woods, coppices, and plantations (inclusive of garden grounds) is stated at 1,325,765 acres for England, 126,833 for Wales, and 734,199 for Scotland. For Ireland the land so occupied is returned at 325,173 acres.

As regards the number of each kind of live stock in the

United Kingdom, the returns for 1875 show the following results: With respect to horses, as only the number of such as are used for agriculture and of young and unbroken horses can be ascertained for Great Britain through the agricultural returns, the number of other horses until lately subject to licence duty in Great Britain must be added in order to obtain an aggregate of the stock of horses in the kingdom, which, computed in this way, would amount to about 2,799,000, of which about 2,264,000 belonged to Great Britain, including the Islands, and 526,000 to Ireland. The total stock of cattle of all ages in the United Kingdom was 10,162,787, of which Great Britain, with the Islands, possessed 6,050,797, and Ireland 4,111,990. The total stock of sheep and lambs in the United Kingdom numbered 33,491,948, of which 29,243,790 were in Great Britain and the Islands, and 4,248,158 in Ireland. The total number of pigs was 3,495,167, of which 2,245,932 were in Great Britain and the Islands, and 1,249,235 in Ireland; but the pigs kept in towns and by cottagers are not included in the returns for Great Britain.

The wheat crop of the United Kingdom in 1875 occupied 3,514,000 acres, which is the lowest acreage for that crop in the eight years for which returns have been obtained, from 1868 to 1875. In Great Britain the land under wheat in 1875 was 288,000 acres, or nearly 8 per cent. less than in 1874, and 346,000 acres below what it was in 1869, the year of the largest wheat acreage between 1868 and 1875. The decrease in the cultivation of wheat in 1875 was chiefly owing to the low price of wheat in the autumn and winter of 1874. Barley, on the other hand, was more extensively cultivated in the United Kingdom in 1875 than in 1874, or in any one of the years for which returns have been obtained since 1868. The 2,751,362 acres under that crop in 1875 exceeded the corresponding area in 1874 by 244,262 acres. But there is not so much land under barley in 1874 as in some previous years, and the acreage of the crop in 1875, compared with the highest acreage in a previous year, 1870, shows an increase of 123,000 acres instead of 244,000 as against 1874. There was, however, an increase of 403,000 acres in 1875 as compared with 1868, the year of the lowest acreage under barley during the eight years from 1868 to 1875. The oat as well as the barley crop had a larger acreage in 1875 than in 1874. The increase for the United Kingdom amounted to 88,000 acres, of which 65,000 acres were in England. But notwithstanding this increase in the quantity of land under oats in 1875, the acreage of the crop in that year, both in Great Britain and in Ireland, was still below the acreage for 1873, which showed a falling acreage for the oat crop as compared with previous years. The acreage of the other corn and pulse crops—rye, beans, and peas—was rather larger in 1875 than in 1874, but less as regards beans and peas than in 1873. There was rather more land under the various kinds of green crops in 1875 than in 1874, both in Great Britain and Ireland, but the acreage of green crops was lower in 1874 than in some previous years. In 1875 potatoes were planted upon 523,000 acres in Great Britain, and 500,000 acres in Ireland, showing a small increase of 2,200 and 8,000 acres respectively over 1874. But the acreage under potatoes in 1875 was below what it was in 1871 by 194,000 acres in Great Britain, and by 158,000 acres in Ireland. The extent of land cultivated with turnips and swedes in Great Britain in 1875 was 2,143,000 acres, against 2,433,000 acres in 1874, showing an increase of 10,000 acres in 1875; but although more turnips and swedes were sown in Great Britain in 1875 than in 1874, and also than in 1873 and 1872, there were 67,000 fewer acres under those roots in 1875 than in 1870. The plant of mangolds was much larger in 1875 than in 1874. The 392,000 acres under that root in Great Britain in 1875 were 39,000 acres more than in 1874, but the acreage under mangolds was rather low in 1874 and the two preceding years, and the acreage in 1875 was not more than 1,100 acres in excess of the acreage of mangolds in 1871. The cultivation of mangolds is increasing in Ireland. There were 43,000 acres of mangolds in Ireland in 1875, showing an increase of 5,000 acres over 1874, and double what the acreage under mangolds was in that part of the kingdom in 1869. The other kinds of green crops, including cabbages, kohlrabi, rape, vetches, and lucerne, were grown to a larger extent in 1875 than in 1874. The acreage returned for the sugar beet in England continues to be very small. The growth of the flax in Great Britain is still diminishing. There were only 6,751 acres under that crop in 1875 against 9,394 in 1874, and 24,000 acres in 1870. Low prices are reported as a cause of the falling off in the cultiva-

tion of flax. The acreage under hops in England, which was larger in 1874 than in any recent year, shows a further increase in 1875. There were 69,171 acres of hop plantations in 1875 against 65,799 acres in 1874, and 64,455 acres in 1868, the year of the largest acreage before 1874 as ascertained by agricultural returns. Favourable prices are said to have led to an increased growth of hops. In 1875 the quantity of land returned in Great Britain as under bare fallow, or left uncropped upon the 25th of June, was smaller than in any year since 1868, with the exception of 1871. There were 558,000 acres in 1875 against 669,000 in 1874, and 706,000 in 1873. The character of the weather in the spring and early summer months must, as is well known, largely influence the extent of land left uncropped in every year. There was a large increase in 1875 over 1874 in the acreage reserved for hay in Great Britain, to the extent of 395,000 acres for all kinds of grass. But the hay acreage, whilst larger in 1875 than in 1874 and 1873, was as much as 156,000 acres below what it was in 1872, after the two bad hay crops in 1870 and 1871. The total acreage of clover and other artificial grasses reserved for hay in Great Britain in 1875 was 2,169,000 acres, against 2,046,000 acres in 1874, 2,138,000 acres in 1873, and 2,299,000 acres in 1872. The total acreage of permanent pasture grass reserved for hay in Great Britain in 1875 was 3,611,000 acres, as compared with 3,279,000 acres in 1874, 3,415,000 acres in 1873, and 3,577,000 acres in 1872. It will be seen by these figures that the acreage for hay from clover and other artificial grasses in 1875 was 199,000 acres less than in 1872, and the acreage for hay from permanent pasture grass in 1875 was larger by only 33,000 acres than in 1872.

As regards the relative number of each kind of live stock in 1875 and in previous years it appears, according to the agricultural returns, that the number of horses continues to increase. To far as relates to Great Britain it must be observed that since the repeal of the licence duty, means have only been available for ascertaining the number of horses used in agriculture, of mares kept for breeding, and of unbroken horses. The increase in the number of horses in recent years, as might have been expected, it is not to be observed in the class returned as used solely for purposes of agriculture. This class of horses in Great Britain has only increased between 1871 and 1875 from 639,000 to 651,000, showing an increase in five years of 12,000, or at the rate of only a little more than one per cent. In Scotland during the same period the number of horses used solely for agriculture has slightly decreased. The chief increase in the number of horses in Great Britain, so far as returned, occurs in the class of mares kept solely for breeding, and of unbroken horses. The number of this class in 1875 was 388,000, against 367,000 in 1874 and 314,000 in 1871, so that between 1871 and 1875 there has been increase of chiefly young horses of 74,000, or 23 per cent. The total number of horses in Ireland was about the same in 1875 as in 1874. The number of horses removed from Ireland to Great Britain in 1875 is likely to be smaller than in 1874, as only 21,000 passed from Ireland to Great Britain in the first 10 months of 1875, against 27,000 in the same period of the year 1874. Foreign horses are now brought to this country in rather considerable numbers, owing no doubt to the high prices to be obtained for them. The imports of horses numbered 12,618 in 1872, 17,822 in 1873, 12,033 in 1874, and 23,390 in the first ten months of 1875. Against these imports the exports of British horses numbered 3,389 in 1872, 2,816 in 1873, 3,050 in 1874, and 2,791 in the first ten months of 1875. Whilst in point of number the imports of horses exceed the exports, the average value, according to the trade returns for 1875, was twice as much for the English horses exported as for the foreign horses imported, or £77 against £37 per head. The total stock of cattle of all kinds in Great Britain was rather smaller in 1875 than in 1874, but the decrease occurred chiefly in the young cattle. The dry summer and severe winter of 1874 made cattle food scarce and dear, and thus led to a reduction in the number of young stock. The number of cows and heifers in milk or in calf in Great Britain was less by only 20,000 in 1875 than in 1874, the number in the two years having been 2,253,000 and 2,273,000. In the chief beef-producing class of stock, that of cattle of two years of age and above, there was an increase in 1875, as compared with 1874, to the extent of 76,000 head. There were 1,585,000 of cattle of two years of age and above in Great Britain in 1875, against 1,509,000 in 1874. The class of young stock, or of cattle under two years of age, was less in Great Britain by 168,909 in 1875 than in 1874. But the

stock of cattle in Great Britain shows a decided increase upon what it was seven years ago. If the average of the number of cattle in the two years 1874 and 1875 be compared with a similar average for the two years 1869 and 1870, the following rates of increase are shown for 1874-5: for cows and heifers in milk or in calf, 5 per cent.; for cattle of and above two years of age, 14 per cent.; and for cattle under two years of age, 22 per cent. The total number of cattle in Ireland in 1875 was, within a few thousands, the same as in 1874. The returns of cattle removed from Ireland to Great Britain for the first ten months of 1875 show for bulls, oxen, and cows a small increase, as compared with the same period in 1874, but a decrease, as compared with 1873 and 1872. The number of calves sent from Ireland to Great Britain fell in 1874 to one-half what it had been in 1873 and 1872, and the returns for 1875, so far as recorded, show about the same number as in 1874. The imports of foreign cattle into the United Kingdom were larger as respects oxen and cows in 1875 than in the preceding two years, having amounted in the first eleven months of each year to 215,000 in 1875, 148,000 in 1874, and 151,000 in 1873. An unfavourable season in diminishing the supply of green food, especially of grass, for the use of live stock, appears to occasion a greater reduction in the number of sheep than in the number of cattle. The total number of sheep and lambs in Great Britain was smaller in 1875 than in 1874 by 1,146,000, or about 4 per cent. The falling off in the number of sheep in 1875 is generally ascribed to the dry summer and severe winter of 1874, and the lambing season of 1875 is said to have been unfavourable, especially in the hilly districts. Although the stock of Sheep in Great Britain in each of the last three years, 1873, 1874, and 1875, has been maintained at a higher number than in the three years of depression from drought, 1870, 1871, 1872, the number of 39,711,000, returned in 1868, has not as yet been again reached. The number of sheep in Ireland decreased in 1875 by 189,000 as compared with 1874, but more sheep were sent from Ireland to Great Britain. The sheep so removed numbered in the first ten months of 1875 706,000, against 568,000 in the same period of 1874, and 452,000 in the same period of 1872. There were more sheep imported into the United Kingdom from foreign countries in 1875 than in 1871 and 1873; in the first eleven months of each of these years the number of sheep imported was 938,000, 721,000, and 812,000. The number of Pigs in Great Britain (exclusive of those kept in towns and by cottagers) was smaller in 1875 than in 1874 by 193,000. There has been a decrease in the number of this kind of live stock in each of the last three years. The dearth of suitable food for fattening purposes, disease, and a smaller demand for pork and bacon, are causes mentioned in various parts of the country for the decrease in the number of pigs. In Ireland, on the other hand, owing, perhaps, to a better crop of potatoes, the number of pigs returned in 1875 was larger than in 1874 by 159,000.

The usual table showing the relative course of Agriculture in the counties of England, arranged in two divisions of chiefly Grazing and Corn-growing Counties, has been prepared and is here given. The *Grazing*, or *Western*, Division includes 21 Counties: Northumberland, Cumberland, Durham, Westmoreland, York (North and West Ridings), Lancaster, Chester, Derby, Stafford, Leicester, Salop, Worcester, Hereford, Monmouth, Gloucester, Wilts, Dorset, Somerset, Devon, and Cornwall. The *Corn*, or *Eastern*, Division includes 21 Counties: York (East Riding), Lincoln, Nottingham, Rutland, Huntingdon, Warwick, Northampton, Cambridge, Norfolk, Suffolk, Bedford, Bucks, Oxford, Berks, Hants, Hertford, Essex, Middlesex, Surrey, Kent, and Sussex. Although the number of the counties is the same in each of these groups the total acreage is larger in the grazing than in the corn division, in the ratio of 53 to 47 per cent. of the total acreage under crops and grass in England. The variations in the acreage of the corn crops in 1875 as compared with 1874 were nearly to the same relative extent in the two divisions. With respect to the acreage under barley, it may be observed that whilst there was relatively rather a larger increase in the grazing than in the corn counties, in 1875, there were only 1,000 more acres under barley in the grazing counties than in any preceding year since 1870, against 114,000 more acres in the corn counties. The whole of the increase in 1875 over 1874 in the acreage of artificial grasses reserved for hay, was in the grazing counties to the extent of 42,000 acres. In the corn counties there was a decrease of 2,000 acres. The acreage of permanent pasture reserved for hay increased in 1875 over 1874 in the same ratio in the two classes of counties. The variations in

the number of cattle and sheep were relatively the same in the grazing and in the corn counties.

	IN GRAZING COUNTIES.		IN CORN COUNTIES.	
	Acreage	Per-cent- age of Total Acreage returned for England.	Acreage	Per-cent- age of Total Acreage returned for England.
Total Acreage re- turned under all kinds of Crops, Bare Fallow and Grass ...)	12778557	53.0	11333752	47.0
		Per-cent- age of Total Acreage returned in the Division.		Per-cent- age of Total Acreage returned in the Division.
Acreage under—				
Corn Crops .....	2870195	22.4	4658318	41.1
Green Crops .....	1185668	9.3	1662865	14.7
Clover and other Grass } For hay } Not for } under rota- } tion .....	862311	6.3	730124	6.4
Bare Fallow .....	638065	5.0	437303	3.9
Permanent } For hay Pasture     } Not for } hay .....	243613	1.9	271573	2.4
	1981122	15.5	1131432	10.0
	5043574	39.5	2374155	20.9
		Per-cent- age of Acreage under Crop in England		Per-cent- age of Acreage under Crop in England.
Acreage under—				
Wheat .....	1135192	36.3	1993355	63.7
Barley .....	750518	35.9	1338905	61.2
Oats .....	751969	52.9	669982	17.1
Rye .....	14306	32.8	29211	67.2
Beans .....	145681	27.3	38771	72.7
Peas .....	72535	23.4	238088	76.6
Total under above } Corn Crops .....	2870195	38.1	4658318	61.9
Potatoes .....	183187	57.2	137290	42.8
Turnips and Swedes...	706472	45.0	862577	55.0
Mongold .....	106733	28.6	251465	71.4
Carrots .....	3316	24.4	10275	75.6
Cabbage, Kohl-Rabi } and Rape .....	70279	38.3	113123	61.7
Vetches, Lucerne, &c.	121621	29.7	288135	70.3
Clover and } For hay other Grass } Not for } under rota- } tion .....	862311	52.3	730124	47.7
	638065	59.3	437303	49.7
Total under above } Green Crops and Grass under rota- tion .....	2625987	48.1	2365592	61.9
Permanent } For hay Pasture     } Not for } hay ...	1984122	63.6	1134432	36.4
Flax .....	5043574	68.0	2374155	32.0
Hops .....	2470	37.7	4677	62.3
Orchards, &c. ....	8596	12.4	60575	87.6
Woods, &c. ....	116680	77.5	33920	22.5
	676139	51.0	619626	49.0
		Per-cent- age of Total Number in England		Per-cent- age of Total Number in England.
Number of Horses } used solely } for Agricltre. }	355958	47.8	389398	52.2
" Ditto, Un- } broken, and } Mares, for } breeding .....	159819	55.8	126601	41.2
" Cattle .....	2750896	65.2	1467834	34.8
" Sheep .....	1090373	52.3	911494	47.7
" Pigs .....	92277	18.1	972570	51.6

The usual tables to show the state of agriculture in the various British possessions have been compiled from the official returns of the several colonies publishing agricultural statistics. The most complete and regular returns of this description are those of the several Australian colonies. Some particulars relating to the agriculture of Canada were collected when the census of the Dominion was taken in 1871. According to the latest returns, generally for the year 1874, the Australian colonies, including Tasmania, but not New Zealand, with a total population of about 1,891,000 persons, had an area under cultivation for all kinds of crops, and of grass for hay, of 3,243,000 acres, or in the proportion of about one acre and three-quarters per head of the population. Of the 3,243,000 acres under cultivation there were 1,833,000 acres under corn crops of all kinds, and of the acreage under corn rather more than three-fourths, or 1,424,000 acres are under wheat. New Zealand is excluded from these totals because an exceptionally large acreage is returned in that colony for what is called "permanent artificial grass." The extent of land under cultivation in proportion to the population varies considerably in the several colonies of Australia. Thus Victoria, with a population of 808,000, has a cultivated area of but 1,012,000 acres, and South Australia, with a population of not more than 205,000, has as many as 1,330,000 acres under cultivation. The quantity of land under wheat in the year ended 31st of March, 1875, in each of the Australian colonies, was: In New South Wales 167,000 acres; in Victoria, 353,000 acres; in South Australia, 849,000 acres; in Western Australia, 23,000 acres; in Queensland, 3,500 acres; in Tasmania, 58,000 acres; and in New Zealand, 105,000 acres. Barley is only grown to a small extent in Australia; the largest acreage for that crop was 30,000 acres in Victoria, in 1874-5. Oats are more largely cultivated, and in 1874-5 there were 157,000 acres of oats in New Zealand, and 115,000 acres in Victoria. Of maize there were 118,000 acres in New South Wales, 21,000 acres in Queensland, and but a trifling acreage in the other colonies. The cultivation of the sugar-cane is increasing in Queensland and New South Wales, in which colonies there were, respectively, 14,400 and 8,500 acres under that crop in 1874. The growth of cotton, on the other hand, is falling off in Queensland, the only Australian colony for which it is returned. There is no increase shown in the last returns of the acreage of land used for vineyards in Australia; the aggregate number of acres so cultivated was about 15,000. The extent of land under the various crops in the South African colonies is included in the tables of colonial returns, but the information, unfortunately, is not for similar years, the Cape of Good Hope returns not being given for a later year than 1865, and those of Natal being for as recent a year as 1874. Wheat is the chief corn crop at the Cape of Good Hope, and maize at Natal. At the dates mentioned there were 202,000 acres under wheat at the Cape, and 105,000 acres under maize at Natal. The vineyards at the Cape occupied 16,000 acres, and the sugar cane at Natal 8,000 acres. The cultivation of the sugar cane at Natal is increasing, but that of cotton appears to have been almost abandoned, as only 114 acres were returned for that crop in 1874, against 1,875 acres in the year 1871. Following the tables of the acreage of the various crops in the several colonies are tables showing the estimated total and average quantities of the crops produced in the colonies. In the year ended 31st of March, 1875, the wheat crop in New South Wales, Victoria, South Australia, Tasmania, and New Zealand amounted in the aggregate to 21,000,000 bushels. This yield gave an average supply of about 10 bushels per head of the total population of those colonies. But, taking the yield and the population of each colony separately, the average supply per head would vary from 4 bushels in New South Wales to as much as nearly 50 bushels in South Australia—a rate of supply which would afford a good margin for export beyond the requirements for home consumption. The quantity of wheat produced at the Cape of Good Hope in 1865, the date of the latest returns, was 1,390,000 bushels, or at the rate of about 2½ bushels per head of the population. In the Dominion of Canada, in 1871, the yield of wheat was returned as 15,724,000 bushels, which would give nearly 5 bushels per head of the population. As regards other kinds of corn than wheat the crops are not of importance in Australia, but the Canadian returns for 1871 show a production of barley to the extent of 11,000,000 bushels, and of oats to the extent of 42,000,000 bushels. The crop of maize in Natal in 1874-5

is returned as yielding 1,346,000 bushels. With respect to the average yield per acre of the corn crops in different colonies, it will be observed that in Australia, in 1874-5, the average yield of wheat ranged upon the mainland from 11½ bushels in South Australia to 1½ bushels in Victoria. In Tasmania the average was 18½ bushels, and in New Zealand it was as high as 28 bushels per acre. These averages appear to represent the yield of fairly good harvests.

The table of the number of live stock in various British possessions distinguishes the number of horses, cattle, sheep, and pigs. The stock of horses in all the Australian colonies numbered, according to the returns, 868,000 in 1875 against 700,000 in 1870, which figures show an increase in four years of 168,000 horses, or at the rate of 24 per cent. New South Wales heads the list with 347,000 horses, and Victoria comes next with 180,000. For the Cape of Good Hope the number of horses returned in 1865 was 227,000; and for the Dominion of Canada 837,000 horses were returned in 1871. As regards cattle, the stock continues to increase in the Australian colonies, the total number according to the last returns (generally for the year ended the 31st of March, 1875) having reached nearly six million head, which is about 235,000 more than in the returns for the previous year. Nearly one-half of the stock of cattle, or 2,857,000 head, belonged to New South Wales. Queensland stands next, with 1,313,000 head, and then Victoria, with 959,000. The returns from colonies in other parts of the world show that Natal, in 1874, had a stock of cattle numbering 501,000; the Cape of Good Hope, in 1865, 602,000; and the Dominion of Canada had 2,624,000 head of cattle in 1871, against 2,356,000 in 1861. In Canada therefore, the stock of cattle increased 368,000, or by 16 per cent., in the ten years from 1861 to 1871. The agriculture, wealth of some of the colonies, especially in Australia, is more marked in the number of sheep they possess than in that of any other kind of live stock. The aggregate stock of sheep in all the Australian colonies in the year 1874 amounted to no less a number than 61,650,000, which exceeds the number for the previous year by 3,600,000, or 6 per cent. Of the large total just mentioned, about 23 million sheep belonged to New South Wales, rather more than 11 million each to Victoria and New Zealand; and South Australia and Queensland owned respectively from 6 to 7 million. The increased commercial wealth derived by the Australian colonies from their flocks of sheep is shown by the extent of the imports of Australian wool into the United Kingdom. In the last three years, 1873, 1874, and 1875, these imports amounted to 186 million, 225 million, and 239 million lbs. weight, of the value of nearly 12 million, 14 million, and 16 million £ sterling. The number of sheep in the Cape of Good Hope colony was nearly 10 millions in 1865, and as the imports of wool into the United Kingdom from the Cape have increased, the number of sheep in that colony must be now larger than in 1865. The number of sheep in the Dominion of Canada was 3,155,000, according to the returns for the year 1871, against 2,400,000 in 1861. The supplies to this country of preserved meat from Australia continue to be smaller in quantity than they were in 1872.

Tables are given for various foreign countries, with the latest statistics of agriculture that could be obtained through the kind assistance of the Chief of the Statistical Department in each country. More recent information than that published in the agricultural returns for previous years is given for Sweden, Wurtemberg, Holland, Italy, and the United States. Statistics of the agriculture of Hungary and Egypt are included in the tables for the first time. In the table relating to the acreage of crops it will be seen that in Hungary, according to returns for 1872, nearly 5 million acres were allotted to the production of wheat, and between 3 and 4 million acres to the production of maize. The extent of land used for vineyards in Hungary was about one million acres. For Egypt the land returned in 1871 as under wheat was 1,103,000 acres, and 700,000 acres were returned as planted with cotton. The returns for the United States in 1874 show nearly 25 million acres for the wheat crop, 11 million acres for oats, and as many as 41 million acres for maize. The land under cotton is stated at 9,350,000 acres. These figures, compared with those given for the United States in 1869, show an increase in 1874 of 6 million acres under wheat, 4 million acres under maize, and 1½ million acres under cotton. The estimated yield of crops in the various foreign countries is shown in a table following the table of the acreage of the crops, but exact

comparisons of the quantities of particular crops produced in different countries cannot be made, owing to the variation in the years for which these statistics are given. The yield of wheat and other crops in Russia, France, and some other countries of Europe is repeated from the data published in the Agricultural Returns last year, as information for a later date has not been received from those countries. The quantity of wheat produced in Austria in 1874 is stated at 40 million bushels, and the quantity produced in Hungary in 1872 at not quite 43 million bushels. The yield of wheat in Egypt in 1871 is returned as amounting to about 17 million bushels. In the United States in 1874 as many as 308 million bushels of wheat were estimated to have been harvested, which is about three times as much as is produced in Great Britain in an average season. The production of wheat in the United States is now approaching the large quantity grown in France, and it probably exceeds what is produced in Russia. The estimated average yield per acre of the various kinds of corn and potatoes in different countries is stated in a separate table. The figures there given show that the production of wheat per English statute acre in the countries specified was highest in Holland, where the average yield in 1873 was stated to be 23.6 bushels, against 19.3 bushels in France in the year 1872; 15.2 bushels in Austria in 1874; 8.6 bushels in Hungary in 1872; 15.4 bushels in Egypt in 1871; and 12.3 bushels in the United States in 1874. It appears, so far as can be ascertained from available statistics, that the average yield of 23 bushels of wheat per acre in Great Britain is much above the average yield in all foreign countries. The number of each kind of live stock in foreign countries is stated in a separate table, as completely and up to as late a date for each country as the information could be obtained. These statistics furnish information as to the actual resources of various countries in their home supply

of animals for food, and for the furtherance of agriculture in various ways. It will be observed in looking at the number of cattle and sheep, that, as a general rule, cattle bear a larger proportion to sheep in foreign countries than in Great Britain; this may be accounted for partly by different systems of farming, and partly by the necessity in colder climates of providing shelter for sheep in winter. It is a question of some interest, in connection with the supply of foreign live stock and meat to this country, whether any and what amount of increase is taking place in the number of live stock in countries from which we chiefly receive our supplies. The following figures show for some of these countries, so far as can be ascertained from the last and previous returns, the variations in the number of cattle and sheep. Denmark had 1,194,000 head of cattle in 1866, and 1,238,000 in 1871; and in the same years 1,875,000 and 1,842,000 sheep. Prussia had of cattle 7,995,000 in 1866, and 8,612,000 in 1873; and of sheep 22,262,000 in 1866, and 19,624,000 in 1873. Bavaria had of cattle 3,162,000 in 1863, and 3,066,000 in 1873; and of sheep 2,040,000 in 1863, and 1,342,000 in 1873. Holland had of cattle 1,402,000 in 1869, and 1,432,000 in 1873; and of sheep 927,000 in 1869, and 901,000 in 1873. France had of cattle 12,733,000 in 1866, and 11,284,000 in 1872; and of sheep 39,386,000 in 1866, and 24,589,000 in 1872. A part of the decrease in the number of cattle and sheep in France was due to territorial changes; but so far as relates to the other countries, it would appear by these figures that cattle have increased and sheep decreased in number.

I have the honour to be, my Lords,

Your Lordships' most obedient servant,

R. VALPY.

*Statistical and Commercial Department,  
Board of Trade,  
Whitehall, December, 1875.*

## LANCASHIRE FARMERS' CLUB AND CHAMBER OF AGRICULTURE.

A meeting of this association was held at the Lion Hotel Warrington, to discuss the Agricultural Holdings Act, and particularly to express an opinion upon its compensation clauses, and on the period of notice to quit. The chair was taken by Mr. G. C. Hale, of Knowsley, and there were also present—Messrs. W. B. Hulton, J. S. Hutchinson (Warrington), R. Whalley (Bold), W. Scotson (Aigburth), R. Leigh, S. Cook, H. Neild (Worsley), J. Hatton, W. Owen (Weir), W. Longton, E. Rothwell, R. Atherton, W. Johnson, W. Mandsay (Pennington), J. Wright, Thomas Rigby (secretary), &c.

The SECRETARY, having read the minutes of the last meeting, and the notice convening the present meeting, said he had been requested by Lord Wiumarleigh to announce that he was unable to be present with them. He had also received the following letter from Mr. Forrester, bearing upon the object of their meeting:

"Layland, Feb. 14th, 1876.

"Dear Sir,—As I do not expect to be with you on Wednesday, perhaps you will kindly allow me to allude to the subject of the meeting. You are aware that there has been a meeting of agents, &c., lately at Preston upon the same subject in its application to landlord and tenant, and that it was remitted to a committee to report to them upon it. The committee have met and gone so far, and though not yet reported, the result will be as follows: They recommend a total entry upon the 2nd February. They recommend a twelvemonth's notice to quit. Also, they adopt the clauses of the Agricultural Holdings Act for compensation as far as the two first, and the third does not quite meet the case, and must be remedied in the cropping clauses. They will recommend freedom of cultivation under certain safeguards and limitations, and they consider the landlord should arrange with the outgoing tenant, and also with the incoming one. If the Chamber should see its way clear to support the above ideas, it will certainly be a step in the right direction.

"W. FORRESTER.

"Mr. T. Rigby."

The CHAIRMAN said he was present at the meeting to which reference had been made in Mr. Forrester's letter, the object of which was to consider whether some uniform practice could not be adopted in the county of Lancaster, in regard to the time for giving up possession of farms and other matters.

He thought it would be advisable for the report of the sub-committee to be submitted to the general committee before being made public, inasmuch as the object in view was to act fairly between man and man in regard to the working of the Agricultural Holdings Act. The inquiries which had been made in various parts of the country went to show that it was almost impossible to establish uniformity of action, and until the report of the sub-committee had been adopted by the general committee it would be premature to say more upon the subject, except to show the direction which their efforts had taken to bring about a plan of general adoption in the county. There were several things in the Act which did not apply to the county of Lancaster.

Mr. H. NEILD said he wished, in referring to the meeting of land-agents at Preston last month, to do so with moderation of feeling and sentiment, and in the belief that they were actuated by a desire to do justice to all parties concerned. At the same time he could not help uttering a protest that it was an injudicious proceeding of the land-agents not to take into their council the tenant-farmers in whose interest they were presumably acting. There were plenty of first-rate farmers in the county who were well able to enlighten them upon what was best to be done in the interest of agriculture generally; and the fact of the meeting in question having altogether ignored them had been severely commented upon. He was forcibly struck with the remark, or rather the apology, that was made—that the initiative had not been taken by the landlords. In many cases landlords had called their tenants together, and discussed the various matters in which they were mutually interested, and much good had resulted therefrom. He thought if it were more often done than at present it would be productive of advantage in many ways; in too many cases they did not know their landlords, nor did their landlords know them. He willingly accepted the chairman's assurance that the object of the Preston meeting was to promote the farming interest; but when he read the report he was thunder-struck at the assertion made that if the Act had been in operation during the last 20 years, the landlords in the county of Lancaster would have had a claim against their tenants. He considered that it was both ungenerous and unjust for any one to make such a statement. When he looked around and saw the largely increased rentals of their farms, he was prompted to

ask. Would that have been the case had it not been for the skill and enterprise of the holders? He repeated that it was an ungenerous and unjust insinuation upon the farmers. He had no wish that his remarks should have a personal application, but he referred to it upon general grounds. He had been a member of the Central Chamber of Agriculture for a period of nine years, and had devoted a great deal of time and what little ability he possessed to further the interests and to improve the social status of his fellow-agriculturists without receiving fee or reward, and in the belief that he was doing his duty. It was therefore with some degree of pain and surprise he found that they were spoken of as agitators by a gentleman whom they hitherto had regarded with esteem and respect. They were fortunate in having some land-agents who were actuated by the feeling and principle of doing as they would have others do unto them; but there was a large number of exceptions which he could, if it were necessary to do so, adduce to the contrary, and which would very much astonish them. Having made these preliminary observations, he would address himself more immediately to the object of their meeting—namely, to discuss the Agricultural Holdings Act. He regarded it as the first Act of Parliament which had been passed for the direct benefit of tenant-farmers within the last half-century. There had never been an Act passed worth sixpence which so immediately concerned itself with their interests. He was privileged, as one of a deputation from the London Farmers' Club, to wait upon Mr. Disraeli before the Agricultural Holdings Bill was introduced into Parliament, and he believed that no one could have been influenced by a more sincere desire to benefit the tenant-farmers of this country than Mr. Disraeli was. In the course of that interview he revived his intercourse with Mr. Philip Pusey, who was the great champion of Tenant-Right 25 years ago. Mr. Disraeli gave his tenants two-years' notices, and was in other ways one of the most liberal landlords in this country. He said that if ever he could have contemplated the prospect of carrying a Tenant-Right Bill, he would have waived what he had done, for he felt that their views and ideas were most reasonable. The week following that interview the Duke of Richmond brought in the Agricultural Holdings Bill. And what was the meaning of that bill? It said that the occupying tenant should have a *bona-fide* and legal security in the property in his farm. No private arrangement could give the same kind of security, and this, coupled with a twelve-months' notice to quit, were two grand things for the security of the farmer. He looked upon the Agricultural Holdings Act as an earnest and sincere desire on the part of Government to do justice to tenant-farmers, although they could not fail to observe that it was drafted in such a way that some landlords could contract themselves out of it. It was a shuttlecock-and-battledore affair; and it was a serious question whether three-fourths of the time of Parliament was to be wasted in passing measures, if they were to be made of none effect. They were accustomed to see the ingenuity which was displayed by those connected with trades' unions to evade the law; but what could they think of a body of gentlemen combining together for a like purpose? How would they as a chamber of agriculture stand affected? Their president was a pillar of the Government which brought in the bill, and their vice-president, whom they equally respected and esteemed, handed the language of the bill. They were hampered with the bugbears of compensation and arbitration, but when did they hear of the need of such things where there was a right feeling between landlord and tenants? If a landlord had no confidence in a tenant, he ought to get rid of him, and there would be five good tenants to fill his place. A man who possessed skill, capital, and "go" deserved to be supported and encouraged; but under the present system a good tenant was made to suffer for the misconduct of the inferior tenant. They did not find that their prize farms were those where the tenants were tightly bound in the swaddling-clothes of covenants and conditions. In his own case he had conditions which he never read, but he knew that so long as he farmed honourably he would not be interfered with. On the subject of freedom of cultivation he had been much impressed with some remarks of Dr. Voelcker made at a meeting of the London Farmers' Club. He said: "The longer I live the more deeply I am convinced that great progress in agriculture is only consistent with perfect freedom. No amount of legislation, no amount of rules binding a landlord to give certain compensation for what are called unexhausted improve-

ments, will ever make up for the loss sustained by a truly intelligent tenant farmer through his not being allowed to do what is profitable to himself, and as I believe in the long run prove conducive to the property of the landlord. The interests of landlords and tenants are not divided: what is for the permanent interest of the intelligent tenant is also for the lasting benefit of the landlord. But let the truth be confessed. Many landlords do not want improving tenants; they want tenants who will do precisely what they are told to do, who will be satisfied with their lot in life, and never strive to improve their position. Many landlords object to any change in the system of farming on their estates." He (Mr. Neild) thought these were truths which could not be gainsaid. He proposed "that this meeting recognise the Agricultural Holdings (England) Act as a valuable acknowledgment by Parliament of the principle of tenant right being conceded to agricultural tenancies, and legalised by statute." He thought it was due from them as a farmers' meeting to make this acknowledgment in regard to the Act which had been brought in by Government.

Mr. ROTHWELL said he understood the object of that meeting was to express antagonism in regard to the Agricultural Holdings Act. In his opinion they were not called upon to express an opinion as to the merits of the Act, but to discuss any innovations or improvements upon it.

Mr. W. SCOTSON seconded Mr. Neild's proposition. He said that meeting had in part originated in consequence of what took place at the meeting of land agents at Preston. It was felt by some members of the Club that as that meeting represented the landlords' interest, the tenant farmers as representing the agricultural interests generally should express an opinion upon the Agricultural Holdings Act. At the Preston meeting there were agents present who represented 300,000 acres of land; and when they reflected that something like 10,000 tenants and three millions of capital belonging to them were interested in the question under consideration, they had a fair claim to be heard. All that he had ever contended for was that a farmer should be free to expend his capital so as to get a fair and legitimate return from the land he cultivated. With regard to Mr. Forrester's letter, he was doubtful whether twelve months' notice to quit would be equitable in the case of farmers who having manured their land heavily for a green crop, were looking forward to having three or four other crops. A man who planted 20 acres with a green crop, manured his land to the extent of 40 or 50 tons the Cheshire acre, and he expected to derive some benefit from it for the next two or three years. He agreed with what Mr. Neild said, that if a tenant could not be trusted to farm his land properly, he ought to be sent away. He had much pleasure in seconding the resolution, and thought that some practical good would arise from it.

Mr. R. WHALLEY said he was one of those who after reading the report of the meeting at Preston thought it nothing but right and proper that they should have an opportunity of discussing what had been said. He thought the gentleman who asserted that looking back upon the past 25 or 30 years the amount to be deducted for dissipation and depreciation would exceed the amount to be paid for compensation, knew very little of Lancashire and the estate for which he was agent. He knew a farm—Gilmoss—on that very estate, close to the Hall, which was a wilderness 22 years ago; but now it was a perfect garden and produced the most luxuriant crops. Was it the landlord or was it the tenant who had brought it into such high cultivation? He would take another farm, the Grange, which was formerly occupied for many years by a widow. He should have liked it had it been at liberty, and after the occupant's death he went over it and never saw such a wilderness. The remark he made was that rather than have such a place he would prefer going to Australia. But now there was no farm in Lancashire which produced more luxuriant crops. There were others present beside himself who knew the farms he referred to, and his only reason for mentioning them was because they were on the estate for which the gentleman who made the remark about the depreciation being in excess of compensation, was agent. He would take the township of Bold, and would assert without fear of contradiction that one-third to double the amount of produce was raised compared with 22 years ago. In Burtonwood three times as much was produced, and taking the whole of Lancashire one-third more at least produce was raised than there was 25 to 30 years ago. He was pleased to see the amicable feeling which existed between tenants and land agents at Liver-

pool the other day, and he hoped and trusted that in future there would be more harmony of action between landlord, agent, and tenant than in the past.

The CHAIRMAN said what Mr. Wyatt intended by urging a re-valuation, was merely to have a record of the condition of a farm, so that when it changed hands it would be a starting point for arbitration where necessary. One of the great objects he sought to avoid was litigation, and this was likely to be achieved, by ascertaining the present condition of a farm so that a tenant would know exactly what compensation he was entitled to in any given year.

Mr. WHALLEY said there was no necessity for re-valuation inasmuch as the Act already limited the number of years over which compensation was to extend either in regard to buildings or improvements in the land.

The CHAIRMAN said he was quite sure Mr. Wyatt had been misunderstood for the reason no doubt that re-valuation had invariably been associated in the minds of farmers with raising the rent. The object of revaluation in this instance was to have placed on record the present condition of the farm as a starting-point for simplifying the working of the Act.

Mr. W. B. HULTON, of Hulton Hall, said he was the heir to an entailed estate. Personally he had no wish to contract himself out of the Act, nor did he think that landlords generally had a disposition so to do so. No doubt the alarm which farmers felt at re-valuation arose from the association it had with raising rents; but in arriving at the valuation of anything they must have a basis from which to subtract or add to. He remembered a meeting at Preston three years ago at which Mr. Scotson read a paper, in which he said that what tenant farmers wanted was freedom of cultivation, compensation for unexhausted improvements; whilst the land-owner wanted—his rent in due time, protection from deterioration, and a sharp clear clause so that he could get rid of a bad tenant. In the discussion which followed attention was directed to the question of permanent and temporary improvements, and the Act which had been passed embodied in effect all that was said on that occasion. He did not think that landlords as a rule object to pay compensation for money laid out, for which the tenant had not received an adequate return. It was quite right for the land-agents to meet together and discuss the operation of the Act, whilst the interests of the farmers would not suffer so long as they had such enlightened and independent spokesmen to look after them as Mr. Scotson, Mr. Whalley, Mr. Neild, and others.

Mr. WHALLEY said he had spent three thousand pounds in improving his farm, and he did not think it was right that he and hundreds of others who had done the same thing should sit down quietly under these remarks about depreciation amounting to more than compensation, without contradicting them. If they did they had not the spirit of a man in them.

The resolution was then put and unanimously carried.

Mr. NEILD suggested that when the land agents committee had decided upon their report and resolutions, the Chairman should report the propriety of submitting them to a committee of the farmers' club for their opinion. It would be a very graceful act, and no doubt the resolutions would receive unanimous approval.

The CHAIRMAN said he would prefer that the secretary, Mr. Rigby, should be instructed to officially communicate their request to the committee referred to.

This course was accordingly agreed upon.

A general conversation then took place in reference to an amendment of the clauses of the Agricultural Holdings Act dealing with unexhausted improvements.

It was decided that a meeting should be shortly held in Warrington to discuss the provisions of the bill about to be brought in by Mr. Selater-Booth dealing with the question of local taxation.

The SECRETARY announced that he had received an intimation from the London Farmers' Club that it was intended to present Mr. C. S. Read with a testimonial in recognition of his efforts to advance the interests of tenant-farmers.

Mr. SCOTSON said he had already received sundry subscriptions toward the proposed testimonial.

It was thought that Mr. Scotson had better receive and forward any further subscriptions from Lancashire in one sum, which he undertook to do.

A vote of thanks to the Chairman brought the business to a close.—*Warrington Guardian.*

OWNERS OF LAND IN ENGLAND AND WALES.

As the result of between three and four years' labour, the Local Government Board has completed a modern "Domesday Book," under the title of a "Return of owners of Land in England and Wales, exclusive of the Metropolis." It consists of two quarto volumes, containing together about 800 closely-printed tabulated pages. The following table, compiled from, but not forming part of, the return, shows the number and relative percentages of owners below an acre and of an acre and upwards in each county:

Divisions and Counties.	Number of Owners.			Percentage of Owners.	
	Below one acre.	One acre and upwards.	Total.	Below one acre.	1 acre & upwards.
<b>SOUTH-EASTERN.</b>					
* Surrey .....	12,712	4,581	17,293	73.5	26.5
* Kent .....	26,945	7,758	34,683	77.6	22.4
Sussex .....	14,675	5,059	19,734	74.1	25.6
Southampton .....	21,236	6,235	27,471	77.3	22.7
Berks .....	4,172	3,068	7,240	57.6	42.4
<b>Totals .....</b>	<b>78,720</b>	<b>26,701</b>	<b>106,421</b>	<b>74.9</b>	<b>25.1</b>
<b>SOUTH MIDLAND.</b>					
Middlesex .....	9,006	2,875	11,881	75.8	24.2
Hertford .....	9,556	2,831	12,387	77.1	22.9
Buckingham .....	6,120	3,283	9,708	66.1	33.9
Oxford .....	6,833	3,344	10,177	67.1	32.9
Northampton .....	10,010	4,455	14,465	69.2	30.8
Huntingdon .....	1,816	2,087	3,903	46.5	53.5
Bedford .....	5,302	2,382	7,684	69.0	31.0
Cambridge .....	6,677	6,496	13,173	51.7	48.3
<b>Totals .....</b>	<b>55,620</b>	<b>27,758</b>	<b>83,378</b>	<b>66.7</b>	<b>33.3</b>
<b>EASTERN.</b>					
Essex .....	14,833	7,472	22,305	66.5	33.5
Suffolk .....	12,511	6,765	19,276	64.9	35.1
Norfolk .....	16,552	10,996	26,648	62.1	37.9
<b>Totals .....</b>	<b>43,896</b>	<b>24,333</b>	<b>68,229</b>	<b>64.3</b>	<b>35.7</b>
<b>SOUTH-WESTERN.</b>					
Wilt .....	9,635	4,378	14,013	68.8	31.2
Dorset .....	7,494	3,409	10,903	68.7	31.3
Devon .....	21,647	10,162	31,809	68.1	31.9
Cornwall .....	8,717	5,149	13,866	62.9	37.1
Somerset .....	2,0370	12,395	32,765	62.2	37.8
<b>Totals .....</b>	<b>67,863</b>	<b>35,493</b>	<b>103,356</b>	<b>65.7</b>	<b>34.3</b>
<b>WEST MIDLAND.</b>					
Gloucester .....	29,250	8,425	37,705	77.7	22.3
Hereford .....	9,085	4,616	13,731	66.2	33.8
Salop .....	7,281	4,838	12,119	60.1	39.9
Stafford .....	33,672	9,880	43,371	77.6	22.4
Worcester .....	16,008	5,796	21,804	73.4	26.6
Warwick .....	46,894	4,622	51,516	91.0	9.0
<b>Totals .....</b>	<b>142,220</b>	<b>38,056</b>	<b>180,246</b>	<b>78.9</b>	<b>21.1</b>
<b>NORTH MIDLAND.</b>					
Leicester .....	8,921	4,927	13,848	64.4	35.6
Rutland .....	861	561	1,425	60.4	39.6
Lincoln .....	13,768	16,729	30,497	45.1	54.9
Nottingham .....	9,891	4,628	14,519	68.1	31.9
Derby .....	12,874	6,992	19,866	64.8	35.2
<b>Totals .....</b>	<b>46,615</b>	<b>33,840</b>	<b>80,155</b>	<b>57.8</b>	<b>42.2</b>
<b>NORTH WESTERN.</b>					
Chester .....	17,691	6,029	23,720	74.6	25.4
Lancaster .....	76,177	12,558	88,735	85.8	14.2
<b>Totals .....</b>	<b>93,868</b>	<b>18,587</b>	<b>112,455</b>	<b>83.5</b>	<b>16.5</b>
<b>YORK.</b>					
West Riding .....	59,496	17,417	76,913	77.4	22.6
East Riding .....	15,012	4,564	19,576	76.7	23.3
North Riding .....	10,115	6,198	16,313	62.0	38.0
<b>Totals .....</b>	<b>84,623</b>	<b>28,179</b>	<b>112,802</b>	<b>70.5</b>	<b>20.5</b>
<b>NORTHERN.</b>					
Darham .....	31,205	3,112	34,317	90.9	9.1
Northumberland .....	10,036	2,221	12,257	81.9	18.1
Cumberland .....	9,617	5,896	15,513	62.0	38.0
Westmoreland .....	1,714	2,662	4,376	39.2	60.8
<b>Totals .....</b>	<b>53,572</b>	<b>13,891</b>	<b>66,463</b>	<b>79.1</b>	<b>20.9</b>
<b>WELSH.</b>					
Monmouth .....	4,970	2,841	7,811	63.6	36.4
South Wales .....	16,155	10,830	26,985	59.9	40.1
North Wales .....	15,467	9,068	24,536	61.1	38.9
<b>Totals .....</b>	<b>36,592</b>	<b>22,739</b>	<b>59,331</b>	<b>60.8</b>	<b>39.2</b>
<b>Grand totals .....</b>	<b>703,289</b>	<b>269,547</b>	<b>972,836</b>	<b>72.3</b>	<b>27.7</b>

\* Exclusive of the Metropolis.



Of this grand total of owners there are twelve counties which show a percentage of over 75 of owners below an acre—namely, Warwick, 91; Durham, 90.9; Lancashire, 85.8; Northumberland, 81.9; Gloucester, 77.7; Kent, 77.6; Stafford, 77.6; West York, 77.4; Southampton, 77.3; Hertford, 77.1; East York, 76.7; and Middlesex, 75.8; while of the counties showing the smallest percentage there are but three under 50—namely, Huntingdon, 46.5; Lincoln, 45.1; and Westmoreland, 39.2. The residue range from 50.7 to 74.6.

REVIEW OF THE CATTLE TRADE DURING THE PAST MONTH.

The cattle trade generally has ruled quiet during the month. The supplies of stock have been moderate, and sufficient for requirements—in fact, towards the close quotations were depressed. As regards beasts, the receipts from our own grazing districts were on a fair average scale, and the condition also was improved; consequently the actual weight of meat exhibited was rather large. Scotland exhibited more freely, and the quality of the stock was quite equal to previous occasions, but the Irish stock was not worthy of special comment. The foreign receipts were chiefly made up from Denmark and Holland, but there were a few German and French beasts detained at Deptford. A novel feature has been the arrival of a few Texan beasts. These were purchased in America at the rate of £3 10s. per head, and forwarded hitherto with the object of testing the market. They reached fair prices, and as a commercial transaction were a success, but the quality was too rough for a permanent footing to be obtained for this class of stock. The dead meat trade between this country and America appears to be developing, and vessels are now running between New York and Glasgow. With reference to trade, the best Scots and Crosses have at times made 6s. per 8lbs., but latterly, with a falling demand, 5s. 10d. and even 5s. 8d. has been accepted.

The sheep pens have been fairly filled, and the supply has included a full average proportion of choice stock. Generally speaking, the demand ruled steady. The top price for the best Downs and half-breeds has been 6s. 10d. to 7s. per 8lbs. A few lambs were offered at from 7s. 6d. to 8s., but they did not meet with a ready sale.

Calves realised very full prices,

Pigs were quiet.

The total imports of foreign stock into London last month were:

	Head.
Beasts .....	5,992
Sheep .....	38,563
Calves .....	1,932
Pigs .....	63

Total .....	45,650
Corresponding period in 1875 .....	49,052
" 1874 .....	26,882
" 1873 .....	30,469
" 1872 .....	34,986
" 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 total arrivals from our own grazing districts, as well as from Scotland and Ireland thus compare with the three previous years:

	Feb. 1873.	Feb. 1874.	Feb. 1875.	Feb. 1876.
Norfolk, Suffolk, Essex, and Cambridgeshire .....	4,650	5,750	6,790	7,990
Other parts of England .....	1,200	2,500	1,750	1,780
Scotland .....	490	650	553	837
Ireland .....	210	100	500	500

The following statistics exhibit the total supplies of stock offered and sold at the Metropolitan Cattle Market during February:

	Head.
Beasts .....	16,910
Sheep .....	102,460
Calves .....	1,345
Pigs .....	160

COMPARISON OF SUPPLIES.

Feb.	Beasts.	Sheep.	Calves.	Pigs.
1875 .....	15,650	119,180	1,430	310
1874 .....	15,465	88,275	1,685	505
1873 .....	14,230	70,830	1,254	399
1872 .....	14,860	80,220	978	681
1871 .....	15,825	72,690	644	525
1870 .....	16,322	104,186	858	350
1869 .....	22,066	111,600	1,331	1,290
1868 .....	16,840	83,480	593	1,670
1867 .....	17,140	79,710	1,081	1,979
1866 .....	21,240	85,070	1,125	1,215
1865 .....	21,158	66,590	1,196	2,714

Beasts have sold at from 4s. 6d. to 6s. 0d., sheep 4s. 6d. to 7s. 0d., calves 4s. 6d. to 7s., and pigs 4s. 0d. to 5s. 4d. per 8lbs. to sink the off.

COMPARISON OF PRICES.

	Feb., 1875.	Feb., 1874.
Beef from... 3 6 to 6 4 .....	5 0 to 6 2	5 6 to 7 0
Mutton..... 5 0 to 6 10 .....	5 4 to 6 6	3 6 to 4 8
Veal..... 5 0 to 7 0 .....	5 4 to 6 6	3 6 to 4 8
Pork..... 4 0 to 5 0 .....	3 6 to 4 8	
	Feb., 1873.	Feb., 1872.
Beef from... 4 4 to 6 0 .....	3 2 to 5 6	4 8 to 7 4
Mutton..... 5 8 to 8 0 .....	4 0 to 6 0	4 0 to 6 0
Veal..... 5 0 to 6 6 .....	3 8 to 5 0	
Pork..... 3 4 to 4 6 .....		

DUMFRIES CANDLEMAS FAIR.—This horse fair commenced on Tuesday. The weather was favourable, and the show of horses fully an average as to numbers. In regard to quality, the fair has not been surpassed by previous ones. The stock was mostly in the hands of dealers, the local dealers having for weeks been scouring the country making purchases. Few horses were shown by farmers. Messrs. R. and A. Johnston, Dumfries, including a number sold on Monday evening, had about 170 animals, many of which were first-class. Mr. M. Teenan, Dumfries, had 85, including some of the heaviest horses in the market. Mr. Thomas Currie had about 40, including some very high-priced horses. Mr. D. Riddell, Kibbowie, had a lot of first-class animals. Mr. J. Carslaw, Mearns; Messrs. Wm. and J. Crawford, Beth; Mr. Hugh Crawford, Kiltbrellan; Mr. John Brown, Bigg r, and other West-country dealers, had large studs. On Monday evening, after dealers had returned from Castle-Douglas Fair, a good deal of business was done at the stables of local dealers. This morning business commenced early, but was never brisk. Holders had purchased in the country at very high prices—some advance on those of the Road Fair—and could with difficulty in most cases get a higher figure than they had bought at. The market was consequently very stiff and slow, business being mostly between dealers. Few farmers were purchasing, as field labour is unusually forward for the period of the year. Prices for young and powerful horses for railway lorries and similar heavy work, £80 to £120, and in some instances up to £140. First-class mares, £80 to £130; useful, but lighter horses, £55 to 475; two-year-old colts and fillies, £45 to £90, and in rare cases up to £110; Messrs. R. and A. Johnston sold at £80 to £110; Mr. M. Teenan at £50 to £140, two entire colts rising two years at £300, and a filly foal at £50; Mr. T. Currie sold at £50 to £130; Mr. J. Carslaw sold at £65 to £120; Mr. W. Wyllie, Ochiltree, bought and sold from £40 to £94; Mr. Adam Dunlop bought and sold at prices from £70 to £130; Mr. D. Riddell sold at £70 to £160—the sun got for a four-year-old mare; Mr. Hugh Crawford sold at prices from £65 to £110; Mr. John Brown, Bigg r, sold a number of young mares from £80 to £90. Mr. R. Allan, Glasgow, bought and sold at prices from £40 to £60; Messrs. W. and J. Crawford sold at figures from £60 to £110; Mr. J. Foster, Carlisle, sold at £50 to £70. Prices of first-class draught horses, £80 to £130; lighter animals, £35 to £75; two-year-old colts and fillies, £50 to £85; saddle and harness horses, £10 to £80.



## REVIEW OF THE CORN TRADE DURING THE PAST MONTH.

Our last report ending on January 24, we commence with Monday, Jan. 31 as the first of the present month. The accounts from Mark Lane stand as follows:

The first Monday, the supplies were: English wheat, 5,771 qrs.; foreign, 24,688 qrs. Exports, 410 qrs. The show of fresh samples from Essex and Kent was limited; condition still inferior, and only five dry samples sold at previous rates. The remainder were neglected. The foreign trade was very inactive, and those who wanted to sell ex ship found they must take less money. Country flour, 16,583 sacks; foreign, 4,641 sacks, 10,652 barrels. The trade was very much hindered by the mild, damp weather, and hardly previous rates were realised. In fine foreign there was a quiet trade, at previous prices. English barley, 2,588 qrs.; Scotch, 1,818 qrs.; foreign, 2,414 qrs. The tendency of prices was certainly downwards for malting descriptions, and even grinding scarcely obtained the same money. The malt trade was again quiet, without much change. Maize, 21,289 qrs. The business in this grain was limited, and new American was 6d. cheaper; but small old round was in fair demand. English oats, 3,064 qrs.; Scotch, 155 qrs.; Irish, 550 qrs.; foreign, 20,026 qrs. Without any quantity to oppress the market, there was a dulness from the idea that the ports would soon re-open, and prices were rather in favour of buyers, say 6d. cheaper on the week. English beans, 556 qrs.; foreign, 2,275 qrs. The trade was quiet, and prices lower, 1s. to 2s. English peas, 410 qrs.; foreign, 28 qrs. Peas generally quoted 1s. cheaper. Linseed, 21,307 qrs. Exports, 876 qrs. With good supplies the market kept dull. Cloverseed was in fair demand, it having risen in Paris 5 francs, and Tares sold pretty freely.

On the second Monday, the supplies were: English wheat, 5,633 qrs.; foreign, 25,465 qrs. The show of samples from the home counties was but moderate; condition middling. No advance was made in prices. The foreign trade was fair at about last week's rates. Country flour, 18,839 sacks; foreign, 2,497 sacks, 7,550 barrels. The trade in country flour was moderate. In foreign a steady trade was done, at no quotable advance. English Barley, 2,175 qrs.; Scotch, 1,800 qrs.; foreign, 9,189 qrs. The demand for best malting descriptions was moderate, at late rates. Grinding sold slowly, The Malt trade was dull at about late rates. Maize, 11,275 qrs. Business in this grain heavy. New American 6d. cheaper. English oats, 153 qrs.; Scotch, 400 qrs.; foreign, 54,300 qrs. Exports, 136 qrs. The trade was generally pretty free; good samples held their value. English Beans, 484 qrs.; foreign, 2,581 qrs. No great improvement was made on last week's prices. English Peas, 529 qrs.; foreign, 47 qrs. For white peas the demand was rather better. Linseed, 17,688 qrs. Exports, 766 qrs. Trade was quiet, and no advance in price made. Cloverseed sold freely at its full value. All red clover advanced 1s. to 2s. from last Monday's prices. Tares were an active trade, at full prices.

On the third Monday the supplies were: English wheat, 6,525 qrs.; foreign, 26,892 qrs. Exports, 495 qrs. The trade is very firm, and here and there a fine sample of English makes 1s. more money. Foreign is held for some improvement; but only the fine Australian white wheat is 1s. per qr. dearer. Country flour, 17,956 sacks; foreign, 2,467 sacks 3,856 barrels. The trade has been firm, and full prices have been made, but without much activity in the demand. English barley,

3,667 qrs.; Scotch, 2,490 qrs.; foreign, 133 qrs. The trade for malting barley is very slow, without change in prices. Foreign meets a limited demand, at previous rates. The malt trade continues to be very quiet, and sales are made slowly. Maize, 14,539 qrs. The demand is somewhat improved, and prices are the turn higher. English oats, 746 qrs.; foreign, 54,092 qrs. Though the supply is rather large, the trade is firm at full prices, and Swedish are dearer. English beans, 497 qrs.; foreign, 1,309 qrs. The price remained unchanged, and the demand slow. English peas, 624 qrs.; foreign, 4,220 qrs. The trade is steady at previous rates. Linseed, 1,646 qrs. Very little doing; prices the same as last week. The demand for cloverseed is checked by the severe weather, but prices are maintained.

On the fourth Monday the supplies stood as follows: English wheat, 5,834 qrs.; foreign, 30,729 qrs. Exports, 799 qrs. The trade very quiet, with little demand, and prices in buyers' favour. Country flour, 20,341 sacks; foreign, 12,613 sacks and 12,495 barrels. Exports, 177 cwt. The trade is quiet, at last week's prices. English barley, 1,485 qrs.; Scotch, 1,127 qrs.; foreign, 8,485 qrs. Exports, 11 qrs. English barley is quiet, at late rates; foreign steady, but demand small. Malt, 24,447 qrs. Exports, 1,564 qrs. The trade remains in the same dull state as of late. Maltsters would gladly sell at fair prices, but there is little demand. Maize, 12,962 qrs. Exports, 1,008 qrs. Demand slow. Prices in favour of buyers. English oats, 1,140 qrs.; Scotch, 272 qrs.; Irish, 4,090 qrs.; foreign, 21,301 qrs. Very dull. English beans, 309 qrs.; foreign, 6,005 qrs. English trade quiet; foreign rather lower to sell. English peas, 790 qrs.; foreign, 5,478 qrs. Quiet at last week's prices. Linseed, 11,272 qrs. Very quiet. The demand for cloverseed has revived with the return of mild weather, but buyers do not like to give the advance asked.

From *The Mark Lane Express* of Jan. 21st, we quote the following, pertaining to the foreign corn trade: The Paris flour market lost the improvement noted last week as quickly as it gained it, dropping to the old level, or nearly so, directly the frost yielded. The eight marks for the current month are now 57 francs (36s. 7d. per 280lbs.), for May and June 59 francs (38s.), and for May and August 60 francs (38s. 7d.). Superior flour for February, 54 f. 50 c. (34s. 11d.), May and June 57 francs (36s. 7d.), May and August 58 francs (37s. 3d.). Offers are abundant, and the sale is difficult, but at the present low rates holders are not willing to make concessions. Rye is inactive, but the price is firmly maintained. Barley is still in slow demand, and holders are rather inclined to take their samples home than accept the low prices offered. Oats are more freely offered, and prices rather easier. In the country markets supplies have been fair, the demand inactive, and prices a little lower. At Lille the supplies were good, and wheat sold at 50c. decline. At Marseilles the arrivals during the week have been very small, amounting to only 2,500 qrs. Business has been more active, and prices firmer, with a good demand for the interior and for Switzerland. For forward delivery sellers were scarce. Towards the end of the week the market became more quiet. At Angers business was calm, offers were few, but enough for the demand. At Bordeaux, as elsewhere, the activity of the previous week has given place to great quietude, and little business has been done this week. In Belgium

there has been little change. Antwerp reports a dull trade, under the influence of mild wet weather. At Liege sellers had to submit to some decline in order to make sales. Rye was a trifle higher, but without much demand. At Bruges the supplies were very small, and there was little disposition for business. At Amsterdam the reports are chiefly of the weather—a mild temperature and rain having followed the hard frost and snow of the previous week, and the trade being affected as usually by the change. There has been some demand for forward delivery, which was readily met. Some demand was experienced for rye for the interior, while the offers both from the South of Europe and from St. Petersburg were on a limited scale; but any rise at once brought in sellers. Barley was dull. Azoff barley offered from off the English coast did not find buyers. At Berlin the frost had been very severe, succeeded by a milder temperature and rain. Wheat was flat. Rye rather lower, and oats steady at full prices. The Term market was more active, some wheat having been purchased on Austro-Hungarian account. At Rostock the navigation was still closed by ice. The young wheat plant was well covered by snow. Some offers had been received for wheat for shipment to the United Kingdom and Belgium; but holders had a good opinion of the future, and were disposed to hold rather than accept the prices offered. From Montreal heavy snowstorms are reported, which were considered beneficial to the country. Little or no trade was yet doing, but merchants were looking forward to a better trade in the spring. Philadelphia reports a quiet market. Prices were relatively higher there than at Liverpool, and what was going forward was on speculators' account. Winter wheat was in small supply, and held firmly, with a steady demand from the local millers. Spring wheat was neglected, and sprouted and unsound wheat was selling at very low prices. The winter in the West had been unusually mild, but there was nothing unfavourable in the prospects for the future. The flour market remained in a very stagnant condition, foreign advices being very discouraging. At New York shipments still proceeded on a liberal scale. The visible supplies were still very large as compared with previous years. Whether this really indicates larger stocks in the West and larger spring supplies than usual is a matter of question. It is held by many to be susceptible of other explanation. If not, it is mysteriously at variance with the general belief in a short crop. Maize continues to be freely offered, and the shipments to the United Kingdom are on a large scale.

**LONDON AVERAGES.**

Wheat .....	1,261 qrs.	43s. 6d.
Barley .....	766 "	39s. 1d.
Oats .....	— "	—s. 0d.

**COMPARATIVE AVERAGES.**

Years.	WHEAT.		BARLEY.		OATS.	
	Qrs.	s. d.	Qrs.	s. d.	Qrs.	s. d.
1872...	45,746	55 7	57,503	39 8	5,216	23 0
1873...	50,939	56 8	46,965	40 6	6,197	22 8
1874...	43,015	63 2	54,520	43 9	5,665	23 1
1875...	58,932	41 11	49,622	44 5	4,583	29 6
1876...	46,361	43 0	67,672	33 7	4,556	24 5

**AVERAGES**

FOR THE SIX WEEKS		Wheat.		Barley.		Oats.	
ENDING		s.	d.	s.	d.	s.	d.
Jan. 8, 1876	.....	45	1	34	5	23	10
Jan. 15, 1876	.....	44	7	34	3	23	10
Jan. 22, 1876	.....	44	9	34	2	23	10
Jan. 29, 1876	.....	44	2	35	0	25	4
Feb. 5, 1876	.....	43	7	34	1	24	5
Feb. 12, 1876	.....	43	0	33	7	24	5
Aggregate Avg. of above.	.....	44	2	34	3	24	3
The same period in 1875...	.....	43	5	45	1	29	6

**FLUCTUATIONS in the AVERAGE PRICE of WHEAT**

PRICE.	Jan. 8.	Jan. 15.	Jan. 22.	Jan. 29.	Feb. 5.	Feb. 12.
45s. 1d.	...	...	...	...	...	...
44s. 9d.	...	...	...	...	...	...
44s. 7d.	...	...	...	...	...	...
44s. 2d.	...	...	...	...	...	...
43s. 7d.	...	...	...	...	...	...
43s. 0d.	...	...	...	...	...	...

**FOREIGN GRAIN ENTERED FOR HOME CONSUMPTION DURING THE WEEK ENDING FEB. 10.**

Wheat.....	cwts. 106930	Peas.....	cwts. 12333
Barley.....	" 22951	Maize.....	" 27994
Oats.....	" 60566	Flour.....	" 19511
Beans.....	" 23900		

**CORN IMPORTED AND EXPORTED**

FOR THE WEEK ENDING FEB. 12.

	Imported into			Exported.	
	Engl'd.	Scotl'd.	Ireland	British.	Foreign
Wheat.....	Cwts. 470579	Cwts. 83666	Cwts. 207029	Cwts. 3397	Cwts. 4783
Barley.....	113147	25310	...	1561	...
Oats.....	166573	...	...	3853	3169
Rye.....	...	9350	...	...	...
Peas.....	21471	14692	...	203	...
Beans.....	35278	2190	...	...	...
Indian Corn.....	394951	14387	97652	...	2237
Buckwheat.....	...	...	...	...	...
<b>Total.....</b>	<b>1112004</b>	<b>150325</b>	<b>304681</b>	<b>9024</b>	<b>10239</b>
Wheat Flour.....	88614	36014	3555	70	129
Oat Meal.....	7145	1252	...	174	...
Bean Meal.....	100	...	...	...	...
Ind'n Corn Meal.....	...	...	...	...	1
Buckwheat.....	17	...	...	...	...
<b>Total.....</b>	<b>93877</b>	<b>37266</b>	<b>3555</b>	<b>244</b>	<b>130</b>
<b>Grand Total.....</b>	<b>1205381</b>	<b>187791</b>	<b>308236</b>	<b>9268</b>	<b>10369</b>
Malt.....	...	...	...	2011	...

**CURRENT PRICES OF BRITISH GRAIN AND FLOUR IN MARK LANE.**

WHEAT, Essex & Kent, white.....	old 49 to 55	new 43 to 53
" "	red 47 ,, 50	new 42 47
Norfolk Linclnsh., and Yorksh. red	old 50	new 41 47
BARLEY.....	Chevalier new.....	37 42
Grinding.....	23 31.....	Distilling..... 34 37
MALT, pale.....	63 66.....	old 63s.....brown.. 52 56
RYE.....	.....	..... 42 44
OATS, English, feed 25 to 26.....	Potato.....	— —
Scotch, feed.....	00.....	Potato..... — —
Irish, feed, white 22.....	00.....	Fine..... — —
Ditto, black.....	21.....	Potato..... — —
BEANS, Mazagan.....	44 45.....	Ticks..... 43 44
Marrow.....	46 62.....	Pigeon, old... 54 56
PEAS, white, boilers.....	40 41.....	Maple... 44 to 45 Grey 39 40
FLOUR, per sack of 280lbs., best town households..	43 47	Best country households, old..... 37 40
Norfolk and Suffolk, old.....	.....	..... 30 33

**FOREIGN GRAIN.**

WHEAT, Dantzic, mixed.....	52 to 54.....	extra.....	— to 57
Königsberg.....	49 52.....	extra.....	— 54
Rostock.....	47.....	old.....	— 50
Silesian, red.....	46 43.....	white.....	49 51
Pomera., Meckberg., and Uckermark.....	red.....	.....	46 49
Ghirka 45 to 47... Russian, hard.....	42 to 45 Saxonska	46 50	
Danish and Holstein, red.....	46 49.....	red American	45 49
Chilian, white 51.....	Californian 53... Australian	52 56	
BARLEY, grinding 25 to 29.....	distilling.....	.....	30 34
OATS, Dutch, brewing and Poland 23 to 27.....	feed 21 24	Danish and Swedish, feed 23 to 26.....	Stralsund... 23 26
Canada 20 to 24, Riga 23 to 26, Arch. 23 to 26, P'sbg. 24 27	TARES, Spring.....	.....	60 64
BEANS, Friesland and Holstein.....	.....	.....	42 48
Königsberg.....	46 to 47.....	Egyptian.....	39 40
PEAS, feeding and maple.....	40.....	fine boilers.....	40 42
MAIZE, white.....	30 32.....	yellow.....	30 31
FLOUR, per sack, French.....	00.....	Spanish, p. sack	00 00
American, per brl. ....	23 24.....	extra and dble.	25 26

# THE FARMER'S MAGAZINE.

## C O N T E N T S.

MARCH, 1876.

PLATE.—TREDEGAR, A "ROYAL" HEREFORD BULL, THE PROPERTY OF MR. WILLIAM TAYLOR, OF SHOWLE COURT, LEDBURY.

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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 " " " (Cask and measure)	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.

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 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 assured, that while it effectually destroys vermin, it will not injure the hair roots (or "yolk") in the skin, the fleece, or the carcass. I think it deserves the numerous testimonials published. I am, Sir, yours respectfully,  
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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.

"Scouton, near Hingham, Nortoik, 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 TINGEY, Esq.,  
 "R. RENNEY.

"To Mr. Thomas Bigg." "R. RENNEY.

BY 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. XLVIII.]

MAY, 1876.

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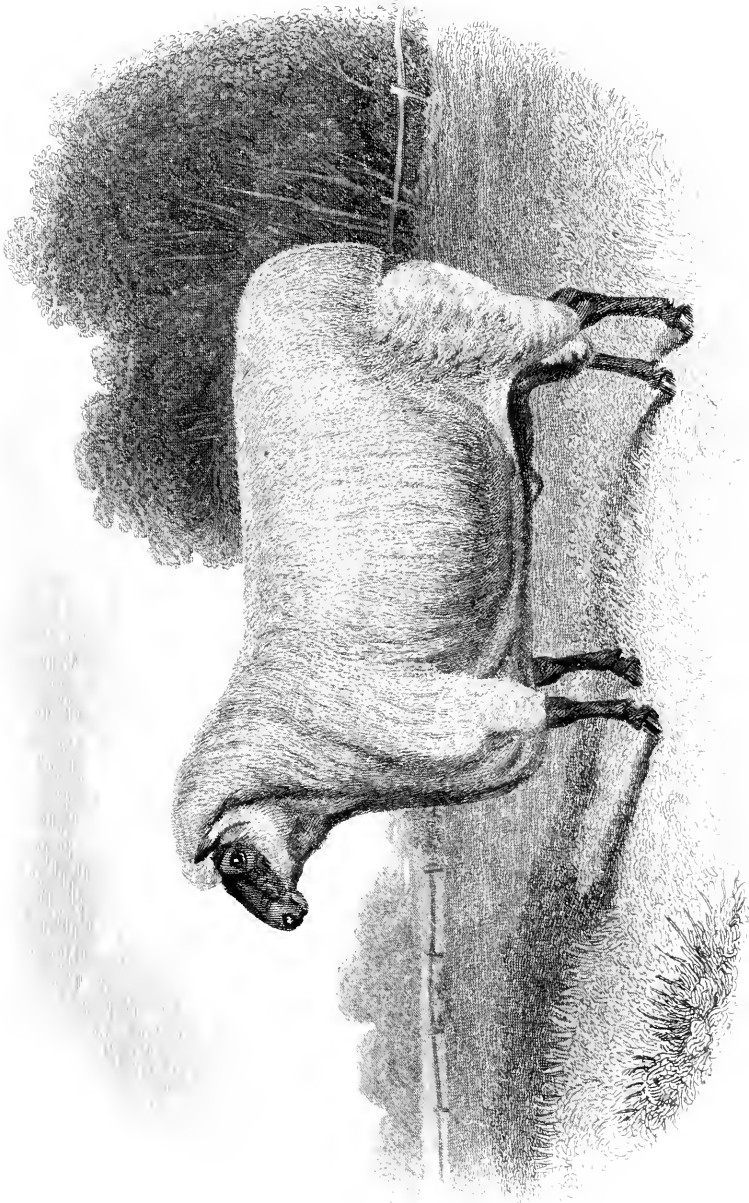
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*Woolly Sheep, from*

# THE FARMER'S MAGAZINE.

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## PLATE.

### A "ROYAL" OXFORD DOWN RAM,

THE PROPERTY OF MR. A. F. M. DRUCE, TWELVE ACRE, EYNSHAM, OXFORD.

Mr. Druce writes: "I have named the old ram 'Burchfield;' he was a four-shear last year, and took first prize at Taunton; two of his sons took first and second prizes at the same meeting in the shearing class, and some of the first prize shearing ewes were also by him. The name of my first prize shearling (1875) is

"Freeland;" he took first prize and cup at our Oxford show, first at Bath and West of England Society last year, as well as first at the Royal. He was let last season to Mr. Treadwell for 50 guineas. My ewes took first prize at the Smithfield Club in December last."

## THE FARMERS' CLUB.

### LOCAL TAXATION.

The monthly meeting of the Club was held at the Caledonia Hotel, on Monday, April 3, Mr. T. Horley in the chair. The paper was entitled "Local Taxation," and was read by Mr. James Trask, of Orcheston. Devises.

The CHAIRMAN, in referring to the recent deputation on cattle diseases in conjunction with the Central Chamber of Agriculture to the Lord President of the Council, said he thought that on the whole they might look on it with satisfaction. He looked equally with satisfaction on the recent discussion in the House of Commons, and the way in which their champion (Mr. C. S. Read) was received in the House. He himself did not regret taking part in the deputation, because he believed it strengthened the hands of their supporters in the House, and if that was the only result he thought they had been amply repaid. They were still in communication with the Central Chamber of Agriculture on this subject, and he hoped some further steps would be taken, and that it would not be lost sight of till a little more sympathy was shown to stockholders in regard to their herds and flocks at the hands of the Government (cheer-).

Mr. J. TRASK then read the following paper:

The subject which the committee selected for this evening's discussion is one that has, as you all know, been most prominently before the public for some years past. Unfortunately, however, it cannot be said as yet to have made but little progress towards a satisfactory settlement; but it would be a great presumption on my part to suppose for a moment that I am competent to solve so great and intricate a question as that of Local Taxation is universally admitted to be. I think I may venture to say, however, that I am tolerably well acquainted with the evils of the existing system, having had several years' practical experience of it, but I can only suggest, in the limits of this paper, the direction by which I hope to see a reform of it proceed. It may be desirable at the outset to recall your attention to the well-known fact, proved in

many instances by actual experience, that if any trade or occupation is unduly burdened by taxation, it will decline more or less rapidly, or may even be extinguished altogether. In the case of Holland many years ago, we are told that the oppressiveness of taxation caused the prosperity of the country gradually to decline; and in more recent times in this country it was stated in the report of the Poor-law Commissioners on Local Taxation (1843) that when it was the practice of rating the stock-in-trade of the woolstaplers and clothiers of the South and West of England "the ancient staple trade rapidly declined there, and withdrew itself still more rapidly into the northern clothing districts, where no such burden was ever cast upon the trade." The report went on to state that "whether this transfer of business was in any way aided by the imposition of the burden of the poor rates, county rates, highway rates, and other rates upon stock-in-trade in the one district, and the exemption in the other, cannot now perhaps be distinctly proved; but it is undeniable that the operation must have been in effect a discriminating tax of very considerable amount against the trade of the one district, and therefore proportionately in favour of the trade of the other. In both districts the industry was of ancient growth, but hitherto the southern district had had the advantage; for the natural and acquired advantages of the two districts were in most respects such as rather to have favoured the southern district." The injurious effects of the imposition of undue burdens on the business of farming are, in my opinion, quite as great as on any other industrial occupation. The *taille* which was levied on the cultivators of the soil in France prior to the Revolution has always been represented by French writers as "the main cause of the backward state of agriculture, and of the wretched condition of the rural population" of that country. Of course, I do not mean to say that the burden of Local Taxation on occupiers of land here is as onerous as the *taille* in France seems to have been, but I feel quite sure that it has become sufficiently onerous to injuriously affect production from the soil in this country, and,

as a consequence, causing a stimulus to production from the soil of other countries; and it has been pointed out "that a migration of an industry, and the attendant capital, from Great Britain to a colony, or to some foreign country, is scarcely attended with more difficulties now than a migration from one district of England to another a hundred years ago." The Right Hon. J. Bright, from his speech to the electors of Birmingham last January, apparently views with great satisfaction the fact that the food of half our population now comes from somewhere beyond the seas; and it may be that the right hon. gentleman would be much more satisfied if, instead of half, the whole of our population were fed with foreign produce, and if there are any who share the same feeling, they may be gratified to know that we are progressing towards that result. There was a smaller acreage of wheat in England last year than in any preceding seven years, and Mr. Bright has been informed on good authority that it was the worst crop we have had for forty years. But it may be said that it was an exceptionally bad season for wheat last year, which I admit, but we had also a large diminution in the numbers of cattle, sheep, and pigs last year, as compared with the year before. This refers, however, to one year only; surely, if we take a period of seven years we may hope to show satisfactory progress. But no, we had last year nearly two millions of sheep in England less than we had seven years ago, and although our stock of cattle shows an increase in the same period of the comparatively small number of some 400,000, we had 325,000 acres less of arable land last year than we had three years ago. I think I have given sufficient evidence to prove to you that the business of farming is not in a progressive state, and I think those most conversant with it will say that our agricultural industry is in a declining state; this is the opinion of some friends of mine of much more experience than I have had, but I entirely agree with them. It was only on Saturday last that a valuer of great experience made the remark to me that it was astonishing in walking over the farms, as he had lately done, to see how cultivation had gone back, and how foul the land was becoming. But you may ask, what has this to do with Local Taxation? Well, I have endeavoured to show you that the effect of placing undue burdens on any trade is to cause that trade to decline, and drive it away into other parts where it is not subject to such burdens. I believe, as I said before, that this is quite as true with regard to the business of farming as with any other trade or calling. It is not the opinion, however, of some of our leading statesmen. Mr. Gladstone has recently written a letter in which he states "that of all the economical changes I have lived to witness, the increase of agricultural wages is that which gives me the most lively and unmixt satisfaction—unmixt, I mean, with any fear of injustice to others. If it be ever found to press upon the means of the employer, he will find his remedy in more careful inspection of work, in general economy of methods, in the extension and improvement of machinery, and in further transition from arable to pasture." Now I am not about to take you into the wages question; but you cannot fail to see that if these economical advantages, which Mr. Gladstone says will follow from the pressure of increased wages upon the means of the employer, they will follow also under the pressure of increased taxation. The opinions of Mr. Gladstone, however, are not at all original, they were held by French ministers of finance many years ago. I have referred to the effect of the burden of the *taille* on the cultivators in that country, and in Alison's "History of Europe" it is stated that the "burdens imposed for the maintenance of the highways in France annually ruined vast numbers of the farmers." I feel quite sure that the same causes operate in the same direction in this country, and that whatever theory any one may hold to the contrary, I know in practice that, whenever any undue pressure is placed on the means of the occupier of land, it is immediately followed by a contraction of his operations. He sells a few more sheep or cattle than he otherwise would, and he recoups himself by cutting down his expenditure in every direction to the lowest possible amount, and especially in his *labour* bill by the discharge of every hand that he can possibly do without. Why, the increased wages which are being now paid to our agricultural labourers, is being necessarily followed by the process of their more or less rapid extinction! If

evidence be desired of this, the Returns of the Registrar-General can be referred to. The *Times* referred to them in a leading article on the 14th of January last. "The Returns, from the General Register Office for the first week of this year, published yesterday," said the *Times*, "proclaim emphatically that this is an age of large towns. We have come to that distribution of the people, and are advancing rapidly on the same lines." And after referring to the immense number who lived in only twenty-three of the largest cities of these islands, thus alluded to London:—"That there should be 4,500,000 thus fairly capable of being described as the population of our Metropolis, is a fact to suggest the most serious considerations. It is a growing fact 'Greater London'—we are told it is demonstrable—attracts from the outside world—that is, from all parts of Great Britain and Ireland, and the Continent—30,000 a year, or the population of a good-sized city, in addition to its own natural increase. The actual increase year by year, from all causes, is nearly 80,000. In all probability, therefore, the population of 'Greater London' will be 5,000,000 at the next Census." The *Times* said further:—"But there certainly are a head of its changes which it is not possible to contemplate without misgiving. The rural, and even the small town population of these Isles is fast diminishing. There are not so many persons brought up in the hard school of agricultural labour. There are not so many to guide the plough, to wield the scythe, the sickle, the bill-hook, or the spade; to trudge with weighted boots through heavy clay; or to move about fearlessly among hoofs and horns in the stable and the yard. Art and Science may do much for us, but it remains to be seen whether the cultivation of the soil will not always require a large amount of rude unartificial labour. The Army draws its best men from our villages, and may find the supply run short when most needed." Well, these remarks of the *Times* appeared to me to deserve the greatest attention. I have read of a city of unlimited power, but of limited liability. I have not time, however, to moralize on this aspect of the question, but let us take it for granted that it all rests on a perfectly solid foundation; yet I do not hesitate to say that the population who are leaving our rural villages are leaving an occupation that sadly needs more labour rather than less. But it does not pay to employ it on the poorer tillage soils of this country. All this may appear to the dairyman or grazier a matter of indifference, but you would not go to Belgravia to look for poverty. It is the thin corn and turnip soils which require a large amount of labour to make them productive, that is first affected by any undue pressure on the occupier. It is from these soils mostly that the loss of nearly two millions of sheep have occurred in the past seven years; and if such soils are sown down to grass, it will result in a still further diminution of the rural population, and of a very large decrease also in the production of food for the people. But there need be no fear of not having enough, for if our food is not produced in our own country the business of farming flourishes abroad, and America can supply all the food we may require, both in corn and meat, so long as we can find the money for it, but if the farmer in this country is saddled unduly with taxation or other burdens, he will contract his business and the foreigner will have the honour of supplying this country with the greater amount of food. Well, I have been endeavouring, though very imperfectly I fear, to show you what I believe is the effect of placing an undue amount of taxation on any industry; and this brings me to the question, is the farming industry unduly taxed? That is generally admitted, but it may, perhaps, be as well if I just glance at the increase which has taken place in our local burdens since the abolition of the Corn-laws. I consider that comparisons of expenditure between the present time of periods anterior to the passing of the new Poor-laws, are useless for all practical purposes. Because wages were, to a large extent, virtually paid from the rates before that time. I consider the fairest period to start from is from the passing of the Corn laws in 1816. In that year £4,954,204 was the total amount expended in relief to the poor; in 1874 the amount so expended was £7,664,957, an increase of nearly 55 per cent., and it is worthy of remark that over 24 per cent. of this increase took place under the operation of the Union Chargeability Act of 1866, in a period of only six years of its operation. The expenditure for purposes unconnected with relief amounted, in 1846, to £1,453,569; in 1874 the amount was £1,568,142, an increase of £3,114,573, or a little over 214 per cent. Of this amount £777,111 was ex-

\* R. H. J. Palgrave. Prize Essay on Local Taxation.

found in 1874 by Highway Boards; but the great bulk of the increase has been incurred by the county and police rates. We see very clearly, therefore, where a reform of our system of Local Taxation should begin. But before I proceed to this question of a reform of our existing system, which everybody admits must take place, I must refer to the great difference in the incidence of local rates as rural as compared with urban districts, and I cannot illustrate this better than by quoting two actual cases in comparison. The London School Board rates, it appears, are exciting some public attention from their magnitude, but from a letter of Mr. Potter in the *Times* of the 15th of February last, it seems that the rate is only 4½d. in the pound, and Mr. Potter is of opinion that the education given "is worth all the money that has been spent to obtain it," a statement that I have no wish for a moment to dispute. But a friend of mine in a rural parish has also had to bear an education rate, and he tells me it amounts to exactly 4½d. in the pound, like the London School Board rate. Now, mark the difference in the incidence of the two rates in these cases. The London tradesman, or merchant, or mechanic, as the case may be, is rated only on the annual value of the house or premises in his occupation; and I think it would be a very moderate estimate to take the annual value of a house or premises in London as representing not more, certainly, than a fifth part of the income of the occupier; thus, a tradesman, or broker, &c., occupying a house or premises of the annual value of £50 or £100 a year, would hardly be making less out of his business than £250 or £500 as the case may be. They would be highly indignant, no doubt, if anybody told them they made less than this. Taking this estimate, then, the rate at 4½d. in the pound is equivalent to a trifle less than a penny in the pound of income-tax in London. Well, the farmer is assumed to get an income to the amount of one half his rent, but he is rated on the whole amount of his rent, or double the amount of his income. The new education rate in the case of the farmer, therefore, is equivalent to a new income-tax of *ninety per cent in the pound* for doing the same thing that is done in London, or any other large town, at something less than one penny in the pound. This illustration, I think, shows the great difference in the incidence of local taxation as between town and country. "But," says the *Times*, "the awkward fact in this matter is that a great part of the fourpenny-halfpenny rate now to be levied on the metropolis will be wrung from small householders, who are just able to keep their heads above water, who have a pride in independence, who educate their own children at their own cost, or at least, notwithstanding the aid of endowments"—which by-the-by, the farmer rarely ever has any advantage from—"is at a far heavier cost than the fees exacted in Board Schools, and who would give very bitterly a heavy increase in their rates for the education of the class immediately below them." Well, I think, most people will be disposed to agree with these sensible remarks of *The Times*. But we have "the awkward fact in this matter" immensely intensified in the rural districts, for the recently issued Agricultural Returns shew that 71 per cent. of the holdings in England are small—namely, of 50 acres and less. Now, take the case of the largest occupier of this most numerous class of occupiers; he probably pays a rent of 40s. an acre, that is £100 a year, and he has to work hard to get a profit of £50 a year; may I not ask, then, is it not an extremely hard case that a new education, or any other rate, should be wrung from small occupiers such as this? A class whose incomes are certainly below those of London mechanics. Then as to the larger occupiers of land. The occupiers of holdings from 50 to 500 acres cultivate more than one-half the land, and they number 25 per cent., while occupiers of holdings exceeding 500 acres number only 4 per cent., although they occupy more than a quarter of the cultivated acreage, being 29 per cent. of it in England. Now, if we deduct the 71 per cent. of small occupiers from the total number of about 550,000 occupiers, we have only about 160,000 who occupy over three-fourths of the total cultivated acreage of the country, and only 22,000 of these occupy over a quarter of it. The conclusion to be arrived at, therefore, is that nearly three-fourths of all rates levied on land is borne by about 160,000 persons; while in London alone there may be probably nearly three times this number of ratepayers. But it is the fact that the local rates are levied on so few persons in rural districts that I particularly wish to impress on those who take an interest in

this important question. Taking all these circumstances into consideration, the incidence of the rates, the means of the small occupiers of land, the very few number of the large occupiers, and the great increase in the amount of the rates that has already fallen on them, and the clamour for new rates to come, and can any one be surprised that we have a Local Taxation question troubling the country? But, say some, this is merely a class question between landlord and tenant; if the rates were less the rent would be more, and, therefore, it is a fair game in the end. Everybody admits, however, that new and heavier rates fall on the occupier in the first instance, and I have pointed out already what I believe is the effect of undue burdens of this kind; ready money and the credit which belongs to it is drawn away from the occupier, working capital, his resources are diminished by so much, and a head of stock are sold more than otherwise would be piled with, or a labourer or two is employed the less, or both these means, or operating together to a more or less extent, having, however, the same effect, that of causing a check to production. I cannot agree, therefore, that this is merely a question that affects owners and occupiers only, the whole community is deeply interested in it. A friend of mine, the manager of a bank at Bristol, told me the other day that they were having some alteration made to their premises, and an iron road to be used to go across the building, but instead of this iron being procured from the near iron districts of South Wales, it was had from Germany, because it could be got there cheaper; so it is with the production of the farmers. If most of our corn can be had from beyond the seas at a cheaper rate than it can be produced at home, it will be had from beyond the seas, and our home produce will be lessened. The economical advantages that will follow, in Mr. Gladstone's opinion, from pressure on the means of employers, are just as applicable to our iron as to our agricultural industry. Well, I have already shown you that there has been an increase in our local rates of nearly £3,000,000 since the abolition of the Corn Laws in 1849, and the Union Chargeability Act enormously increased the burdens of thinly populated rural districts by a shifting of charges, though this is not shown in the figures I have given. I have not been referring to those town rates without which, Mr. Bright says, the towns could not possibly exist. I am referring to those to which the occupiers of land contribute, which are levied in country districts mainly, or in town and country together, and are non-recuperative rates. I say then that the portion of this increase of nearly £3,000,000 that has fallen on the land in England has fallen, as everybody admits, in the first instance, on the occupiers exclusively, and considering the small number of those occupiers, and the varied means of the bulk of them, which I have already pointed out, I say it is impossible that so large an additional burden could be borne without having had a very injurious effect on the farming industry of this country by way of checking its onward development. To say that rents would be higher if the occupier had not borne these increased burdens does not improve the matter at all, for all the evils of which I have spoken will operate to a more or less extent before rent is affected; the rents of hill farms have fallen considerably of late, but the system of levying additional burdens exclusively on the occupying tenant has had a restraining effect on production before this result has been reached. I firmly believe, therefore, that had our system of local taxation been somewhat similar to Scotland, our agricultural industry would have prospered much more than it has done, for the capital of the occupier would not have been drained away from the business of farming to anything like the extent it has been now with our present system. It is agreed on all hands that rents have increased to a much larger extent in Scotland than they have here; their agricultural returns show a far more satisfactory result also than ours do. The capital of the occupier has not been drained away from its proper use in developing the resources of the soil, and the consequence has been that all classes have benefited from the owner downwards, and the community has reaped the advantage of an increased production. I have shown before that the increase in the expenditure for purposes *unconnected* with relief to the poor has amounted since 1845 to more than £3,000,000, mainly through an increase of the county and police rates. Major Dashwood, in his excellent paper on the different systems of rating in England, Ireland, and Scotland, read at this Club just seven years ago, pointed out that in Scotland the

county and police rates are all paid by the owners. Does any one imagine for one moment that if such a system had prevailed here we should have witnessed such an increase as I have mentioned, amounting to over 214 per cent. since 1543? Most surely we should not. I may illustrate the rapid growth of the county rates by a reference to the county of Wilts. The Treasury grants to this county amounted altogether to nearly £4,000 more in 1875 than in 1872, but the expenditure increased by more than £7,000 in the same period, and yet we hear of constant demands on the Government to pour increased grants into the lap of such a system as this. I trust these demands will not be successful, and that we shall have no further grants or subventions till the existing system of *administration* is altered. If we have subvention pitted against expenditure, I am quite sure that the former will be "nowhere in the race" against the latter. A noble lord, a magistrate of Wilts, said the other day that the management of the county finance business at Quarter Sessions was a mere burlesque, and another magistrate of the county said that he always felt himself in a wrong position when spending the money of the ratepayers without their having any voice in the matter at all. My own opinion is that the magistrates are not really to blame, but the system; and I feel quite sure that if a court composed of any other class of persons had the power of spending money of which they contributed no appreciable part directly themselves, and are not responsible in any way to those on whom it is levied, the result would be worse rather than better than it is now; nor do I think it would much improve matters by simply establishing finance boards composed of representatives of owners and occupiers together, while the rates are levied, as at present, wholly on the occupier, because such an authority would not have any real identity of interest; the owner has only a remote interest, while the occupier has an immediate interest in the economical administration; in fact you would still have, what has been the cause, mainly, of all the evils of our local system from the first, a *divided authority in administration*, and that is fatal to all good government wherever it exists. In order, then, to establish a proper system of local finance, it is imperative that the authority which is to be charged with its administration should have a thoroughly identical interest in the judicious expenditure of the funds placed at their disposal. In order to carry out this, it is absolutely necessary to adopt, in the first place, Adam Smith's first canon of taxation, "that each person ought to contribute to the revenue in proportion to his ability to pay." Well, the occupiers of the land are assumed to get an income of half the amount of their rent; this, then, represents the measure of their "ability to pay"—the occupier half as much as the owner, or the latter two-thirds and the former one-third. Now, this does not compare very widely with the system that prevails so successfully in Scotland, for there, not only does the owner, as Major Dashwood pointed out, pay all the county rates, but half of the poor-rate and highway-rate, and the whole of the education rate. By such a system as this the means of the occupiers are mercifully spared the undue pressure which we feel, and their capital is thus left for employment in fructifying the soil, where it yields an increased produce for the country, as well as an increased return in the shape of rent to the owners. It may not, however, be wise to turn an old-established system like that which prevails in England, although it is not a good one, upside down all at once, but it appears to me that a very favourable opportunity presents itself for adopting the best system with regard to the forthcoming Road Bill. No improvements can be made in our roads, no hill lowered, no bridge strengthened or rebuilt to enable our agricultural locomotives to pass over them with safety, without the cost falling exclusively on the occupier, and as they have only a temporary interest in the property they hold, they very naturally decline to have these improvements made at their sole cost, however necessary they may be. I have seen numerous instances of this. I believe the county to be the best area for road management, carried out on the contract system as in Ireland, but not with all the peculiarities of the Irish system. I should therefore establish a county board composed of owners and occupiers, in proportion to the amount that each class contributes to the rates; and, if they contribute according to their ability to pay, the board will be composed of two-thirds owners and one-third occupiers. I would give the management of the county finances to such a board as this, as well as the management of the roads, and these rates, the county and road rates to begin

with, I should levy strictly according to the long-acknowledged principle of Adam Smith, that everyone should contribute according to his ability to pay, and that is, as I have said, occupiers to contribute one-third and owners two-thirds; under such a system there would be no difficulty in effecting necessary improvements without the cost falling unduly on any one class, and especially as it does at present on that class which is least able to bear it. It has always been considered by our most eminent writers on political economy to be one of the duties of a State to make and maintain public roads for the benefit of the nation; and the most equitable mode of raising funds for this purpose was by payment of toll by all persons in proportion to the wear and tear which they occasion to those roads. Certainly it has never been held by authority that the duty of maintaining public roads could be justly borne by any one class of property in particular, and assuredly not by the small class who happen to be the temporary occupiers of land. The throwing of the burden of the maintenance of public roads, which have hitherto been kept up by the public by the payment of tolls, on the occupiers of land has always appeared to me to be most unjust, and I think we have a great claim on the State for assistance in the maintenance of the roads; and if the roads were kept in repair by persons who publicly contracted to do so under proper safeguards, I believe the public would have confidence that any grant in aid from the State for this purpose would not be wasted. I would embrace all roads in the new measure that led from one place to another; footpaths and byeroads could be easily kept in repair by the parish by funds raised under the sanitary rate. If we could get such an equitable system established with regard to highway and county administration and expenditure, we shall have gained a great step, I believe, towards a solution of this important question. I have, I fear, detained you already too great a length, for which I must apologise, but I can hardly conclude a paper on Local Taxation without alluding to the question of the valuation for the assessment on which all local rates are to be levied. The bill now before Parliament dealing with the question has been assailed, on the ground "that it was nothing less than another attempt by the central power to annihilate local authority throughout the kingdom." Well, I am sorry to differ with Mr. Read, who holds this opinion; but the only local authority which the bill proposes to annihilate is the authority which the Quarter Sessions now exercises of making a useless and often costly valuation for the purposes of the county rate. Surely there ought to be one valuation which should be adopted for all purposes, and this is what the Government bill proposes to do. Previous to the passing of the Assessment Committee Act (1862), competent surveyors were generally employed to make a survey and valuation for parochial purposes when necessary, and the result generally was an equal valuation, so far as the parish was concerned, but when the Union Chargeability Act was passed, it became necessary to secure, if possible, an equality of valuation throughout the Union. But now it becomes necessary to obtain equality of valuation throughout a county, especially as the county charges have increased so much, and, as I hope to see, the maintenance of the roads become a county charge. What then is the most satisfactory method of obtaining an equality of valuation throughout a county? I admit that equality of valuation is best secured by a competent surveyor, making an estimate of value of each hereditament, but it must be admitted that this would be a most tedious and costly proceeding if it were adopted throughout the county, and then you could not be sure that each surveyor would value according to a uniform basis, or hold identical views as to the value of different properties. We know very well indeed that widely different views are held by them on this matter. I have come to the conclusion, therefore, that although a competent surveyor can make a parish valuation very fairly, he could not do so for a county, much less for the whole kingdom; and this valuation is to be adopted for imperial purposes throughout England and Wales. The only reliable basis of value, therefore, that will secure the object to be obtained is that which is fixed by competition for the different holdings, and that is rent. That is what the bill proposes to adopt, and it is what is generally adopted in the county of Wilts, and indeed generally in the West of England. I am a member of an assessment committee where it is strictly adopted, and it is satisfactory to the ratepayers. The Government bill will make no alteration whatever in our union

Then it is objected that the surveyor of taxes is to have a voice in the matter; well the valuation is for imperial taxes as well as local rates, and at present the surveyor of taxes has exclusively to do with the valuation for imperial taxes and the representatives of the ratepayers have nothing to do with it. Now, it is proposed that they shall be united for the purpose of making the valuation for both purposes, and I confess I can see no valid objection to it. But it is said the bill invests the surveyor with arbitrary power, and I confess that this is to some extent true, but this may be easily modified in committee, and I believe it will be so modified; but this is not a reason for denouncing the bill *in toto*. With regard to the appeals provided by the measure, I confess I should prefer to see a ready appeal provided (after a second appeal is heard by the committee) to the county court. Many owners of property are also occupiers, and there is no fixed rent in these cases by competition in these cases and I think it is only fair that a ready appeal should be provided by the bill to a perfectly disinterested and impartial authority, and, I believe, that will be best secured by an appeal to the county court. It must be borne in mind that it is of the utmost importance to pass a Valuation Bill, because, as it has been pointed out many times, it must precede the reform of our local taxation system which we so much want. I hold, then, that it is highly desirable that every effort should be made to make this a satisfactory measure, which I feel sure may be done, and get it out of the way for other more important reforms to come. Gentlemen, I have done, but I will say in conclusion, that I believe the present time is one of greater depression in farming pursuits than has ever been known since the effect of the abolition of the Corn-laws passed away; the best labour is leaving it as I have pointed out, because it cannot be profitably employed, and I commend this fact to the serious consideration of owners. "If the rod be bent too much one way," says the proverb, "in order to make it straight you must bend it as much the other;" and I sometimes think that we shall have, sooner or later, to bend the rod back again almost to protection, perhaps, in order to make things straight. "The establishment of perfect justice, of perfect liberty, and of perfect equality, is the very simple secret," we are told, "which most effectually secures the highest degree of prosperity to all classes." It is not, therefore, the interest of any class to cast undue burdens on another. I believe that undue burdens have been thrown very largely on the occupiers of land, and I have come to the same conclusion as the Select Committee of the House of Commons came to on this question—viz., "That it is expedient to make owners as well as occupiers directly liable for a certain proportion of the rates," and I think this proportion should be established strictly according to the old maxim of Adam Smith, "That each should contribute in proportion to his ability to pay." When this is done you will also establish what is infinitely more to be desired than anything else—a real identity of feeling between landlord and tenant.

Mr. JOHN WALKER (of Maffesea) said he was a stranger here, but he was not a stranger to the question of local taxation, for 20 years ago he was nicknamed "Local Taxation Walker" (laughter). He had listened with attention to the paper, but it did not embrace the question at all; it went to the question of owner and occupier, and forgot the large area of floating capital which represents 1/2-1/3 of the wealth of England, and which ought to bear its burden. He contended that every one ought to pay in his degree, and that nothing short of a fairly-adjusted income-tax would do this, so as to cover the whole local taxation. If fairly adjusted, an income-tax of 2d. in the pound would cover the whole local taxation of England altogether. He believed that the owner ought to pay on his rental, and the tenant on his income, and that all should pay in their degree, and according to their ability. He should like to know why the merchants shipowners were to be allowed to miss the area of local taxation, and why a man who had thousands of capital invested in mortgages secured on land should escape the obligation of paying local rates? All the huzzing they heard in Parliament on this question was not worth considering. He did not care for party, though he had always voted with the Conservatives (laughter). All he wanted was that the question should be dealt with fairly and well. Mr. Disraeli knew this well enough, and the right hon. gentleman had played a cowardly part to shirk the question now. Thirty years ago he (Mr. Walker) proposed that if they had free trade, it should be

carried out fairly, by knocking off the Malt-tax, and putting all indirect taxes on the manufactured articles, so as to leave production free, and putting on a fair income-tax for everything, whether imported or local, which would come fairly up to the mark, according to every man's ability. This could be done easily enough, and the reason why it had not been done was that the Liberal party consisted of floating capitalists chiefly, and the Conservative party did not like to do it, because it might do away with some of the feudal holdings which, in some degree still survived, and might further lead to a redistribution of seats (laughter). Now local taxes belong to all income alike, and if the poor received, when sick or needy, from a self-helping fund to which they themselves contributed in their brighter hours, the name of pauper would disappear—the employing power being freed from the unequal pressure of the unemployed would pay the employed well, and no one could point out injustice in the matter. The owner would pay on the rental, the tenant on his income and interest, the mortgagee on his receipts, and without directly taxing stock-in-trade you would have its profit and income; and the working man can only pay on his income, whether he pay directly or indirectly, as he owns no fixed wealth whatever.

Major DASHWOOD (Oxfordshire) said he hoped the paper of Mr. Trask would start this question of local taxation with new life. England required attention on this question, and the farmers especially wanted to know more about it. He thought the Central Chamber of Agriculture had not been of use in that line, and that it had not done the good it might, having misunderstood the question. This was a bold assertion, but he told the leader of the Local Taxation Committee as much six years ago, and he thought his words had now come true. Seven years ago, this very month, he read a paper on this subject before this Club, and he was glad Mr. Trask approved of it. He could, perhaps, not do better than read some extracts from that paper, for he thought farmers wanted to know more on this subject, and the hon. Mr. Trask had taken was a very valuable one. He said:

Since my paper on Local Rating appeared seven years ago, the late Government brought forward a bill embodying the half-rating there advocated. And although the change is only in the administration, and the fact that any charge paid by the tenant is a diminution of rent to the landlord, still many see the change in the light of the introduction of a new burden on the land. I am glad to see the half-rating (in England, a new principle) being ground, for a measure that shall bring rating more directly to the consideration of the landlords will make them see how much they are interested in the expenditure, and will bring them into active co-operation with their tenants, and in this way the interests of both will be jointly worked to the advantage of the country. The tenant at the present time is made the agent of the landlord in administering the rates, but as the tenant's interest is temporary, whilst that of the landlord is permanent, questions will continually arise where the conflicting interests will tell to the prejudice of the owner and of the public. I think the pleaard placed before you may be found useful in showing the different systems of Local Rating in the three divisions of our country, of which difference so few people seem aware. Without this system of half-rating may I ask, how is it possible to enlist the co-operation of owners and of occupiers of property, both large and small? "We will take 2s. 6d. in the pound as being the amount of all the rates in the three countries, and we will assume each rate to be in the same proportion—say poor-rates 1s. 3d., highway rate 9d., county rate 6d.—total 2s. 6d. And the result is, that in England the owner (directly) pays all. The occupier pays the whole—namely, 2s. 6d. In Ireland the owner pays half the poor-rate, 7½d.; the occupier half the poor-rate, 7½d., and all the county and highway rates, 1s. 3d.—making a total of 1s. 10½d. In Scotland the owner pays half the poor-rate, 7½d.; half the highway rate, 1½d.; all the county rate, 6d.—making a total of 1s. 6d. The occupier, half the poor-rate, 7½d.; half the highway rate, 1½d.—making a total of 1s. Mark the important difference:

	OWNER PAYS	OCCUPIER PAYS
In England . . . . .	Nil . . . . .	2s. 6d.
In Scotland . . . . .	1s. 6d. . . . .	1s. 0d.
In Ireland . . . . .	0s. 7½d. . . . .	1s. 10½d.

We cannot now be astonished that we hear little, if any, grumbling as to the rates in Scotland—some what more in Ireland—and so much in England. No wonder that in England owners have not had enough home to them the necessity of rating their property share in the administration of work in which they are really so largely interested. On comparing the three systems of rating, it appears to me that England is now under the worst, and Scotland, as a whole, is

the best system. But the important difference I wish specially to point out, and to urge on your attention, is the system of half-rating as adopted and carried out in Ireland, as to the poor-rate. The want of this I believe to be the key-note to all our troubles in matters connected with rating. Ought not the following to be the machinery of all rating, namely—that all rates should be paid half by the owner and half by the occupier; the occupier, first paying the whole of the rate, being empowered to deduct half the amount from his rent, as was done in England with the cattle-plague rate; the expenditure of all rates being controlled by both owner and occupier?—the lasting interests of the owner being considered as well as the temporary interests of the occupier. By the owners having to make an entry of the deductions for rates in their rent rolls, they would have this expenditure periodically brought to their notice, which is not the case under the present system, and they would see that their lasting interests were provided for. I have seen the rent-roll of an Irish landlord, with its column of deductions for poor-rates, and an account of English estates would allow that such a summary would be a most instructive lesson to every owner. The occupiers, knowing that half the rates would be deducted to them, and that in case of any fresh rate being imposed they would only have to bear half the burden, would not be so inclined to oppose any useful improvement; and this would lead both parties to work together in a more advantageous manner to themselves and to all classes than at present. Many may urge, "Why alter a system which satisfies the wishes of the party and the public generally?" and as the occupiers were to certain terms when entering on their tenancies, they have no cause to complain. A tenant generally agrees to all rates and taxes, which may hereafter be imposed, parliamentary or otherwise." In answer, I urge that I am not advocating the interest of either party, the owner or the occupier, the lasting or the temporary interests; I am only advocating measures for the good of all classes in this country. I ask, Do we find the present system to work well? and, if not, what is the reason? and, can it be improved? As many may wish to know what have been my chances of gaining experience on such subjects, I may state I am, and I have been for several years, a large employer of labour, both as a tenant-farmer occupying upwards of 1,000 acres of land, chiefly arable, and also assisting largely in estate management. I have also been a poor-law guardian, and, as a magistrate, a guardian *ex-officio*; consequently I hope I may be considered to have had good opportunities for observing not only the good and bad points of our machinery and management, but also the interests of all classes connected with such management; and I have felt more and more disappointed as I have observed how hopeless is any real improvement under the disadvantages of the present system. I am strongly convinced that the half-rating would be of the greatest use to our country, and without it our rating will never be on a proper basis, or get the support of all classes. Our present system is one-sided. The owners of property, with their lasting interests, and on whom these charges really fall, in the absence of laws, and by the present legislation made to leave their interests and duties to their tenants, and they are thus practically shut out from the management of the poor and highway rates (which in my union and district, in Oxfordshire, are as four-fifths to the one-fifth of the county rate, which is managed by the magistrates as owners). When one discovers that the amount at Quarter Sessions as regards the rates is to look after only the one-fifth (which one-fifth is much controlled by the State), does not the importance attached to the formation of financial boards for the county rate alone appear to be rather exaggerated? The owners are often magistrates, and as such control the Board of Guardians and of Highways in the district in which they reside, and one-third of the members of assessment committees may be composed of magistrates *ex-officio*; but as these owners do not pay directly any of the charges on their property (except for land in hand or in the pipes), the importance of such matters is not brought to their notice; neither do they, when they attend at their respective boards (which is, comparatively speaking, seldom or at all events, not for a continued period), carry that weight which their lasting interests represent, in fact, they are looked on as interlopers, which the law has practically made them, and thus, through the non-payment of the rates, both the highest and lowest classes are excluded from taking interest in and sharing in this work. The occupiers, on whom, as ratepayers, the business really devolves, as a rule, do their best, for which they often get abuse instead of co-operation. Having only temporary interests their management is necessarily parsimonious rather than economical, and they naturally oppose any change that may increase the annual charge, as they know all present expenditure for a future benefit will fall directly on themselves; as, for instance, in such cases as the Union Rating and Highway District Bills (we well know the opposition these bills met with), and which is now working against the Education Bill. I know a landlord who on making fresh agreements with his tenants has agreed to pay half of the Education Rate.

Through the education arising partly from the half rating, the Irish landowner will invariably be found more cognizant of his duties in this line than the English landowner—at least, this is the experience of myself and others. Does not blame rest with the system that causes such ignorance? It speaks for itself, that it must be the system that is at fault, as we all know that many of our owners of property would be ready to join in such work if they felt called on to do so. The owners have most leisure—the attending the numerous Boards and Committees, which is becoming a heavy tax on the occupiers' time, and some expense. Landlords who at present take no interest in the charges paid by their tenants would probably be started to find their property is taxed as follows: If at 2s. 6d. in the £ the yearly charge on £100 rateable value is £12 10s., and on £1,000 the sum of £125, the half rate would be £62 10s. The average of all rates in England and Wales is 3s. 4d. in the £, and 4d. paid by the State. At this 3s. 4d. in the £ the yearly charge on £100 rateable value would be £16 13s. 4d., ditto on £1,000 £166 13s. 4d., the half-rate would be £83 6s. 8d.—The Chairman of 1861 (Mr. Newton) agreed with Captain Dashwood that it would be extremely advantageous to get as many persons as possible rateable personally. That would tend to the closest supervision, for when parties had to pay rates, they acted very properly, as a check to unjust claims on the part of others. He thought the principle of rating landlords was a sound one. Some speakers seemed to consider it impracticable to get landlords to pay. A he could say in reference to that question was that, at the time when the cattle plague was devastating their herds, landlords who had to contribute their share of the burden arising from the loss exercised a very active supervision, watching the expenses, and helping to keep them down as far as possible; and he could not but think that the payment by them of part of the permanent local rates would produce a similar effect.—In conclusion, I beg to say I do not think much of the small contribution towards the cost of police and lunatics given in Session 1874. It is a slight boon to us temporary occupiers. It is a real addition to the value of property. Before making any alterations in Local Taxation it appears to me the old English Act of Local Self Government requires re-establishing, somewhat as proposed by Mr. Goschen's Bill of 1871. If there was a Parochial Board in every parish it would teach all classes their local responsibility, and by accustoming representatives of all classes to work together for public but non-political objects, it would strike at the root of those class prejudices mainly springing from mutual ignorance. In these days of Trades Unions the necessities of such teaching is forced upon us.

Mr. C. S. READ, M.P. (Norfolk): Major Dashwood, seven years ago, read a paper in which he advocated that the remedy for the evils of local taxation were practically to be found in this—that you should divide the rates between landlord and tenant. I ventured on that occasion to say it would be something like putting a burden upon two panniers, and informing the ass that had to bear the two that he was not the best that carried the whole burden (laughter). I have yet to learn that though it may be convenient to divide it, that there is really any sort of relief by that mode to those who now pay local taxation. If you were to begin the world again, I should have no objection—in fact I should very much prefer—that the rates should be divided between landlord and tenant. I don't doubt that on the whole we should see that a great many rates had better be paid exclusively by the landlords. But on the other hand, if it comes to this, and you have a bill introduced into Parliament like Mr. Goschen's, which interfere directly with freedom of contract (and I have no objection to interference with freedom of contract for a good object), but if you for this infinitesimal benefit interfere with all existing contracts between landlord and tenant, and say, for instance, that from the 1st of January next every agreement and every holding of real property in England is to be altered, and that from henceforth there is to be a division of these rates between landlord and tenant, why of course you have immediately a revision of rents. What should I do if I were an agent, and a tenant were to come to me thus: "Now, sir, you as representing the landlord, will have to pay half my rates in future." I should say, "What are your rates per acre?" He says, "Why, about 4s. an acre." "Well then," I should ask, "what is half of 4s.?" "Why, 2s." "Well, as I don't want any bother about altering this thing every year, you pay an extra rent of 2s. 6d. or 3s.—that will be the way; that will satisfy me, and I am sure it will be agreeable to you" (laughter). What sort of benefit would that be to the tenant? I say it would be none. It would perhaps be a certain gain to the landlord. But on the other hand, I am ready to admit that if you can enlist the sympathy of owners with the reform of local taxation, I should



be very happy indeed to lend my aid to them; but I don't think in that way we should gain any very substantial assistance. Now Major Dashwood has said that the Chambers of Agriculture have been altogether wrong in what they have advocated. Well, they have not advocated what Major Dashwood proposed seven years ago—namely, this division of rates, and he therefore tells us we are all wrong. May I ask, when he informs us there has been a great growth of public opinion in his favour, where can he point to it (Hear, hear, and laughter)? One would fancy he would look to Parliament. Has Parliament done anything of the sort? Parliament passed what I believe to be a most unrighteous measure, inflicting the whole burden of the Education rate on the occupier. That surely would have been a very good opportunity for beginning this system, but Parliament turned a deaf ear to it, and inflicted the whole of that rate not only for the education of the community, but for providing land and schools, absolutely upon the tenant (Hear, hear). I am at a loss to know—but perhaps Major Dashwood or Mr. Trask can tell us—of some Act that has been passed lately that in any way carries out their favourite panacea. [Mr. TRASK: The Sanitary rates.] Well, the Sanitary rates in the country don't seem to be divided; I don't pretend to know what happens in towns, but I do know this, that the sanitary rates in the country fall exclusively and entirely upon the tenant. [A VOICE: Altogether.] Then Major Dashwood says we shall never get any reform in local taxation until we recur to the old Constitutional principle, but I did not say what that Constitutional principle was. Well, I always thought it was that representation and taxation should go together; but he immediately afterwards said, "What would be the use of County Financial Boards?" Why County Financial Boards would very much carry out the old Constitutional principle of representation and taxation. I think Major Dashwood and Mr. Trask have both pointed out that very little of the actual payment of the county rate depends upon the will of the magistrates, but depends more entirely upon statute. I believe eighty per cent. of the county rate is obligatory upon the magistrates. They cannot help expending it. On the other hand that has nothing at all to do with County Financial Boards. I don't suppose we shall gain in economy one halfpenny in the pound all over England. I believe, and I have stated it previously in this room, and elsewhere, that the county rates are as economically managed by the magistrates as they would be by any financial board in the world; but there are so many things cropping up which belong to the county rather than to the village, or to the union, that must engage the attention of Parliament, with which I believe (I say it with all deference) the Quarter Sessions has not the capacity to deal, because they are not a representative body. Therefore I say, "Get a good board: there are lots of things cropping up which will be sure to engage its attention, most legitimately I believe, for the benefit of all concerned." I think Mr. Trask said the Education rate in Scotland was paid by the landlords. [Mr. TRASK: Yes.] I think Mr. Trask has not seen the bill that a Conservative Government passed a year or two ago. [Mr. TRASK: I quoted from Major Dashwood.] Yes, but that is seven years old. You will find in Hansard that the rate for the better education of the Scotch people (whom we thought were particularly well educated before) has now to be paid by the occupier as well as by the owner; and therefore that seems to be rather a retrograde step. Now we really come to another matter which is more important still, because it directly affects us at the present moment, and that is the Valuation Bill; and that has been spoken of in terms of great and decided approbation by Mr. Trask. That is the first time I have ever heard any body say anything in its favour in an agricultural meeting, and I hope Mr. Trask will find some backers in this room, although on the whole I believe he will be in a very great minority. [Mr. TRASK: Well, we act on it.] No, Mr. Trask does not act upon it, and no one acts upon it. Mr. Trask says in his union they take rents; but the Valuation Bill is not going to take rents. If the Valuation Bill prescribed that the rent should be the assessment, I should not mind the bill and the surveyor of taxes, but the bill says this—that in no case shall the assessment be less than the rent (Hear, hear), and it may be as much higher as the surveyor of taxes can make it; and what is that? Simply this—a perpetual screw-jack to extort from the owners and occupiers of real property a greater amount of rates and taxes. If that is not what the bill means, tell me what it does mean! Why, if Mr. Trask would go to

Scotland—and he seems to be enamoured of that system, and so does Major Dashwood—I say as far as regards the principle of assessment I am quite with them. They take these actual rents—not only rent paid by a yearly tenant, but rent paid by a man under a 21 years' lease. A farm may enter on a farm in a bad state of cultivation, and may pay £1 an acre a-year for it, and may increase the value by the expenditure of his own capital, from 20s. to 25s. or 30s. an acre. But what is the result: that during the whole term of that lease he does not pay upon an assessment of more than the actual rent. But what is the case with this Valuation Bill? Why we are to have a supplementary assessment every year. If I drain a piece of land and afterwards steam dig it and really improve the staple of the soil, I am at the mercy of the overseer and the surveyor of taxes, and a kind neighbour perhaps, to bring my case up before the assessment committee, or city sessions, or the Quarter Sessions, which ever they may think fit. I don't want to trouble this meeting with any lengthened details, but I say this—that if you take Ireland, and if you take Scotland, as Major Dashwood has said, they are both in advance of England in this respect. What have you in Ireland? You have an assessment made on one uniform basis by a Government official. Sir Richard Griffiths, some years ago, through the aid of able assistants, valued every hereditament in the whole of Ireland. Now what do you get there? Why you get uniformity; and that is what I should like to have in England. I should like to have a good imperial valuation of the whole country, but who will pay for it? Not the Government. If the Government would do it honestly and well, I would guarantee the ratepayers should pay half of it, but Government won't have that, and they won't have rent, though they take it in Scotland and a valuation in Ireland; but they are going to give us the benefit of both, and when the rent is not enough they will take the valuation, and when the valuation is not enough they will take the rent. That is really and truly the bill. [Mr. TRASK: "No, no."] If Mr. Trask or any one else can prove the contrary I shall be very much indebted to him. Why, it is very good indeed to say we should have one basis of valuation for both imperial and local taxation. I agree—that is, if the basis is a right one; but if I understand the basis of valuation for local taxation, it has generally been a basis of uniformity. First of all it used to be between property in the parish, then between parishes in the union, and now we are going to try and get uniformity of valuation in all the different unions within the country. Very right and very proper; but I don't like the means that are employed, because the means are these—putting everybody up to a higher level. Now with regard to the other point—the uniformity of imperial taxation.—I have always understood that to be this—to extract the uttermost farthing from everybody who are fools enough to pay taxes (laughter). I am not aware that the surveyors of taxes have ever gone upon any other line. It is the privilege of an Englishman to suppose that he is honest, and that he is presumed to be honest till he is proved to be a rogue; but I believe the principle of taxation is that everybody is presumed to be a rogue until he has proved himself to be an honest man (laughter); and really if that is the principle that is to be brought into our assessment committees, I don't see why the surveyor of taxes should be a different man in the assessment committee to what he is out of it; and I say that the introduction of him with the power that is given him is nothing less than a subversion of local self-government altogether. Now Mr. Trask says: "Who is subverted?" I will tell him who are subverted, and that is the assessment committees throughout the country. I will just say how they will be subverted. A little ignorant rural overseer is pitted against a sharp intelligent surveyor of taxes. They come together in the most amicable way, but it is £100 to 1s. in favour of the surveyor. But supposing the overseer is endowed with that obstinacy which is characteristic of some rural people, and does not submit to the judgment of the surveyor, the overseer is to make out a valuation of every hereditament of the parish, and forward it to the surveyor for his comments. The surveyor has in this valuation list a column put for his special figures, and whatever he puts down in that column—now this is the point I so strongly object to, and I think Mr. Trask objects that—it is considered to be right until the contrary is proved (laughter). Now, surely that is upsetting the authority of the Assessment Committee altogether. [Mr. TRASK: Alter it in committee.] No; I want to show you the *antecedents* which underlies the whole bill.

You may alter it in committee if you will, but you see what the central government would do to local interests if it had its own way; see how it would tread us under foot and hand us over to some great local government office. Why, I know what it is very well (Hear, hear, and laughter). I have been there myself; and therefore I know this—that however good, and great, and generous may be the ruling powers in any public office, still the whole tendency of modern legislation and modern government is to bring up everything here to London, and to have everything drawn by wires from the central authority (Hear, hear). Well, now, having said all this, I just pass to one pleasing subject which I am sure you will be glad to hear; and that is, that our esteemed friend, Mr. Trask, who has introduced this paper with so much ability, is to be an officer under the Local Government Board in the country (Hear, hear). I say that appointment has given me more satisfaction than this paper (laughter). I think it is a very capital appointment. I am sure that in the country districts generally it would be very popular. You take a man here who is thoroughly conversant and been intimately connected for many years with the administration of the Poor-law and local government, instead of going to some man learned in the law, for the purpose of auditing our accounts; and you bring a man before the local authorities who really has sympathy with them, and who knows very well the evils which attend the present administration of the Poor-law. I hope the appointment of Mr. Trask is eminently satisfactory to himself. I am quite sure it is a very excellent appointment on the part of my right hon. friend the President of the Local Government Board, and I believe that it will be a very great advantage not only to the Local Government Board, but to the local authorities throughout the district in which Mr. Trask is to work (applause).

Mr. W. SPATTON (Wilts) said that he was not an authority on this question, but his sympathies went with Mr. Walker. It seemed to him what they wanted was to bring other property into the area of local taxation, and that the question of the division of rates between landlord and occupier was only a very small part of the question, and was only that certainly which would be merged in the greater one raised by Mr. Walker. He quite agreed with Mr. Walker that there should be no difficulty in taxing all property towards local rates. It was not for farmers to point out the details of such a scheme, but he thought that men who were conversant with the matter could draft a scheme on the lines laid down by Mr. Walker which would be eminently satisfactory. He could not agree with Major Dushwood, that the Local Taxation Committee had gone wrong, for he believed they had worked on the right lines. He had no desire to see a division of rates between the owner and occupier, for he was sure that the result would be that pointed out by Mr. Read, that the occupiers would get in a worse hole than they are now.

Mr. P. PHIPPS, M.P. (Northampton), was sorry he had not heard the paper read. In the present state of affairs, when the prospects of farmers, especially on cold land, was not a very flourishing one, the question of local taxation was of very great importance to them. He was under the impression, though it might be a false one, that the Government, whatever its politics, for many years had tried to make the Imperial Budget as small as they could, at the expense of the Local Budget. There were many matters which any man of common sense could see were thrown, for the sake of convenience, upon local occupiers, with the view to lessen imperial taxation (Hear, hear). That, he held, to be altogether wrong. There ought always to be in the minds of those who had the destinies of this country in their hands, a distinct opinion as to what were local and what imperial taxes. He had seen it stated somewhere that farmers appeared always to have small-pox more than other classes, for they had to pay all the vaccination rate (laughter). Then, again, it was stated that the farmers appeared to be looked on as uneducated, and as a consequence of being uneducated, the imperial Legislature cast upon them the pleasure of paying for the education of the people (Hear, hear, and laughter). Many years ago he stated at a public meeting that it was the duty of the farmers to put their foot down, and say that, whatever might be the consequences, or how good the proposal, they were determined that nothing should be carried that would put another feather on the back of the camel, which had almost too much now to carry—he meant the tenant-farmer (hear, hear). Although he had heard it said that evening that

the Local Taxation Committee, in connection with the Chamber of Agriculture, had not done much good, he did not believe there was a single institution in this country that had done more for the tenant-farmers, directly and indirectly, than the Local Taxation Committee had done. It had, to his own knowledge, been the means of preventing many measures being passed, that if passed would have increased the local rates; and it had, by its effect on public opinion and on the opinion of the House of Commons, caused the Government to do what they could towards lessening the burden of local taxation, by making considerable subventions in their favour. He differed from the expressed opinions of some agricultural bodies, when they considered that the present Government had not done what they could. He considered the subventions the present Government had made entitled them to the gratitude, or at least to the recognition of the tenant-farmers. They must recollect the whole world were not farmers, and that the Government had to take into consideration, not the welfare of a particular section of the people, but "the greatest happiness of the greatest number." Local taxation, no doubt, wanted reforming, and he would reform every wrong; at the same time he would maintain every old institution of the country that was fit for the object it had in view. There was no man he respected more than Mr. Read, but they agreed to differ, and he could not see the Valuation Bill in the same light as Mr. Read. He believed if there was a curse in this country more than another, it was the modern form of Assessment Committee. He might be wrong, but he knew that when he had inquired into the rating of the Assessment Committee, he found, at all events, that they were not rated higher than their neighbours (laughter). He believed Mr. Read was quite right in regard to county financial boards (Hear, hear). He believed that as a principle, representation and taxation ought to go together. Mr. Read would concede that a greater part of the revenues dispersed by the magistrates were, at the present moment, dispensed under statute, and there could not be differently dealt with under a county board; at the same time it is the great principle of this country, and it will be a great safeguard to this country to get as many men as possible, of all classes of society, to take an interest in the political welfare of this country (Hear, hear). He believed it was their duty to do all they could to prevent centralisation rather than increase it (Hear, hear)—and to do all they could to promote local representation. He hoped the Valuation Bill would be the means of affording something like uniformity in taxation, and that the Poor-law Amendment Bill which had been introduced would tend to produce uniformity of county area; and he trusted the ultimate result would be county financial boards in which all might have confidence; and though they might spend more money than at present, it would only be spent in accordance with the feelings of the ratepayers.

The CHAIRMAN said if no further remarks were made Mr. Trask would reply. He was sure they all agreed that Mr. Trask's recent appointment was a very satisfactory one, and he wished to congratulate him upon it. Mr. Trask was a very old member of the Club, and though they might not see him so frequently at the meetings, yet he hoped they would see him often for many years to come (Hear, hear).

Mr. TRASK, in reply, thanked Mr. Read and the Chairman for their congratulations. He had not entered on his new duties yet, and therefore he was not breaking official rules by discussing a subject connected with the Department he was about to join (Hear, hear). In regard to the question of rating personal property, he thought that question was dead and buried (Cries of "No, no"). It was considered ten or eleven years ago, and the difficulties of rating were pointed out. It was discussed recently in the Chamber of Agriculture for South Wilts, and the Marquis of Bath, who supported Mr. Andrews at the outset of the movement, said that he was obliged reluctantly to give it up, because it was impractical, and equivalent to adopting another income-tax for the relief of local burdens, and no government at the present time would ever propose a second income-tax for that purpose. Pope said—

For forms of government let fools contest;  
What'er is best administered is best.

He should like to know, if the whole income of the country was to be rated at 2d. in the pound to provide for these local burdens, who would have the spending of the money?

It would be utterly fatal to local authority, and he believed it would be utterly impracticable. Therefore he did not refer to it in his paper. Mr. Phipps had referred to the disposition of Parliament to relieve Imperial taxation, and to push it off on local burdens. His opinion was that if the Lords and Commons, who were chiefly landowners, paid their fair proportion with the occupiers, they would take care of these things; but because the occupiers only paid they were indifferent. He did not know that he differed from Mr. Read on any point but this Valuation Bill. He was a member of an assessment committee where they adopted rent. Mr. Read said the terms of the bill were "not less than the rent." Nobody wanted it to be more. [Mr. READ: The surveyor of taxes would.] He would ask, did any one know a surveyor of taxes put the value above the rent? (Cries of "Yes, yes"). He never did. [Mr. WALKER: Write to the surveyor of Gainsborough, and ask whether it has been done.] It was the fault of the occupier if he paid more than his rent (Cries of "No, no"). Then it was under very special circumstances. He would say, as he said just now, that to some extent it was perfectly true this bill was an arbitrary measure. According as the bill was drawn now, the figures which the surveyor of taxes laid down must be conclusive evidence; but that would no doubt be modified, and he thought Mr. Read drew upon his imagination for his reasons when he condemned the bill *in toto*.

Mr. READ: I don't condemn the bill *in toto*, but I condemn

two points of it, and those are the arbitrary power of the surveyor of taxes and the minimum rent.

Mr. TRASK said he was sure this, or some valuation bill, must be passed before there would be any further progress with regard to local taxation. It was in the interest of the rate-payers that this valuation bill should be passed. [A voice: Not in its present form.] Well, it might be modified in committee, and there was every disposition, he was sure, in the House to pay respect to any suggestion by Mr. Read. He objected to the bill in regard to an appeal to Quarter Sessions (Hear, hear). He did this because owners were to a large extent occupiers themselves, and there was no competition fixing their rents. There was an appeal to Special and Quarter Sessions, but that was the owners themselves, and he thought there ought to be a ready appeal to an independent court, such as the County Court.

Mr. DRUCE pointed out that if appeals were made to County Courts some provision must be made for remunerating the judges, who were already overworked.

Mr. TRASK said he thought there would be very few appeals; indeed, the effect of a ready appeal to a County Court would operate with the assessment committee, and render them more ready to do justice to all parties before any appeal became necessary.

On the proposition of Mr. Little a vote of thanks was accorded to Mr. Trask for his paper, and a vote of thanks to the Chairman concluded the proceedings.

## AGRICULTURE IN VICTORIA.

The Third Annual Report of the Secretary of the Department of Lands and Agriculture for Victoria is full of interest, as showing the great progress made in the Colony, and the growing interest in improved methods of farming. The report is for the year ending March 31st, 1875, and comes, therefore, somewhat late to hand, but it is not on that account less interesting. The Secretary commences his remarks by congratulating the Minister of Lands and Agriculture, to whom they are addressed, upon the satisfactory results of the season 1874-5, which he says was marked by a general immunity from disease among the crops, the cereals being free from rust, and the vines from *oidium* and black spot. The yield of grain was up to the average of recent seasons, whilst that of the vineyards far exceeded any former vintage in point of quality, and in most cases was beyond an average as to quantity. The agriculture of the colony is also said to be undergoing a rapid change, "the spendthrift system of continuous grain-growing fast giving place to a rational course of husbandry, into which the keeping of sheep enters largely." The Secretary next calls attention to the need of improved labour-saving machines in the colony—a need which the farmers of Victoria feel at least as strongly as those of the American Continent. With a view to meeting this want, he recommends the appointment of a specially-qualified person to inspect and report upon the agricultural machinery department of the Philadelphia Exhibition. He then refers to a previous report, in which attention had been called to the subject of agricultural education, and remarks with natural satisfaction that, since the time of that report, steps have been taken to secure sites for agricultural colleges.

Many of the characteristics of British farmers at home appear to cling to them when they emigrate, and to be transmitted to their descendants at the antipodes. For instance, the Secretary remarks: "Although farmers, as a class, are numerically more powerful than any other section of the community, yet how few among their number take an interest in public matters that affect their position collectively!" "This," he continues, "is not as matters should be. Farmers should not be dependent upon persons to represent them in public who cannot

fully know or appreciate the requirements of the agricultural interest; they should be so educated and trained as to qualify them to perform such work for themselves." This little homily is as suggestive to us on this side of the world as it is to the agriculturists of Australia. Only here we require a training in independent thought and feeling rather than in qualifications for taking part in public life. It is not so much capable representatives of the agricultural interest who are lacking here, as intelligence and courage on the part of the county electors. The organisation of farmers' clubs is also recommended for the colony, not only for the purpose of spreading agricultural knowledge, but also with a view to educating the farmers in the art of public speaking and in the cultivation of their minds. There are already three flourishing clubs in Victoria, and some of the papers read during the past year are given in the volume which is before us. One paper is upon "Shorthorns," another on "Farm Homesteads," a third on "The Growth and Consumption of Mangel Wurtzel," and a fourth has the suggestive title, "A Farmer: What should he be?"

In order to afford a clear idea of the gradual development and present proportions of the farming interest in the colony, the Secretary proceeds to give a number of statistics. From these we learn that between the 1st of March, 1869, and the 31st of March, 1875, horses on farms (as distinguished from mere squatting stations) have increased by 41,498, cattle by 307,577, sheep by 3,286,149, and pigs by 4,746—a total increase of live stock on settled farms of no less than 3,639,970 head. This is an increase of nearly 100 per cent. in six years, although the area of land occupied has increased only by 62 per cent., 6,491,363 acres being appropriated to farms in 1875, against 4,032,302 acres in 1869. This increase in the number of stock on farms must not, however, be regarded as the net increase for the whole colony; for during the period referred to the live stock on stations has decreased by 1,872,722 head. The net increase for the colony in the six years is, therefore, 1,767,248 head. The Secretary regards the fact that there is now more live stock on farms than on stations as eminently satisfactory, denoting as it does a development of squatting into settled farming. The advantage of this develop-

ment is to some extent apparent from a comparison of the numbers of stock and the area of land belonging to farms and stations respectively. Thus, on 10,523,665 acres occupied as farms, 6,789,655 head of live stock are kept; whilst 25,971,039 acres held as stations maintain only 5,708,234 head. Similarly the number of hands employed on farms has increased, whilst the number employed on stations has decreased within the period under review.

Amongst the useful efforts for the advancement of the colony to be credited to the Department of Agriculture, we may mention the establishment of a system of exchange in agricultural reports and other publications, and in seeds of corn, vegetables, and shrubs, between the Department and the leading Agricultural Societies of foreign countries. Under the auspices of the Department a National Exhibition of Live Stock, Implements, Dairy Produce, &c., was held at Melbourne, in November, 1874, with great success.

Special attention is directed by the Secretary to the great progress of vine-growing in Victoria. He says: "It is most satisfactory to report that our wines continue to meet with high commendation at the hands of European connoisseurs. The position that they took at the Vienna Exhibition, and the laudatory remarks of the

jurors, particularly upon the sample of Hermitage sent from Victoria, which they confessed their inability to distinguish from the famous wine of the Droune, will assist greatly to permanently place the Australian wines upon the English market. In no country does the vine flourish better than in Australia, and in none is a greater range of climate to be found within a comparatively limited area. Victoria alone possesses, between the sea and the river Murray, every variety of soil and climate that is to be met with in the wine-growing countries of Europe. The vineyard interest of Victoria increases in importance every year; and it may, I think, be confidently said that the day is not far distant when this important industry will have overcome the difficulties which always attend the establishment of new undertakings, particularly when these take the form of luxuries for which it is sought to procure a permanent market." All this is very hopeful for the Victorians, and we hope the sanguine expectations of the Secretary may be realised. Great things are also expected from the cultivation of silk and flax, which the Department encourages in a substantial way. Altogether the Report is one upon which we can sincerely congratulate our fellow-countrymen—if we may so call them—in one of the most important divisions of "Greater Britain."

## AGRICULTURAL MACHINERY AT THE PALAIS DE L'INDUSTRIE.

The *Debats* in its agricultural review mentions the general prevalence of bad weather during the month of March throughout almost every part of France, and the consequent interruption to field operations, so that fears are entertained with respect to the prospects of the crops, the oat more especially. In many of the Departments the overflow of the rivers has caused much distress and inconvenience to the population who dwell along their banks. The columns of local newspapers have been filled with heart-rending descriptions of the misery that has ensued upon these inundations, and subscriptions are announced to assist the sufferers, whose losses cannot, however, be fully known until the season of the harvest. The vine districts have been more fortunate, and should no severe frosts intervene during April, an abundant vintage may be anticipated, although it will be difficult to exceed the results of 1873, which can now be reckoned at 83,632,391 hectolitres. The heavy rains have been favourable to the growth of the forest trees planted in February, and large proprietors cannot be too much impressed with the advantages that are likely to arise to them from this method of treating their unproductive lands. It has been shown by recent statistics that nearly five million hectares are completely unproductive, whilst many soils cannot be made to yield a fair profit without an extravagant expenditure upon manures. When planted with the pine, which gives at the lowest estimate 30 francs per hectare, the national property would be increased to the extent of 150 million francs. And in addition to a return of four per cent. upon the capital expended, the populations in the vicinity of such plantations would become supplied with employment during the winter months, as is now the case in the Sologne and the Landes, both classic countries for the maritime and sylvan fir tree.

An account has already appeared of the collection of fat and breeding animals that took place at the Palais de l'Industrie, and it would be impossible to pass over in silence the exhibits of machinery attached to this most successful gathering. Even the casual visitor may well feel astonished at the rapid strides that are made annually in the development of machinery in connection with French

agriculture. It is not too much to say that the celebrated implement makers of France, England, and America were represented by examples of their most powerful locomotives, mowers, reapers; in a word, by inventions which their genius has brought in aid of the cultivator, by superseding the labour of the hand. The writer then refers to the most recent inventions which commend themselves to the notice of the landed proprietors and farmers of France. Amongst these he mentions the improvements in the "Smyth" drilling machine, whereby greater regularity is obtained in the sprinkling of the grain; and the implement can be adapted to its work without the necessity of employing a blacksmith, who was formerly required to remove the rivets. The "Kirby" horse-mower exhibited is intended to obviate the difficulty experienced from the excessive weight of former machines and their liability to fracture upon trial. The inventors, relying upon the high quality of the cast iron used in the construction of this new model, guarantee that its use will not be attended by such drawbacks, and the next hay season will test the accuracy of their predictions. Amongst the reapers attention was drawn to the "Française," constructed by M. Cumming, at Orleans, which obtained a prize last summer at the Versailles Exposition, where all who examined it were alike struck with its solidity and the regularity of its operations. Messrs. Howard, of Bedford, exhibited a new reaper, the "Simplex," which combines every known improvement; and this will, without doubt, be often seen at the provincial gatherings. Another novelty of the same description, and of American manufacture, was exhibited by M. Anson Wood. This machine, which can be made to act at the height of forty centimetres, is well adapted for countries where long stables are one of the necessary conditions of agriculture.

The locomotives of Head and Schemioth were likewise much remarked upon by visitors to the Palais de l'Industrie, from their ability to work without the use of coal. All vegetable substances, such as straw, rushes, stems of maize, that abound in places where wood and coal are deficient—these suffice to create a flame that will generate

steam, and raise it to a power equal to that which is obtained from the best coal. But it is evident that a great quantity of vegetable matter is needed to create the necessary caloric: thus four quintals of straw must be consumed in order to produce the same result as one quintal of coal. M. Hignette, the inventor of a well-known and highly ingenious instrument for cleansing grain, exhibited an apparatus of this description which concentrates all his previous inventions. This machine cleanses, riddles, and sorts the cereals and other grains confided to it, in such a manner that all extraneous matter is eliminated as if by

magic. Especial attention was directed to the miniature railway constructed by M. Decanville. The rails, level crossings, turnstiles, points, carriages, &c., in fact every part, was complete, with the exception of the steam engine. This was intentionally omitted, since the inventor proposes to traverse the fields and to move the waggons either by hand or by horses; and the rails being movable they can be brought to the centre of the harvest-field, or amongst the beet-root, when but a small amount of labour will be required to convey the produce either to the farm or to the place of manufacture.

### CLOSE OF THE SEASON FOR SPRING SOWINGS.

The fears we expressed in a former communication to *the Mark Lane Express* as to the possibility of accomplishing our intended spring sowings in seasonable time, will be fully realised. In many localities there will be considerable acreage of heavy land that, in our opinion, will be better not sown at all to corn than sown badly and late. We have repeatedly noticed that late sowings on such soils are seldom if ever productive of profitable results. As soon as the sun obtains power, in all but exceptionally wet seasons, the ground becomes hard, dry, and hot, on the surface, exactly in proportion to its previous coldness and wetness, and the shallow rooted spring sown cereals are forced into premature ripeness, which is attended by serious loss of quantity and quality, both of straw and grain. This state of affairs is particularly noticeable where a long-continued system of shallow ploughing (generally on five-turn ridges) has formed a "pan" or floor, as hard as rock itself, and almost as impervious to air, water, or the roots of plants; under these conditions the four or five inches of cultivated soil is saturated with the stagnant water during winter, cold and wet in the spring, and parched up by the heat of summer. Steam-cultivating machinery, the usual precursor of more approved systems of agriculture, although easily available in some districts, where it has become an indispensable agent, has not yet made its appearance, or rather has not yet become appreciated, in more localities than might generally be supposed by the readers of *The Mark Lane Express*, and until it does, very little will be accomplished towards altering this state of things. Horse labour is too expensive, both in time and money, to be applied to systematic subsoiling, but unless clay and is drained, and discreetly subsoiled, the very elements of success are wanting in its cultivation. The greatest unwillingness exists, both among farmers and ploughmen in some districts, to break through this "floor" into the subsoil, probably because in most instances in which it has been attempted it has been improperly carried out by bringing the subsoil to the surface, followed by unfavourable results, as might be expected, and ploughmen are very generally averse to harder work than usual for themselves and their horses—chiefly for the sake of their horses we admit, for we have repeatedly known men alter their ploughs when the master's back was turned, rather than "take it out of their horses" as they expressed it. Time will change all this, and rapidly too, no doubt; but meanwhile these circumstances exist to a very great extent, and what we wish to point out is, that it is precisely under these circumstances that spring work is most hopelessly behind in this exceptional and trying season. The thin soils on gravel and chalk are usually in a high state of cultivation from sheep farming, and are also so easily worked at nearly all times that they are comparatively little affected just now. The well cultivated deep loams will admit of a liberty being taken with them occasionally, and especially in a season like

this; but on undrained, shallowly ploughed clays we do not hesitate to express an opinion that it will be wiser to give up all idea of sowing any more corn. It is just possible that under the conditions of which we have been speaking it might be found advisable to sow a field or two of some quick growing pea, such as the maple, a plan we have adopted in late seasons on the London clay. Although a very uncertain crop they are more likely to succeed than barley under these circumstances, and the value of pea-haulm (when well saved) in the stock-yard, and when put through the chaff-cutter, is a temptation we can seldom withstand. We have found it a good plan to soak peas before sowing at a time like this although they do not drill quite so well.

There has been great difficulty in obtaining a good seed-bed for barley this season, and that will seriously affect the sowing of the clovers and grasses. As it is of the greatest importance that the intended acreage of seeds should not be diminished, it will in many instances be found a good plan to seed a portion of the wheat. We have experienced that mixtures of clovers and grasses do better with wheat, on clay lands, than either barley or oats, and the harrowing and rolling is a great advantage to the young wheat plants: they are firmly rooted, and very few are torn out even when severely treated, but the Cambridge roller should follow at once then the seeds, and bush-harrow.

The greatest care should be taken in the selection of clover and grass seeds, both as regards their cleanliness and vitality, and also their suitability for the kind of soil and climate of the district. It is cheapest in every way to buy the best, and as guarantees are now given by some of the largest and most noted of our seedsmen of the percentage of vitality in each sample, there is no practical difficulty in obtaining a reliable article. In cases, however, where small seeds are purchased from farmers and seedsmen who are not growers, the germinating power should be carefully tested. The best way to do this is to count out a hundred seeds, and spread them carefully on some fine mould in a small flower-pot, barely covering them with a pinch of mould rubbed between the finger and thumb, then place the pot in a forcing-house. If this facility is not at hand, a cucumber-frame will do; but it will amply repay the trouble of going to the nearest gardener who has a hot-house under his charge, where heat and moisture will speedily bring about the desired result.

Too great condemnation can scarcely be passed upon the plan too often adopted of sowing the hay-seeds out of the tallet and from under the horses' mangers, without the least attempt to free them from the seeds of annual weeds they are sure to contain. They may safely and economically be used to renovate old and poor pastures, but never for mixing with purchased seeds for dryground hay.

Where labour can be obtained of an efficient character and at a reasonable rate, we can confidently recommend

the hoe for the autumn-sown wheats. Never was there a season when it was more required, for the constant heavy rains have left a battered surface that will speedily become very hard and unfavourable to plant life; whereas if thoroughly broken up and rendered amenable to the influence of light, heat, and atmospheric air, the young plant will immediately avail itself of these resources which were previously locked up out of its reach, and start upon a fresh growth, with renewed vigour. In default of the hoe, heavy iron harrows must be depended upon instead; there is very little fear of overdoing it on clay lands. We greatly prefer the Cambridge roll to the Crosskill for rolling either wheat or spring corn, from the fact of the indentations being sharper and more regular, thus affording a more decided check to the wire-worm, which are thereby driven to the surface, where they become a prey to our feathered friends, especially rooks.

To those who have a small field or plot of ground near the homestead which can be devoted to the growth of lucerne, we can confidently advise them so to do, providing they are prepared to attend to it after they have grown it. If the field or plot is clean, if it be carefully drilled with a hand-drill about twelve inches apart, if enough seed be used (about 20lbs.), and if it be kept perfectly clean with the hoe after each cutting, we can safely predict that no other portion of the farm of equal extent will be half the utility and convenience. It fills up the breaks that will sometimes occur in the succession of soiling plants, such as rye, trifolium, tares, &c., and there is always something to depend on for the hackney horse, the bull, the weanlings, and any and every animal that may have to be housed during the summer months. Now is the time to attend to it.

One of the most important matters we have now to attend to is that of deciding what to use as a top-dressing for the wheats. Although the orthodox time of year has come for so doing, the plant in many instances is not yet in a position to receive artificial manures, owing to the backwardness of the season. We have found the best time to apply them to be when the plant leaves the ground, and begins to throw up its seed stem: it is then in a condition to assimilate the food placed within its immediate reach. In recommending nitrate of soda we give the following reasons: its comparative cheapness at the present time, and its very decisive and rapid action. Exhaustive reports have been made by professional men of its chemical action and value, which leave nothing to be said on that score, and we wish simply to state the result of our own experience—viz., that we have found it more reliable than any other manure for the purpose. Most of our readers who have been in the habit of using it will probably bear us out in the opinion that from 1½ cwt. to 1½ cwt. seems to be the quantity that can be taken up by the growing crop; we have tried larger quantities, but without noticing a corresponding increase either in straw or grain. The increase of straw is, perhaps, more certain, at all events more apparent than that of grain; and taking into consideration the enhanced value of straw, not only for market but for feeding purposes, since the introduction of the chaff-cutter and root-pulper, this is a matter not to be overlooked. The uniform purity of the samples on offer, as testified by Dr. Voelcker, in his report to the Royal Agricultural Society, is another inducement to purchasers. The great difficulty attending its application is that of distributing it evenly; 1½ cwt. or 1½ cwt. is a very small quantity to spread over an acre of ground. The easiest plan no doubt is to mix it with 2 or 3 cwt. of salt; but the tendency of salt to retard the ripening of the grain, especially on the class of soils of which we have been speaking, must be borne in mind, especially as the nitrate has a similar effect in a

lesser degree, possibly from being used in smaller quantities. We have tried dry earth, ashes, and saw-dust, and greatly prefer the ashes, the earth being unnecessarily heavy, and the saw-dust objectionable. Of course, it is necessary to have them carefully sifted and kept ready in a dry place: they can then be mixed with the nitrate in such proportion as will make the bulk about equal with that of 2 cwt. of guano, or ¼ cwt. of super-phosphate, or of whatever quantity of some particular manure *the man has been in the habit of sowing*. Care must also be taken to have the nitrate thoroughly and evenly mixed with the ashes by repeated turnings, and that it is reduced to as finely comminuted a condition as possible, by pounding with the flat of the shovel during the process of mixing. The moisture of the atmosphere is often sufficient to dissolve nitrate of soda, as may be noticed in damp weather by the water running out of the bags, even when put in a dry place, or during transit; we, therefore, prefer to sow it in dry weather, from the conviction that a large proportion of it would otherwise be carried down into the subsoil, and out of the reach of the roots of the plants. For this very reason we are inclined to think a favourable result might be obtained by sowing half the quantity at twice, but have never found time to make the experiment; it is, however, our intention so to do, using ¼ cwt. each time, first when the plant is leaving the ground, and next when it is about eight inches high.

April 13th, 1876.

G. T. T.

OUR LABOUREES.—In answer to an invitation to be present at the annual meeting of agricultural labourers, near Yeovil, on June 5, Mr. Mechi sent the following letter to Mr. G. Mitchell: I am getting too old (74) for distant locomotion, but very sincerely wish you a successful meeting, as free as possible from imputations of unworthy motives to any particular class. Like yourself, I am no "Malthusian," but a sincere believer that population can never be too numerous, provided it is profitably employed for we live by one another; but when that proviso is unfulfilled, over-population becomes an evil which can only be remedied by migration or emigration. To me it appears evident that on the 24,000,000 of acres of permanent pasture, which still, unfortunately, constitute one-half of the entire farmed area of the United Kingdom, human labour must always be in excess, and, as a natural consequence, ill paid. The reason is obvious and undeniable. The pastoral areas have no children or increase, while the labourers do fall in love, marry, and multiply. Therefore, if labour is to be highly paid in such districts, it can only happen by a constant departure of the increasing surplus, however painful such necessity may be. We need not, therefore, feel surprised that low wages are "the order of the day" in pastoral districts. The Union is, therefore, doing good service to the country at large, and to the labourer himself by providing means for removing his capital (which is his labour) from an unprofitable to a more profitable market, either at home or in the colonies with which we happen to be blessed. Fortunately we now live in times when facilities for locomotion and inter-communication are ample and cheaply available. In my early days we had no railways, telegraphs, or steam-ships—no penny postage or penny papers; a single letter to Cork cost then 2s. 2d., and if two pieces of paper were enclosed the charge was 6s. 6d., now it is only 1d. Both you and I know and must admit that in a rural life, as in all other callings, it is a sound maxim that we should buy in the cheapest and sell in the dearest market, and that an over-stocked market means a diminished or unremunerative price. Labourers and farmers are perfectly justified by law to combine for their own interest or profit, but all such combinations must ever submit to the inexorable laws of supply and demand. A surplus labourer here is an injury to himself, to his fellow-labourers, and to the country at large; therefore, the sooner he carries his capital to a more profitable market, the better it will be for all parties. However amiable and natural may be your desire to prevent emigration, it is, under the circumstances I have named, a mistaken philanthropy. I am a great

disbeliever in permanent pasture, especially poor permanent pasture. It neither feeds nor employs the people, and, as compared with our reclaimed and well-farmed arable districts (producing food and employing labour and capital abundantly), I consider it to be a national curse and disgrace. I disapprove of strikes, and their consequence—lock-outs. One effect of

higher wages will be a great increase in the use of labour-saving machines, which already considerably mitigate the severe mechanical labour of the agricultural workman. When labour gets dearer, it will, like any other commodity, be more sparingly used. Wishing you a fine day for your meeting.—  
J. J. MECHT, Tiptree Hall, Kelvedon, Essex, April 3.

## ROYAL DUBLIN SOCIETY'S CATTLE SHOW.

The Spring Show, which opened on Tuesday, was in many respects above the average of former annual exhibitions. This is especially the case in the section for bulls, which filled remarkably well, the number of all breeds being nearly 240, while the entries of animals of all kinds numbered 350. The yearling Shorthorn bulls were no less than 152, an increase of 12 over the number exhibited last year. The two-year-old Shorthorn bulls show even a greater relative increase, the respective numbers being 41 and 26; and there is also a slight increase in the number of bulls of three years and upwards. In fact, in this department the show would compare most favourably with the best cattle shows held in England and Scotland; and the Royal Dublin Society, at a time when it is apparently on the eve of important changes in its constitution, has just reason to be proud of such a display. Nor is the success of the exhibition confined to the live stock, for the collection of agricultural implements and machinery is one of the best, most varied, and most comprehensive that has ever been gathered within the commodious premises in Killare-street. While the animals were all good, and many of them first-class, good judges observed with regret that in some sections, especially in the yearling bulls, there was an apparent falling off in quality. This may, perhaps, be attributed to the prevalence of foot-and-mouth disease, which, while it has left its mark on all, has naturally more seriously affected the younger cattle. But it is only the most experienced eye that could detect any such deterioration as that to which we allude, and to the mass of spectators the animals presented in almost absolute perfection all the points that are considered essential in good cattle. The animal with which Mr. Chaloner won the plate, presented by himself, for the best bull of any breed over two years, Anchor, is a model of symmetry, and a splendid example of the perfection to which Shorthorn breeding has been carried in Ireland. Of course, where there is such a display of Shorthorns, a prize for the best animal of "any breed" virtually amounts to a prize for a Shorthorn. Anchor has been sold, doubtless at a figure which will prove remunerative to Mr. Chaloner. The section for two-year-old bulls, which we have already said was unusually well filled, elicited the special commendation of the judges, who declared that the entire class was good. The first prize was, of course, awarded to Anchor, while the second was carried off by Mr. J. Moffatt, of Enniscorthy, for his bull Solicitor. In the yearling section the principal prize was awarded to Mr. M. Gumbleton for his very fine animal, Lord Shannon. There was a good show of Shorthorn cows and heifers, and of fat cattle, while the display of Ayrshires, Herefords, Kerrics, and other less important breeds was as creditable as may be expected at any show of the kind, now that the Shorthorn has almost banished all competitors from the country.

The weather was fine, and to this, doubtless, may be attributed the very large attendance of visitors, notwithstanding the high price charged for admission on the opening day. The arrangements for the show were admirably carried out. The adjudication was completed at an early hour, and we believe the result gave general satisfaction. The show-yard was under the efficient superintendence of the new curator of the Agricultural

Museum, Mr. D. C. Rogers. The labours of the stewards, especially in the section for Shorthorns, were by no means a sinecure.

### LIST OF PRIZES.

**JUDGES.**—SHORTHORNS: A. Mitchell, Alloa, N.B.; J. C. Toppin, Musgrave Hall, Skelton, Penrith; C. P. Gell, Hopton Hall, Wirksworth. **HEREFORDS AND MIXED BREEDS:** R. Glaney, Skelard, Creggs; T. Mansell, Ercall Park, Wellington; J. Keating, Cabra, Moynalty. **KERRIES AND DEXTERS:** G. Hewson, Ennismore, Listowel; E. Rae, Keel House, Castlemaine; B. Hayden, Grenagh, Fossa. **FAT CATTLE:** A. Darker, Burn Hill, Clonsilla; J. Sinson, Cloona Castle, Hollymount; D. Kellett, Virginia. **PIGS:** A. Warburton, Kill, Straffin; J. Bruce, Miltown Castle, Charleville; S. Mowbray, Killybeg, Mountath. **FRIEZE AND TWEEDS:** R. Sexton, Dawson-street; J. Reside, College-green; J. W. Switzer, Grafton-street.

### SHORTHORNS.

Bull of any breed over two years and under six, was won by Mr. Chaloner's Shorthorn roan bull Anchor, by King James.

Bull, calved in 1873.—First prize, M. Gumbleton, Glanatore, Tallow (Lord Shannon); second, Earl of Duxry (Killerby Lamp); third, J. Moffatt, Ballyhyland, Enniscorthy (Don Carlos); fourth, Captain Crosby, Stradhall Hall.

Bull, calved in 1874.—First prize, R. Chaloner (Anchor); second, J. Moffatt (Dictator); third, J. Downing, Aslufield, Fernoy.

Bull, calved in or prior to 1873.—First prize, H. L. Barton, Straffon (Conqueror); second, Major O'Reilly (Prince Royal).

Heifer, calved in 1875.—First prize, M. Gumbleton; second, B. Dekson, Gilford.

Heifer, calved in 1874.—First prize, Capt. Cosby; second, W. J. Digby, Wexlough.

Heifer, calved 1873.—First prize, Earl of Courtown. Cow, of any age.—First prize, Representatives of the late R. F. Dunlop; second, W. Johnson, Carlow.

### HEREFORDS.

Bull, calved in 1875.—First prize, G. N. Purdon, Killucan (also best of the Hereford bulls, prize £20).

Bull, calved in 1874.—Prize, P. J. Kearney, Miltown House, Clonmellon.

Bull, calved in or before 1873.—Prize, G. N. Purdon.

Heifer, calved in 1873.—Prize, J. A. Farrell.

### KERRY.

Bull of any age.—First prize, J. Robertson, La Mancha, Malahide; second, J. Smith, Oak Park, Castlesknock.

Heifer, calved in 1874.—Prize, Earl of Clonmell.

Heifer, calved in 1873.—Prize, Earl of Clonmell.

Cow.—First prize, G. Hollway, Greenville House, Dublin; second, J. Robertson.

Cow.—Prize, W. H. Henry, Oaklands, county Dublin.

### FAT CATTLE.

Shorthorn ox, calved before 1873.—First prize, W. Peyton, D.L., Carrick-on-Shannon.

Cow of any age.—First prize, Lord Clermont; second, A. S. Drake, Athboy.

Heifer not exceeding four years old.—First prize, Marquis of Drogheda; second, O'Connell L. Murphy, Trim.

Hereford ox, calved in 1873.—Prize, P. J. Kearney, also best of the prize fat oxen.

Ox, calved before 1873.—Prize, P. J. Kearney.

Cow, of any age.—First prize, P. J. Kearney (also best of the prize fat cows); second, R. W. Reynell, Killucan.



Heifer, not exceeding four years old.—Prize, E. J. Briscoe (also best of the prize fat heifers).

Devon ox, calved before 1873.—Prize, R. S. Fetherstonhaugh.

Kerry cow of any age.—First and second prizes, S. Garnett, Arch Hall, Navan.

Heifer, not exceeding four years old.—First prize, Earl of Erne; second, Earl of Clonmell.

Ayrshire heifer, not exceeding four years old.—Prize, Earl of Erne.

Ox, of any other pure or cross breed, calved in 1874.—Prize, R. W. Reynell.

Ox, of any other pure or cross breed, calved prior to 1874.—First and second prizes, S. Garnett.

Cow, of any other pure or cross breed, calved prior to 1874.—First prize, Marquis of Headfort; second, R. and H. Doughty.

Heifer, or any other pure or cross breed, calved prior and bona fide worked as plough bullocks up to May, 1875.—Prize, T. Winders, Killaderrig, Ashford.

#### PIG S.

##### COLOURED BREEDS.

Boar, six months, and not exceeding twelve months old.—First prize, J. Dove; second, Lord Clermont.

Boar, exceeding twelve, and not exceeding twenty-four months old.—First prize, J. Dove; second, Lord Clermont.

Boar, exceeding twenty-four, and not exceeding thirty-six months old.—First prize, J. Dove.

Breeding sow.—First prize, Lord Clermont.

Three breeding pigs.—First prize, J. Dove; second, Lord Clermont.

Litter of not less than six pigs.—First Prize, J. Molloy; second, Captain Cosby.

##### WHITE BREEDS.

Boar, six months, and not exceeding twelve months old.—First prize, J. L. Napier; second, Earl of Clonmell.

Breeding sow.—First prize, J. Molloy; second, J. Dove.

Three breeding pigs.—First prize, J. Dove; second, J. L. Napier.

Litter of not less than six pigs.—First prize, Earl of Clonmell; second, J. L. Napier.

Three pieces of Irish manufactured tweeds.—First prize, M. Mahony and Brothers, Cork; second, J. and J. Reed, Rathfanham.

The Shelburne Hall, the Court-yard, the Agricultural Hall, and the galleries present what to not a few of the general public will prove the most interesting part of the exhibition. Almost every inch of available space in the very commodious premises of which the Society has control, is utilised, and the exhibits are of the most diversified kind. Among the contributors are most of the leading English and Scotch manufacturers of agricultural implements, while the leading Irish houses have come forward in such force as to lead to the inference that past enterprise in this respect has not gone unrewarded. One of the most extensive collections in the court-yard—the chief *locus* of agricultural machinery, and of all that passes under that general title—is that of Messrs. Keenan and Sons. The list includes wire fences, gates of all kinds, sawing machines, rustic seats, horse hoes and rakes, Howard's ploughs, portable steam engines, lawn mowers, and thrashing machines, &c., &c. Messrs. Edmundson and Co., Capel-street, exhibit, *inter alia*, a patent atmospheric gas engine and other inventions relating to the production and burning of gas. They also show garden engines, galvanised wire garden arches, ornamental garden vases, and washing machines. Messrs. T. Dockrell, Sons, and Co., of South Great George's-street, offer for inspection beautifully-carved chimney-glasses, marble chimney-pieces, close fire ranges and specimens of decorative painting and graining, and of paper-hangings of superior quality. Messrs. Whyte and Sons, of Marlborough-street, have two stands—one containing specimens of Irish manufactured glass and china, and another in which they exhibit specimens of Irish manufactured china, from Belleek Works, Fermanagh; speci-

mens of newest designs in glass opaques, for table decorations; and the triple patent duplex seven-night well lamp. Messrs. W. and J. Ritchie, of Ardee, exhibit a collection of agricultural implements, including improved double-furrow ploughs, winnowing machines, mowing and reaping machines, &c. The specimens of carriage building exhibited show the great advance which has been made in this branch of industry in Dublin of late years. Messrs. H. E. Brown and Co. show their patent angular safety cab, and the Walldgrave landau and Prince Arthur brougham. Messrs. Coleclough and Sons also exhibit specimens of their Victoria landau, and other carriages. Altogether, the show-yard proved well worthy of a visit, even from those who take but little interest in agricultural matters.—Abridged from *The Daily Express*.

#### CARMARTHENSHIRE AGRICULTURAL SOCIETY.

—The annual exhibition of entire horses in connection with this Society took place in the Cattle Market, Carmarthen. A very large entry was made, and the weather being bright and summerlike, an unusually large number of persons attended the show-ground. There were four classes in which competitions took place, and the prizes in these were stoutly contested for. The judges were Mr. Price, Glandulais, Llanoverly; and Mr. Price, Bridgend; assisted by Mr. Essex Harries, Scilton. Their awards, although the competition was so brisk, received general commendation, and were often greeted with cheers. In the first class, in which prizes of £7 and £3 were given for the best thoroughbred stud horses, which, in the opinion of the judges, are best calculated to improve the breed of horses in the county, Mr. Broad, of the Angel Inn, Carmarthen, easily carried off the first prize with his splendid horse "Ranfrid." Mr. Rice James, Haverford-west, took the second with "Free Trade;" and "Egremont," the property of Mr. Rice, Llanboidy, was highly commended. These were the only entries. There were ten entries for the two prizes given for the best stallions for agricultural purposes—namely, £7 and £3. In this class the result of the awards was as follows: First prize, Mr. D. Davies, of Porth, Llanawel's "King Tom;" second, Mr. Broad's "Honest Tom;" and highly commended, Mr. Thomas, of Derllys's "Prince Arthur." For the prizes offered for two best hackney stallions the competition was very close, and many thought the second prize horse equal to, if not better, than the first. There were twelve entries, and the result of a long and careful examination of the two best stallions showed that Mr. Broad gained the first prize of £4 with "Quicksilver" and Mr. Evans, of Cefneca, Llangethro, received the second of £1 with "Alonzo the Brave." Mr. Broad also offered a prize of £5 for the best stallion calculated for carriage purposes, and this was gained by himself with "Melbourne." "Matchless," the property of Mr. Howells, of the Boar's Head Hotel, Cowbridge, was highly commended. The Secretary of the Society, Mr. D. Prosser, rendered valuable services in the exhibition-ground, and the police arrangements were highly satisfactory.—*Carmarthen Journal*.

RIPON CHAMBER OF AGRICULTURE.—A meeting of this Chamber was held at the Unicorn Hotel, Ripon, when Mr. T. Scott, of Grantley, presided. There were also a number of other members present. After the minutes of the last meeting had been read, a discussion followed on Mr. Selater Booth's bill to "Consolidate and Amend the Laws relating to the Valuation of Property for the purpose of Rates and Taxes." Mr. Lomas thought the surveyor of taxes had not the arbitrary power given him under the bill which some people imagined he had, as it was competent for the Assessment Committee to appeal to the Court of Quarter Sessions as well as the surveyor of taxes, and Mr. Lomas was of opinion that the surveyor's powers had been somewhat exaggerated, and that his opinion was not conclusive. Mr. Bennett and other members were of an adverse opinion. Mr. Lomas admitted that the onus of disproving the surveyor's statements rested with the Assessment Committee or the party aggrieved. He moved, "That this Chamber, while approving of uniformity of assessment, most strongly object to the admission of the surveyor of taxes as a party to the rating authorities as at present constituted." Mr. J. T. Pearson seconded the motion,



which was carried unanimously. Mr. Bennett moved, "That this meeting is of opinion that no bill will be satisfactory unless realised personal property becomes liable to be rated." Mr. R. Pearson seconded the motion, which was carried unanimously. Mr. Highmoor moved, and Mr. Tutting seconded, a vote of thanks to the chairman, which closed the proceedings.

## THE EDUCATION OF THE AGRICULTURAL CLASSES.

The Earl of Portsmouth, Lord Lyvington, Mr. W. E. Forster, M.P., Professor Bryce, of Oxford, and Professor Adams, of Cambridge, were among those who took part in a largely-attended middle-class education meeting at North Tawton.

The Earl of PORTSMOUTH, alluding to the Royal Titles Bill, said, in giving the toast of "The Queen," he preferred to use the old title in asking them to drink her Majesty's health—a title by which she was known and beloved by her subjects, and a title associated in the minds of all with the sovereignty of a great and free people.

Mr. FORSTER, in proposing "Success to Middle-class Education," said that school afforded an example which the remainder of England might well copy, inasmuch as the promoters had succeeded in supplying a great want, namely—cheap, efficient, and self-supporting boarding schools. From their position farmers had been unable hitherto to give their children the education they really required. On the one hand great public schools were beyond their reach, and on the other the elementary schools were insufficient. Schools of the class of those at North Tawton supplied the want. He noticed that boys generally came there when about ten years of age and remained five years. Prior to coming there he supposed they went to the village school, and he was glad to believe that, because it showed the good sense of the farmers in assuming that their children, in their early education, would not be injured by receiving it from the same source as the offspring of their labourers. That farmers' children went to elementary schools was the greatest guarantee that those most able to secure it would see that the instruction there given was efficient. He proceeded: I am very glad to find myself among some of the farmers of the country, for I cannot express how strongly I feel the importance of the educational movement for the farmers of England. Do not suppose that I mean to convey any kind of impression than farmers want education more than men in the same position of life among the manufacturing and other classes. I do not think so. I believe that, man for man, the farmers at present would be able to rank very well with, and probably to beat, in educational requirements, master-manufacturers of the same position and of the same opportunities for culture. But I confess that I think there is no class in England to whom it is of more importance, looking at the probable future of the country, that their children should be well taught. You know you have to keep your agricultural position amongst civilised countries. We hope that this "Tight Little Island," will continue to be the best-farmed country in the world—as I believe it is, generally speaking, at this moment—and we can only maintain our position in agriculture by aspiring to be the garden of Europe, indeed the garden of civilisation. I am glad to see that your children are getting a good teaching, that will be of use to them in their farming trade; but I am also very glad to see it is a kind of education that will enable them so get their living outside the farming trade, that will enable them to make their way in the colonies if they choose to go there and show the vigour and energy of that Devonshire spirit which was shown a century ago, when you were the great colonisers of the world—the great pioneers of English enterprise. If your sons are enterprising enough to go into the colonies they ought to have that kind of education which would give them a chance in that bold and difficult kind of work. I do not know whether what I am going to say applies at all to this audience, but in some parts of England there is great competition for farms in consequence of farmers feeling that their sons could do nothing but farm. I do not think this applies to you at all, but it is a very great disadvantage wherever it does apply. One of the chief means by which you can prevent it is by letting the boys have such a kind of training that they are not compelled to follow in their fathers' footsteps, and if there are three or four sons in a family that they shall not all be obliged to compete for farms. It would appear to be rather to the interest of the landlord that there should be this great

competition, but that is just that kind of apparent advantage which turns out to be a real disadvantage, and the result is that you have a rather lower kind of tenant than you otherwise would have. It would be a great thing if in all districts they were to follow your example and get thoroughly good farmers' schools throughout the country. There is another reason for which I cannot but look with interest on the educational movement amongst the farmers. You have difficulties just now, and those difficulties are not likely to diminish for a time. The labour difficulty has now come to you. We have had it in our manufacturing districts for many years past; and whatever they may tell you to the contrary, we are now getting over the difficulty in those districts. The difficulties we have had have now come to you. I believe you will get over them much more easily and rapidly than we did in the manufacturing districts. I think so because you have the advantage of our experience, and I think there is at this moment a more healthy feeling throughout the country than there used to be on all questions of master and man. But there is no denying that the farming interest generally throughout the country is in a transition state, and that the labour difficulty is a question the dealing with which will require very great moderation and much knowledge. I am not sure the difficulty will not even last until the time has arrived when your sons will be able to take part in the management of the sons of your labourers. I think you will all admit that good real education—not merely the giving of knowledge, but the training to habits of self-control—will be an advantage in the settlement of this dispute. I am now getting to a rather delicate question, that of rates. I find that if people do not feel about anything else they generally do about a rate. I think, therefore, it is very good of you to receive me so kindly as you have to-day, because I believe I am locked upon as a dreadful bugbear in many districts, having had a good deal to do with the education rate. I do not mean to say that in the education rate there should not be very economy, and I am not going to enter into the question as to whether the incidence of the rate should not be different; but I will assert this, that there is no part of your expenditure, whether upon yourselves, your wives, your daughters, or your sons, for which you will get more than you do from the education rate. If you fully look at what is got from that rate, you will admit it is money you should not grudge. I may be told "It is rather hard; wages are rising, rates are rising, and the result is, that as the labourer is better able to take care of himself and to get employment elsewhere, he is more difficult to deal with." But that will not last. Depend upon it, the very best thing that can happen for the farmers of England and the employing class generally is, that those whom they employ shall be educated and independent. But whether it will be a good thing or not we must look forward to it. It will happen, and I am thankful to say that I think nothing on earth can stop it. I do not know what the present Government will do. I believe they are desirous of pushing the movement forward, but whether they do so or not it is only a question of two or three years, and then we shall have education throughout the country, so that all the work-people, manufacturers or agriculturists, working in mills or in tilling, the land will be able to obtain for their children at least the rudiments of education, reading, writing, and ciphering, and I hope a little more—some knowledge of history and geography, and above all, some knowledge of their Bible. Without entering upon politics, I may say that whilst nothing can stop the progress of education, so nothing can stop the agricultural labourer from having the same voice in the government of the country as have the labourers of the towns. Whether we wish it or not, we must look forward to this as something that will become a fact, and that too in a very short time. Do not let employers and farmers be downhearted on account of this. In the long run it will be an enormous advantage to have an educated peasantry. The way in which the farmers must guard against difficulties is by getting a much better education for their own children,

and learning to become as independent of their landlords as their labourers are of them. None will more rejoice in that than the large body of landowners of England. I cannot sit down without congratulating you upon your success in one other matter. You have met the religious difficulty here. I have been complained of on several occasions for having said that the religious difficulty only required to be met to disappear, but I think this is a case in which it has been shown that facing it is all that is wanted. The difficulty your committee had to deal with was this: "The parents of our children are of different denominations. How can we give them religious education without there being those disputes, those difficulties which prevent a school going on in peace and harmony." The way in which your committee have met the difficulty has been successful, and wherever it has been so met this difficulty has always disappeared. Your committee asked themselves, "What is it the parents really want?" They want two things. First, in this Protestant, Christian country (for such this country mainly is) the parents desire that their children should have an instruction in the Bible and in the great truths of Christianity. This above all they desire, and there never was a greater mistake than to suppose that any amount of jealous controversy among members of different denominations would prevent the large body of the fathers and mothers in England desiring a religious education for their children. They are also very anxious for this, and they ought to be anxious for it—that no advantage should be taken of their need and desire for education, and above all for religious education, to swell the number of one denomination and one sect rather than another; and consequently there is a jealousy, a well-founded, most reasonable and just jealousy, against any kind of attempt at schools and by reason of schools to obtain advantage for one denomination at the expense of another—either Church over dissent or dissent over Church. What has happened in your school is this—that you insist upon reading the Bible, and not merely upon reading it, but upon teaching it; you insist upon learning the Belief, the Apostle's Creed, the Commandments, and man's duty to God and his neighbour—the first part of the Church Catechism—to which no one can object. The final result is that you have had no religious difficulty whatever. On the contrary, had you done otherwise, you would have had a religious difficulty. A boarding school upon the secular system seems another absurdity, because the master occupies the place of the parent, and how can he hope to obtain moral or religious control over the children, to whom he stands in the position of parent, without being allowed to give them religious instruction? But, as you have worked it, you have had no difficulty, and therefore I go away from this school with an additional confirmation of what I have long held, that the religious difficulty is one made by controversialists outside the real work of education, and disappears immediately men set to work to get a school upon principles which actuate parents generally in England, and disappears because they set to work to give them that kind of religious instruction in which all can unite and which all desire for the children.

Several other gentlemen addressed the assemblage.—*Standard.*

## IRISH AND SCOTCH RENTALS.

TO THE EDITOR OF THE TIMES.

SIR,—Permit me, writing from the North of Ireland, to corroborate the statements in *The Times* of Friday made by Mr. Hussey, writing from the South, as to Irish and Scotch rents. Mr. Hussey refers to arable land. I will state the case of mountain pasture. This year, some pasture farms of a relative of mine in the south of Scotland fell out of lease. They had previously been let for about £1,000 a-year. They were immediately re-let by tender, the highest tender not being necessarily taken, for £1,300. The extent of ground is about 4,000 acres. I recently let about 7,000 acres of not dissimilar grazing in this county for £50 a year, which I was glad to get from a Scotchman, having held the land for some years in my own hands because I could find no Irishman willing to give me so much. But this is not the worst. This occurred before the days of the Land Act. If that Act had then passed, I could not have taken these mountain acres into

my own hands nor have got a poor £50 a year for them; nor could my excellent tenant the Scotchman, have got a good thing, which he understands how to use, unless I paid for my own land considerably more than its fee simple value.

Writing from the South of Ireland, Mr. Hussey considerably understates the case of the unfortunate landlords in the North. As he says, "the average selling value of land in Ireland is 19 years' purchase." I have before me a newspaper with a report of the decisions of the "land claims" in this county during the past week. I must premise that "the Chairman" who made these decisions is a man of unimpeachable integrity. In three out of five of these cases, 22 years' purchase of the rent was given against the landlord. In the other two cases I do not think less was given to the tenant, but I am unable, from the *data*, to calculate the exact number of years' purchase. But when tenants themselves underlet to others, then I grant that The O'Donoghue's statements as to high rents in Ireland are perfectly correct. It is true that subletting forfeits "Tenant-Right" by Clause 3 of the Land Act, but it is held, at least in this county, that this clause may be evaded by the superior tenant stipulating that he may put a horse or a cow each year on the land after the crop has been removed. I will give you a case in point which came under my own observation: A tenant sublet for two years a fourth of his farm, at a rent more than double what he paid to his landlord for the whole farm. The landlord in consequence gave him "notice to quit," but told him that if he would pay for the whole farm the same rent that he charged an under-tenant for one-fourth of it, and would cease to underlet, he might remain in possession. The man refused these terms, brought his claim into the Land Sessions, and was awarded by the Chairman 22 years' purchase of the rent and costs. Twenty-two years' purchase appearing to be what a landlord must in this county pay for his own land, 19 or 20 years' purchase being all that he probably would get for it if he were to sell the fee simple, I will ask what course a landowner can take who may inherit a property crowded with tenants, on farms so small that they scarcely afford a subsistence. I have before me a list of 311 tenants on one property who each pay less than £2 a year rent, many of them less than £1. Formerly he was considered the best landlord who, under such circumstances, assisted some of his tenants to emigrate, and enlarged the farms of those who remained. Not so now. Any attempt to remedy this national evil, to provide against the danger of future famine, would result in long litigation, in payment of more than the fee simple value for the property as "Tenant-Right" and costs, and in the fact being apparent that Irish property is not longer in the hands of its owners, but in those of gentlemen from Dublin, who, as the Knight of Kerry says in his able letters to you, "know as little of the equities between landlord and tenant as of the tenets of the faith of Vishnu."

Now, I would put it to your readers, How can any country prosper under such conditions? In all the past attempts at coercion and conciliation, all the class legislation, all the trampling upon one class after another (*vide* Mr. Froude), finishing with the only body in Ireland entirely devoted to the English connexion, the landowners, one party has never been considered, and that party is Ireland. There is much to account for this. I will mention one point: To being accounted one of the Irish people there are two obstacles—one, with some exceptions, is the being a Protestant; the other, with hardly an exception, is the being an owner of Irish land. In Ireland a creed or a class stands for the Irish nation, with the professors of that creed or the members of that class. We are a divided people, and we show our unfitness for self-government by our contests, whether in Church synods, O'Connell celebrations, or processions on the 12th of July. We are at the mercy of political charlatans. Year after year breaches of the ordinary laws of political economy are proposed, each deeper and wider than the last accomplished. Poverty is now stereotyped in vast districts of the country; and, as we know that much which has been done cannot be undone, all we can say to the Legislature is, "Leave us some portion of that stability which has made England and Scotland what they are; let what is left to us of English custom and English law be tampered with no more."

I am, Sir, your obedient servant,

LIFFORD.

*Meen Glas, County of Donegal, April 18.*

## THE AGRICULTURAL HOLDINGS ACT. MEETING OF LAND AGENTS IN PRESTON.

Annexed will be found an account of a meeting of Lancashire land-agents, with two or three farmers privileged to hold consultation with them, held to take into consideration the report of a Committee appointed in January last "to suggest the best clause with regard to unexhausted improvements as contemplated by the Agricultural Holdings Act, and other clauses which they may deem possible to be universally inserted in Lancashire agreements." The proceedings which resulted in the appointment of this Committee were commented on at some length in our issue of January 31st, and we had occasion then to object to the arbitrary manner in which it was proposed to draw up a model agreement without giving the tenants a voice in the matter. Whether our remonstrance had any effect we cannot tell; but we see that at the second meeting one tenant-farmer from each hundred in the county was allowed to be present.

The Committee recommended that the date of entry to house and buildings, as well as to land, should for the future be the 2nd of February, and this was agreed to at the meeting. The next suggestion was too liberal for the majority of the agents present. It was that the term of notice to quit should be extended from six months to twelve, and the proposal was rejected by twelve votes against six. The third suggestion is a very fair one—namely, that the 53rd section of the Agricultural Holdings Act should be extended to all fixtures not the property of the landlord. The recommendations with respect to unexhausted improvements are practically an acceptance of the provisions made for the first and second classes of improvements by the Agricultural Holdings Act, with the extra limitation of making the landlord's consent necessary with regard to the second as well as to the first class, and without that risk of litigation which is so great a drawback to the Act. On the whole, this is a fair and reasonable concession, considering that it is made to a helpless class by men who know that they possess arbitrary power over the conditions of contracts. The other recommendations of the Committee do not call for any comment.

Before the meeting closed, the Chairman, Mr. Halifax Wyatt, made a long speech in reply to what he considered the unwarrantably severe comments made in *The Mark Lane Express* and *The Farmer* upon the proceedings at the first meeting. Mr. Wyatt has somewhat misapprehended both the point and the temper of our remarks, as any reader who will refer to our leading article of January 31st will see. But probably the warmth which Mr. Wyatt displayed is chiefly due to a mistaken notion as to the authorship of the article of which we may at once relieve him. He stated, as if he were absolutely certain, that "the writing of these articles took place not fifty miles from Preston." We do not know to whom Mr. Wyatt alludes as the supposed writer, but we can assure him that his guess is utterly wide of the mark as far as our own article is concerned. We cannot of course answer for our contemporary, but if Mr. Wyatt thinks that our article was written by some local individual who has a personal bias against him and his friends, he is entirely mistaken, and he may therefore withdraw from the unfortunate person whom he thinks he has "spotted" the full measure of his indignation against him. Many other remarks of Mr. Wyatt were as wide of the mark as far as we are concerned, and we can with confidence leave our readers to judge between our article regarded as a series of comments upon the first meeting

of the Lancashire land agents, and Mr. Wyatt's speech in reply. What we chiefly objected to was, first, the summary way in which the Agricultural Holdings Act was disposed of, without giving the tenants any voice in the question; second, the threat of a revaluation if the Act were adopted; and third, the cool manner in which the agents proposed to frame a cut-and-dry agreement, without consulting one of the parties to the contract. We are told now that the tenants have been consulted; but as far as we could judge from the report of the first meeting we had every reason to suppose that they would not be. Possibly our strictures may have had some effect, and if that is the case we can very well bear the imputation of having been over-harsh in our judgment. We will even admit, by way of a peace-offering, that the bark of the Lancashire land agents is worse than their bite, and that they have made greater concessions than the tone of their first discussion could have led any one to expect. But perhaps for these mercies the tenants have in some measure to thank those agricultural papers whose remonstrances, whether justified or not, appear at least to have been strongly felt.

On Thursday, March 23, a second meeting of the agents of the principal land-proprietors in this county took place in the Town-hall, Preston, for the purpose of considering the report of a committee appointed at the previous meeting on the 13th of January, "to suggest the best clause with regard to unexhausted improvements as contemplated by the Agricultural Holdings Act, and any other clauses which they may deem possible to be universally inserted in Lancashire agreements." The report of the committee stated that, "in accordance with the feeling expressed at their preliminary meeting on the 13th January, they had taken the opinion of some of the principal tenant-farmers in the hundred they represented on the subjects they were about to discuss, and that a tenant-farmer from each hundred was appointed to attend at Preston. The committee, having taken into consideration the objects for which they were appointed, find it impossible to frame clauses applicable to the whole county, with its various modes of husbandry and varieties of soil, climate, and custom, and have therefore confined themselves to enunciating principles which they believe may be universally adopted and embodied in the farm agreements suitable to each locality."

Mr. HALIFAX WYATT (agent to the Earl of Sefton) was voted to the chair, and in opening the meeting said they were met to take into consideration and, if the meeting thought fit, adopt the report of the committee appointed at their first meeting. That meeting was appointed to consider a clause with regard to unexhausted improvements, and any other clauses which they might think advisable to be adopted universally in Lancashire agreements. He must apologise because of the report of the committee having been sent out so late, thus allowing very little time to consider it before the meeting took place; the reports, however, were delayed on the way to him, which accounted for their tardy distribution, and probably also accounted for the attendance that day not being so large. They would see from the report that the committee had carried out the wishes that were expressed at the general meeting of agents, and he thought they had, to the very best of their ability, associated themselves with the principal tenant-farmers of the districts they represented, and, as a result of their investigations, he would read the report, after which they could take in detail the various points mentioned therein, and come to what decisions they thought best.

THE DATE OF ENTRY ON FARMS. — After finishing the reading of the report, the CHAIRMAN asked them to take up the different matters in the order in which they were mentioned. The first was the date of entry, and in one respect it was the most important matter that would come under their consideration, because it entailed a decided change of custom

rona what had obtained in Lancashire before. The observations of the committee upon the point were these: "A strong feeling from every hundred, except North Lonsdale, was exhibited in favour of doing away with the present custom of entering on the land in February, and the house and buildings in May. The 2nd of February was decided on as the best time for entering on both house, buildings, and land. The committee strongly advise an effort being made to adopt this system in all the districts except North Lonsdale, as they believe it would be most satisfactory both to tenants and landlords." He himself thought the 2nd February would be a very convenient time.

Mr. G. C. HALE (agent to the Earl of Derby) said the subject of entry had been discussed not only by the committee but in other places. He himself had heard in other places strong expressions of opinion in favour of the change, which he believed would be advantageous to the country at large, as well as of great advantage to the farmers themselves.

Mr. C. ROBER (agent to Lord Skelmersdale) was also strongly in favour of the proposed change, but thought unless it was adopted by all the principal landowners in Lancashire it would be useless to attempt to carry it out.

Mr. T. FAIR did not expect that the tenants would offer any objection to the change or cause any difficulty to the carrying of it out. If the principal landowners in the county agreed to make the change, then the smaller landlords would find themselves compelled to follow their example.

Mr. BLUNDELL (of Weeton), a tenant-farmer, speaking on behalf of tenants, said he had had conversation on the matter with a good many of them, and they were all of one opinion—that the change would be a good thing.

Mr. J. W. FAIR said that as the majority of the large landowners were represented at that meeting, if they decided to carry out the change then there was little doubt but that the smaller owners would do the same for the sake of their own interests.

Mr. HALE said they might accept it as the general wish of the agricultural community.

Mr. HOWARD spoke in support of the proposal, as also did Mr. WILLACY.

Mr. VEEVERS expressed his concurrence with the committee's suggestion, but feared it would not be practicable without a short Act of Parliament to carry it out, as the voluntary principle had been tested already for above 100 years, the result being now that we had New Candlemas and New May Day, New Candlemas with Old May Day, and Old Candlemas with Old May Day.

The CHAIRMAN thought the question of compensation to outgoing tenants who left their holdings before May Day ought to be settled afterwards, not by that meeting. He thought some resolution ought to be come to, and he would suggest that the members of the committee obtain the names of the principal landowners who were willing to adopt the clause in their tenancy agreements.

This suggestion was seconded and carried unanimously.

**NOTICES TO QUIT.**—The second clause submitted to the meeting had reference to the duration of notices to quit, and the committee recommended the principle of twelve months' notice to quit instead of six months'.

Mr. ROBER thought it was the weakest point in the bill. At the present time, if a landlord wanted to get rid of a tenant it would be two years from now before that tenant could leave his farm, and it might be that he would not want to run the risk of paying two years' rent. Now, that in a large holding was a very serious item, and if there was any disagreement or dispute between a landlord and a tenant, the latter might so arrange his affairs through the length of time which might end in an actual loss to the landlord. On the other hand—on the tenant's side—it various family or other matters might arise through which the tenant might wish to give up his farm, he would be required to give that notice, which would be a very great inconvenience. He (the speaker) thought six months was quite long enough, and he considered that twelve months was very objectionable, and ought not to be adopted, and he proposed by way of amendment a six-months' notice.

The amendment was seconded.

Mr. STOREY was quite of opinion that it would be as binding on the landlord as it was on the tenant. Since the last meeting he had had an instance in which a tenant came to him and said

he had taken a farm near Rochdale, and that his family were going to work in the mill, adding that he hoped he would not be bound to keep on the farm which he now occupied. He (the speaker) told him, as he was a decent kind of person, that he would be sorry to go against his interests, but he would have to find another tenant. Now, it would be very hard to keep that man for two years on the farm. He could give them other instances showing that if a bad tenant did much against the interest of his landlord, they could not turn that man out within two years.

Mr. MOUBERT considered that twelve months' notice would be objectionable.

Mr. COOK (tenant-farmer, Litherland) said the tenants would not as a rule, feel injured by the longer time of notice. His own opinion was that 12 months was a short enough period. In his district that was practically the custom.

Mr. FORRESTER could not see, although the fault was possibly his own, how there could be a two-years' occupation after twelve months' notice had been given. They gave notice on the 2nd of February, and there was only a year to run after that date. For himself, he should be really sorry to think that they could not trust a tenant twelve months. In his district, they had nineteen years' notice, and of course if they could trust a tenant so long they could surely trust him a year. The whole aim of their discussion, he took it, was to give the tenant-farmer a little more encouragement to farm well. Now a farmer did not turn out badly all in one year, and there was strong reason to think the agent would soon discover when he began to do so. The recommendation had been drawn up to give more encouragement to the tenants; but if the meeting did not see fit to adopt it, of course it was right to say so. He could not, however, say that anything he had heard on the subject had altered his opinion.

Mr. BLUNDELL (tenant-farmer, Weeton) thought the agreements should be pretty liberally drawn. He had spoken to some 50 or 60 tenants on the question, and their opinion was that it would be injurious to adopt the principle of six months' notice.

Mr. HALE felt bound to support the recommendation of the committee, who had considered the matter closely.

Mr. WILLACY said that as far as he had had an opportunity of taking the opinion of the tenants he found they did not look on the clause as a concession, but as simply a question between the outgoing and incoming tenant.

Mr. HALE remarked that he should certainly stipulate for a certain course of cropping during the last year. That point he considered to be of the utmost importance.

Mr. HOWARD (agent to Col. Feilden) said the meeting ought not to overlook the fact that neglect in a tenant arose from different causes—sometimes, perhaps, for want of means for carrying on operations and others, possibly, from a death in the family. Having illustrated these conditions, he added that in nineteen cases of twenty it was not necessary to give a tenant more than six months' notice.

The CHAIRMAN said all the gentlemen who had spoken to the amendment had missed the strongest point—what, indeed, he considered the real advantage of a six-months' notice—namely, there was a custom in this county that the whole rent should be due on the 24th of June, and therefore if they had a bankrupt tenant or a bad tenant they had the opportunity of securing the rent fairly due. That was one of the strongest points why there should be a six-months' notice. He was, however, very strongly inclined to think that the whole matter was brought to them as an exception to the rule, and it was a question whether they ought to make a rule against an exception, or *vice versa*. His own idea was that there should be a twelve-months' notice; but whether that mode of agreement would result in any great advantage to the tenant he did not take upon himself to say. As a matter of fact, a good tenant never brought himself into a position necessitating notice to quit; and all they as agents had to do in adverse cases was to look after the landowner's interest a little more closely than before, and if need be to give the tenant a little hint. That was one reason he voted for a twelve-months' notice, and he was inclined to think it would be the most desirable course. Another reason was that the subject had been discussed by a higher tribunal than theirs, where the opinion was in favour of twelve months. As far as they conscientiously could he thought they ought to try to follow, as much as possible, in the principles of the Agricultural Holdings Act, whilst endeavouring to improve the

machinery for carrying it out; and he thought that, although the twelve-months' notice might be prejudicial in a few cases to the interest of the landlord, it was their duty to take into consideration the wishes of the tenants, and that was why he went for twelve months. A division then took place on the amendment, which was carried by 12 to 6; and thereupon the principle of six months' notice was held as generally desired.

**OTHER CLAUSES.**—The following clauses or recommendations of the committee were passed *scribitur*, and without set discussion: *Fixtures*.—The committee recommended with regard to fixtures that the 53rd section in the Agricultural Holdings Act be extended to all fixtures, such as grates, boilers, &c., not the property of the landlord, so as to give him an opportunity of purchasing the same, and avoiding, as is sometimes the case, the outgoing tenant selling by auction. *Gardens*.—The tenant not in any case to remove from the garden any plants or shrubs, or any trees that have been planted to replace others, or any that have borne fruit. *Unexhausted Improvements*.—The committee approve of the schedule of works and maximum time given for compensation in the Agricultural Holdings Act, both in the 1st and 2nd classes, but they consider that, to avoid the expense of arbitration and litigation, the following rules should be adopted: 1st. That any improvement, and the estimated cost thereof, shall be sanctioned by the landlord or his agent before commencement, and the time over which the allowance is to extend then settled, but in no case shall any allowance extend beyond 20 years or 7 years respectively. 2nd. That the improvement must be passed and sanctioned by the landlord or his agent when completed, and the sanctioned cost then entered either in a schedule attached to the agreement, or in a certificate, a copy of which shall be given to the tenant. The committee considered that the provision for compensation for such improvements as are described in the Agricultural Holdings Act, as 3rd class, together with the restrictions thereon, do not apply to this county, and would recommend that each district, according to its cultivation, should introduce such clauses respecting feeding stuffs and manure as would be an encouragement to outgoing and protection to incoming tenants. *Deterioration*.—The committee considered that, in every case where clauses for unexhausted improvements are given, a clause should be inserted to give compensation to a landlord for waste and depreciation of premises or land, caused by neglect or default of the tenant, or by non-observance of covenants; but they recommend that any claim, &c., should be made within a reasonable time after such waste or breaches of covenant have taken place. *Cultivation*.—There was no formal resolution arrived at upon this point, but the general opinion was that freedom of cultivation should be recognised and allowed, under certain limitations, as to approved systems of husbandry and keeping up the fertility of the soil during a tenancy. *Outgoing Clauses*.—The committee recommend that in agreements, some arrangements, in conformity with the cultivation of each district, should be made, in order to do away with the present objectionable custom of dividing the wheat crop in the last year of tenancy between the outgoing and incoming tenants, and, to effect this, that the landlord shall guarantee the estimated value of the wheat crop shall be paid, the valuation to be made during the month of July. On the latter clause only was there any discussion, and the latter part of the sentence was added as the result of remarks to the effect that what was sought was to avoid a collision between the outgoing and the incoming tenant.

**LORD SETON'S AGENT AND THE AGRICULTURAL JOURNALS.**—The CHAIRMAN: Perhaps you will not think I am trespassing too much upon your time if I say a few words before this meeting is brought to a close. First of all, I think we may congratulate ourselves on the spirit with which this meeting has been conducted. There has been shown a spirit of entire fairness as between landlord and tenant; but what I want to show you, and I do not know that you are aware of it, is that our last meeting was deemed to be of such great importance that it met with some very severe handling, and some severe comments by some of the leading agricultural journals in the land. Now, there have been meetings, as I know, in several other counties besides this, and a meeting of agents at Bristol came to the same conclusion that we arrived at, yet I have never heard that their meetings have been criticised in any way. I don't know why our meeting should have been so distasteful to journals which are considered to advocate, as far as possible, what is good for the agricultural community.

I think one could, very soon, from the tone and style of the articles, trace their originators; at any rate, the writing of these articles took place not 50 miles from Exeter. But be that as it may, I do not wish to accuse anybody. There was a very severe article in a paper called *The Farmer*, and another in *The Mark Lane Express*; and I think the gentleman who wrote them, in a very unseemly manner, I must say, founded them on the construction which they chose to place on the fact of the agents having met together, and before they had come to any actual result at the meeting, at one judgment of its results. Well, it will be quite impossible for me—I shall be delaying you too long—to answer anything like these iniquities with which we are charged, and I shall not attempt to do so; but I think we shall be very unwise if we press ever this without any observation. I don't wish to make any actually unkind remarks, but *The Farmer* says, for one thing, that a concerted movement was made by the landlords and their agents to promote their own interests. Now I think that our meeting was not in the slightest degree to promote our own interests, or speaking for the landlords, but it was for this object—to obtain, in what we consider a most easy way, from all the different districts of a large county, the feeling which the agents could bring as to what the tenants themselves felt with regard to the Agricultural Holdings Act. There was no doubt at all about it that at that meeting, from the conversation and the discussion that took place, the universal feeling was against the bill—I won't say that it was against the principle of the bill—but the general opinion of the people was that they would rather be as they were. That was the universal feeling, and therefore we proceeded according to the terms of our circular announcing a meeting to consider whether it would be best to be wholly in the bill, wholly out of the bill, or partially in the bill; and when we came we never came with the idea that we should be out of the bill, but with the idea that we should hear what the feeling in the different districts was, and in accordance with that feeling pass our resolutions. I am prepared to say that if we had heard from all the different agents that all the tenants were wishing anxiously to be under the bill, we should not one of us have hesitated to fall in with their wishes, and I think that a resolution would have been passed of exactly the contrary effect to that one which was passed, so far as the first resolution was concerned. With regard to the second resolution, the agents who were present saw this, that even if the tenant-farmers had stated that they would be rather as they were, yet the gentlemen felt that this was an opportunity for putting them in a position of having at any rate compensation according to the principle of the bill, although they were not in the bill itself; and it was a good time for trying to get a written agreement between the landlord and tenant, which did not exist among a great part of the owners in Lancashire. The third resolution was not passed, and I shall have a word to say on that at present. The fourth resolution springs out of the second, which I explained. I think that this meeting will see that the whole of these matters have been discussed in a perfectly fair and impartial manner, not taking the part of the landlord more than the part of the tenant, or the part of the tenant more than the part of the landlord; therefore, I must say that I think the criticism in *The Mark Lane Express* with regard to our having left the tenants entirely out of our consideration was very improper and very uncalculated. The first thing that the committee did when it was appointed—and we held a meeting in this room—was to decide that every single agent in the different hundreds should take the means of ascertaining the feelings of the tenants generally in those hundreds, and that they should bring representative tenants to that meeting; that was carefully and faithfully done; therefore the report that you have now adopted has not come from the agents alone, but from the agents as representing the landlords and tenants. There were one or two words used in *The Mark Lane Express* and *The Farmer* which were most offensive, I think, with regard to the meeting and the rejected resolution. The papers seemed to say that the resolution was objected to because it was far too barefaced for any agent to pass. It was concerning the tenants being subjected to a revaluation. I do not think that resolution was objected to entirely on account of the revaluation referred to at the end, but chiefly by the people in the room, because, having already obtained the feeling of the tenants regarding the bill, they thought it was no use putting it in. The word "revaluation" was used by myself, and I am perfectly willing to give way as far as that goes to people who

think revaluation might not be required, though I still hold to-day myself that revaluation does not the least, in my idea, mean the rent to be raised on account of the valuation. I merely hold that there should be a record and report of the state of the farm when the new Act came into vogue. I think that although it may not be useful so much for compensation, surely, I think that, knowing what state the farm was in would be almost necessary before you could ascertain any dilapidation. Still, it is a matter for open criticism, and I think any paper, as far as that goes, has a perfect right to pass remarks upon it. *The Mark Lane Express* seemed to say that the valuation of farms is very much depreciated; but it is a great pity that they don't accept my challenge. I must say that I can't quite agree with them with regard to that, because I only look at facts, and I say this—that if I have a farm to let there are seven or eight men running after it as hard as they can, and are very glad to give any fair price for the farm. Therefore, I can't say that in Lancashire, whatever it may be in other cases, the value of farms is manifestly depreciated. These are one or two of the points touched upon, and there is a vein running through the whole of these emanations that, I think the picture which these—what shall I call them?—word-painters in the agricultural journals present to our view you will find, to say the least of it, rather offensive. For instance, they say, first of all, that we meet only to serve our own interest. In the next place they say, “In any resolution they passed, though it may seem feasible, there is some covert and dangerous signification.” Those are scarcely the exact words, but the purport is there. In another place they say we will be illiberal on this side and liberal on the other; that it will be bad enough to be brought face to face with the landlord, but far worse to meet the land-agent; that we are men who are kept to do a disagreeable work for the landowners, and men of such hardihood that we may fear nothing as long as the landlord is pleased. Those are some of the phrases that are used in the course of these articles, and they give a very sad description of us all, I must say, and if it were all true I should feel now as if I was almost addressing a Chamber of Horrors. I remember perfectly well, when I was at Oxford in my younger days, coming across this phrase in one of the Latin poets:

*Monstrum horrendum, informe, ingens, cui lumen ademptum;*

the meaning of which, liberally translated, is—*Monstrum horrendum*, a monster horrible and much to be feared; *informe*, of crooked ways; *ingens*, very big and mighty; *cui lumen ademptum*, one who cannot see anything in a right light. That is about the description that these journals give of us, and I am sure we are very much indebted to them for so lively a picture; but I do hope sincerely, nevertheless, that we are not quite so black as we are painted. I may say this, that there is one great fact which I think proves they are wrong, and it is this—that at the result of this meeting has shown that all the tenants have, as a rule, desired to be as they are. Now, to be as they are is to be at the mercy of the agents and the landlords. I think if we were such persons as these gentlemen in the journals depict us, we should not find tenants quite so ready to put themselves entirely in our hands. I cannot help thinking that it puts a very different tone on the picture that these journals contain. There is one more point to which I will allude, and it is this. I have found that it is no uncommon occurrence for a tenant to come to me—a land agent even—to consult with me on some private matter of his own, and I think if we were a set of enemies to the tenants, as we are told we are by these journals, the tenant would never do that. I think it shows that tenants chiefly, as a rule, rely on their agents as being men of honour and men of sound judgment. Again, these journals say I am “practising some little game.” I hope it may be very amusing. I think it is almost my duty to say that my “little game” was played out about three years ago, and it was this: In conjunction with my friend Mr. Hale, Lord Derby's agent, we convened a meeting of tenant farmers long before any agricultural bill was thought of, and we concocted an agreement containing certain clauses which met with the approval of the tenants—and those with regard to unexhausted improvements were nearly identical with the present Agricultural Holdings Act, and one clause for cultivation was that cultivation should be free. I do not think that that looks quite like what we are depicted to be. I can only conclude by saying that I freely believe that the general body of agents—of course, there may be some exceptions—are upright

men, and men who will do their duty between landlord and tenant. I thank you very much for the very kind attention you have given to these proceedings, and for the way in which you have borne my chairmanship.

A vote of thanks was accorded to the Chairman, who, as the meeting broke up, explained that the Chancellor of the Duchy had, as far as he could make out, given the very same reason for his action as that meeting had done.

The following letter, referring to a discussion on the Agricultural Holdings Act at the Institution of Surveyors, is reprinted, by permission, from the Transactions of that Institution:

*Athenæum Club, March 7th, 1876.*

Dear Sir,—If it is not contrary to the customs or rules of your Institution, I beg leave to make a short communication on paper with reference to the discussion on the Agricultural Holdings Bill to which I was admitted. Several of the speakers alluded to me last night in kind and flattering terms. I could not think of asking to take up any of the time of the meeting, when there was a general wish to hear your able and most useful summing up, which gave your hearers much to think about. I wish to guard against the supposition of some of the speakers, that I had contended that the measure of compensation depended on the exhaustion of an improvement; that is, that an outgoing tenant would be entitled, subject to the maximum of time for each class, to compensation so long as any additional produce resulted from the improvement. I have been for thirty years—that is ever since I had the honour of being associated with the late Mr. Pusey—an earnest advocate for compensation to tenants; but, taught by that clear-sighted and wise man, I have always protested against the phrase “compensation for unexhausted improvement,” as involving a false assumption and tending to cause misunderstanding. The phrase “unexhausted manure” has an intelligible meaning. The phrase “unexhausted improvement” is quite another matter, and opens a door to endless misconception. The important question, however, at the present moment is, What is the meaning and legal effect of the new Act? Let us see what the Act says. It lays down in Section 5, first, the broad general principle that, “where, after the commencement of the Act a tenant executes . . . an improvement in either of three classes . . . he shall be entitled, subject to the provisions of this Act, to obtain . . . compensation in respect of the improvement.” Then it gives, in Section 6, the first measure of compensation, or rather the first limiting qualification of the principle: “an improvement shall not be deemed, for the purpose of this Act, to continue unexhausted beyond” twenty, seven, or two years, as the case may be. Again, in Section 31, “The award shall find . . . the time . . . at which each improvement is taken for the purposes of the award to be exhausted.” What does this mean? The “purpose of the Act” is the compensation of the tenant. The claim for compensation is to cease at certain periods which are arbitrary limits “deemed or taken” to give sufficient time for compensation. The amount or measure of the compensation is, in each case, based on the outlay of the tenant, that is, on the sum laid out by the tenant either with the consent of the landlord, or laid out “properly,” in the judgment of the referees. In no case is the improved letting value made the basis of compensation; it is merely introduced in one special case as a limit or check on the amount of compensation. What then is meant by the Act is this, that a tenant who is disposed to expend capital in improving another man's land (with that man's consent, expressed or implied), has a presumptive claim to compensation; and that claim for compensation is to be satisfied (in the absence of some special contract) either by sufficient time of occupation to allow him to recover his capital with a profit, or by a proportionate payment of part of the outlay. It is therefore the claim which may be “exhausted” or continue “unexhausted”—the exhaustion of the improvement is only introduced as a legal fiction, to be “deemed” or “taken” as a limit to the duration of the claim for compensation. I am aware that in some quarters it is held to be a sound principle that, whatever improved annual value land may acquire in consequence of the outlay of capital by a tenant,

such annual value, capitalised, belongs in equity to the tenant, as the due reward of his enterprise and skill. I am also aware that in the bill, as originally introduced to Parliament, there were expressions introduced for a different purpose which favoured this principle; though I doubt if the framers of the bill knew the effect of their language till it was brought home to them in the House of Commons. I must not occupy your time by discussing the abstract question whether this principle is in accordance with sound political economy, or with wise national policy, or is capable of being carried out in practice. I only contend here that it is not a principle to which Parliament has given its legislative sanction in the Agricultural Holdings Act. Any language such as the "tenant's right to compensation for unexhausted improvements" tends, in my opinion, to raise undue apprehension, and, therefore, to retard the frank acceptance of the principle of "security to tenants for the capital invested by them in the improvement of land." I venture to hope that such language will be discounted by the able and impartial men who are members of the Institution of Surveyors.

I wish to make one further remark on a similar misapprehension tending to an extreme view in an opposite direction. I have heard it contended on behalf of the landlord that he ought not to be answerable for any compensation to a tenant unless it can be shown that his land is improved to the extent of the sum claimed as compensation. In fact, the principle of the letting value stood in the bill when first introduced as a protection to the landlord in every case. It has been said that, as the Act in its final form does not protect the absolute owner, the referees ought to protect him in their award against any claim in excess of the value added to his land. I venture to say that this view of the case is untenable, and that, if it were advocated in the name of landlords, it would shake the confidence of the tenants, and produce a feeling of injustice. If a landlord gives his formal consent to an improvement in the first class, he, in fact, borrows money of his tenant, or becomes a partner in a speculation which is expected to bring immediate profit to the tenant, and ultimate increase of rent to the owner. The landlord can make his own conditions as to the total amount to be laid out, or for which he will be answerable, as to specifications, contract, and superintendence, and as to the time for the exhaustion of the claim. All this he can do before he gives his consent in writing. Without such consent in writing no compensation for an improvement of the first-class can be claimed under the Act. If the attempted improvement does not answer the expectations of its promoters, I do not think the owner can equitably turn round on the tenant and invoke the protection of the referees to release him from what was, in fact, a bargain. In the case of the limited owner, the State intervenes for the protection of the remainderman or reversioner, because he had not been a party to the transaction. I confess I think the Act goes further in this direction than is necessary; but the absolute owner can have no claim to similar protection, independent of his own action. As to claims in the second class, although the Act does not make the consent of the owner necessary, still it is open to any owner to refuse either to adopt the Act, or to let a farm, without a special contract making the consent of the landlord to an improvement under the second class indispensable to a claim for compensation. As to the third class—if the landowner is unwilling to give unlimited discretion to the valuers—it is open to him to stipulate by contract that the compensation for manure and food shall not, without his consent, exceed a fixed sum, say £2 per acre, the sum which you mentioned as the average in Lincolnshire.

I may be allowed to say, in conclusion, that the searching discussion to which the Act has been subjected by the practical surveyors, and by the legal gentlemen who have so ably assisted them, cannot fail to have a most beneficial effect in clearing up doubtful points sooner or later. It will, probably, cause many of the landowners and tenants to pause before they consent to adopt the Act, and, therefore, to give notice that, for the present at least, they wish their existing contracts to remain unaffected by the Act. But I have little doubt that those who have not already good written contracts will see the importance of defining their relation to each other, and to the land. With good professional advice it will not be difficult to frame contracts in the form best suited to particular districts, embodying the substance of the Act, in fact to contract within the Act, instead of contracting out of it. It will be no small advantage, both to landlords and tenants, if one result of the

Act should be to take the valuations between outgoing and incoming tenants out of the hands of inferior persons, and to secure the appointment, by public authority, of umpires qualified both by professional knowledge, experience, and reputation, to deserve the confidence of all the parties interested.

I am, dear Sir, yours faithfully,  
T. D. ARLAND.

The President of the Institution of Surveyors.

THE AGRICULTURAL HOLDINGS ACT.—The Marchioness of Westminster has given her Dorset and Wiltshire tenants notice that she prefers existing contracts to remain rather than her estates should come under the clauses of the Agricultural Holdings Act.—*Dorset Chronicle*.

MR. GLADSTONE ON FARM LABOURERS AND THE DISESTABLISHMENT OF THE CHURCH.—Mr. Gladstone has replied to a letter from Mr. G. Mitchell, "One from the Plough," asking him to present petitions to the House of Commons in favour of the Disestablishment of the Church of England. Mr. Mitchell, in his letter, said: "Though there are individual clergymen who are humane and kind-hearted Christians, yet I can assure you, from an intimate acquaintance with a large number of rural parishes, that many of the clergy of the Established Church are tyrants of the worst class—cruel, hypocritical, selfish, and empty-headed. This could not continue if the Church were disestablished—if there were no 'royal road' to the pulpit; for then men would have to preach to live, and would have to conciliate their parishioners, and not be their autocrats. See grand annual demonstration on Ham-hill, Yeovil, Somerset, will be held next Whit Monday. May I ask you to come and address 15,000 to 20,000 persons in the old Roman Amphitheatre? Or, if that be impossible, pray write us a letter to let the world know that you are the friend of the poor, oppressed, under-fed agricultural labourer." In his reply to Mr. Mitchell, under date 4, Carlton-gardens, the 11th inst., Mr. Gladstone said: "Sir,—With regard to your intended meeting on Ham-hill, I do not now attend any public assemblages, except in cases with which I have some special connexion. So far, however, as it aims at the improvement of the condition of the agricultural labourer, and most of all in south and west, I heartily wish it well, and I hope the means adopted or favoured may be as effective and judicious as the end is laudable and beneficial. I may repeat here what I have publicly said elsewhere—that, of all the economical changes I have lived to witness, the increase of agricultural wages is that which gives me the most lively and unmixed satisfaction—unmixed, I mean, with any fear of injustice to others. If it be ever found to press upon the means of the employer, he will find his remedy in more careful inspection of work, in general economy of methods, in the extension and improvement of machinery, and in further transition from arable to pasture; but he will not, I trust, seek for it in any attempt to interfere with liberty of action on the part of the labourer. I need hardly add that I continue to be heartily favourable to his political enfranchisement. With regard to the petitions which you wish me to present, I have no objection to do this with reference to such as do no more than pray for the disestablishment of the Church, or set forth reasons for it in terms not involving injustice; but I cannot promise concurrence in their prayer. In my opinion, the Establishment of England (not of Scotland) represents the religion of a considerable majority of the people, and that they do not seem to desire the change you recommend. This being so, the only other question I need now ask myself is whether the civil endowment and status of the Church are unfavourable to the effective maintenance and propagation of the Christian faith. If and when I am convinced that they are so, I shall adopt your conclusion, but not before. I hope you will take my plain speaking as a proof of attachment to the plain dealing which Englishmen love, and of real respect for those on whose behalf you write. Advancing a step further in this direction, I must tell you that I cannot undertake to present those of the petitions which renounce the Establishment as 'idolatrous,' and likewise pray that 'this arrogant Popish priests of the Anglican Church may no longer use Governmental powers to persecute and insult.'



In my opinion the conception of the clergy expressed in these petitions and in your letter is unfounded and unjust. Among the classes of our mixed society, I hold that the clergy are with reference to their training, manners, and social station as a class, rather under than over paid; and that they are also, as a class, the most self-denying and the most devoted to the education, consolation, and elevation of their poorer brethren. Within this description there is plenty of room for the exceptional faults and foolish language of individuals which, in certain cases, no language can be strong enough adequately to condemn. Nor do I deny that more generally the clergy may exhibit some desire for power. But in this

case they resemble most other classes and professions, only with this excuse, and with this guarantee for the welfare of the community, that the other classes are sufficiently ready upon occasion to combine against them; and the love of liberty is too strong, and has too much place in the laws and institutions of the Church itself, to leave room for any general or serious encroachment within her communion. I think it therefore my duty to show them reasonable respect and deference, to abstain from anything that resembles railing accusation, and rather to esteem them highly for their works and their Master's sake."—*Times*.

## THE AGRICULTURAL GEOLOGY OF MAIDSTONE AND ITS NEIGHBOURHOOD.

A lecture has lately been delivered to the members of the Maidstone Farmers' Club by Professor T. Rupert Jones F.R.S., F.G.S., upon the above subject.

The CHAIRMAN having introduced the lecturer, Professor JONES commenced by stating that the agricultural geology of a district might be divided into two heads—the soil and subsoil, or substrata. They could not, however, think of soils without referring them to their origin, and that would lead them to treat of the strata exposed, or those which lie above the surface. To begin with the substrata, if they were to look at the map of Maidstone and its neighbourhood (opened out before them), they would see several patches of gravel spread over the surface of the country. There was a considerable variety of strata, coming out in the green sand, and many acres of gravel were to be found here and there. These also were accompanied by a wide-spread coating of loam, and clays and clayey sands all over the country. The Wealden clay is mixed with a certain amount of sand, which about Tunbridge Wells and East Grinstead makes the soil of a sandy nature, while north of that district is an area traversed by the Medway, and where a lot of beds of alluvial or river gravel mark out and define the border of the valley which has been run over by the river and its floods, and towards the mouth spreads out over what has been a wide estuary. The chalk spreads over it all, and extends through the country from Dover to Croydon, while underneath it lies the Hastings sand. These chalk cliffs have remained the longest amid the wearing away of other material. The other materials have been worn away by the action of water, of frost, and of the sea, but the chalk formation has retained its position on account of the closeness of the material. Chalk is a very soft substance, but yet it stands up in the hills. Why does it do this? Because chalk is homogeneous—it is all of one consistency, and all its particles support themselves equally, except the flints which are found in it, and which are so small that in such a mass they do not affect it. They all stand shoulder to shoulder, like British soldiers, and, however relatively soft to ragstone, can only be taken away or renewed by solution. Ragstone, when affected by wet or by frost, has fissures created in it, and it splits up in all directions. Sand is not so homogeneous as chalk, and much more friable, and much more easily washed away than chalk. The broad lagoons which form the valley of the Medway were a long time ago a mass of mud, and they could form very little notion from what was seen in cultivated countries of the action of rivers. There was a great set of rivers running into the sea in this neighbourhood, forming great estuaries and lagoons and deposits of mud, and animals which lived upon the neighbouring hills walked across this mud and left their footprints and their bones in it. They had an instance of this in the iguanodon which was found in Mr. Boustead's quarries. These animals came down from the hills, were rushed out to sea, and became buried in the deposits of the neighbourhood. The Weald of Kent has very little traces of towns, for the mud would have been so soft that it would have been very difficult to traverse, and there they found large quantities of fossil lake-shells, but they occurred only in bands. They must imagine a great lake there, with the river bringing down continually deposits of mud, and covering up and burying the shell-fish; and even now the black marks which they found in the Sussex marble show that animal life was in the shells when they were overwhelmed by the mud and were fossilised. The stiffness of the clay was due to the non-presence of fossils, which interrupt and prevent close cohesion. Nearly all the

towns and villages situate in this clay are destitute of water, except superficial water, because water cannot sink deep into the clay. At Maidstone they had to sink 500 or 600 feet, till they got to the sands beneath, before they found any water. On the Gault clay they would have to go down 150 feet, and in London clay 400 feet, before they would have any right to expect to find water. He then related some instances of the disappointment of engineers who had not been aware of this. Going from the clay to the ragstone, they found a different kind of thing, clay deposited over fresh-water areas, those of lakes, lagoons, and rivers. The whole of Holland was the delta of the Rhine; and in former times vast spaces, such as the Weald of Kent, were formed in this manner. Sandy limestone was formed in a district where the currents of the ocean conveyed sands and shells, and formed a calcareous deposit. They could not burn it and form lime for manure, because it contained a large proportion of sand, which was of no use to land, and if they were to look at the hassock which was found in ragstone, they would find it was formed of sand, with scarcely a shell in it. This showed that the ragstone was formed in a shallow sea, where there were few shells, but where the water was not deep enough for the full deposit of calcareous matter. Then they came to the iron sands, and which were necessarily formed in shallow water. Too much sand was brought down after a time, even for shell-fish to live, and so among these sands, most of which were white at first, in some places they found mixed green silicate of iron sand, some of which becomes rusted and gives the sand a brown appearance. Oaks grow on clay as well as sand, but they will not grow where there is no water. On the clays their roots strike down and find water in the fissures, but they could tell directly by the character of the vegetable productions of a district where the clays were and where the sands were. Many of the Gault clays were full of deposits of shell-fish and ammonia, and so are full of animals. Men speak, when taking a farm, of the soil being formed of sands and clays, but it makes a difference in its productiveness what sort of clays and sands they are. At last the chalk arose above these deposits, not being actually raised, but because the other portions of the soil which formed the seabed went down. The chalk hills were portions of what was once the sea level, and which gradually accumulated as the surrounding ooze went down; but the particular area of which he was speaking was a portion of what was once a broad, coastless sea. When chalk was formed there were two great East and West Oceans. Lakes, rivers, and estuaries gradually took the place of these seas, and accumulations were formed, and large glaciers probably ploughed their way, bringing occasionally large stones with them, to the level of the sea. The chalk, while these things were going on, through its homogeneity and non-variety of its materials, held up; and sand, because it is partially homogeneous, has also kept up to a certain extent. The best bricks were made of the soil in hollows, where some of the sand has been washed into the clay and the rain has brought down some chalk. When there was nothing but clay they could not do anything with it, and to make good bricks they must have chalk with it brought down from the Downs. In the sandy soils they must have loam to mix with it. The lecturer concluded by expressing a hope that what he had said would impress upon his hearers the importance of knowing, before they took a farm, the character of the clays and sands which they were going to cultivate.



Mr. BARLING expressed his disappointment at the geological features of the neighbourhood being dwelt upon more than its agricultural aspect, and said he differed entirely with the Professor as to the origin of the formation of the soils of the neighbourhood. The lecturer had said that the exposed strata of Gault, ragstone, and weald clay found beyond Debting was formed by the subsidence of the soils and the upholding of the chalk. But his (Mr. Barling's) idea was that chalk at one time formed the whole, that its surface had been shivered, and the action of water or something else penetrating the fissures, had forced up the other portions and exposed the other strata. The ragstone he did not think had been broken up precisely in the way which had been described. There was good evidence to show that the strata had been exposed to enormous force, and had got broken up and twisted about. The chalk had been broken up, and water had removed portions of it, but had not removed the whole of the evidence of the presence of chalk, because in the clays in some places pockets of flints were found and they remained as an index of the action which had taken place. The agricultural geology of the neighbourhood of Maidstone was a compound one. There was every evidence to confirm him in the belief that long after the disturbance took place by which the chalk was removed the action of water in the direction where the river runs now had brought down a quantity of matter from Sussex, and had formed what may be called the gravel-beds. The loam on both sides of the Medway was much deeper in some places than others. The loam was very seldom high above the level of the river: it might rise as high as from 100 to 120 feet, but in most places it was much below that level. The fissures or faults in the rag-stone were caused by violent separation, and the after-action brought down loam from a distance, even from beyond Sussex. But the value of the land in this neighbourhood for agricultural purposes depended upon the matter which was brought down to fill up the fissures in the rag, or overlies the rag itself. There was also another action; chalk was deposited simultaneously with the disturbance of the layer of clay now called Gault. In Gault clay they had 80 per cent. of alumina, and 20 per cent. of carbonate of lime. The local evidences were to his mind conclusive that it was not by any wearing away and lowering of the beds that the strata of the neighbourhood were now exposed to us, but by a violent upheaval. There was no district at an equal distance from the Metropolis so rich in geological interest as the neighbourhood of Maidstone, and he should have been glad if its agricultural, more than its general geological, features had been explained by the lecturer.

After a few remarks from Professor JONES, in reply to the strictures of Mr. Barling, a vote of thanks was given to the lecturer, and the meeting came to a close.

**PENRITH FARMERS' CLUB.**—At a meeting of the members of this club, held at the Club Room, Penrith, Mr. R. Montgomery, the newly-appointed analyst to the club, read a paper on "Chemistry in its Relation to Agriculture." The chair was occupied by Mr. W. Heskett, of Plumton Hall. After some preliminary business had been disposed of, Mr. Montgomery read his paper. At the close of the lecture, Dr. Taylor said the members of the Club were to be congratulated on having such a well-informed gentleman as Mr. Montgomery associated with them. It showed an inclination on the part of the majority of the members of the Club to cultivate the science of agricultural chemistry. The lecturer dealt with general principles more than with particular details; and therefore the lecture did not admit of much criticism. Perhaps on another occasion Mr. Montgomery would give the Club a lecture on some particular department—some particular department of agricultural chemistry which would afford them better scope for discussion. With reference to Liebig it must never be forgotten that he was rather too didactic in his views, and forgot to separate facts from theory; and there were many points in Liebig's doctrine—of which he could give examples, both in animal and vegetable chemistry—which had been overthrown by more recent researches, though it was to him we were much indebted for the great spread of the principles of agricultural chemistry; but was agricultural chemistry at the present day a perfect science? He questioned very much that it was; indeed, he thought it

was hardly quite ripe for general application to agriculture, and he did not think that agriculture was quite ripe for the adoption of chemical science. Mr. Mitchell also made a few observations, chiefly in corroboration of the lecturer's views. With reference to Mr. Montgomery's remarks on the care that was needed in the maintenance of plant life, he said that when he had the oversight of the Earl of Minto's estate, and had charge of a large home farm, he gave instructions to the servants to put down a large manure heap adjacent to a fine plantation. In the course, the liquid from the manure flowed down to the roots of the trees, three of which shortly afterwards showed signs of drooping and decay. They were pointed out by Lord Minto, and of course he saw that the trees were dying, and they were cut down instantly. They were fully 30 feet in height, and on the tops of each of them there were dark stains, while the identical odour of the manure heap escaped from them. That to him just showed that however much a large quantity of liquid manure might have helped the growth of some plants, it proved to be the death of those trees. The speaker went on to show that the action of the atmosphere upon vegetable life was of the highest importance, and as a practical agriculturist spoke of the feeding properties of nitrate. Mr. Barker said it would seem that the old times they so often heard of were passing away before the modern grey coats of Westmoreland and Cumberland. He had no wish to ridicule those who held so tenaciously to the science of "muckology," for farmyard manure formed the basis of successful farming, but they all knew that the supply of that material was quite inadequate to meet the growing demands of the age, and they must look for something else to meet the increasing necessities of the times. A certain great lord was reported to have said to a farmer on one occasion that the time was not far distant when he could carry in his pocket sufficient manure to fertilise an acre of land. But the old grey coat was incredulous, and he was reported to have replied that when that day came he would be able to carry the produce of the farm in his hat. Probably they would think with him that the old grey coat had the best of the argument. Mr. Barker concluded by referring to the advantages that would be derived from the study of agricultural chemistry. The Lecturer, in reply to Mr. Mitchell, said he was by no means insensible to the beneficial influence of the atmosphere upon plants, assisted by the application of manure. Votes of thanks to the lecturer and the chairman terminated the meeting.

**A SUBSTITUTE FOR MALT IN BREWING.**—At a meeting of the Chemical Section of the Society of Arts, Professor Williamson, F.R.S., in the chair, Mr. W. G. Valentin, F.C.S., read a paper on "The Preparation of Dextrine-Maltose (Malt-Sugar), and its Use in Brewing." The subject of the communication is a material the manufacture of which has been jointly patented by the author and by Mr. C. O'Sullivan, chemist to Messrs. Bass and Co. After some observations on the value of chemistry as applied to the art of brewing, and the disadvantages of blindly adhering to mere empirical processes, the paper furnished a general outline of the chemical reactions or changes that take place in the manufacture of beer. These were not very numerous, but were still rather imperfectly understood, the true composition of malt and the reconstitution which its components undergo during the three stages of malting, mashing, and fermentation having until recently received comparatively little elucidation. The "wort" obtained by the mashing process contained two substances, formed by the transformation of the starch of the barley—dextrine and maltose—upon the presence and relative proportions of which rested the efficacy of the subsequent operation of fermentation. The latter substance—maltose—was a readily-fermentable variety of sugar, the former—dextrine—being a material not yielding alcohol during the original fermentation, but remaining in the beer and exerting important influences upon its subsequent quality. Until quite lately the general body of chemists had erroneously considered maltose as being identical with glucose or grape-sugar. Its individual and characteristic properties had, however, been now placed beyond the pale of controversy. The sweet taste of malt had for a long time led to the supposition that the starch of the grain was converted into sugar during the malting process. Starch, however, could be isolated from the malt as well as from barley, and on investigation was found to be changed into sugar only during the process of "mashing"—by the action,

as it had been presumed, of an albuminous body called diastase. There were, however, certain particulars in which even this view required modification. A description of various materials introduced as malt-substitutes—such as cane-sugar, glucose, and so-called "saccharines" from various artificial sources—was then given, the action of each in brewing being explained. The objection that had arisen with regard to all of them was their rapid fermentation, and the ultimate attenuation of the beer which they produced. Besides the low per-centage of fermentable sugar contained in many of them, a strong condemnatory feature was the absence of dextrine, a compound invariably found in malt-wort. What had really been wanting was a substance having a composition approximating to ordinary wort, and this the author, in conjunction with Mr. O'Sullivan, had been able to obtain by the action of warm dilute sulphuric acid upon starch—preferably ground rice. The details of the manufacture were related—the

efficacy of the process resting on the stoppage of the operation at the stage when the infusion has attained the requisite composition. By careful preliminary observation and the employment of constant quantities of materials, this point may be easily ascertained, as the conversion of the starch takes place with great regularity. The acid having been neutralised with chalk, the liquor is run off and evaporated in vacuum pans, leaving a residual cake containing about 67 per cent. of maltose and 33 per cent. of dextrine. It is in virtue of the latter ingredient that this substance—called "dextrine-maltose"—differs from the so-called "grape-sugar" ordinarily made from starch. When dissolved in the requisite quantity of water, "dextrine-maltose" yields a liquor of much the same properties as malt-wort, with a suitable proportion of which it may be mixed and fermented in the usual way. A discussion followed the reading of the paper, after which votes of thanks were passed to the author and to the chairman.

### THE LOCK-OUT OF FARM LABOURERS IN ESSEX.

It is a subject for regret amongst all classes of the community that the friendly relations which have existed between the farmers and their employés in the Tendring Hundred have suddenly had a rupture through the instrumentality of an organization calling itself the Labour League, having its head quarters in Lincolnshire, and its ultimate end in one or other of the various emporiums for the reception of emigrants from England. Observing a *Central News* telegram to the effect that one hundred farm labourers had been locked out in the neighbourhood of Colchester, and four hundred more were expected to be treated in a similar manner, I re-commenced my mission of inquiry, suspended since a couple of years ago, into the differences between employers and employed, now unhappily reopened. My last inquiry was in reference to a mission of reconciliation between farmers and labourers, undertaken by the agitator, Mr. C. Jay, but although this was its ostensible purport, agriculturists in this locality know full well that the "mission" was in reality directed to that *residuum* of labourers who had not availed themselves of the flattering offers held out to them to emigrate to a new field of labour abroad. Many of those who had gone before, either to the manufacturing districts, or to Canada, or New Zealand, regretted the move, while others wrote some glowing accounts of their improved prospects. Those who still held on to the scene of their youthful labours were actuated by a variety of emotions. Some had connections of a tender nature in the locality; some were loth to sever themselves from aged relatives to whose support they were contributing; while others were content to remain in idleness so long as they received the pay of the Labourers' Union. With the "mission" of Mr. Jay came the crash. The labourers on the books of the Union were told flatly that if they did not "move on" to the fields of labour open to them in New Zealand and elsewhere the Union would stop payment. Those who had irretrievably forfeited the confidence of their employers did "move on," and went to swell the last cargo of labourers from England, whose mission abroad was to contribute to the wealth of other lands. Those who remained at home, frightened at the reports of the misery undergone by their fellow labourers who had emigrated, threw up their connection with the Union, and were taken on again by the farmers. The movement amongst the labourers has now been at work about a fortnight in an entirely new district in the neighbourhood of Colchester. The operations of the Labour League are confined to the Tendring Hundred, whereas the agitation fomented by the Agricultural Labourers' Union was chiefly in the Lexden and Winstree Division. Whether the *modus operandi* will be the same or not it would be unfair to the League, and it would perhaps be premature to surmise, but there is no doubt about the fact that "migration and emigration" is manifestly one of the objects of the movement, and so long as agents in advance of organisations of this description are peculiarly interested in rendering dissatisfied, and ultimately shipping off, agricultural labourers to countries where their thews and sinews are needed for the development of internal resources, and for the acquisition of whom the colonics concerned are ready and willing to pay a handsome royalty per head—so long as this is the case, so long will the philanthropic principles of "agitators" be questioned, and it will become the duty of the press to guard benevolent individuals

from subscribing towards organisations of this description. Passing through the village of Myland, one of the outlying parishes of Colchester, on Saturday morning, I met on the road about twenty-five fine young fellows dressed in their Sunday clothes, and each distinguished by strips of yellow ribbon round their arms and hats. They were marching in twos headed by a leader carrying a wand. I pulled up and asked what they were doing. They replied that they were the locked-out men from Langham, and were going to Colchester. What for it was easy to perceive—they intended making a demonstration. In the afternoon and evening the little contingent from Langham was considerably scattered, and from what I afterwards heard I do not think they had a profitable journey, or that they returned to their native village with the military precision with which they set out. The Langham Fox is the head-quarters of the movement.

You will perceive that every facility will be offered to labourers to emigrate. A similar placard I saw at Walton-on-the-Naze a few days ago, fixing the dates of meeting for next week in the neighbourhood of Dovercourt. In that locality the League has not made headway at present, and if they should ever do so, a lock-out will be inevitable, the farmers having formed a league of their own, each member of which, I understand, pledges himself to forfeit the sum of £50 if he employs any labourer subscribing to an organisation of this description. At Dedham the League have secured a number of members, all of whom have been locked-out as a natural consequence. A small farmer gave me his opinion, that this is a clever emigration movement, and said it would be a bad day for England when we lose the tillers of the soil. We ought to think of our own country before we think of others. Without men, what are we to do if a nation rises up against us? I hinted that the agricultural labourers ought to be able to think for themselves, but he replied that the poor man was easily led, and added, "What do you think, sir? Don't you think it will come to a 'bustle' afore long?" Glancing over the mantel-shelf I observed a placard, which seemed an appropriate answer to the query. It was a notice offering £50 reward—"Whereas on the night of the 30th January last, the farm premises occupied by Mr. G. Gifford, situate at Park-lane, Langham, were wilfully set on fire. Notice is hereby given that the above reward will be paid to any person giving such information as shall lead to the apprehension and conviction of the offender. Information to be given to Mr. George Gifford, Langham, or to Superintendent Dault, County Police Station, Colchester." I was told, however, that the circumstance to which the notice referred occurred before any disruption took place between the farmers and the labourers. The farmer expressed his opinion that much of the present trouble was owing to the "schoolin'." It was a difficult matter now to get a boy to work on the land at all. What with heavy rates, heavy rents, and increased wages the farmer did not know what to do, and it was time the landowner took a share of the burden. Twenty men were locked out in the Manningtree district. Several men had given up their tickets at Bromley Lawford and Ardeleigh and returned to their work. Capital, another farmer said, would beat labour any day. Around Bury they are paying 2s. a week less than in Essex, notwithstanding the agitation of a couple of years ago in

Suffolk. In the Tendring Hundred about 10 per cent. of the men have joined the League. He gave all his men clearly to understand he should not employ a member of the League. If they joined they were at once discharged. The rules of the League, he said, plainly told the men they could work on at their present wages until hayseal, when they would strike at a time when they could not be spared, for 3s. or 4s. a week more. The object of the League was to make the men dissatisfied first and then make them emigrate, thus getting a profit out of them. A profit would also be got out of the philanthropic public. "So you see," he added, "the knife cuts both ways."—*Essex Telegraph*.

**THE CHILTERN HILLS.**—Toiling up Caversham Hill with a ghastly chalk-pit on one side, and a Stoke-Pogis-looking old church on the other, you begin to realise the graceful undulations of the Chiltern Range. The neighbourhood of Reading being eligible for building sites, land owners seem purposely to have deformed its natural beauty by cutting down the trees. In less than a mile, however, you escape from this bareness. The road first becomes a picturesque avenue. Then you remark that the woods close in on your path, like the Russian cannon at Balacklava, to the right and left. At last you are fairly immersed in the beech-woods and can imagine yourself Robinhood, Friar Tuck, or, if in a loftier vein, Sir Gawain on a wild-goose quest. We term this tract of country, in accordance with its own modest pretension, the beech-woods. It would, however, be far more accurate to designate it forest; for a noble forest it is, stretching from Whitechurch, opposite Pangbourne, right away to Stokechurch in Buckinghamshire, its greatest latitude being about eight miles, between Henley and Nuffield. The soil is for the most part chalk and flint, with oases of gravel. The population is abnormally sparse; but the pheasants and hares, being much the reverse, attract gangs of poachers, whose nocturnal enterprise helps to supply Leadenhall Market. The first place of consideration you pass along the road is Cane End, the seat of H. Vanderstegen, Esq., who has inherited the acres of the Brighams, an ancient and honourable county family. If you were Sir Boyle Rochie's bird, and could be in two places at once, you might, without severe locomotion, catch a glimpse of Hardwick, a genuine Elizabethan mansion, the property of Mr. Powys-Lybbe, the representative of another good old stock; or of Blount's Court, so called after the Blounts, who still adhere to their ancient habitation, and moreover to their ancient faith. In fact, Chilternia is covered with armigerous folk who have never made up their mind to sell manorial rights, which every fresh decade becomes more and more prized and precious. From Cane End—still following our guidance—you walk through a leafy paradise to Woodcote, where you get a peep of the Berkshire Downs and the White Horse Range. From thence, a short half mile, to Checkendon, a handsome church of Norman outline, containing a splendid mediæval brass of Sir E. Rede. Having satisfied your archaeological lust, if you have any, Shanks's mare is gently spurred, and you march off to Scots Common, the loveliest spot, beyond doubt, in this line of territory. To call it a common seems a mere façon de parler. It is indeed a golconda of greenery, such a bit of foreground, as would rejoice the heart of Mr. Vicat Cole. At the entrance of the farmyard abutting on the common stands the shell of a giant oak, planted, at a guess, by some Saxon ere ever Bassett the Norman constituted himself lord paramount of these hundreds, or Marmyon, the king's cup-bearer, to be afterwards immortalised in poetry, perhaps by virtue of his euphonious name, cribbed the adjoining liberty of Stoke. In passing by the Ipsden woods, second to none in density and variety of foliage, you come upon a queer three-cornered plot, styled the "Devil's Churchyard." The monks, so runs the legend, had a fancy to remove Ipsden Church, which lies two miles west in the valley, and they did accurately commence a new edifice on this very spot. Mephistopheles, however—who we suspect was a Norman of the Bassett variety—took what there was of the new church bodily and popped it down in its present position. Hereabouts, if you could only reproduce the legends destroyed during the wild excesses of the Reformation, would be found plenty of historiettes of older England. For, on the adjoining promontory of hill-land called Berrins Hill,

after St. Birinus, founder of Dorchester Abbey eight miles distance along the Oxford road, was a Roman station, the present evidence whereof is well, whereunto as they say, hangs a tale. \* \* \* No marvel that Birinus pitched his tent in view of this splendid panorama rivalled only perhaps by the delicious view of the Otmoor vale from the altitude of Elsfeld. Before you lies the valley of the Thames, meandering by Goring, Moulsoford, Mougewell, or St. Mungo's Well—wells in this district were of yore more prized than rubies—Crowmarsh Gifford, Wallingford, Bensington. In the farthest distance range the Cotswolds, a bleak desolate region, with Camnor Hurst, like a tall sentry guarding their van. To the left behind the river towers Streasley Hill, whilst in the foreground beneath your feet nestles the exquisite village of Ipsden, the birthplace of Charles Reade; and apart, in solitary dignity, the lowly parish church, where lies buried his gifted and adventurous nephew, who tempted the African desert just once too often. Well, if Shanks be not tired with this nine miles of easy strolling amid the purest of pure atmosphere, you can right-about-face and walk back, via Stoke Row and Witheridge Hill, to Henley-on-Thames, whence the Great Western Railway will convey your carcase townwards; or, if you prefer a briefer route, strike across country to Goring station. At Henley, however, we can promise you the excellent hospitality of the Red Lion; whereas Goring—a sweet spot for fishing—does not offer the delicacies of Lucullus, or, indeed, ought edible except bread-and-cheese.—**COMPTON READE**, in *Belgravia* for March.

**HORSE SHOW AT CAMBRIDGE.**—Lately a large and well-attended show of entire horses was held in Mr. Moyes's Field, Hills-road. The competition was open to all England; and a prize of a silver cup given by the Hon. Eliot C. Yorke, M.P., with £25, was offered for the best cart stallion. This class, No. 1, attracted the largest number of entries (the age being fixed at three years and upwards) no less than 22 being in the catalogue. Not only was this the largest class, but it was pronounced by competent judges to be the best. The first prize, £25 and cup, was awarded to Mr. Alfred Richardson, of Torpey House, Nepal, for his bay horse Young Samson, five years old, by Samson. He was sold at the conclusion of the show to Mr. Street, of Somersham, for £500. The second prize was awarded to Mr. H. Bultitt, of Bedwellhay, Ely, for his bay five-year-old King Tom, by Honest Tom, bred by the exhibitor. There was a close run between this horse and the one to which the "reserve number" was given—a bay six-year-old, exhibited by Mr. Henry Stanley, of Bury St. Edmund's. Mr. Drage Camps, of Haddenham, was highly commended for his bay horse King of the Fens, five years old. Two animals were commended—Mr. Thomas Briggs's (of Braham) Heart of Oak, another bay, five years old, who was awarded the prize as the best horse in the yard at Bedford, in 1874; and Mr. Henry Cockle's (of Hilrow), Honest Tom, a dark brown horse, five years old, bred by the exhibitor. In Class 2, for cart stallions under two years old, one prize (£10) was offered, and was awarded to Mr. Joseph Martin, of Highfield House, Littleport, for Ajax; he also receiving "reserve" for Hector, both horses being by Hercules, and bred by the exhibitor. There were three other entries. There were nine entries of nag stallions. Mr. William Wilson, of Wormley, Herts., taking the prize (£15) with his bay horse Hotshot, 13 years old; Mr. Thomas Grainger, of Haddenham, was selected for the "reserve number" with his dark bay five-year-old, Young Perfection, and Mr. J. B. Wilkinson, of Godmanchester, was highly commended for his Mulletto, a black-brown horse, four years of age. On the whole the show was a most successful one, and will, most probably, not be the last of its kind in Cambridge.—The judges were—Class 1 and 2: Mr. Plowright, of Manea, and Mr. Manning of Northampton; Class 3, Mr. F. Gordon, Thorn Haw, Wausford, and Mr. Bennett, Husband Bowick, Rugby.

**SOUTH DURHAM AND NORTH YORK CHAMBER OF AGRICULTURE AND THE VALUATION BILL.**—A meeting of this Chamber was held at Darlington, Mr. J. Feetham in the chair, to consider the Valuation Bill.—Mr. Hodgson explained some of the alterations in the proposed bill; and was followed by Mr. Graham, of Staindrop, who objected to the appeal to Quarter Sessions, thinking there should be instead financial boards. He had been greatly annoyed at this Valuation Bill, especially to see that the surveyor of taxes was set over the assessment committee. He

thought that if this were persisted in the assessment committees would take no part in the matter. Like the Agricultural Holdings Bill, this Valuation Bill was an absurdity. He held that the farmers should combine together and then they would make themselves a power in the country. It would be necessary at another election to vote for measures, not men. They would have to look after the agricultural interests, as every other profession was represented in Parliament but that.—Mr. Rowlandson said that the Surveyor of Taxes might summon the Assessment Commissioners to any place as often as he chose. He had no objection to the surveyor of taxes sitting as other members, but not with the omnipotent powers which were conferred upon him by the bill. Mr. Pease had written to him to say that such was the dissatisfaction with the bill that he did not think it would pass. If any simpleton chose to give double the value for a farm, then it was in the power of the surveyor to place the same valuation upon another farm adjoining, which might not pay more than half

the first one. He moved the following resolution: "That this meeting, while approving of the uniformity of assessments, strongly objects, first, to the arbitrary powers proposed to be conferred upon the surveyor of taxes by the Valuation Bill; secondly, to the provision making the annual rental the minimum of gross value; thirdly, to the courts of final appeal. It also further objects to any bill on this subject being passed until we have properly constituted county financial boards, checked by the ratepayers, to which boards appeals could be made instead of the Quarter Sessions."—Mr. C. Middleton seconded the resolution.—Mr. Wooler said he would hardly trammel the question with county boards. This bill struck at the root of their liberties.—Mr. Coates also opposed the bill.—On the result being put it was carried unanimously.—Mr. C. Middleton moved, and Mr. Graham seconded, that five guineas be voted to the Clare Sewell Read Testimonial Fund, which was agreed to, and the meeting adjourned.

### THE AGRICULTURAL RETURNS.

The Agricultural Returns for 1875 have been issued recently, with the usual interesting summary by Mr. Valpy prefixed. They give, like their predecessors, much valuable information as to the state of the country in what is still its most important industry, and would be yet more valuable than they are were cultivators of land conscientious in sending in their returns. Considerable improvement has been effected in recent years in that respect, but much is still wanted to make the information perfectly complete and trustworthy. No doubt as farmers become more alive to their duty in this respect this ground of complaint against them will be removed. Were it not, however, borne in mind in dealing with these returns, we should be misled at the outset, for we find that the total acreage returned for the United Kingdom as under cultivation showed an increase in 1875 over 1874 of 171,000 acres, and the increase against 1868 was no less than 1,659,000 acres. Were that all due to reclamations of waste lands, enclosure of commons, and such like, it would be a most remarkable fact in more ways than one. But it is not due to any such activity, at least not anything like wholly due to it. Probably the larger part of this seeming increase is owing to more thoroughness on the part of cultivators in sending in their returns. At the same time the reclamation of waste lands has no doubt proceeded at a rapid pace. High prices and the ever-increasing press of the population make that a matter of course. As returns should be sent in from every separate holding of cultivated land above one quarter of an acre in extent (except gardens and allotments), exactitude in filling up the information required ought to enable a most accurate gauge to be taken of the yearly increase. Until that is attained the matter must remain to a certain extent guess-work.

The total quantity of land returned as under crops or in bare fallow and under grass in 1875 was 31,416,000 acres for Great Britain, and 15,775,000 for Ireland. For the whole of the United Kingdom, including the Isle of Man and the Channel Islands, the cultivated area was 47,314,000, exclusive of heath, mountain pasture-land, woods, and plantations. Of the total for Great Britain alone 18,104,000 acres were arable land, which was about the same as for 1874, but a decrease of 325,000 acres as compared with 1872. The pasture-land has, of course, more than proportionately increased, but it must not be concluded from this that cultivation of cereal or other crops is rapidly on the decline, and cattle-breeding on the increase. The altered figures are due in this case also, Mr. Valpy says, "to more correct returns and to new enclosures of down or open pasture lands." Of the 11,399,000 acres returned as under corn crops in the United Kingdom, 3,514,000 were appropriated to wheat and 4,176,000 to oats; barley, beans, and peas taking up the rest in unequal proportions. Wheat grew on 41 per cent. of the corn-land of England, 8 per cent. in Ireland, and only 7 per cent. in Scotland; but it formed 83 per cent. of the corn crop of Jersey and 44 of that of Guernsey. Oats formed only 19 per cent. of the corn crop of England, but it was 71 per cent. of that of Scotland, and 78 per cent. of that of Ireland. Turnips occupy the principal place among the green crops, of which a total of 5,057,000 acres was grown. There were 150,600 acres returned as orchards

in England, but the orchard-land of Scotland reached only 1,449 acres—a contrast due, perhaps, as much to difference in the habits of the peoples as to climate. Nursery gardens are in extent more in accordance with the wants of the populations of these two parts of the kingdom, but Scotland here also lags behind. Woods and plantations occupy 2,187,000 acres in Great Britain, of which 1,325,765 acres are in England, 734,490 in Scotland, and the rest in Wales. Ireland has 325,173 acres in timber-lands.

The total stock of horses in the United Kingdom is computed at 2,700,000, including horses subject to licence duty, and of that number 526,000 are placed to the credit of Ireland. Considering the enormous quantity of butchers' meat which is now consumed weekly in the country, it is almost surprising that the total stock of cattle of all ages in the kingdom is but 10,162,728, of which 4,111,990, is in Ireland. There are, however, 33,491,948 sheep and lambs, and 3,495,167 pigs, exclusive of those kept in towns and by cottagers, so that the number of live animals of all the kinds used for food is nearly double the number of the population of all ages. There are, however, considerable importations of both horses and cattle, which appears to show that the home stock is in neither case up to requirements. The class of horses used for agricultural purposes has only increased about 12,000 in five years over Great Britain, while in Scotland alone the number has slightly decreased. The chief increase in horses is among the classes kept for breeding and unbroken horses, which have increased from 314,000 in 1871 to 388,000 in 1875. A good many horses are brought to England from Ireland, but not so many now as there were some years ago. We export a few horses, but in the past year nothing like the number imported. What we do export are, however, about twice as valuable as those we buy, the average price in the one case being about £77, and in the other £37 per head. The stocks of neat show last year in several instances some reduction in quantity over those of 1874. The number of cows and heifers in milk or in calf was less by 20,000, and the young stock of animals under two years of age had fallen off by 168,000, but there was an increase of 76,000 in the chief beef-producing class of stock. Taking the years 1874-5 together, and comparing them with 1869-70, there is, however, a general increase, varying from five per cent. in the case of cows and heifers to 22 per cent. in the case of young stock. The reduction in this latter class in 1875 is attributed to the severe winter of 1874 and the consequent scarcity of fodder. This scarcity has also had a most marked effect in diminishing the stock of sheep and lambs, which was less by 1,146,000 last year than in 1874. The lambing season, too, was said to have been unfavourable, particularly in the hilly districts.

Some interesting notes are made, as usual, on the agricultural returns of the Colonies and one or two foreign States. They are not, if we except some of the Colonies, sufficiently accurate or minute for purposes of comparison, but their information is interesting. We find, for instance, that the Australian Colonies, including Tasmania, but excluding New Zealand, with a population of about 1,891,000, have an area of 3,245,000 acres under cultivation for all kinds of crops. This is in the

proportion of about  $1\frac{1}{2}$  acres to every head of the population. Of this total, about 1,823,000 acres are under corn crops, more than three-fourths wheat. New Zealand has a large area under permanent artificial grass, and the proportion in which land is cultivated varies considerably for the different Colonies. Victoria, with a population of 808,000, had in 1874 a cultivated area of but 1,012,000 acres, while South Australia has only 205,000 people, with a cultivated area of 1,330,000. South Australia gives as large an average of wheat as all the other Australian Colonies put together, New Zealand included. Few other grain crops are raised regularly, or to a large extent, except oats, which occupy a considerable acreage in New Zealand and Victoria. All these Colonies together had 1,527,500 acres under wheat in 1874, or rather more than half the acreage grown in the United Kingdom. The produce was last year about 21,000,000 bushels; they are therefore in a position to be considerable exporters of grain, and will, no doubt, come more on the markets of the world in that capacity. Cotton-growing in Queensland does not seem to make progress, nor is there any increase in the acreage under vines. The returns of the South African Colonies are mostly too varied in date and too remote to be of any value, those of Cape Colony being only given up to 1865, while Natal, with commendable promptness, gives its returns up to 1871. Maize is the chief crop of the latter colony, and it also cultivates 8,000 acres of sugar-cane. Cape Colony, on the other hand grows mostly wheat, but had also in 1865 16,000 acres of vineyards, or 1,000 acres more than Australia. Canada, again, is rather backward in its agricultural information, the latest returns being for 1871, according to which the Dominion produced 16,724,000 bushels of wheat and 42,000,000 bushels of oats. The average production of wheat per acre appears, so far as the Australian group of the Colonies are concerned, to range highest in New Zealand, where it was 28 bushels per acre; and it was lowest in South Australia, reaching only  $11\frac{1}{2}$  bushels. Nearly one-half the stock of cattle in Australia belongs to New South Wales, which has 2,857,000 head out of a total of about 6,000,000; Queensland comes next, and after it Victoria. New South Wales alone had more cattle in 1874 by 233,000 than the whole Canadian Dominion in 1871. It is in sheep, however, that the great wealth of the Australian colonies consists; their flocks having attained the prodigious number of 61,650,000 in 1874, an increase of 3,600,000, or 6 per cent. over the previous year. New South Wales possess 23 millions of this total, Victoria more than 11 millions, and the other colonies own from 6 to 7 millions each. The value of the wool exported from these flocks to the United Kingdom reached £16,000,000 last year, and its weight was 239,000,000 lb. None of the other colonies possess anything like the same wealth in sheep except the Cape of Good Hope, which had 10,000,000 head in 1865; and the only foreign countries that have large flocks are Prussia, France, and Russia. According to these returns, the flocks of both France and Prussia show a considerable decrease since 1866. —*Times*.

## “THE WOOD-PIGEON AND ROOK NUISANCES.”

The protest against wood-pigeons and rooks, of which we read in *Land and Water* of the 4th inst, is deserving attention, having been signed by landlords as well as influential tenants in Easter Ross, and addressed to the landowners of the district. There can be no question that it is the result of very serious grievances, and that the charges made against the rooks can be fully sustained, but we submit that they cannot with justice be said to be “at all seasons most injurious.” Not only is the statement incorrect, but it ignores the existence of an evil over which we have very little control—the depredations of insects, which, were they not kept in check, would doubtless destroy every cultivated plant of the farm. This result is effected by our feathered friends, foremost among whom is the rook. We do not wish to make light of the mischief they effect at seed-time and harvest, or when the young plant is in its seed-leaf: they are too palpable to be overlooked, but they may in great measure be prevented, or at all events be reduced to a minimum, by care and attention. What we wish to point out is, that during the remainder of the year they subsist mainly on the farmer's greatest enemies—insects. There are

probably few of us who have not seen rooks busily picking up wireworms which have been driven to the surface of the ground by a judicious application of the ring-roller in the spring of the year; picking off grubs (larvæ of the crane fly) from the young mangel plants; following the plough and devouring the many forms of insect life (in a larva or pupa state) then exposed to the light of day; searching carefully over the fields, digging here and there; doing no perceptible harm and a vast amount of imperceptible good; in fact, while their misdeeds are too evident, their good services are often overlooked and seldom thoroughly understood. We do not for one moment wish to assert that the agriculturists of Easter Ross are not justified in wishing to reduce their numbers, but we are anxious to enter our protest against the classification of rooks with wood-pigeons. Of the latter it may truthfully be said, in the terms of the protest, that “the injury done by them can be imagined;” but we fear not fully described. They do not dig up the seed-corn itself, after the manner of rooks, but leguminous plants are subject to their attacks as soon as they appear above ground. Everybody knows how they can deal with turnips, and they have a way of picking out the hearts of clover plants peculiarly their own. At seed-time and harvest they thoroughly eclipse the rooks in the extent of their depredations; and after many years of careful observation we are unable to credit them with one single redeeming feature. We look upon them as a bye-product of the preservation of game. Gentlemen are unwilling to have their coverts and woods disturbed in the breeding season for the purpose of destroying wood-pigeons. If they knew how large a proportion of the barley, &c., put down in the preserves for the pheasants was consumed by the wood-pigeons, perhaps their keepers would receive orders to take effective means for their destruction (which would be very simple), but we doubt if they would be carried out: keepers have their own reasons for a policy of *laissez-faire* when rabbits and wood-pigeons are in question. Unless landowners who are game preservers can be brought to see that it rests with them to relieve agriculture from this great incubus, we are likely to remain subject to it, for if the wood-pigeon be not destroyed in the egg, or in the nest *before* he can fly, the chances of the farmer being able to destroy him afterwards are somewhat apocryphal. We trust, in this respect, the cry from Easter Ross will receive the attention it deserves. Our object in the foregoing remarks has been to do justice to our old friend the rook, and to avenge the insult conveyed by the association of his name with that of the wood-pigeon.—G. T. T.

## CATTLE IN THE NORTH OF ENGLAND EIGHTY YEARS AGO.

An extract from a report of J. Bailey and G. Calley to the then existing Board of Agriculture, respecting the breeds of cattle in Northumberland eighty years ago, runs thus:

The different kinds of cattle bred in this county are the Short-horned, the Devonshire, the Longhorned, and the wild cattle. The Short-horned kind have been long established over the whole county, the other kinds are found only in the hands of a few individuals, who have introduced them with a laudable view of comparing their merits with the established breed of the country. They differ from the other breeds in the shortness of their horns, and in being wider and thicker in their form, consequently feed to the most weight; in affording the greatest quantity of tallow when fattened, in having very thin hides, and much less hair upon them than any other breed (the Alderneys excepted); but the most essential difference consists in the quantity of milk they give beyond most other breeds—there being instances of cows giving thirty-six quarts of milk per day, and of forty-eight firkins of butter being made from a dairy of twelve cows; but the more general quantity is three firkins per cow in a season, and twenty-four quarts of milk per day. The colour is much varied, but they mostly are an agreeable mixture of red and white. From their being in many places called the Dutch breed, it is probable they were originally brought from the Continent. They have been much improved of late years by the exertion and attention of enterprising breeders, who have already improved them so far as to be sold fat to the butchers at three-and-a-half years old. The weight of the carcass is in general from 69 to 80 stone (1 lb.

to the stone), but there are instances of individuals attaining much greater weight. Sir H. Grey bred and fed two seven-year-old oxen that weighed 152 stone 9lb. the four quarter only; and a spayed heifer, 132 stone 6lb. ditto. Mr. Smith, of Togstone, a cow, 127 stone 11lb. ditto. But large size is not now considered as an excellence—quick feeders, that lay their fat upon the most valuable parts, and have the least offal in the coarse parts, are the kind which every enlightened breeder wishes to be possessed of. The Longhorns have been introduced from the improved stocks of the Midland counties, at different times and by different breeders, but have in most instances given way again to the improved breeds of Shorthorn. The Devonshire breed is only in the possession of Walter Trevelyan, Esq., of Nether Witton, who introduced them about three years since: their offspring has not yet got to a proper age to form a judgment of their comparative merits. The wild cattle are only found in Chillingham Park, belonging to the Earl of Tankerville; and as it is probable they are the only remains of the true and genuine breed of that species of cattle, we shall be more particular in our description. Their colour is invariably white, muzzle black; the whole of the inside of the ear, and about one-third of the outside, from the tip downwards, red; horns white, with black tips, very fine, and bent upwards. Some of the bulls have a thin upright mane, about an inch and a-half or two inches long. The weight of the oxen is from 35 to 45 stone, and the cows from 25 to 35 stone the four quarters—14 lbs. to the stone. The beef is finely marbled, and of excellent flavour. From the nature of their pasture, and the frequent agitation they are put into by the curiosity of strangers, it cannot be expected they should get very fat; yet the six-year-old oxen are generally very good beef, from whence it may be fairly supposed that, in proper situations, they would feed well. This county cannot boast of its dairies; those who live in the vicinity of Newcastle and other populous places make a handsome return by the sale of milk, fresh butter, &c., but upon most of the large farms of this county dairies are not held in much estimation. Breeding young cattle is practised in almost every part of the county. Upon the large farms cows are kept more for this purpose than the profit of dairying: there are instances of fifty or sixty cows being brought up in one season, by one farmer, who did not milk more than fifteen cows. Calves are certainly best reared with milk, but where such numbers are bred many different things have been mixed with, or substituted for, this nutritive and natural diet. Oats and bran-meal, oilcake, luscad, boiled turnips, &c., are used, and have their various advocates; but luscad is most approved. Eggs are excellent for mixing in the calf's food; when cheap, in the spring, perhaps they cannot be better employed. In the summer the calves are turned to grass, and in the first winter get turnips and straw. After being a year old, they are kept in summer on coarse pasture, and in winter on straw only. Hiring bulls for the season is practised in this county; as high as fifty guineas have been paid for a bull of the Short-horned breed for one season, and from three to five guineas given for serving a cow, but the more common premium is a guinea.

**PIECE WORK.**—At a meeting convened by the Social Science Association there was a discussion on the piece work as compared with time work. Mr. Leonard H. Courtney occupied the chair, and Mr. Frederick Hill, late of the Post-office, read his paper on the subject above mentioned. From his statement it appeared that Mr. Hill was in favour of piece work, and stated that the opponents of payment by piece instead of by time seemed to found their opposition in a great measure on a belief that this system tended to reduce the number of persons employed, and as regarded a large portion even of those who did find employment to keep down their wages. He held this belief to be without foundation, and the fallacy appeared to be based on the assumption that the quantity of work to be executed in every kind of manufacture was fixed, as also the sum of money to be divided among the workpeople. But experience showed that this was so far from being the case that both the quantity of work and the payment for it were capable of vast and indefinite extension. Mr. Mandella said the question was whether piece work was desirable or not. It had been assumed that it was desirable and good for the operative consumer, but that the

trades' unions and working classes generally were opposed to it. This assumption was as wide of the mark as could be any misrepresentation made to the working classes, who were being constantly misrepresented. He was an advocate of piece work. Of the 240,000,000 of exports from this country fully 90 per cent. was the result of piece work. Our textile fabrics, iron and steel manufactures, haberdashery, and cutlery were all produced by piece work. More piece work was done in England than any other country, and this had been the main cause of her market prosperity. The further it was carried the better it would be for every one concerned. All that was needed was an amicable arrangement between employers and working men. Piece work could not be always resorted to, and time work should be in such cases adopted. In conclusion, he must protest against the injustice done to working men by the statement so often made that they protested against piece work.—*Times*.

## BATH AND WEST OF ENGLAND SOCIETY

### AND SOUTHERN COUNTIES ASSOCIATION.

At the usual monthly Council Meeting of the above Society, held at the Grand Hotel, Bristol, the chair was taken by Sir J. W. Walrod, Bart. There were also present Messrs. R. Bremridge, J. Gray, and J. C. Moore-Stevens, Vice-Presidents; Messrs. C. T. D. Acland, R. H. Bush, W. R. Crabbe, T. Danger, John Daw, R. R. M. Daw, T. Duckham, Colonel W. R. Gilbert, Rev. John Goring, J. D. Hancock, H. M. Holdsworth, H. P. Jones, J. W. King, Colonel Luttrell, Henry St. John Maule, Henry Mayo, J. Murch, R. Neville, S. P. Newbery, James Quartly, Trevor Lee Senior, Henry Spackman, Joseph Stratton, W. Thompson, W. Whippell, and J. Goodwin, Secretary and Editor.

**THE MEETING OF 1877.**—Mr. Gray, as Chairman of the deputaion appointed to visit Bath, with reference to the centenary meeting in 1877, reported in favour of Mr. Butler's farm, near the Bear Inn, Holloway, as the site for the Society's Show Yard, but left the selection of fields for the trial of implements an open question; and the report having been accepted and approved by the Council, the Field Stewards undertook by the next meeting (April 25th), to furnish a supplemental report on several matters of detail. The arrangement for the Society's visit to Bath may therefore be taken as finally settled, Holloway Farm being the site for the Show Yard.

**THE LATE MR. GABRIEL STONE POOLE.**—Sir J. W. Walrod, speaking under the influence of deep emotion, said he hoped the Council would allow him, as an old friend of the late Mr. Poole, to express their deep regret at the sad intelligence of his removal from among them, and to propose that they join in an expression of sincere sympathy with Mrs. Poole and family. Mr. Poole, until his late illness, was a very constant attendant at their meetings, and he (Sir J. W.) did not think there ever was a gentleman among them who brought to bear more good sense, practical knowledge, and good temper on the various matters that came before them for discussion. His loss would be very deeply felt not only as a citizen of the world, and an enlightened philanthropist, but as a member of the Council of the Society, holding several important offices, and discharging all his duties with exemplary ability, conscientiousness, and courtesy.—The resolution was seconded by Mr. Gray, and passed amid expressions of deep feeling, and the Secretary was directed, at the proper time, to communicate the same to Mrs. Poole and the family.

**NEW MEMBERS.**—Mr. F. Platt, Sugwas Court, Hereford; Mr. H. J. Taylor, Holmer, Hereford; Mr. Thompson, Breinton, Hereford; Mr. John Spencer, Bowood, Calne.

**MALT AND BARLEY.**—Mr. Locke, M. P., has obtained a return, printed on Wednesday, from which it appears that in the year ended the 31st of December last there were in the United Kingdom 58,139,529 bushels of malt charged with duty, amounting to £7,884,378 6s. 7½d. In England the duty was £7,078,235 13s. 4½d.; in Scotland, £368,406 0s. 11½d.; and in Ireland, £437,646 12s. 2½d. The quantity of barley imported into the United Kingdom in the year was 11,049,476 cwt. being equivalent in quarters to 3,093,853.

## HIGHLAND AND AGRICULTURAL SOCIETY.

## AGRICULTURAL EDUCATION.

In 1856 the Society obtained a supplementary charter, under which it is empowered to grant diplomas in agriculture. The first examination took place in 1858, and since that period twenty-nine gentlemen have passed for the diploma, and eight for certificates. With the view of popularising the examinations, the Society has seen cause from time to time to alter its bye-laws, and those at present in force (which embrace for the first time two classes of certificates) were confirmed at the general meeting in June last. The diploma examination is open to candidates who have completed their twenty-first year; the first-class certificate examination to those who are not less than eighteen; and the second-class certificate examination to those not less than seventeen years of age. To pass the "second-class certificate examination" a candidate must be acquainted with the principles and practice of agriculture, agricultural chemistry, surveying and farm engineering, and farm accounts; to pass the "first-class certificate examination" a candidate must be acquainted with the subjects of the second-class certificate, and any three of the following subjects: botany, geology, physics or mechanics, meteorology or climate, natural history, and veterinary practice. To pass the "diploma examination" a candidate must possess a thorough knowledge of the theory and practice of agriculture, of mechanics and mensuration, of the physiology and treatment of domesticated animals, and of the application of botany, chemistry, and

natural history to agriculture. Sixteen gentlemen enrolled their names, and fifteen presented themselves for examination. The examination resulted in the following passing:

*For Diploma.*—1. Mr. R. Lang Anderson, Milliken Park, Renfrewshire; 2. Mr. Archibald A. Ferguson, Gosfield, Essex; 3. Mr. John Arthur Maconchy, Rathmore, Aghnaccliffe, Co. Longford; 4. Mr. Alexander Sutherland, Ramyards, Watten, Golspie.

*For First-class Certificate.*—1. Mr. Cecil C. Baker, 2, Bloomsbury-place, London, W.C.; 2. Mr. Robert Carr, Feikington, Northam; 3. Mr. Percy H. Cathcart, 16, Oakley-square, London, N.W.; 4. Mr. John McCaig, Killhilt, Stranraer; 5. Mr. C. E. M. Russell, Ballielisk, Dollar.

*For Second class Certificate.*—1. Mr. Andrew Catton, Conston, Aberdour, Fife; 2. Mr. John Fleming, Coates, Penicuik; 3. Mr. W. J. Murray, Mailingsland, Peebles; 4. Mr. John J. Sharp, Leaston, Upper Keith.

The several examiners were as follows: 1. Professor Wilson, Mr. Hope (Bordlands), and Mr. Milne (Niddrie Mains), for the science and practice of agriculture; 2. Dr. Balfour, for botany; 3. Dr. Aitken, for chemistry; 4. Dr. Stirling, for natural history; 5. Professor Williams, for veterinary surgery; 6. Mr. David Stevenson, C.E., for field engineering and surveying; 7. Mr. Kenneth Mackenzie, C.A., for book-keeping and accounts.

## THE SELECTION OF ROOT CROPS FOR THE COMING SEASON.

Clay-land farmers have before them a season of unusual difficulty. Not only is work of all kinds sadly in arrear, but the position is rendered still more unfortunate by the fact that the strong retentive clays have not had the influence of dry frosts upon them, and are in consequence in a cold, tough, unworkable condition. The disintegrating action of frost is the one condition, above all others, upon which the successful cultivation of heavy land in the spring of the year can be based, and no amount of labour can take its place; in its absence, a few hours' wind and sun often suffice to change the wet clay into something very like brick. We have too often been unable to roll land that has proved too wet one day, and too hard the next. Drainage and good farming are the only ameliorating influences that can be brought to bear upon such land as this, and meanwhile we must do the best we can with it. The few fine days with which we have hitherto been favoured have overwhelmed us with work, so that one scarcely knows what to do first. With the season so far advanced there can be little doubt but that our arrangements, in many instances, will have to be recast, and the elements have in a very remarkable manner forced us into a course of action we might otherwise have been slow to adopt. As in the autumn, so again in the early spring, the constant succession of rainy days have not only hindered work, but have positively prevented the sowing of wheat to a very considerable extent, and much of the pulse and lent corn has been badly sown, or will be sown late. Under these circumstances we are inclined to think there will be a larger acreage of root and fodder crops grown this season, on such farms as have been thrown out of gear by the adverse influence of the weather. Many will probably adopt some such plan, on the principle of good roots being preferable to indifferent corn, but others will prepare for larger stock operations than usual, in more direct accordance with the requirements of the times, and, while contemplating possible financial difficulties, try to derive consolation from the fact of their

having been in a measure forced into such course of action by "circumstances over which they had no control." But, whether our surmise prove to be correct or not, the present is an appropriate time to offer a few practical remarks to the readers of *The Mark Lane Express* with regard to the selection of root crops for the coming season.

It has become a well-attested fact, that the difficulties attending the cultivation of turnips and swedes have greatly increased during the past twenty years, and are still increasing. In many districts these crops have become so uncertain that farmers are beginning to try others in their place: from the time the seed is deposited in the ground until the bulb is ready for consumption they are exposed to the depredations of insects whose name may rightly be called Legion; and should they live down all these, there are many species of fungi which attack them at various stages of their growth. The disease called "anbury," supposed to be fungoid, has become exceedingly prevalent in some localities, in others the bulbs are covered with the gall-like excrescences of the "turnip-gall weevil" and taking these two afflictions only, as illustrating our subject, it appears to us that in such localities the soil may have become full of the spores of the fungus in the one case, and of the pupæ of the insect in the other, thereby perpetuating the disease and pest, rather than that the soil has become "sick" of the plant. We do not of course imply that the prevalence of insect pests has ever been attributed to the absence of any of the constituents of plant-food in the soil, but mention it in connection with "anbury" because that disease has been attributed to the cause just cited. No doubt plants would become more susceptible to the attacks of fungi if any important element of nutrition were withheld from them, but the fungus must exist before it can attack them, and by repeatedly growing the plant it affects we simply multiply the fungus itself. We shall be glad to hear the opinions of others on this matter, which to us appears to be of great importance. If it can be sub-



stantiated, it is in itself a powerful reason for substituting other plants for the turnip and swede in the localities of which we have been speaking. But, whilst advocating such a change in such localities, we do not hesitate to express our personal reluctance to give up the turnip and swede to any great extent where such evils do not exist. We have the greatest appreciation of the kohl-rabi and cabbage, in their place as auxiliaries, or even as something more than that, but on heavy land, and indeed on all farms that are not devoted entirely to sheep, we prefer to have something like the usual relative proportion of turnips, swedes, and mangold as a basis for our operations. Agriculturists of all classes are indebted to Mr. Russell for the information afforded by him of his experience in the cultivation of the cabbage and its varieties. It will be strange indeed if we cannot all learn something from it—we hope a great deal; but we do not all live at Horton Kirby—many of us very far off, both literally and figuratively! and as the great majority of holdings in England are of medium size, and a large proportion of them on stiff and medium soils, suited and devoted to a "mixed husbandry," we cannot all of us follow Mr. Russell so far as we might otherwise gladly do. On such farms the requirements are very varied. In some instances sheep are not wintered at all, or a few only are bred; in others the resources are devoted to rearing bullocks, or to feeding bullocks, or to breeding, or to dairying; and under these differing circumstances it is evident very different provision must be made. Cabbages will not answer all these purposes; and if they would, there are other considerations which must not be overlooked. We have our straw to utilise and economise—a thing we are only just learning to do—chiefly by the aid of roots which have been taken off the land and stored. This leads to another question of great importance. We are indebted to Dr. Voelcker and other scientific gentlemen for careful analyses of our fodder plants, by which we have learned the exact amount of nutriment they severally contain, and this knowledge is of the greatest value; but in practice we find that a root—say a turnip—is of far greater value than its constituents would warrant us to suppose. So is straw. We are all familiar with that influence which farm-yard manure and marl has upon the soil, which is not due to its chemical composition—its *mechanical* action—and we are aware that a similar effect could not be produced by applying an exact chemical equivalent. It is the same with our fodder. We cannot feed an animal by giving it the chemical constituents of its food—91 per cent. of water, and the rest as per analysis, will not do in lieu of a turnip. The stomach of an ox is a very complicated affair, and must be *filled* before it will properly perform its functions. Hence we learn the very great utility of our *bulky* fodder plants of low nutritive power. Our own experience has led us to the conclusion that, whilst the value of fodder crops, other than roots, for consumption on the land by sheep, or for soiling purposes, is yearly becoming more pronounced as we improve in our agriculture, the importance of our mangolds, swedes, and turnips has increased in even greater degree as we learn how to use them properly.

We regard the chaff-cutter and root-pulper as the groundwork of mixed agriculture. On a medium-sized farm, where there is generally something of everything in the shape of live stock, great waste often occurs both in roots and straw from a reluctance to spend the extra

money in labour. Of course, if there is an absence of system in the way in which a farm is stocked, and things are bred and reared without a definite object in view other than simply to *grow* something, it can readily be understood that the animals should be allowed to "cut their own," to save trouble; but such instances get to be fewer each year, and we have no doubt the majority of our readers will coincide with our opinion that chaffed straw and pulped roots, properly mixed and, perhaps, slightly fermented, is the most economical manner in which these bulky fodder plants can be utilised.

All things considered, the mangold is probably the most useful root, not only in respect of its nutritive value, but as most affects our immediate subject, in point of being less subject to disease and injury. The cultivation of this root has very considerably extended during the last few years, and soils of very various natures have been found capable of producing remunerative crops. The North of England and Scotland do not appear suited in climate to the growth of mangolds, whereas swedes grown in these localities are of decidedly higher nutritive value than those grown in the southern counties. They are often of the greatest value in the spring, especially in a backward time, when a very awkward break is apt to occur in our supplies. The greatest attention should be devoted to lifting the crop. If the roots are pulled in an unripe state, in wet weather, and badly stored, they will retain their acid scouring properties for months; whereas if harvested when ripe, and in dry weather, and properly stored, they may be used with impunity almost from the first. Horses are very fond of them, and it has been our plan to give a few in the spring: they prefer to bite them rather than to have them cut. Next to mangolds, swedes are, in our opinion, most useful; nevertheless, it is at the expense of this crop and the turnips, that we may in many instances, and to a greater extent than heretofore, find it advisable to grow kohl-rabi and the varieties of cabbage. The former has many things to be said in its favour. It is safe from the greatest of all drawbacks to swedes and turnips—the "fly;" it can withstand drought; it can withstand the winter; it can be stored and above all, it can be transplanted. We noticed yesterday a few of these plants which had been transplanted among some swedes, which latter were covered with weevil galls; there were galls on the *roots* of the kohl-rabi plants, but not on the enlarged stems we call "bulbs" for convenience. The swedes were rapidly decaying from the effects of the injuries inflicted by the larvæ of the weevils, but the rabi plants were uninjured, neither had their growth been appreciably retarded. This is a matter deserving consideration, and speaks volumes in favour of the more extensive cultivation of the plant. A small seed-bed sown even now would probably furnish very useful material for filling up the gaps that will occur in our various root crops in the best of seasons, and many may think it advisable to drill a larger average than usual of this plant. We have found it invaluable for early lambs, and both the leaves and the stem are greatly relished by all kinds of stock. Unfortunately, rabbits and hares are especially fond of it. Of cabbage we have had comparatively but little personal experience, but have found them most useful in the small extent to which we have grown them. We hope to take a leaf out of Mr. Russell's book. On a sheep farm his plan represents a minimum amount of labour; but while the bulbous roots cost more in preparation for the stock, and in hauling or storing, they enable us at the same time to utilise our straw, haulm, and rough hay, by filling a larger number of large stomachs. We hope to find that mangold and kohl-rabi will be grown to a larger extent this season than usual.

G. T. T.

March 31st.



## THE MODE OF RELIEVING THE POOR IN HAMBURG.

The peculiar position which has been occupied by the small republic of Hamburg from the earliest times has had the effect of preventing that sharp line of demarcation from being drawn between public and private charity which exists in larger and less isolated communities. There is, therefore, no legal provision for the support of the poor, nor any system bearing a resemblance to the general operations of the English Poor-law. The relief being voluntary, there is neither a legal obligation on the part of the wealthy to contribute to any special fund, nor a legal claim on the part of the poor to assistance when destitute. Although local peculiarities have thus rendered poor-laws unnecessary, the relief of the poor has always occupied a large share of public attention.

The administration of charity, previous to the Reformation, was committed almost exclusively to the Romish clergy; but among the numerous beneficial changes introduced at that period was the system of parochial relief, which appears to have attained the end in view in a very admirable way. The intentions of the originators were carried out in a negligent spirit, so that towards the end of the last century the poor had become both demoralised and dangerous. To remedy these evils several influential citizens remodelled the regulations then to a small extent in force, and succeeded in devising a system for poor relief which, after serving as a model to several countries and towns in Europe, has been continued, in a somewhat modified form, down to the present day. With this organisation the town is divided into twelve districts, each of which is subdivided into six sections, each section being placed under the care of two overseers. In addition to its twenty-four overseers each district has a physician, two or more apothecaries, a nurse to attend the sick, and one or two messengers, according to the necessities of the various localities. Each district is also under the superintendence of an inspector; and the operations of the whole body are directed by a board of twenty-seven persons, composed of the inspectors or superintendents of the twelve districts, one of the managers of the general hospital, the lunatic and orphan asylums, and the workhouse, with representatives from the financial department of the town council, and presided over by a burgo-master and a senator. The overseers of the poor are elected for a term of three years by the inhabitants of the districts in which they live, whilst the superintendents are chosen for ten years by the General Board, and retire as their period of office expires. With these exceptions, the whole machinery is voluntary.

The practical working of the system may be thus briefly described: A committee, consisting of eight district-superintendents, meet together weekly to revise the lists furnished by the overseers of persons receiving or applying for permanent or temporary relief, and to decide upon the general nature and extent of the aid to be continued or granted. No statistics are available as to the actual number of persons relieved at their own homes, nor is it possible to distinguish able-bodied paupers from the aged and infirm. The importance of such statistics has, however, been long recognised; and measures are being taken which will remedy this defect in future years. The recipients of out-door relief constitute by far the largest number of the persons receiving public charity, and are estimated to vary between 4,000 and 5,000, according to the season of the year and the state of trade. Owing to the anomalous character of the Board as a

private and voluntary institution receiving considerable grants from the public treasury, it is difficult to arrive at an accurate account of the total sums raised and expended for public charity. A large amount of the fund thus required used to be raised by voluntary donations and legacies. When the public found, however, that the deficiency of private contributions was supplied by public grants, these contributions gradually decreased, and have latterly ceased altogether.

There are three public institutions in connection with the General Board for the relief of the poor—namely, the general hospital and the lunatic and orphan asylums, all of which have been endowed to a certain extent by bequests of property; but as these endowments are not sufficient to meet the claims made upon them, it is necessary to supplement them by contributions from the public exchequer, as is done with regard to the funds of the General Board. The inhabitants are under no legal obligation to support their poor relations, but it is only in exceptional cases that aid is given to such persons. The isolated condition of Hamburg when surrounded, as was formerly the case, by a wall, and accessible only by gates, which were closed at sunset, made it possible to carry out very stringent regulations to prevent the influx of persons who were liable to become destitute. Owing to the precautions taken, the city has always been much freer from vagrants and beggars than most localities of the same character. The principle adopted with reference to the chargeability of individual paupers is now uniform throughout Germany, having been regulated by the laws of November 1st, 1857, and June 1st, 1870. In conformity with the provisions of these enactments, every German in distress must be temporarily relieved by the authorities of the state or town in which he finds himself. Should a person in distress not be entitled to a settlement in a state or town where he is living at the time, which settlement is acquired either by a continuous residence of two years after the completion of his twenty-fourth year, by marriage, or by descent, the local authorities have a claim upon the locality to which he legally belongs for the reimbursement of the expenses that have been incurred for his relief. These laws have not been long enough in force to permit any reliable opinion being formed as to their practical working. The probable effect, so far as Hamburg is concerned, will be the accumulation of a great deal of poverty, which the laws hitherto in operation have effectually prevented.

The effect of the system, described by Consul Amesley, upon the welfare of the inhabitants in general may be said to be good, especially where the persons charged with carrying out the details devote a sufficient amount of attention and discrimination to the investigation of the various cases brought to their knowledge. The voluntary character of the organisation is commendable; and the extent to which the feelings of those in destitute circumstances are spared, and their self-respect preserved, deprives the system of public relief in Hamburg from exposure to those charges of inhumanity or favouritism which are so frequently brought against the administration of the Poor-law in England. Frugality, temperance, and foresight are general characteristics of the German people; and savings' banks, sick and burial clubs, and other forms of provision for old age and distress, are taken advantage of by a large section of the population, even where their means are so low as to render saving a matter of great difficulty.

## THE IRISH PRESS ON CATTLE DISEASE PREVENTION.

It is difficult to convince the meat consumer that free trade in foreign cattle disease has had nothing to do with the high prices he has been paying for his butcher-meat. Gradually, however, evidence is being accumulated to show that the introduction of foreign cattle disease is one of the main causes of that rise. Mr. James Howard, of Bedford, is the author of No. III. of a useful series of "Farmers' Papers," in which the topic of our meat supply is ably dealt with and elucidated by statistical tables and the discussion of collateral subjects. The pamphlet furnishes a good deal of evidence to prove that the rise in price has been produced by the importation of infection from abroad. It proves, for instance, that while twelve per cent. of foreign meat is imported dead, and consequently without the introduction of disease, only five per cent. of our annual consumption is imported alive, and with it those diseases which have so damaged the hopes of the producer of home supplies. The remedy for all this is stamping out and keeping out. To this we must come sooner or later, not only with rinderpest and pleuro-pneumonia, but with foot-and-mouth disease—considered by many good authorities the most mischievous of all. Mr. Howard considers the preponderance of scientific opinion and the evidence of facts tend to the conclusion that pleuro-pneumonia and foot-and-mouth disease are both of foreign origin. His arguments on this question are very clear and forcible, and his own opinion very definitely expressed. It is that these maladies are no more indigenous with us than yellow fever, leprosy, or cholera-morbus. Some of the facts cited in support of the contention are interesting to us. Thus, in certain remote districts of Ireland the foot-and-mouth disease never appeared. Again, Mr. R. O. Pringle, of Dublin, is quoted as stating that there are in Ireland many extensive cattle-rearing districts where foot-and-mouth disease is unknown, "simply because no strange cattle are ever taken into these parts of the country, the breeders being exclusively exporters." One of the most serious aspects of the situation to the mind of Mr. Howard is the grave danger existing that these maladies, having got footing among us, may become naturalised among our animals. This would mean the conversion of our healthy flocks into unhealthy ones, subject at any time to outbreaks of the contagious disease. Increasing acquaintance with the phenomena of epidemiology, or the study of infectious disease, shows that diseases not naturally inherent may by their prevalence in generation after generation become indigenous. This is theory on which Mr. Howard bases his views and calls upon Government and all concerned to make a determined and united effort to stamp out and keep out so dire an enemy. The vast interest involved is perhaps not fully considered. It has been shown that if the money loss sustained in 1872 by the stock-owners of Herefordshire from foot-and-mouth disease was proportionately great in other parts of the United Kingdom, it would amount to the sum of £20,000,000. This is a calculation which is well called astounding, for the sum given exceeds by four times the total value of the live stock imported into Great Britain. The provisions and regulations deemed necessary by the author of "Our Meat Supply" are twelve in number. He suggests, in the first place, in order to avoid the present diversity of action, that all Orders in Council or legislative enactments bearing on the trade and disease in animals should be imperative and not permissive, also that their application should extend throughout the United Kingdom. More thorough inspection is urged, also a universal system of local officials with considerable powers of action; compulsory notice of disease; temporary stoppage of fairs or markets in infected districts, or of movement of animals from infected localities; immediate slaughter in cases of pleuro-pneumonia. It is recommended that Irish cattle shall be treated in all respects as English, Welsh, or Scotch cattle, or animals arriving coastwise at one British port from another. But in the event of contagious diseases being reported to exist in Ireland or other of the British isles, inspection at the port of embarkation and the certificate from the local authority of the district the animals came from are advocated. In case the cattle are unsound or the owner fail to produce a satisfactory certificate, the animals not to be embarked till subjected to such quarantine as the inspector shall order. Mr. Howard declares himself for treating Ireland as

an integral part of the United Kingdom in respect of legislation upon cattle disease. With regard to the suggestion that cattle imported from this country should be subjected to the restrictions advocated for foreign animals, he observes that such a course would be an additional argument for Home Rule. Uniform laws and equal privileges for the Three Kingdoms form Mr. Howard's programme, which, he contends, has been sustained by the Irish Cattle Defence Association in a resolution passed by them, declaring the advisability of identical legislation in reference to cattle disease for Ireland and Great Britain.—*The Freeman*.

## SALE OF THE MUSGRAVE HALL SHORTHORNS.

On Thursday, March 30, Mr. Thornton disposed of the entire herd of Shorthorn cattle, the property of Mr. J. C. Topping, of Musgrave Hall, Skelton, Penrith. The attendance was exceedingly large; but the prices were much below the usual prices for high-class Shorthorns.

### COWS AND HEIFERS.

Waterloo Duchess, calved May 1, 1865.—Mr. T. Hudson, 31 gs.  
 Familiar 9th, calved June 26th, 1866.—Mr. Booth, 31 gs.  
 Princess Royal, calved April 12, 1867.—Mr. Crosby, 28 gs.  
 Princess, calved February 1, 1868.—Mr. Milner, 33 gs.  
 Booth Duchess, calved October 31, 1868.—Mr. Davidson 39 gs.  
 Emma's First, calved March 17, 1870.—Mr. Heslett, 71 gs.  
 Familiar 10th, calved March 29, 1870.—Mr. Wilson, 38 gs.  
 Ruby Gwynne, calved April 10, 1870.—Mr. Thompson, 61 gs.  
 Christiana, calved July 5, 1870.—Mr. Phillips, 73 gs.  
 Familiar 11th, calved February 23, 1871.—Mr. White, 125 gs.  
 Clarissa, calved February 23, 1872.—Mr. Dickinson, 45 gs.  
 Violet, calved March 5, 1872.—Mr. Harris, 26 gs.  
 Roan Duchess, calved May 1, 1872.—Mr. Mackay, 56 gs.  
 Wild Eyes Gwynne 3rd, calved August 25, 1872.—Mr. Thompson, 100 gs.  
 Lady of the Lake, calved October 5, 1872.—Mr. Parker, 45 gs.  
 Agnes Gwynne, calved November 9, 1872.—Mr. Thompson, 63 gs.  
 Xmas Rose, calved December 25, 1872.—Mr. Scott, 47 gs.  
 Primrose, calved January 20, 1873.—Mr. Mitchell, 60 gs.  
 Queen of the Roses, calved March 26, 1873.—Mr. Wilson, 37 gs.  
 Familiar 13th, calved August 23, 1873.—Mr. Scott, 66 gs.  
 Ruena Gwynne, calved November 10, 1873.—Mr. Stanforth, 60 gs.  
 Princess Maude, calved December 16, 1873.—Mr. Bailie, 57 gs.  
 Medora Gwynne, calved January 13, 1874.—Mr. Jackson, 45 gs.  
 Lady of the Manor, calved January 20, 1874.—Mr. Fortescue, 60 gs.  
 Comfort, calved June 14, 1874.—Mr. Hudson, 42 gs.  
 Caroline, calved June 19, 1874.—Mr. Phillips, 51 gs.  
 Familiar, calved August 20, 1874.—Mr. Davidson, 51 gs.  
 Primula, calved December 1, 1874.—Mr. Taylor, 54 gs.  
 Princess of Wales, calved December 10, 1874.—Mr. Mitchell, 22 gs.  
 Peach Bloom, calved March 25, 1875.—Mr. Wilson 33 gs.  
 Ada Gwynne, calved March 30, 1875.—Mr. Fortscue, 50 gs.  
 Welcome Gwynne, calved June 4, 1875.—Mr. Smith, 75 gs.  
 Pride of the Harem, calved June 16, 1875.—Mr. Lambert 28gs.  
 Lady of the Isles, calved August 25, 1875.—Mr. Spencer, 42gs.  
**BULLS.**  
 Iron Duke, calved February 15, 1869.—Mr. Phillips, 115gs.  
 British Knight, calved December 5, 1872.—Mr. Stanforth, 300gs.  
 Coventry, calved October 19, 1874.—Rev. J. O. Wilson, 36gs.  
 Marksman, calved December 19, 1874.—Mr. Hodgson, 30gs.  
 White Duke, calved July 18, 1875.—Mr. Lancaster, 28gs.  
 Iron Chief, calved September 5, 1875.—Mr. Hudson, 18gs.

THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

MONTHLY COUNCIL, Wednesday, April 5, 1876. — Present: Lord Chesham, president, in the chair; the Duke of Bedford; the Earl of Lichfield; Viscount Bridport; Lord Skelmersdale; the Hon. W. Egerton, M. P.; Sir T. Dyke Acland, Bart., M. P.; Sir Massey Lopes, Bart., M. P.; Sir A. K. Macdonald, Bart.; Sir R. C. Musgrave, Bart.; Mr. Avcling. Mr. Aylmer, Mr. Bowly. Mr. Deut, Mr. Druce, Mr. Evans, Mr. Frankish, Mr. Braudreth Gibbs, Mr. Horley, Mr. Bowen Jones, Colonel Kingseote, M.P., Mr. Leeds, Col. Loyd Lindsay, M.P., Mr. McIntosh, Mr. Martin, Mr. Masfen, Mr. Milward, Mr. Pain, Mr. Pole-Gell, Mr. Randall, Mr. Ransome, Mr. Sunday, Mr. Shuttleworth, Mr. Torr, M.P., Mr. Jabez Turner, Mr. Wakefield, Mr. Wells, Mr. Whitehead, Mr. Jacob Wilson, and Dr. Voelcker.

Earl Howe, Gopsall, Atherstone, was elected a governor of the Society.

The following new members were elected:

- Allfrey, Goodrich H., Wokefield Park, Mortimer, Berks.
- Bower, Thomas White, Woodthorpe, Norbriggs, Chesterfield.
- Bulstrode, William, Mount Earn, Cookham Dean, Maidenhead.
- Chamberlin, J. K. B., West Field, Tuxford.
- Coker, James P., Beetley Hall, Dereham.
- Dee, James William, Winnall, Bewdley.
- Dormer, Lord, Grove Park, Warwick.
- Dixon, Edwin, Meridale Grove, Wolverhampton.
- Edwards, James, Woodhorn Grange, Morpeth.
- Evenett, Thomas, Tent Cottage, Coniston.
- Fearall, Richard, Lea Aldford, Chester.
- Forster, Charles Frank, Bishop Middleham, Ferry Hill, Durham.
- Fox, George M., Lincoln.
- Gelsthorpe, William, Annesly Woodhouse, Mansfield.
- Hulbert, F. R., North Cerney, Cirencester.
- Lawson, Sir John, Brough Hall, Catterick.
- Lester, William, Walford, Baschurch, Salop.
- Lewis, W. Thomas, Mardy, Aberdare, Glam.
- Mathews, John William, Aeton Trussel, Stafford.
- McGregor, Paul M., Onston, Weaverham, Chester.
- Morris, John, Llwynrhedith, Chirbury.
- Nevett, Thomas, 18, Winekley-street, Preston.
- Parker, Cecil T., The Lodge, Stoke Saint, Milbro', Lullow.
- Parker, Thomas, Churton Hall, Chester.
- Peare, Charles, Thorney, Cambs.
- Potts, George, Rounton Grange, Northallerton.
- Powell, Thomas Philip, Marchamley, Hawkstone, Salop.
- Ridley, John, Damerham, Salisbury.
- Santy, Arthur Henry, Castle Meadow, Norwich.
- Shallcross, Thos. R., Capenhurst Grange, Wy Chester.
- Sly, Joseph, Waterhead Hotel, Coniston.
- Smith, Richard, Newton Great Barr, near Birmingham.
- Spencer, Sanders, Holywell, St. Ives, Hunts.
- Stratton, Frederick, Alton Priors, Marlborough.
- Upton, Stephen, St. Benedict's-square, Lincoln.

FINANCES.—Col. Kingseote, M.P., presented the report, from which it appeared that the secretary's receipts during the past month has been duly examined by the committee and by Messrs. Quilter, Ball, & Co., the Society's accountants, and found correct. The balance in the hands of the bankers on March 31 was £733 8s., and £2,000 remained 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 £533. The Committee recommended that the names of seven members, whose addresses cannot be found, or whose subscriptions cannot from other causes be recovered, be struck off the books.

The list of all governors and members having been published in the last number of the *Journal*, the committee

wish to draw the attention of members to it, with the hope that any errors observed by them may be communicated to the Secretary. This report was adopted.

JOURNAL.—Mr. Deut (chairman) reported that the cost of the last number of the *Journal*, including list of members and bye-laws, is—

	£	s.	d.
For Printing.....	579	11	6
For Paper.....	139	8	0
For Illustration .....	17	9	0
	£736	8	6

250 more copies were issued this year than the last. They made a recommendation as to the live-stock report at Birmingham, and that a geological map of Denmark be engraved, to accompany Mr. Jenkins' paper on the agriculture of that country, at a cost not exceeding £30. This report was adopted.

CHEMICAL.—Mr. William Wells (chairman) reported that the circular letter respecting the purchase of manures and feeding-stuffs which was issued by them, with the sanction of the Council, shortly after the last meeting, had been much appreciated by the members of the Society. The secretary had received a very large number of letters expressing the satisfaction of the writers at the issue of the circular letter, and their acknowledgement of the great service it would be to them. The "Cotswold Association" had had 1,000 copies printed and distributed amongst its members. Several landowners and others had applied for additional copies for distribution in their respective neighbourhoods; and a letter from Aberdeenshire spoke of the great boon it would be, and of its comprehensive, careful, and lucid directions. The Committee also drew attention to the last annual report of the "Kelso Analytical Association," in which the forms of guarantee originally issued by the Society were recommended to the use of the members of that association. The report also contained copious extracts from Dr. Voelcker's various reports to the Society. This report was adopted.

QUARTERLY REPORT.—1. Dr. Voelcker directed attention to the risk which purchasers of low-priced artificial manures run if they buy such manures without a guaranteed analysis, and merely on the strength of taking names, such as fish and blood manures or English guano. In illustration of this fact the following case was reported: A sample of artificial manure, sold as fish and blood manure or English guano, at £4 per ton, was sent to Dr. Voelcker by Mr. B. C. Bennett, of Marston Trussell Hall, Market Harborough, and on analysis found to contain in 100 parts:

Moisture.....	42.86
*Organic matter.....	31.99
Phosphate of lime.....	3.52
Oxide of iron and alumina.....	2.60
Carbonate of lime, &c. ....	12.89
Insoluble siliceous matter (sand).....	6.14
	100.00

\* Containing nitrogen.....1.34  
Equa to ammonia.....1.63

This manure, it will be seen, contains nearly 13 per cent of water, only 3½ per cent. of phosphate of lime, and yields only about 1½ per cent of ammonia. It is scarcely worth 25s. per ton.

2. Mr. Henry Phillips, Brooklands Farm, Perry Barr, near Birmingham, sent three samples of cake for an opinion of their purity. One, a linseed-cake, was sold at £12 10s. a ton; the second, a feeding rape-cake, at £5 10s.; and the third sample, a decorticated cotton cake at £10 10s. 9d. per ton. On examination, the linseed-cake was not found to be pure

linseed-cake, but a cake from dirty linseed; the cotton cake was genuine, but a stale and badly-made cake and not a first-class cake, whilst the rape-cake was found to be so full of mustard that it appeared to be unfit for feeding purposes, and only useful as a manure. The recommendation to buyers of feeding cakes issued by the Chemical Committee not having been adopted by Mr. Phillips, the committee do not feel justified in publishing the names of the vendor and makers of these three cakes.

3. Two samples of cake, one a linseed-cake and the other a rape-cake, were sent for analysis to Dr. Voelcker by a member of the Society residing in the county of Lincoln, who desired to know whether the former was pure and the latter a fair feeding-cake. The linseed-cake on analysis was found to have been made from dirty linseed, and it moreover was adulterated with the husks of the earth-nuts and gingelly or Niger seed. The rape-cake was found full of mustard-seed, and quite unfit for feeding purposes. In reply to the usual inquiry for vendor's name, &c., the member wrote to Dr. Voelcker:

"DEAR SIR,—I received your letter and analysis yesterday. I am so astonished at the result that I think there must be a mistake. I got it from a most respectable firm. The last you analysed for me, not long since, was from the same people. I have sent them a copy of your letter, and when I hear their explanation I will write to you again. I hope I shall find it is a mistake. I have another lot now on rail; when it comes I will send you a sample of it."

Subsequently the same member sent three more samples for analysis. They were all obtained from the same firm as the last sample, and were sent out of the mill to his other farms before the maker was acquainted with the result of the analysis of the first sample. These three samples, like the first, were, on analysis, proved to be adulterated with earth-nut cake, and made from dirty linseed, containing numerous small weed-seeds. The name of the maker of these adulterated cakes, and other particulars, were not given, but the member wrote to Dr. Voelcker:

"If I had worked for the public, I should have filled up the form you sent me, but I thought I ought to consult my own interest first. I got a very large return from the firm, and I think they have been punished severely in losing three customers who were taking about 12 tons of them weekly."

This report was adopted and ordered to be printed in the usual agricultural newspapers.

**REPORT ON MR. RANDELL'S MOTION.**—The Committee have to report that they have fully considered the evidence taken by them on the subjects connected with Mr. Randell's motion. They find, in the case of nearly all the witnesses examined, a very decided opinion in favour of experiments to determine the manurial and feeding value of cakes and other feeding stuffs. It seems to the Committee that the primary condition of any experiments to be conducted under the auspices of the Royal Agricultural Society should be that of their being thoroughly reliable, and of their results adding to the amount of knowledge previously existing on the subject matter of the experiments. While some of the witnesses appear to see no difficulty in carrying out practical experiments of the kind indicated by Mr. Randell, the strongest possible opinions were expressed by the scientific witnesses that, although some special information of local interest might be obtained from them, they would be—in the words of one of the witnesses—"of no use whatever for establishing anything like a scientific basis or principle, which is so much needed when a general question, such as that of manure value, comes into play." But the difficulties and doubts as to the possibility of these experiments being carried out in a trustworthy manner are not confined to the scientific witnesses. They are pointed out in the strongest manner by some of those most in favour of these so called practical experiments, one of whom, indeed, suggests their being instituted at places like the Universities, Kew, or Cirencester, adding that he does not know a single person in the three counties with which he is connected to whom he could entrust them. Another witness considers they ought to be under the direction of the Society's chemist and the Chemical Committee; while it was generally assumed that those who might be willing to undertake the experiments should be compensated for their trouble and expense. The question of expense is one which the Committee are confident the Council would consider of comparatively little consequence

if adequate results were to be expected; but, although fully appreciating the object of Mr. Randell's motion, and the great importance—especially with reference to valuations under the Agricultural Holdings Act—of adding to our knowledge of the value of artificial manures and feeding stuffs, they feel they would only be justified in recommending experiments, the results obtained from which would be held by a general concurrence of opinion, scientific and practical, to be thoroughly exhaustive and worthy of confidence. An opportunity for carrying out experiments has been offered to the Society by the Duke of Bedford, and the Committee now recommend that Mr. Lawes and Dr. Voelcker be requested to draw up a scheme for carrying on at Woburn such experiments as they, in communication with the Chemical Committee, may determine on, it being understood that the experiments, when decided upon, shall be wholly under the control of one or both of these gentlemen. Although not prepared at present to propose—as being instituted under the auspices of the Society—any other experiments than such as may be determined on under the above recommendation, the Committee are far from wishing to discourage experiments independently conducted by practical farmers, but, on the contrary, would be glad to assist them. Dr. Voelcker expresses himself as anxious that such experiments should be made, and gives instances of some that might furnish useful information. It is therefore suggested that it may be of advantage if Dr. Voelcker be requested to draw up the plan of one or more of such practical experiments as he thinks might bear instructive results, laying down for the guidance of such farmers as might like to try them, the necessary instructions and rules for conducting them. With regard to the great advantage which, by the evidence of all the witnesses, there would be in the establishment of some one scale of valuation of unexhausted manures, which would be recognised and adopted generally in the country, the Committee found that none of the witnesses were unfavourable to Mr. Lawes' Tables of Manure Value, if confirmed by direct experiment. One, indeed, of the most important witnesses expresses his own reliance altogether on it as it stands; while another says he should in any case where there was no agreement most certainly adopt Mr. Lawes' table, modified by his own experience, and by considerations as to climate and soil. Inasmuch, however, as the evidence clearly shows that experiments instituted for the purpose, as suggested by Mr. Randell's motion, of corroborating or modifying Mr. Lawes' conclusions as to the manurial value of cakes and feeding stuffs, should be carried on for several years, it appears to the Committee that, pending the completion of such experiments—should they be carried out—it is desirable for the Society to draw up and publish, with the assistance of Mr. Lawes and Dr. Voelcker, a schedule of the manurial value of these substances, based upon Mr. Lawes' table, and on any other evidence that may come under their consideration.

In moving the adoption of this report Mr. WELLS dwelt particularly upon the course which the Committee had pursued in reference to Mr. Randell's motion. They had spent three days in taking evidence of practical and scientific persons. This evidence had been printed, and distributed among the members of the Council, in order that the report of the Committee thereon might be fully discussed. Objections had been raised in committee to the clause of the report which ran as follows: "Bearing this in mind, they cannot recommend, as emanating from the Council of the Royal Agricultural Society, the institution of experiments conducted by and under the control of practical farmers;" and although he remembered that the great object of the investigation which the Committee had undertaken was to ascertain whether, by a union of practice with science, the object of Mr. Randell's motion could be attained, he was now, on behalf of the Committee, quite ready to admit the objectionable clause. The evidence given by the scientific witnesses was apparently a little contradictory, but this was capable of explanation, if it were remembered that those gentlemen had in their minds two kinds of experiments, the one purely scientific, and the other a combination of practice and science, and that the apparent contradiction of their opinions arose in consequence of the same term being

applied to both kinds of experiments. He regarded as of high value the experiments which it was hoped would be conducted at Woburn, on the principles of those which had been carried out for so many years at Rothamstead; and he concluded by drawing special attention to the suggested schedule of the values of unexhausted manures, referred to in the last paragraph but one of the report of the Committee. He then moved the adoption of the report.

Mr. RANDELL held that the conclusions of the Committee were not consistent with the evidence which they had received, and that Mr. Lawes' conclusions No. 1 and No. 3 were more in accordance with that evidence.\* He therefore complained of the report on those grounds. The report cited the evidence of one gentleman who suggested that the experiments should be instituted at places like the Universities, Kew, or Cirencester, and who did not know a single person in the three counties with which he is connected to whom he could entrust them; but he (Mr. Randell) thought they ought to have cited the evidence of other practical witnesses who held a different opinion. Mr. Randell then quoted from the papers in the Society's *Journal* written by Mr. Lawes and Doctor Voelcker, showing that they held that there was comparatively little difference in the feeding value of foods which are included in what may be called the same class. He thought those values had been ascertained by analysis and not by direct experiment. At the time when Mr. Lawes wrote his paper the price of cotton-cake was £10 10s. per ton, and linseed-cake £12 10s. per ton, so that if Mr. Lawes' opinion had been endorsed by practical men, the price of decorticated cotton-cake ought to have increased, whereas in the interval it had decreased to its present price of £7 15s. per ton. He regretted that science, after having had nothing to do with practical results, was content to step in and explain them; and he wished that science, instead of following practice, would attempt to lead it. He disliked the report, but submitted to the decision of the Committee, and, therefore, he did not at present ask the Council to do more than accept the Duke of Bedford's liberal offer. But he objected not only to the paragraph which it was proposed to strike out, but also to the next paragraph but one, commencing with the words, "although not prepared." As a practical man he did not want Dr. Voelcker's assistance in carrying out experiments, and therefore he would ask the Council to strike out that paragraph. He believed that practical farmers knew more about animals and feeding them than both Mr. Lawes and Dr. Voelcker. There had been already too much soreness on the question treated of in the paragraph to which he objected, and therefore he moved to strike it out.

Mr. DENT had sat on the Committee during the first two days, but had not been able to be present subsequently. He testified to the pains and industry which Mr. Wells had shown in preparing the report, and felt quite sure that he had never intended to cast a slur of any kind on practical farmers. At the same time he admitted that the paragraph to which Mr. Randell so strongly objected appeared to him to have been not quite so fully worded. He had, therefore, prepared an amendment which he hoped would serve as a message of peace to the

Chemical Committee and Mr. Randell. He differed from Mr. Randell in considering that science had been behind practice, for the evidence taken by the Committee showed that practical men corroborated science unconsciously in many instances, and he should be extremely sorry that anything which went forth from the Chemical Committee or the Council of the Society should cast a slur on scientific agriculturists. He therefore moved the following amendment:

Although not prepared at present to propose—as being instituted under the authority of the Society—any other experiments than such as may be determined on under the above recommendation, the Committee feel that all agricultural experiments, carefully conducted, have their value as contributions to scientific knowledge, and will be glad by advice or suggestion to assist in their independent institution.

The Hon. W. EGERTON, M.P., seconded Mr. Dent's amendment, as he thought that the paragraph to which exception had been taken was unnecessarily harsh upon the practical farmers. He thought that a great deal of this tone was the result of a confusion in the use of the word "experiment." He referred to the difficulty of carrying out such experiments in different districts, having differences of soil and climate; but if the paragraph were amended as proposed, Dr. Voelcker might lay down the rules under which useful experiments might be conducted.

Colonel LOYD LINDSAY, M.P., spoke in reference to the first of the two paragraphs under discussion, and considered that as it contained an element of truth in it—viz., that experiments without great accuracy in carrying them out are useless—he thought the paragraph should be retained, but moved to substitute the words "persons unaccustomed to scientific inquiry," instead of the words, "and under the control of practical farmers."

Mr. AVELING expressed his disappointment at the result of the investigation which the Chemical Committee had held. He had carefully considered the evidence which had been circulated amongst the Council, and he had expected that the report would have been of a different nature, and would have recommended experiments by practical farmers throughout the country.

Mr. JACOB WILSON seconded Mr. Randell's amendment. The reason for Mr. Randell's motion in the first instance was the necessity for compensating tenants for improvements of different classes under the new Agricultural Holdings (England) Act, 1875. Mr. Lawes' tables contained the only information which we at present possessed to guide valuers in carrying out the principles of the Act, and he thought that those tables ought to be corroborated or otherwise by practical experiments, in order that they might be adopted or rejected. He felt sure that in most districts of England practical men could be found to carry out the experiments in a reliable manner. Nevertheless, Mr. Randell and he had withdrawn their opinions in consequence of the very liberal offer which had been made by the Duke of Bedford, and the acceptance of which had been recommended by the Committee. Still, he thought that the insertion of the two paragraphs which had been objected to by Mr. Randell and himself was a gratuitous insult to the practical farmer.

The Earl of LICHFIELD supported Mr. Wells' offer to omit the clause. He was quite sure that neither Mr. Wells himself, nor any other member of the committee had any idea of casting a slur upon the practical farmers. In fact, the paragraphs objected to, hit the landlords as well as the tenants, so far as landlords were occupiers as well as owners of land. What was meant was that no person who had not had scientific training could possibly carry out the experiments required, so as to obtain reliable results from them. He considered that there was the

\* The following are the conclusions referred to:

"1. That it would be desirable to conduct experiments to ascertain the actual and comparative feeding value of the four cakes named by Mr. Randell, and that they [the witnesses] did not see any difficulty in the way of getting such experiments carried out successfully by practical farmers."

"3. In reference to the tables of the value of the manure obtained by the consumption of different articles of food published by Mr. Lawes, they felt but little confidence in such estimates, and thought that they should be tested by direct experiments in the field."

broadest possible distinction to be drawn between experiments made to ascertain feeding value and those made for ascertaining the manure value of the residue. He never thought for a moment that there would be a difficulty in practical farmers ascertaining the value of different foods, as such experiments are being made by them every day with most successful results. Therefore he would have objected to the funds of the Society being used for such a purpose. But he understood Mr. Randell to lay stress, at the present moment, on the manurial value, a fact which was shown by his letter addressed to the chairman of the chemical Committee, stating the object of his motion. He had also carefully considered the evidence which had been taken by the committee, and the result he had arrived at was that no farmer could himself, without scientific chemical assistance, ascertain the money value of the manurial residue of foods. The experiments would have to be conducted in different parts of the country, and to enable reliable conclusions to be drawn from them, must have similarity of results in all cases. Then the composition of foods used must be alike in all cases; otherwise the results would be a confusion difficult to deal with. Now, he asked what would be the position of the Society after it had voted large sums of money for such experiments as Mr. Randell wanted, and they found in the end that the results of the various experiments all differed from one another. They had not received any guarantee that the results would come out alike in different parts of the country, and therefore he should hesitate to advise the Society to vote large sums of money to carry out experiments when the benefit to be derived from them was so very problematical. Mr. Randell had referred to Mr. Lawes' conclusions on the evidence, but he had omitted to state that in those conclusions which he had quoted Mr. Lawes had said nothing about the manurial value, and that brought him (the Earl of Lichfield) back to the position he started with; and he therefore repeated that if the question originally raised had been the feeding value of cakes he would never have supported the investigation which the committee had carried out, under the impression that it was the manurial value which it was desired to ascertain.

The first paragraph in question was unanimously withdrawn.

The amendment of the second paragraph, which had been moved by Mr. Dent, was seconded by Mr. Wakefield, but on a division was lost by fifteen votes to thirteen.

Mr. RANDELL then moved the omission of the paragraph, and Mr. MILWARD seconded it.

Mr. WELLS thought that, considering that Dr. Voelcker and the secretary had, at the private request of Mr. Randell himself, and other members of the committee, spent a long time in drawing up a scheme for practical experiments, it was rather hard of Mr. Randell that he should object to all reference to such experiments in the report of the committee.

Mr. RANDELL said he had understood the request made to Dr. Voelcker in a different sense, and that the scheme was to be for the purpose which he had in view when he brought forward the motion that had given rise to the investigation of the subject by the chemical committee, and that it was not a scheme of experiments to be carried on by farmer merely for their own purposes.

Mr. BOWEN JONES regretted that Mr. Dent's amendment had not been adopted, but under the present circumstances he should adhere to the clause as it stood in the report. The evidence taken by the committee showed that short series of field experiments would not lead to reliable results as to the money value of the manurial residue of foods; but as all experiments, if carefully conducted, add to agricultural knowledge, he thought it very desirable that they should be uniform, and therefore he considered

that the paragraph would be valuable in drawing the attention of members to the question of carrying out practical experiments, and causing them to solicit the aid of Dr. Voelcker in drawing up a scheme which should be adopted in all cases, subject to modifications rendered necessary by special circumstances.

The Earl of LICHFIELD was puzzled to understand exactly Mr. Randell's views. He understood that Dr. Voelcker was asked to draw up a scheme. That had been done; but the chemical committee were not prepared to ask the Council to vote the amount of money required to carry out the scheme out of the Society's funds. Mr. Randell therefore says, as it seemed to him, "If you do not give us your money we won't have your advice." Mr. Randell ought, on the other hand, to put great value on getting Dr. Voelcker's advice before inducing practical farmers to take the trouble of making experiments.

On a division, the clause was ordered to stand part of the report by 17 votes against 15.

The report was then received and adopted, and the minutes of the evidence taken by the chemical committee were ordered to be printed in the next number of the Society's *Journal*.

**JUDGES SELECTION.**—Mr. Jacob Wilson presented the report of the Committee nominating judges of stock and implements at the Birmingham meeting. The report was received and adopted.

**SHOWYARD CONTRACTS.**—Mr. Randell (Chairman) reported that the Committee had accepted the tender of Messrs. Fry and Sons, of Bath, for the erection of showyard works for the next five years: that the draft agreement had been examined and approved, and they recommended that the contract agreement be prepared for signature at the next Council meeting. They also recommended that the space between the implement-sheds be reduced three feet; that the secretary be instructed to make arrangements with the parveyors of refreshments for five years, after the Birmingham Show, subject to the approval of the Council, and that enamelled labels be provided for the different classes, instead of those formerly used. This report was adopted.

**HOUSE.**—Mr. Shuttleworth reported that the Committee recommended the purchase of a small table for the entrance-hall. This report was adopted.

**SELECTION.**—Mr. Jacob Wilson reported the recommendation of the Committee that Lord Feversham be elected a member of the Council in the place of Mr. Cayley Worsley, resigned; and that Mr. Gibbs, Mr. Milward, and Mr. Wells be the Committee of Inspection for this year. This report having been received, it was moved by Mr. Jacob Wilson, seconded by Mr. Dent, and carried unanimously—that Lord Feversham be elected a member of the Council.

**GENERAL BIRMINGHAM.**—The Duke of Bedford reported that the Committee recommended that the Secretary be instructed to let the refreshment sheds according to his report. The local secretary had reported that satisfactory progress is making with regard to the approaches to the showyard. The Committee had discussed the question of selling tickets in packets of five, or larger numbers, at a reduced price, and were of opinion that it was not desirable to establish a precedent of that nature. The Committee recommended that the Secretary be instructed to communicate with the local committee, with a view to obtain a list of those members of the Committee to whom it was considered desirable to issue complimentary tickets for the Birmingham Show. Mr. Horley having communicated the result of his interviews with Lord Warwick's agent, Captain Fosbery, and read a letter from him, agreeing that the trials of reaping-machines should be held on the Heathote sewage-farm, near Leamington, subject to satisfactory arrangements

being made as to damage of crop, the Committee recommended that Mr. Horley be authorised to make the necessary arrangements with Lord Warwick's agent. This report was adopted.

**VETERINARY.**—The Hon. W. Egerton, M.P. (chairman), reported that the Committee had discussed several proposals in reference to the suggested Veterinary Scholarship, a scheme for which they expected to submit to the Council at the next monthly meeting. The directors of the Highland Society had declined to join in any such scheme, as they would have no voice in the appointment of examiners. Dr. Burdon-Sanderson had already received at the Brown Institution two of the test animals which had been purchased for the purposes of experiments in reference to pleuro-pneumonia and foot-and-mouth disease, and the remaining six were shortly expected to arrive from Northumberland. This report was adopted.

**IMPLEMENT.**—Mr. Brandreth Gibbs (chairman) reported that the Committee had carefully considered the subject brought before the Council in the memorandum of the Council of the Agricultural Engineers' Association, and the comments made thereon by the deputation from that body in conference with the Implement Committee on the 29th of February last. The memorandum might be divided under the following heads:

1. That the shows be held in large centres of population, with a biennial or triennial Metropolitan meeting, or otherwise, once in five or six years.
2. That the charges made by the Society to implement makers, especially as regards space in the catalogue, are too high.
3. That the days of exhibition (as now fixed) will keep the exhibitors' staff two Sundays at the show.
4. That strictly agricultural machinery and implements should be completely separated from miscellaneous articles.
5. That the trials be more extended and complete.
6. That implements are frequently entered at prices lower than that for which they can be manufactured.
7. That implements should be placed, for trial, in the hands of an agriculturist for a whole season's work on a farm.
8. That instead of money prizes, reports be distributed, or that medals be given instead of money.
9. That implements winning prizes should be compared with the ordinary commercial productions of the same exhibitors.
10. That joint action should be taken by the Society and the Agricultural Engineers' Association with a view to induce the railway companies to modify their regulations in reference to the Society's shows.

In addition to the above, the deputation urged:

11. That Exhibitors should have the right to challenge the list of names from which the judges are eventually to be selected.
12. That the rule rendering it compulsory on exhibitors to have their machines tried if the judges require it be abolished.

The Committee begged to report:

**I. ON THE SHOW BEING HELD IN LARGE CENTRES OF POPULATION, WITH A BIENNIAL OR TRIENNIAL METROPOLITAN MEETING OR OTHERWISE ONCE IN FIVE OR SIX YEARS.**—That it was the opinion of the Committee that the proposed alteration would involve so great a change in the principle on which the Society had hitherto acted, and would have so wide a bearing on other departments of the show besides implements, that it would require the careful consideration of the whole Council. The Committee recommended that as an experiment, provided suitable accommodation can be found, there be a show in the Metropolitan district in the year 1878, in place of the Society going in that year to District F (comprising the counties of Gloucestershire, Herefordshire, Monmouthshire, Worcestershire, and South Wales).

**II. CHARGES FOR SPACE IN THE CATALOGUE.**—The Committee considered that as the exhibitors of strictly agricultural articles only pay the cost price, no alteration appears necessary. The profit on the Catalogue derived by the Society came

from the charge made for miscellanous (non agricultural) articles. The Committee recommended that woodcuts be admitted into the Catalogue, on payment for the space occupied at the rate of £2 per page; but that the woodcuts be confined to strictly new implements, and implements entered for trial for the prize offered at that meeting of the Society.

**III. DAYS OF SHOW.**—The alteration made for the present year, for the show to commence on the Wednesday, was made to suit the special circumstances of the Birmingham show. As this was a matter affecting the exhibitors of live stock as well as implements, the Committee recommended that any decision as regards the future be postponed until after the experience that will have been gained by this year's experiment.

**IV. SEPARATION OF AGRICULTURAL FROM MISCELLANEOUS ARTICLES.**—The Committee fully recognised the advantage it would be to both exhibitors and the public that this should be done, and therefore recommended that the general arrangements should direct the surveyor as to the position of the stands in the yard, and that they be placed as follows: 1. Agricultural machinery. 2. Mixed stands. 3. Miscellaneous stands.

**V. IMPLEMENTS ENTERED AT LOWER PRICES THAN THEY CAN BE PRODUCED FOR.**—The Committee recommended that the special attention of the Society's consulting engineers be directed to this matter, and that if any case came under their observation they should make a special report to the judges and stewards, such reports to be laid before the Council.

**VI. TRIAL OF IMPLEMENTS FOR A WHOLE SEASON ON A FARM.**—The Committee was of opinion that this proposition was surrounded by too many difficulties at the present time for its adoption to be recommended.

**VII. SUBSTITUTION OF REPORTS OR MEDALS FOR MONEY PRIZES.**—The substitution of reports would involve the abandonment of the "prize system," and medals, though a pecuniary saving to the Society, did not appear to mark the order of merit in different implements so plainly as first, second, or third prizes. In order, however, to meet the objection that the award of a first prize gave an undue prominence when one implement proved only a shade superior to another, the committee recommended that the Society should revert to the system which was established some years back—viz, that a certain sum be appropriated to each "class of implements," and that the judges have the power to divide it, so as to mark the respective merits of the implements either by equality or a graduated scale of prizes.

**VIII. COMPARISON OF IMPLEMENTS WITH THE ORDINARY COMMERCIAL PRODUCTIONS OF THE SAME EXHIBITOR.**—The Committee did not recommend any special steps being taken in this respect.

**IX. RAILWAY FACILITIES.**—The Committee recommended that the "Railway Clearing House" be requested to receive a joint deputation of three members of the Council (attended by the Secretary) and three members of the Association of Agricultural Engineers, in order that the matter might be brought prominently under notice; and that the Secretary be instructed to prepare a statement of the various inconveniences which had been complained of by exhibitors and others in reference to the railway traffic and the transit of live stock and implements both to and from the Society's shows.

**X. CHALLENGING THE LIST FROM WHICH JUDGES ARE TO BE SELECTED.**—The Committee recommended that no action be taken in this matter.

**XI. COMPULSORY TRIAL OF IMPLEMENTS BY JUDGES.**—The Committee was of opinion that, however necessary this rule might have been in the earlier years of the Society's shows, in order to prevent inferior or useless articles being sold, now the manufacture of agricultural machinery had become so much better understood that this regulation was no longer requisite, and the Committee recommended that it be rescinded for the future; but that if an exhibitor wished to withdraw an implement that has been entered for trial he should be at liberty to do so on giving notice to the Secretary a week previous to the last day on which implement were to be admitted into the showyard, and on paying a fine of £5.

Paragraphs No. IV. and No. IX. of the report were adopted; the remainder of the report was received, and ordered to be printed and circulated amongst the members of the Council.



Colonel Loyd Lindsay gave notice that at the next monthly council he would move the following resolution: "That a memorial from the council of the Royal Agricultural Society be presented to the President of the Board of Trade, praying that he will take an early opportunity to introduce a Bill into Parliament to allow the use of steam power on tramways in agricultural districts, subject to such regulations and provisions as the Board of Trade may deem necessary."

In conformity with the bye-laws, the following list of members of council who retire by rotation, but are eligible for re-election, with a statement of the number of their attendances on councils and committees, was laid before the council, and ordered to be printed in the usual agricultural newspapers:—

ATTENDANCES, FROM THE RISING OF THE BEDFORD MEETING, IN 1874, TO THE PRESENT TIME.

NAMES.	Mon. Councils, Total.	Committees.	
		No. of Meet-ings.	At-tend-ances.
Amos, Charles Edwards, 5, Cedar's Road, Clapham Common, Surrey	2	21	2
Booth, Thomas Christopher, Warlaby, Northallerton, Yorkshire	11	70	58
Bowley, Edward, Siddington House, Cirencester, Gloucestershire	11	25	12
Davies, David Reynolds, Agden Hall, Ely, Cambridgeshire	...	25	...
Price, Joseph, Eynsham, Oxford	11	25	13
Edmonds, William John, Southrop House, Lechlade, Gloucestershire	9	25	14
Beeton, the Hon. Wilbraham, M.P., Ros-therne Manor, Knutsford, Cheshire	11	22	10
Frankish, William (elected February 2nd, 1875), Limber Magna, Ulceby, Lincolnshire	7	5	3
Hensley, John, Shelton, Newark, Nottinghamshire	12	32	21
Horley, Thomas, junr., The Fosse, Leamington, Warwickshire	11	31	22
Hornby, Richard, Spittlegate, Grantham, Lincolnshire	12	40	31
Hoskyns, Chandos Wren, Harewood, Ross, Herefordshire	6	36	10
Lawes, John Bennett, Rothamstead, St Albans, Hertfordshire	...	10	7
Leicester, Earl of, Holkham Hall, Wells, Norfolk	2	...	...
Lindsay, Colonel Loyd, M.P., Lockinge Park, Wantage, Berkshire	6	18	5
Masten, R. Hanbury, Pendeford, Wolverhampton, Staffordshire	7	36	23
Musgrave, Sir R. C., Bart. (elected Feb. 2nd, 1875), Edenhall, Fenrith, Cumberland	3	1	...
Randell, Charles, Chadbury, Evesham, Worcestershire	11	71	46
Rawlence, James, Bullbridge, Wilton, Salisbury, Wiltshire	7	12	...
Saunders, George Henry, Wensley House, Bedale, Yorkshire	12	14	9
Shuttleworth, Joseph, Hartsholme Hall, Lincoln	10	39	28
Stratton, Richard (elected June 29th, 1875), The Duffryn, Newport, Monmouthshire	4	2	1
Tuberville, Major Pictou (elected December 5th, 1874), Ewenny Priory, Bridgend, South Wales	5	1	...
Welby-Gregory, Sir William Earle, Bart., M.P., Newton House, Folkingham, Lincolnshire	5	68	11
Whitehead, Charles, Barming House, Maidstone, Kent	8	79	41

The following is the section of Bye-law No. 13 relating to the nomination of members to be added to the foregoing list:—(a) A list of the members of Council who retire by rotation, but are desirous of re-election, showing the number of attendances at Council and Committee meetings of each of such members during the past two years, shall be prepared at the April Council, and published immediately in at least two agricultural papers.

Any two governors or members may nominate in writing to the Secretary before the first day of May following a member or members of the Society desirous of being nominated for election on the Council; these nominations, with the names of the proposer and seconder, shall also be added to the previously published list, and the entire list shall be published in the same agricultural papers immediately after the May Council, and be also printed for the use of the members at the general meeting in May.

The following letter from Sir F. R. Sandford, C.B., on behalf of the Lord President of the Privy Council was then read:

Privy Council Office, 23rd March, 1876.

MY LORD,—I have the honour to inform your Lordship that the arrangements connected with the appointment of the eighteen judges apportioned to Great Britain and her colonies, by the Director-General of the Philadelphia Exhibition, are now in progress, and I beg to request that you will submit to the Council of the Royal Agricultural Society the desire of His Grace the Lord President, that your Council would have the goodness to nominate a judge for the important section of agricultural machines, implements, and processes of manufactures.

I enclose copies of papers relating to the subject generally, and previous to the issue of the formal invitation, I am directed to ask that the gentleman nominated by your Council will be good enough to inform me if it would be agreeable to him to undertake the proposed duties.

Beyond the honorarium of 1,000 dollars offered by the American authorities, it is the intention of the Lord President to place at the disposal of each British judge a further sum of from £50 to £100, according to the duration of the work, to cover travelling expenses.—I have the honour to be, my lord, your lordship's obedient servant,

F. R. SANDFORD.

The Lord Chesham, President of the Royal Agricultural Society of England, &c., &c., &c.

It was thereupon moved by Mr. Randell, seconded by Mr. Shuttleworth, and carried unanimously—"That the nomination of a judge for the section of agricultural implements at the Philadelphia Centennial Exhibition be left in the hands of the Journal committee, with power to expend a sum not exceeding £100 in obtaining a report of the agricultural features of the exhibition."

Memorials were received from the authorities of Carlisle, Liverpool, and Preston, inviting the Society to hold their country meeting for 1877 in those localities; and the Inspection Committee recommended by the Committee of Selection was appointed to visit the localities.

The exhibition of the Society's friction-brake and traction dynamometer in the loan collection of scientific instruments at South Kensington was approved by the Council, subject to special arrangements for their being obtained when required for the Society's purposes.

A letter was read from the secretary of the Highland and Agricultural Society respecting the conveyance of stock from Birmingham to Aberdeen, and requesting that animals entered at Aberdeen be allowed to leave the Birmingham Show-yard on the Saturday evening. On the motion of Mr. Randell, seconded by Mr. Jacob Wilson, it was resolved that no further alteration of the Society's arrangements, than that already proposed can now be made.

A request by Dr. Forbes Watson, on behalf of the India Office, for the loan of one of the Society's dynamometers for use in a series of experiments to ascertain the best method of extracting the fibre of the rhea plant was granted unanimously.

A letter was read from Messrs. Smith and Grace, replying to a complaint as to the affixing of the Society's first-prize card for general purpose horse-hoes at the Bedford Meeting to a different implement from the one which gained the prize, and undertaking that in future the Society's Prize-cards for implements shall be affixed to such implements only as have received the prize, or to exact duplicates of them; but not to any implements



differing in construction from those to which the prizes were awarded.

A letter was read from Mr. F. Mote in reference to a complaint that he had made an erroneous statement in an advertisement of his second prize general purpose horse-hoc at the Bedford meeting to the effect that it had gained the highest number of points, undertaking to discontinue advertising the said statement.

A letter from Mr. W. Smith, of Woolston, on steam cultivation, was referred to the Journal committee.

A letter was read from the Consul-General for Sweden and Norway with reference to an agricultural exhibition to be held at Nörköping, in Sweden, on July 25th and five following days, when prize medals will be offered for various classes of agricultural implements.

## SHORTHORN SOCIETY OF GREAT BRITAIN AND IRELAND.

A meeting of the Council of this Society was held at the Society's Rooms, 12, Hanover-square, on Tuesday, April 4. Present: Lord Penrhyn, in the chair; Earl of Bective, M.P., Earl of Dunmore, Lord Skelmersdale, Sir W. Stirling-Maxwell, M.P., Colonel Kingseote, C.B., M.P., Colonel Loyd-Lindsay, M.P., Mr. Hugh Aylmer, Mr. Chandos Pole-Gell, Mr. J. W. Cruickshank, Mr. D. McIntosh, Rev. T. Stanforth, Mr. G. Murton Tracy, and Mr. Jacob Wilson.

The following new members were elected: Buchanan, Phillips, Hales Hall, Market Drayton, Staffs. Fanning, Major, Parkwood, Farningham, Kent. Ganly, James, Longford, Ireland. Harris, Joseph Henry, Greengill, Penrith. Housman, William, 27, South-street, Thurloe-square, S.W. Noel, Charles Perrott, Bell Hall, Belbroughton, Stourbridge. Parker, Richard, The Tarn, Bootle, Cumberland. Stone, Frederick William, 7, Stone-buildings, Lincoln's-inn, W.C. Strickland, Miss, Apperley Court, Tewkesbury. Sullivan, Francis, Castle Bamford, Kilkenny, Ireland.

**EDITING COMMITTEE.**—Colonel Kingseote reported that the Committee had examined the pedigree of a bull sent for entry in the *Herd Book*, and that they were unable to accept the same, it being incomplete. The Committee reported that a copy of the 21st volume of the *Herd Book* was laid on the Council table, and so soon as the printers have worked off a sufficient number of copies, they will be distributed to the members of the Society. The Committee recommended that notices, with forms of entry, be sent to the members of the Society, stating that entries for the 22nd volume of *Cotes' Herd Book* must be made on or before Monday, May 1, and also that an advertisement to this effect be inserted in the agricultural papers. This report was received and adopted.

**GENERAL PURPOSES COMMITTEE.**—Mr. Jacob Wilson reported that the Secretary's petty-cash account had been examined and passed, and that the receipts for the month of March for subscriptions, life compositions, entry fees, and sale of herd books, &c., amounted to £90 18s.; the balance now in favour of the Society being £677 14s. The Committee further reported that the number of members now on the Society's books was 948. The Committee recommended that Mr. E. J. Powell be appointed clerk to the Society; this engagement to cease by three months' notice being given on either side. This report was received and adopted. It was proposed by Mr. Jacob Wilson, seconded by Colonel Kingseote, and resolved unanimously, "That the time for holding the ordinary meetings of the Council be altered from 2 p.m. to 3 p.m."

Leave of absence was granted to the Secretary.

## AGRICULTURAL HOLDINGS (SCOTLAND) BILL.

HOUSE OF LORDS, APRIL 7.

The Duke of RICHMOND and GORDON moved the second reading of this bill.

The Duke of ARGYLL had examined the bill, and was confirmed in the opinion he formed last year, that it would have no effect in Scotland either for good or for evil. The position of agricultural land in Scotland was peculiar; for, with the exception of the very small class of tenants known as crofters in the Western Highlands, the land was held under leases varying from 12 to 21 years, and averaging 19 years. The present bill was similar to the Act passed last year for England, and the position of the two countries being different in regard to the tenure of land, that Act would not apply to the case of Scotland; for the lease there secured the tenant against the dangers of eviction and the increase of his rent during his tenancy. The real truth was that tenant-farmers in Scotland cared for nothing except for the law of hypothec, with regard to which they had carried on a certain amount of agitation.

Earl GRANVILLE observed, with regard to the English Act, that the great majority of the landowners were going to contract themselves out of it. Several public bodies had already contracted themselves out of it, and what was still more extraordinary, the Chancellor of the Duchy of Lancaster had also followed the same course. He should like to hear from noble lords opposite what were the advantages to be derived from this Act.

The Earl of MALMESBURY observed that though many landlords had contracted themselves out of the Act they had not contracted themselves out of the whole bill. A great many arrangements had been made with tenants under the compensation clauses.

Lord ORANMORE and BROWNE thought that, as Parliament had admitted the justice of the claims contained in the English Act, it would be afterwards called compulsory to enforce them.

The Marquis of SALISBURY observed that the bill was equally applicable to landlords and tenants; and, probably, the objection to adopting it where the agreements were already satisfactory was as great in the case of the tenants as in the case of the landlords. He was very anxious to adopt the bill, but his tenants declined to accept it.

Earl GRANVILLE asked if the noble duke opposite (Richmond) had brought the Act into operation on his estates.

The Duke of RICHMOND and GORDON said that probably his noble friend did not expect an answer to the question, but he might state that the greater part of his land in Sussex was held on lease. He offered to cancel the leases, and to bring his tenants under the bill; but they preferred to remain under lease. He had other tenants who had got no lease; they had given him no notice, and he had not given them notice, and, therefore, the Act applied. He admitted that this bill would not apply to the same extent in Scotland as in England, but some of its provisions, such as those relating to the erection of cottages, were very important. The measure would also, for the first time, raise the presumption of law in favour of the tenant.

The bill was then read a second time.

## THE FIRST SINGING OF THE MARSEILLAISE.—

What a marvellous power that strange chant has exercised in France during the greater part of a century! What wild vicissitudes have accompanied its declamation by men and women who have used it alike as a patriotic and a revolutionary call to arms! Rouget de L'Isle was himself but a common place young man—a poetical lieutenant in the army of Strasburg—but for once he mounted to a pinnacle of genius without knowing it; for the Marseillaise was simply a *chant de bataille*, and never intended to be a revolutionary song. Dietrich, who was mayor of Strasburg in 1792, asked the young soldier to compose a new marching song for a volunteer company going on foreign service. He finished the composition in a night, and the next morning was heard to rehearse it before the mayor and some of the artistes of the theatre. At mid-day it was sung in the market-place, and so great was

its effect that 300 recruits joined the 600 who were ready to go out. That chant was to have a history unprecedented by any battle-song in the world,—to survive its author, and to take new meaning and a new name. Rouget de L'Isle, himself prescribed as a Royalist, heard it in the Swiss mountains as a menace of death, and recognising the well-known sound, asked

his guide what it was called. It had then been named the Marseillaise Hymn, and was long so called till hymns went out of fashion, and then it still retained its name of the Marseillaise. Whether it has played out its part in the history of France it would be rash to endeavour to determine.—*London and Provincial Illustrated Newspaper.*

## CENTRAL CHAMBER OF AGRICULTURE.

The monthly meeting of the Council of the Central and Associated Chambers of Agriculture was held last Tuesday, at the Salisbury Hotel, Fleet-street, the attendance being rather smaller than usual. The chair was taken by the President, Mr. W. W. B. Beach, M.P. After some preliminary business,

Mr. PELL, M.P., presented the Report of the Local Taxation Committee, and in moving "That the Report now read be received," stated that some remarks which were made by Mr. Monk, in the House of Commons on the previous evening in reference to the Budget, were attributed in *The Times* report to himself, adding that it was not he, but Mr. Monk, who spoke in favour of an addition of a half-penny to the Income-tax, and of an increase in the spirit duty (laughter). The hon. gentleman then expressed his dissent from the view of the Chancellor of the Exchequer, that £4,000,000 had already been granted for local burdens, observing that that estimate included £1,000,000 paid for the Irish police and other items which ought not to be taken into account. He concluded by expressing his concurrence in the regret expressed in the Report presented, that the Budget contained no further relief for the ratepayers.

Mr. D. LONG in seconding the motion, said he was astonished that the Budget did not include any proposal in reference to local taxation.

The motion was then adopted.

The next business on the agenda paper was to receive and consider the Report of the Deputation to the President of the Council, on the Prevention of Contagious Diseases of Animals.

The Chairman presented the Report, which was as follows:

"The Deputation appointed to join the Farmers' Club in waiting upon the Lord President of the Privy Council with reference to the Prevention of Contagious Diseases of Animals, have to report that, after Mr. Pickering Phipps, M.P., and Mr. W. W. Beach, M.P., had introduced the joint-deputation, and Mr. T. Horley, jun., Mr. J. Treadwell, Mr. T. Duckham, Mr. St. John Ackers, and Mr. Lattimore, had urged the desirability of making all regulations for the suppression of cattle diseases uniform and compulsory throughout the United Kingdom, they were asked to supply in detail the measures they desire to see enforced. Having conferred with the Committee of the Farmers' Club, the Deputation recommended the Council to sanction the following proposals to be laid before the Duke of Richmond and Gordon:—1. That all animals intended to be slaughtered for meat should be landed at specified ports, and sent to markets separate from those used for English stock. That all such animals should be branded or marked on landing, and not allowed to be removed alive from the place of debarkation. 2. That proper quarantine grounds should be provided by Government for foreign store stock arriving from "unscheduled" countries, which stock shall not be removed there from until seven clear days have elapsed. In the event of contagious diseases breaking out among any lot thus placed in quarantine, the whole should be slaughtered with the least possible delay. Should cattle arrive at an English port from any country where pleuro-pneumonia exists, such cattle should either be slaughtered upon arrival or be subjected to a quarantine of not less than twenty-eight days, and immediately inoculated for the disease. 3. That in respect of animals from Ireland or other of the British Isles, so long as such islands are free from contagious disease no restrictions beyond the examination at the port of embarkation should be imposed upon exportation or importation; animals coming therefrom should, in all respects, be treated as English, Welsh, or Scotch cattle, or animals arriving coastwise at one British port from another; but in the event of contagious disease being reported to exist

in either of these islands, all animals before leaving such island should be passed by an inspector at the port of embarkation, and the owner should be called upon to produce a certificate from the local authority of the district the animals come from, that such district is free from contagious diseases. Should the animals be unsound, or the owner fail to produce a satisfactory certificate, such animals not to be embarked until they have been subjected to such quarantine as the inspector may order, or in accordance with rules to be issued by the Privy Council. 4. That all vessels, used for the importation of animals, be certified by the Board of Trade as to space, ventilation, convenience, &c.; and that regulations for the efficient cleansing and disinfecting of such vessels be issued and rigorously enforced. 5. That, in order to avoid the present diversity of action, all Orders in Council or legislative enactments bearing upon the trade in disease in animals should be imperative, and not permissive; further that their application should extend throughout the United Kingdom. 6. That provision be made to secure the practice of inspection throughout the three kingdoms being more thorough; to this end a sufficient number of qualified men should be appointed by Government to act as itinerant inspectors, who should be charged with the duty of visiting fairs, markets, and ports, to see that local authorities, railway companies, wharfingers, shipping agents, local inspectors, &c., attend to the respective duties imposed on them by Orders in Council or Acts of Parliament. Further, a sufficient number of veterinary inspectors should be appointed at the ports of Great Britain and Ireland, to make a proper examination of animals before shipment or landing. 7. That the owner of any animal affected with a contagious disease should be compelled to give immediate notice of such case to the local officer, nor should such animal or those which have been in contact be allowed to be removed until the inspector reports them free from disease. 8. That, upon the outbreak of contagious disease in any locality, the local inspector should have the power of prohibiting the movement of animals without an order, not only from the infected farm or premises, but subject to the local authority, from any adjoining farm or premises the local inspector may deem requisite. 9. That, whenever foot-and-mouth disease or other contagious maladies become general or dangerously prevalent, it shall be the imperative duty of the Privy Council to order a temporary stoppage of fairs and markets for store stock, and the adoption of other regulations enforced during the time of the cattle plague. 10. That, in respect of pleuro-pneumonia, all affected animals be immediately slaughtered; that compensation be made to the owners at the rate of three-fourths the value of each animal, and one-third the salvage to belong to the owner. That the remainder of the head be isolated for a period of not less than eight clear weeks. 11. That as the success of any regulations depends mainly upon the action and co-operation of cattle dealers, they should be required to take out a licence, and which should be liable to be suspended or revoked by the magistrates in the event of such dealer being convicted more than once of offences against the Act or Orders in Council.—W. W. BEACH, Chairman."

The CHAIRMAN, in moving the adoption of this Report, observed that the Duke of Richmond and Gordon, after hearing the deputation, expressed a wish to be supplied with a detailed statement of the measures which they desired to have carried out, particularly as regarded foot-and-mouth disease; and hence the two committees had conferred together and prepared what was now submitted to the meeting. In replying to Mr. Read, in the House of Commons, the Vice-President of the Council, Lord Sandon, had expressed the willingness of the Privy Council to meet the wish for uniformity in the regulations which were carried out. His lordship said he trusted that the regulations now in force would prove sufficient for the purpose, but that in case they did not the Government

would be inclined to go further in a uniform direction than they had done yet; and that he had no doubt that the course adopted would have the effect of stopping the spread of disease. The recommendations now submitted had been well considered, and were based to a large extent on the published views of Mr. James Howard on that subject. The hon. gentleman concluded by expressing a hope that those who differed from the joint committee on certain points would, as far as possible waive their opinions, in order that there might be united action, without which it would be impossible to secure the common object.

Professor WILLIS BUND seconded the motion.

Mr. H. BIDDLE, M.P., observed that under clause 10 of the Report the owner of an animal which was compulsorily slaughtered might obtain more for it than he could have done if it had not become diseased. It was there stipulated that the owner was to have three-fourths of the value and one-third of the salvage, and he (Mr. Biddell) could not assent to that.

Mr. STRATTON observed that what Mr. Biddell referred to was a manifest blot in the Report, and though unanimity was desirable that could not be passed by. He had never seen the recommendations in a printed form till that moment, and could not be expected to assent to everything that they contained. He thought the fundamental error of the Privy Council was reliance on inspection. The 6th clause of the Report said that "a sufficient number of qualified men should be appointed by Government to act as itinerant inspectors." Instead of relying on inspection he would require that there should be a certificate from the local authority of the district from which animals were brought to the effect that there was no disease there. He suggested that the Report should be referred back for reconsideration.

Mr. MUNTZ thought it better that there should be a little delay than that the Council should adopt what would not be attended with the advantage of unanimity.

Mr. HICKS (Cambridgeshire) agreed with Mr. Biddell, that under clause 10 of the Report the owner of an animal slaughtered compulsorily would, in some cases, actually receive more than the value.

The CHAIRMAN thought it would be best to adopt the suggestion that the Report should be sent back for reconsideration.

Mr. SMYTHIES, as a member of the Committee of the Farmers' Club, said that in assenting to the Report before the meeting they did not suppose that it would at once be assented to, but their idea was that the Council would appoint a committee to confer with them.

After some further discussion the motion was withdrawn, and the Report referred back for reconsideration, the following gentlemen being appointed to represent the Council: Mr. C. S. Read, M.P., Mr. Stratton, Mr. Muntz, Mr. Treadwell, Mr. Storer, M.P., Mr. T. Duckham, Mr. Jabez Turner, Mr. Bowen Jones, Mr. D. Long, Mr. Hicks, Mr. Edmunds, Mr. Wilson, and Mr. Arkell, with power to add to their number.

Mr. STRATTON said, last year the Council passed a resolution to the effect that the subject of the contagious diseases of animals should be brought before the House of Commons, and that some member of Parliament should be requested to introduce it, and he was surprised that no one in the House of Commons had been found willing to bring forward such a question. It could not require much courage to introduce the subject of foot-and-mouth disease. He concluded by asking the Chairman to be good enough to read the resolution to which he had alluded.

The CHAIRMAN then read from the Minute-book a resolution passed at the Council meeting in April last year, the concluding part of which was to the effect that a member of the House of Commons should be requested to take the earliest opportunity of bringing the question before Parliament. The hon. gentleman added that he did not think it was owing to any want of will on the part of members representing agriculture that the subject was not introduced, and that possibly many members shrank from the responsibility of bringing forward so important a question; adding that, if appealed to, he would have performed the task himself to the best of his ability.

Mr. PELL, M.P., said it should be recollected that it was not so much through what Mr. Read said in Parliament as through what he did out of Parliament that a sudden change had been made in the Government. He regretted exceedingly

that his friend's connection with the Government had been severed, but no one could blink the fact that his retirement had given a prominence to that question which it never had before, and had materially contributed to the altering of the Government regulations with regard to cattle diseases. If he were asked why he had not himself introduced that question in the House of Commons, he would reply that it was partly because he was one of those who served on the important committee of 1873. He had no hesitation in declaring that the reason why he had not made himself the spokesman of the Chamber on that subject was that the report of that committee was entirely opposed to the crude views which some persons had put forward; and it was perfectly clear that until agriculturists came to something like agreement, if not uniformity, with regard to what ought to be done the question would not command that amount of attention which it deserved. What had been proposed as regarded quarantine could not possibly be carried out (expressions of dissent). Well, that was the opinion expressed by men who had given a large amount of consideration to the matter, and who were supposed to know what they were talking about when they were giving evidence. He believed that his views were almost identical with those of Mr. Read, but they were not identical with those held by very many farmers throughout the country, and it was owing to such differences that he and others had not been able to show the front in Parliament which their friends had desired that they should do.

After a few remarks from Mr. JABEZ TURNER, in which he confessed his ignorance with regard to inoculation, referred to in the second clause of the Report, the subject dropped.

The next subject for consideration being "The Poor-law Amendment Bill."

Mr. A. STARTIN moved as follows: "That this Council generally approves of the Poor-law Amendment Bill, and regards the clauses which give power for altering boundaries of existing parishes and unions as of the first importance in facilitating the amendment of areas and the reforms desirable in local administration; but this Council objects to the proposal to make birthplace, in certain cases, the test of settlement." He said that when Mr. Goschen made his memorable speech in the House of Commons on local taxation he described the existing state of things as a chaos of administration, of areas, and of rates. The bill to which the resolution related was an attempt to reduce the chaos of areas to something like order. The Local Government Board were very properly entrusted by it with numerous powers. They had power to deal with any portion of a parish which happened to be isolated from the remainder of the parish, "or otherwise detached," whatever that might mean: they had power to amend the county boundaries, as well as to change those of parishes, and they had power to dissolve any existing union, to change its name, and to rearrange the component parts as they might think fit. Of course, in dealing either with parishes or with unions, the justice of the case would have to be taken into account, and the relative duties and obligations adjusted in a proper manner. Another important provision was to the effect that no person who had received relief during the previous twelve months should be entitled to vote at an election of guardians. In a parish contiguous to his own, a guardian was returned by the votes of ten or twelve persons who were in that position. In his opinion any one who had received relief ought not to be able to vote in the same union at any subsequent period of his life. There were many other changes in the bill which were also likely to work beneficially. He strongly objected, however, to the provision with regard to settlement. The whole law of settlement was antiquated, and he thought the time was come when it should be abolished altogether. Where a poor man had borne the burden and heat of the day, he should be supported in his declining years. Under clause 30 in that bill, if a person had not acquired any other settlement than that of his birthplace, the local authorities would have power to remove him to his first settlement. What would be the result of that? The local authorities of large towns were not very careful in investigating the question whether or not a pauper had acquired a new settlement. In many cases, therefore, there would be a removal to the birthplace, and that would produce very great hardship. He entirely approved of the provisions for removing exemptions from contributing to the rates in such cases as those of the Inns of Court and the Charter House, regarding that as a step towards the abolition of the limitation of rating to one kind

of property. He thought Parliament had now completely discarded the idea of the poor-rate being a rent-charge on land.

Mr. PELL, M.P., in seconding the amendment, said he had given notice in the House of Commons of his intention to move in Committee an amendment in the clause relating to settlement, concurring in the objection stated by Mr. Startin. He could not, however, go so far as to propose the total abolition of the law of settlement, and he did not believe such a proposal would have any chance of being carried. The bill made a material change in the right direction by providing in the case of natives of Ireland, that any person who had resided in a union for three years should be deemed to have acquired a settlement there. He had given notice of an amendment to leave out, after the word "person" the words "born in Ireland," in order that the provision might apply in England, as well as in Ireland, thinking that after a person had resided and worked in a place for three years, he had a just claim to a settlement there.

Professor W. BUND believed that the bill, instead of introducing order into chaos, would "make confusion worse confounded" by the alteration which it would cause in boundaries. Instead of producing simplification, it would create new areas and new interests to be fought against when the great struggle came with regard to local taxation. He agreed with Mr. Startin that the law of settlement should be abolished, that law having been justly described as "a device of old Nick." In his own union in Worcestershire a man who had worked in Birmingham for forty years was at last sent back to his birthplace in that union, and thus the ratepayers were called upon to support a man for whose labours they had derived no benefit.

Mr. C. S. READ, M.P., said his name being at the back of the bill under consideration, he wished to observe that he thought that with a few alterations it would form a great improvement in the law. He quite agreed with Mr. Startin as to the mischievous effect of towns being enabled to remove men who had lived there for many years, to their birthplaces. It was a great injustice that manufacturing towns, after using up the bone and sinew of persons of rural origin, should be enabled afterwards to send them back to the place where they were born. He also agreed with Mr. Startin that a pauper should not be allowed to vote at an election of guardians, and would like to see such persons prohibited from voting for any parochial offices whatever. In the case of School Board elections there was, unfortunately, no provision for plural voting, and "Jack" was not only "as good as his master," but perhaps a little better.

Mr. WALKER (Nottinghamshire) mentioned that the floating wealth of England ought to contribute towards the support of the poor.

Mr. D. LONG said the Gloucestershire Chamber had discussed that question, and approved of the bill so far as the overlapping of boundaries was concerned, because they thought it was a step in the right direction, and might lead to the establishment of county boards. Thinking that the general feeling of the meeting was in favour of the abolition of the law of settlement, he would propose as an amendment that the following words be added to the resolution: "And would prefer that the law of settlement should be abolished."

Baron DIMSDALE seconded the amendment. A great reform was effected in 1864, when union was substituted for parochial rating, and he thought there should be free-trade with regard to labour.

Mr. STRATTON, in supporting the amendment, remarked that the agricultural districts were now not only nurseries for the supply of labourers for the manufacturing towns, but were also educators of such labourers, what they paid in that way being a very serious and unjust tax. Such a tax ought to have been levied on owners instead of occupiers, being an absolutely new kind of impost, and one which occupiers when they took their farms could not have contemplated.

Mr. JABEZ TURNER thought the law of settlement could not be abolished. If the law of removal were abolished that would meet the views which had been expressed on the subject. He thought that where a person became chargeable he should continue so. In nine cases out of ten after a labourer who was bred and educated in an agricultural district had laboured all his life in a town, he was returned to that district, and if the bill passed as it stood, that would be done more easily than it had been under the present system.

Mr. MUNTZ objected to the abolition of the law of settlement.

Mr. GEORGE TURNER (Kent) supported the amendment.

Mr. PIPER condemned the habit of grafting all sorts of verbal amendments on proposals brought before the Council, and said that after what had fallen from Mr. Pell the amendment of Mr. Long seemed to him unnecessary.

After some further discussion, in which Mr. Pell, M.P., Mr. Storer, M.P., and Captain Craigie took part, Mr. Long withdrew his amendment, and the resolution was adopted.

"Elementary Education in Rural Districts" being the next subject in the agenda paper,

Mr. T. BELL (Newcastle) moved the following resolution: "That this Council shall bring its influence to bear on Parliament to have the Elementary Education Acts of 1870 and 1873 so amended that those powers at present invested in School Boards to compel the attendance of children at school, and to pay the fees in the case of the poverty of the parent, shall be conferred on every sanitary authority not in a School Board district; and that in every district where any part of the expenses of a School Board are defrayed out of the local rates, the incidence of such school-rate shall be equally divided between landlord and tenant." He commenced by reading extracts from official reports relating to education, which he contended showed the necessity for compulsion. It was, he said, undoubtedly the intention of the Legislature, in passing the Elementary Education Act of 1870, that as far as possible every child of proper age should attend school; but notwithstanding that large numbers of children in all parts of the country were still left by their parents to grow up in utter ignorance. Influence was useless unless backed up by compulsory powers. The position of many voluntary schools in rural districts was like that of a steam engine working with half-power; and he maintained that if a local committee had the necessary powers it would be a good substitute for a School Board, and would answer the same purpose as regarded enforcing attendance at school. He advocated the sanitary authorities being invested with the requisite authority.

The resolution having been seconded,

Mr. PIPER moved as an amendment, "That education is a necessity in rural districts, and that the Agricultural Children's Act provides sufficient machinery for enforcing such education, Boards of Guardians being empowered to put the Act into operation." He believed that the effect of carrying out the resolution would be to add to the chaos which existed already with regard to parish officials. Practically, it would make all the local boards School Boards. He thought that all that was required was a fair administration of the Agricultural Children's Act, which for some reason or other was a dead letter in many of the rural districts. ["No, no."] At any rate it was so in his own district, and in others with which he was acquainted.

Mr. HICKS (Cambridgeshire), in seconding the motion, said that in his county the agency of the police had been effectually employed in carrying out the object of the Agricultural Children's Act. He also observed that the expense of Board schools was as three to one compared with that of voluntary schools.

Mr. HODGES (East Kent) remarked that the Agricultural Children's Act gave no power to enforce attendance at school, but simply provided penalties for the employment of children under a certain age, or under certain conditions; the result being that great numbers of children were left to grow up in idleness and ignorance. Some enactment was required to compel parents to do what blindness to their own interest, as well as that of their children, now prevented them from doing; and it was not necessary to incur the ruinous expenses involved in the formation of School Boards to arrive at so simple an end as that.

Mr. FITZGERALD (Hampshire) did not agree with Mr. Bell to call in the aid of the sanitary authorities, which, he said, in many counties were represented by the superintendent of police. ["No, no."] In his own district the police inspector occupied that position, and in his opinion such an officer was not the proper person to carry out the intentions of the Act. At the Hampshire Quarter Sessions held the day before, Mr. Cowper-Temple remarked that that question was not viewed in the House of Commons as a party one, and that he had no doubt that when the Elementary Education Act was under consideration, a clause might be inserted to secure the object.

Mr. TREADWELL believed that if compulsory powers were

vested in the sanitary authorities, the object of the Act would be carried out in accordance with the views of agriculturists generally. In his own parish it was carried out already.

Mr. GLENNY (Romford, Essex) observed that in his parish many children were left to run about the streets. He knew one place in the Essex marshes where there was a Board school for only 15 children, with a clerk at £24 a year, and a master and mistress with about £80 a year between them.

Mr. STORER, M.P., hoped the amendment would be withdrawn, believing that the object ought easily be attained through the medium of the sanitary authorities.

Mr. MUNTZ said, when the Agricultural Education Act was passed, he thought it would solve the great difficulty before them; but as time went on an evil presented itself, which he did not anticipate. The great defect in the working of the Act was, that they did not get hold of children soon enough, and the consequence was that the period between the ages of six and ten was entirely lost. If children were educated during that period they would afterwards be ready for employment in agriculture. Parents generally did not look forward, and would not send their children to school when they might easily do so. He thought, therefore, that more direct compulsion was absolutely necessary; but he, for one, could not consent to compulsion, unless schools were placed under the control of a popular body, and he wished to propose the following: "That no law to compel the attendance of children at school will be effectual or useful, unless it is enforced by penalties on the parents, and that such law of penalties will only be tolerated in England when schools are under the control of a popular representative body."

Mr. FIEBER said he was prepared to withdraw his amendment provided the latter part of the resolution were withdrawn.

After some conversation, Mr. BELL consented to withdraw the last part of his resolution, commencing with the words "and that in every district," &c.

On the resolution as thus abridged being submitted, Mr. ACKERS moved as an amendment, "That no amendment of the Education Act of 1870 will be satisfactory that does not provide for subscriptions to efficient public elementary schools being accepted in lieu of rates, or that does not allow of the allocation of rates by individual ratepayers in School Board districts." He observed that his resolution was in accord with what was popularly called "the Canadian system," under which parents were enabled to decide to what schools their children should be sent. While the average cost of voluntary schools was only about £5 a head, that of Board schools was about £18.

Mr. ILQUHAM having seconded the amendment,

Mr. BELL said he could not accept it as a rider, believing that it would tend to create greater confusions than now existed.

Mr. PHIPPS, M.P., deprecated the adoption of the amendment, especially at such a late period of the sitting. [The Council had been sitting about three hours.] He added that the education rates ought, in his opinion, to be paid by owners and not by occupiers, and that he thought that all leases should contain a special clause providing that any new taxation which might be imposed during the currency of the lease should fall upon the landlord.

Mr. ACKERS then withdrew his amendment.

The CHAIRMAN said that, before putting the resolution of Mr. Bell, he wished to make a few remarks. Having taken part in the passing of the Agricultural Children's Act he felt great interest in its working. While it was passing through Parliament he felt that the great defect in it was that there was no adequate machinery for carrying out its provisions. Although boards of guardians might see that they were carried out, yet they did not appear to have felt that to be their duty to do so. In a few counties the police had been employed for that purpose with satisfactory results, but in others there was a decided objection to that, and the Act had remained a dead letter. They must not overlook the fact that school teachers and school inspectors were pressing on the Government and on the country the absolute necessity of compulsory education: the former naturally complained that injustice was done to them, and they were deprived of the proper reward of their exertions under the present state of things, and if something were not done agriculturists could scarcely hope to avoid having School Boards thrust upon the whole country. In order to escape that they must have effective machinery

for the carrying out of the Agricultural Children's Act, and he thought the time had arrived when some action must be taken in the matter. They were, he held, all agreed that the resolution was now unobjectionable, and he hoped it would be adopted.

The resolution was then put and carried unanimously.

Mr. ACKERS having suggested that the further consideration of the question should be postponed till the Council meeting in May,

Mr. BELL protested against that course as being contrary to a previous understanding that he was to be at liberty to propose that part of his original resolution which he had withdrawn as a separate resolution.

Mr. BELL having then proposed "That in every district where any part of the expenses of a school board are defrayed out of the local rates, the incidence of such school rate shall be equally divided between landlord and tenant," and this resolution having been seconded,

Captain CRAIGIE said he should move, as an amendment, "That this Council, while deprecating most strongly the formation of School Boards, is of opinion that if any part of the expenses are defrayed out of local rates, such rates should be levied as special sanitary rates; and, further, that in every district where any part of the expenses of a School Board are defrayed out of the local rates, the incidence of such school rate shall be equally divided between landlord and tenant." He said his main object in proposing that amendment was, that where School Boards existed, but were objected to by many persons, the school rates should be levied on a sanitary basis.

Mr. PHIPPS, M.P., seconded the amendment.

It was ultimately agreed that the further consideration of the question should be deferred till the next meeting.

The Council afterwards adopted a petition relating to the Valuation Bill, in accordance with a resolution previously passed.

This terminated the proceedings.

THE REFORM EXCITEMENT IN 1831.—Such a scene as the division of last Tuesday I never saw, and never expect to see again. If I should live fifty years the impression of it will be as fresh and sharp in my mind as if it had just taken place. It was like seeing Cæsar stabbed in the Senate House, or seeing Oliver taking the mace from the table—a sight to be seen only once, and never to be forgotten. The crowd overflowed the House in every part. When the strangers were cleared out, and the doors locked, we had six hundred and eight members present—more by fifty-five than ever were in a division before. The Ayes and Noes were like two volleys of cannon from opposite sides of a field of battle. When the opposition went out into the lobby, an operation which took up twenty minutes or more, we spread ourselves over the benches on both sides of the House, for there were many of us who had not been able to find a seat during the evening. When the doors were shut we began to speculate on our numbers. Everybody was desponding. "We have lost it. We are only two hundred and eighty at most. I do not think we are two hundred and fifty. They are three hundred. Alderman Thompson has counted them. He says they are two hundred and ninety-nine." This was the talk on our benches. I wonder that men who have been long in Parliament do not acquire a better *coup d'œil* for numbers. The House, when only the Ayes were in it, looked to me a very fair House—much fuller than it generally is even on debates of considerable interest. I had no hope, however, of three hundred. As the tellers passed along our lowest row on the left hand side the interest was insupportable—two hundred and ninety-one—two hundred and ninety-two—we were all standing up and stretching forward, telling with the tellers. At three hundred there was a short cry of joy—at three hundred and two another—suppressed, however, in a moment, for we did not yet know what the hostile force might be. We knew, however, that we could not be severely beaten. The doors were thrown open, and in they came. Each of them, as he entered, brought some different report of their numbers. It must have been impossible, as you may conceive, in the lobby, crowded as they were, to form any exact estimate. First we heard that they were three hundred and three; then that number rose to three hundred and ten; then went down to three hundred and seven. Alexander Barry told me that he

had counted, and that there were three hundred and four. We were all breathless with anxiety, when Charles Wood, who stood near the door, jumped up on a bench and cried out "They are only three hundred and one." We set up a shout that you might have heard to Charing-cross, waving our hats, stamping against the floor, and clapping our hands. The tellers scarcely got through the crowd, for the house was thronged up to the table, and all the floor was fluctuating with heads like the pit of a theatre. But you might have heard a pin drop as Duncannon read the numbers. Then again the shouts broke out, and many of us shed tears. I could scarcely refrain. And the jaw of Peel fell; and the face of Twiss was as the face of a damned soul; and Herries looked like Judas taking his necktie off for the last operation. We shook hands, and clapped each other on the back, and went out laughing, crying, and huzzing into the lobby. And no sooner were the outer doors open than another shout answered that within the House. All the passages and the stairs into the waiting-rooms were thronged by people who had waited till four in the morning to know the issue. We passed through a narrow lane between two thick masses of them; and all the way down they were shouting and waving their hats till we got into the open air. I called a cabriolet, and the first thing the driver asked was, "Is the Bill carried?" "Yes, by one." "Thank God for it, sir." And away I rode to Gray's Inn—and so ended a scene which will probably never be equalled till the reformed Parliament wants reforming.—From *The Life and Letters of Lord Macaulay*. By his Nephew GEORGE OTTO TREVELYAN.

### THE VALUATION BILL.

At the quarterly meeting of the members of the Borough-bridge Agricultural Society Mr. HARLAND (Blows Hall) read a paper entitled "A few Notes on the Valuation Bill." He said that the subject was not to be classed with mere party politics, but interested every member of the community. Rates and taxes seemed to be every year increasing, and necessarily claimed the attention not only of the House of Parliament, but of many another house beside. Therefore any attempt made to alter existing arrangements with the view of rendering more equitable or more just the basis on which the valuation whereby the rates and taxes during the next seven years after the passing of the Act should be levied, was deserving of most serious consideration. He wished simply to glance at the machinery by which the new arrangement was proposed to be worked. After enumerating some of the leading provisions of the Act, he said that power was given to the Assessment Committee, with the consent of the Guardians, to appoint some competent person to assist the committee in the valuation of the rateable hereditaments of the Union, always bearing in mind that in calculating the gross value the annual rent which a tenant might reasonably be expected to pay should not be estimated at less than the actual rent if paid by an annual tenant over a series of years. But he failed to observe who should fix the limit of excess over that rent if the surveyor of taxes thought fit to make an addition. He need not enumerate the reasons which might now and then induce a stranger to take a farm at a much higher rent than it was worth. It might be that tired of smoke and the din of town life, and feeling that the restoration of his health would be an inestimable blessing, he scrupled not to try his hand at farming, and so bid high for some pleasant place; or perhaps he thought how nice it would be to have a herd of cattle capable of winning prizes in the show-yard. Let but a portion of a township realise a higher rent than usual, and it would soon catch the eye of the surveyor, for he was quick at figures, and easily discerned how much would be added to the income-tax and the county rate if by any means the gross value could be elevated to the highest standard. And so, no doubt, in his opinion, the highest rented farm would be the proper standard. From his own experience he believed that no opportunity was ever lost by the surveyor of adding a little more to the assessment—sometimes he thought a little more than any member of any Government intended. He might be mistaken however. He admitted that the number of appeals was small, but it was because business men could not afford to lose the time nor endure the annoyance attached to an appeal for a small amount. It appeared to him that according to the bill it was proposed to invest the surveyor

of taxes with extraordinary powers, for if the overseers failed to agree with the official, it was possible that a township might be put to great costs, and as he (the surveyor) had to determine the value of so many descriptions of property, they might reasonably imagine how he had acquired the very extensive and practical knowledge necessary to enjoy confidence. Along with others, he had hitherto supposed the surveyor to have risen from the position of a meritorious clerk. But what did he know about the different descriptions of farms?

Mr. BENNETT thought that the bill introduced a very objectionable person—he alluded to the surveyor of taxes. But he should like to see the basis of taxation altered entirely. He could not see why people who had personally should not pay their fair share in the taxation of the country.

Mr. BROGDEN agreed with the last speaker that there was hardly any tax which they, as farmers, escaped. He did not know much about the new bill, but very arbitrary powers appeared to be placed in the hands of the Surveyor of Taxes.

Mr. CAPES thought it was entirely an apprehension about the surveyor being a nuisance. On the contrary, he was of opinion that he would be of great assistance to the Assessment Committee, and it was not intended that he should have any power in the matter beyond assisting that committee to come to a proper judgment. That the surveyor would be able to judge of the value of land, however, he disputed altogether, because the class of men from whom they were chosen were persons who knew nothing about land. But it seemed to him that at present the labours of the Assessment Committee, except as to the parochial rates, were entirely thrown away. The rateable value fixed by the Assessment Committee of the different unions did not seem even to be recognised in the assessment for the county rate. He thought that assessment by assessment committees was the very best mode that could possibly be adopted, because they comprised men selected from every part of a Union, many of whom were acquainted with every field in it, and knew the proper value of land. They should have also a uniform system of rating. Whether rent should be taken as the basis of valuation was a matter open to consideration, but he thought that if a man was high rented he should be high rated.

Mr. SCOTT thought the services rendered by the Assessment Committee were most efficient and satisfactory. But at present there was great inequality in the valuation of land in different Unions. In the matter of shooting, in the Union in which he resided, the rate ranged from 6d. to 2s. per acre, whilst in the adjoining Union the shooting was rated throughout at 6d. per acre. There was something incongruous in this, because the sport was as good in the one case as in the other. If, however, the introduction of surveyors of taxes would lead to the equalising of the rates in the various Unions, perhaps some good might come out of it.

The CHAIRMAN thought that the bill in its present state was likely to import a great amount of vexation in the person of the surveyor. He had been compelled to appeal more than once, and most vexatious affairs they were. But if the surveyor were subservient to the Assessment Committee, he believed that in the equalisation of the rates he would be of great service.

After some remarks from the Rev. Mr. OWEN, the Rev. Mr. SALES said that now the Government had undertaken the relief of some local rates, it was bound to see that they were equitably raised throughout the country. He thought a greater equality in the rates might be maintained amongst different Unions, for inequality meant injustice.

CHINESE SUPERSTITION.—A host of superstitions find a home in China. Nearly all of the Chinese are fatalists—believers in inevitable destiny. They take no precautions against fire, even in towns built of wooden houses, and made up of narrow streets; if the houses are to be burned, they say, they will be, if not, what is the use of taking any care to prevent what will never happen? They have great confidence in fortune tellers and "wise people," who, like their fraternity all over the world, promise good in an exact ratio to the amount of money they get; and, as "male progeny, official employment, and long life" are the three greatest blessings a Chinese can possibly desire, these in varying degree are the good fortunes predicted to the dupes who visit the clairvoyant. Charms,

talismans, and such like are hung up in every house, and are firmly trusted in, especially by the Taqists, who are more superstitious than the rest of their countrymen. They dread the wandering ghosts, or spirits of people who have come to a bad end. When the Europeans first came to China, mothers pointed them out as high nosed, fair haired demons, who had

wandered far from home. Hence the term yet applied, though not in the same significance or even bitterness as before, *faï Kwei*, "foreign devil," "spirit," or "ghost," to all Europeans. "Demoniacal possession" is related of many persons, the demons having entered into them, and made them play turbid pranks on those whom they disliked.—*The Races of Mankind.*

## THE USE OF AMERICAN GRANGES.

During the last two or three years we have heard a great deal of the power and influence of the American Granges, but very little of their constitution and objects. It has been popularly supposed that their efforts were mainly directed to the cheapening of the tariffs for the conveyance of agricultural produce on the great American railways, and to co-operative objects which in this country are attained by means of the Agricultural Supply Associations that have been established in several counties; but this is a very narrow and inadequate idea of what the Granges profess to accomplish. They have now sent a missionary to this country to propagate their views, and to endeavour to start here kindred associations, which in some undefined way are to co-operate with those established in the New World; and from the speeches of that gentleman at our Farmers' Club and Central Chamber, his letters to the press, and the pamphlets which he has circulated, we are able to learn more than we have hitherto known of this powerful and wide-spread American institution. Some idea of the importance and power of the Granges in the American continent, including Canada, is conveyed by the statement of Mr. Wright, the gentleman deputed to represent them, first in England, and afterwards in other European countries, to the effect that they have over a million members, and that the organisation comprises one National Grange, 38 State Granges, and 24,000 subordinate Granges. They were first established on December 4, 1868, so that they have been in existence more than eight years. The subscriptions are small; but since its establishment the National Grange has received nearly £70,000, which we presume is the aggregate of the net incomes of the provincial Granges, after current expenses have been deducted. A might be expected in the country which gave birth to the Women's Rights movement, the Granges admit women not only to membership, but also to official positions in perfect equality with men. In some respects the organisation resembles that of the Freemasons, or perhaps more nearly that of the Foresters. It is a secret society, possesses an elaborate ritual, has various grades and titles of honour, and rejoices in a mystic symbolism which is somewhat ludicrous to the uninitiated. So far is it from being merely a species of trade union and co-operative society combined, which it has commonly been supposed to be, that after a very painstaking attempt to gauge the extent of its aims, we feel ourselves utterly unable to comprehend them in all their vastness and sublimity.

We have before us a little handbook entitled "Constitution of the Order of Patrons of Husbandry, with By-laws of the National Grange, adopted at the Eighth Annual Session of the National Grange, February, 1875." From this little book we learn (and we quote *verbatim et literatim*) that, "The ultimate object of this organisation is for mutual instruction and protection, to lighten labor by diffusing a knowledge of its aims and purposes, expand the mind by tracing the beautiful laws the Great Creator has established in the Universe, and to enlarge our views of Creative wisdom and power." We are further informed that "The Patrons of Husbandry consist of the following:

### ORGANISATION.

#### Subordinate Granges.

First degree: Maid (woman), Laborer (man).

Second degree: Shepherdess (woman), Cultivator (man).

Third degree: Gleaner (woman), Harvester (man).

Fourth degree: Matron (woman), Husbandman (man).

#### State Grange.

Fifth degree: Pomona (Hope). Composed of the Masters of Subordinate Granges and their wives who are Matrons.

#### National Grange.

Sixth degree: Flora (Clarity). Composed of Masters of State Granges and their wives who have taken the degree of Pomona, and the officers and members of the Executive Committee of the National Grange.

Seventh degree: Ceres (Faith). Members of the National Grange who have served one year therein may become members of this degree upon application and election. It has charge of the secret work of the Order, and shall be a court of impeachment of all officers of the National Grange."

Again: "The officers of a Grange, either National, State, or Subordinate, consist of and rank as follows: Master, Overseer, Lecturer, Steward, Assistant Steward, Chaplain, Treasurer, Secretary, Gatekeeper, Ceres, Pomona, Flora, and Lady Assistant Steward." These officers are all to be addressed as "worthy." It would take up too much space to state how they are chosen, or to give the rules by which the Granges are governed. The ceremony of initiation is, of course, a secret; but we are informed that it binds those who are subjected to it "in mutual fraternity as with a band of iron," and yet that "its application is as gentle as that of the silken thread that binds a wreath of flowers."

We are not told very distinctly by what means the Granges work for the benefit of their members; but if we may accept the statement of Mr. Wright we must credit them with having produced great results. That gentleman, in reply to an adverse critic, says, "It would consume too much space to endeavour here to enumerate in full the many important results accomplished by our Order in advancing the true interests of agriculture. Suffice it to say, its influence has improved the cultivation of our soil, the economy and comfort of our homes, and has stimulated our farmers to more self-culture. It has secured us higher prices for our products, reduced prices for our supplies, lower rates of interest and insurance—thus, and in other ways, making our farms more profitable financially. By our more direct trade with manufacturers, a farmer frequently saves in the purchase of a single machine many times the small amount of money which the moderate fees of the Grange annually cost him. We have helped to put down a large amount of corruption, and our work tends to purify our political atmosphere. And yet our work has but just begun." It seems, then, that the Grange is a mutual improvement society, as well as an agricultural supply association, and that in some undefined and mysterious way it influences the money market in favour of borrowers, and purifies the political atmosphere—a very desirable sanitary work on the other side of the Atlantic, as on this. But the



Grange only acts on politics indirectly, by the cultivation of a sensitive political conscience we presume; for it disowns all active interference in political affairs.

Of what use the effete jargon in which the Granges have borrowed from the old secret societies we are not told, for it does not at all enlighten us to speak of the order as "a brotherhood working together on the principles of the level, the plumb, and the square, like our Masonic fraternity." There is nothing to be said against "working on the square," and recent revelations seem to show that members of high political circles in the United States might take a lesson from the Grangers in this respect. But a mystic ritual, with its childish twaddle about Pomona, Flora, and Ceres, would be barely tolerable in an ancient society, and is simply ludicrous in a modern one. It is possible that some simple folks might be pleased with the titles of Shepherdess, Cultivator, Matron, and Husbandman, but sensible people do not appreciate such honours. If the American farmers like that style of thing, by all means let them enjoy it. Perhaps they need a little masquerading by way of diversion from their too laborious habits of life: but English farmers prefer fox-hunting and shooting. What the Grangers do at their meetings, which are held at least once a month, we have been unable to ascertain. We have no doubt that the Shepherdesses and Cultivators flirt a great deal, and that the Grange is an excellent marriage mart. Considered in that light it would be likely to meet with favour from our country maidens who are secluded from the delights of balls and skating rinks, and we should advise the apostle of the Grangers to address himself to them. We do not think he has much chance with the farmers—at least not with the married ones.

But why the mission? What common interest can the British farmer have with his cousin and rival on the other side of the Atlantic? They are to co-operate in some mysterious way it seems, but how? A farmer of the old school remarked at a meeting at which Mr. Wright was present, that the most effectual way in which the American farmers could cooperate with those of England would be by keeping their corn and meat at home. This was said in fun, but it expressed a sober truth nevertheless. Unless it is proposed in some way to rig the corn or labour markets, we do not see what common interest English and American farmers can have. Nor is it at all more easy to understand what benefit the establishment of Granges could be to English farmers as a separate body. All the matter-of-fact work that the Granges profess to do, and more besides, is done here by means of Farmers' Clubs, Chambers of Agriculture, and Agricultural Supply Associations, and done too, in a plain and business-like manner, without the paraphernalia of grotesque orders, or the mysterious slummary of secret nonentities. By belonging to a Farmers' Club the English husbandman may discuss husbandry to his heart's content, and more exhaustively than in the "shop" talk which usually prevails at market tables and social gatherings; by joining a Chamber of Agriculture he can express his views on questions of agricultural politics, and make them known to the powers that be by resolutions or petitions; and by becoming a member of an Agricultural Supply Association he can get goods at wholesale prices. It is true that none of these institutions profess to "enlarge his views of Creative wisdom and power;" nor do any of them offer him the advantage of an introduction to attractive representatives of Ceres, Flora, or Pomona. He must go elsewhere for his religion, as well as for his flirting; but Englishmen generally prefer to keep these things separate from business.

Mr. Wright has protested against a real or imaginary disposition on the part of some English critics of the

Grange system to be prejudiced against it on account of its being an American institution. We can assure him that no such prejudice affects us to the very slightest extent. On the contrary, before we inquired about the Granges we were predisposed to think much of them. As to Mr. Wright personally, we have nothing but friendly welcome and sincere respect to offer to him. As far as we have been able to judge he has conducted his "mission" so far with ability and tact. He is our guest, and we trust that no one will treat him otherwise than with the courtesy that his position as the representative of the farmers of America, and his obvious earnestness and disinterestedness entitle him to; but we really cannot see what good the Granges would do here. Almost the only want of the associations of British farmers is some organisation for obstinacy of parents should be allowed to stand in the way of the education of their children; but we do protest against the gross misstatement so constantly made that the poor labourers are anxious to be forced to send their children to school, and that the greed of farmers and the Conservatism of squires are the only hindrances to the spread of education in our villages.

APRIL AND OTHER FOOLS.—Now to whom does the epithet April Fool best belong—to the jester or his victim? That depends upon the spirit of the joke. You are not necessarily a fool because, being invited to a funeral, you find there is none to take place, or, being a child, you are sent for a pint of pigeon's milk or a jug of stirrup-oil; or, having paid for a parcel, you discover it to contain potato-parings; or, being frightened by a shriek in the nursery, you encounter only laughter and grimace; or, being advertised for as heir-at-law to a rich uncle, you learn that he is yet alive, though hopelessly indignant; or breaking an egg at breakfast, you start away from a swarm of spiders. "Better a witty fool than a foolish wit." A most subtle distinction. And then to connect a small bit of tradition, which may have its effect upon serious minds, with the subject. It was Dean Swift who argued, *apropos* of Bolingbroke, that on the 1st of April a "pungent lie" was permissible; but it was on a 1st of April that Bolingbroke told the lie in which his work of self-ruin began. And on the same anniversary the Emperor Napoleon committed the blackest falsehood of his life, by marrying Marie Louise. Even then the Parisians forgot not to nickname him a *Poisson d'Avril*. "He who lives without folly is not so wise as he imagines" is an axiom of Rochefoucauld, who adds, "It is a great folly to affect to be wise by one's self." At any rate, the thing itself represents a real and essential element in manners, difficult though it might be to offer a sufficient definition of the social fool. He is represented, however, by a number of varieties; and these again by a literature of anecdote, false or true, that may perhaps serve as well. It is impossible to set down in any other category those who pretend to sit in the porch, and to be above all human emotions, whether of surprise, alarm, or pleasure. In vain. No amount of eyeglass can raise them to a level with the great men of former days. *Pour savoir*: he who, when his wife had been calcined by lightning, summoned his servant, and said, "Mumbo, sweep up your missis;" he who, when his man had been killed, like Carver, on the railway, observed to the guard, "Find me the piece that has my keys on it;" she who told her friend, when the mutiny was in full swing, "There is nothing to put yourself out about, they are only shooting your husband;" and a fourth—but he was a bishop—who, having a glass of wine thrown in his face by an exasperated controversialist, remarked, "That was a digression." Of course, the stories are all equally untrue; but the very fact of their invention explains a good deal of what on the part of inferior genius we sometimes see. *Vis-à-vis* with young Stoic sits the philosopher of disparagement, who could perceive "nothing" in the crater of Vesuvius. You hear him quote with rapture or vulgarity of the American traveller who, after crossing the Alps, admitted that he thought they had passed over some rising ground. Him



would delight the *nil admirari* of that utter and painful fool who considered that "the best thing about St. Peter's at Rome was its snugness;" or that other, quite on a par with him,

who, when asked, "How long did you stay at Rome?" answered, "Only to change horses." By all means place seats for these gentlemen—or, were they ladies?—*Belgravia*.

## THE DUKE OF ARGYLL ON THE AGRICULTURAL HOLDINGS ACT.

[From *The Mark Lane Express*]

In the current Number of the *Contemporary Review*, the Duke of Argyll has published an elaborate attack upon the principle of legislative Tenant-Right as embodied in the Agricultural Holdings Act. His Grace argues that compensatory provisions for the security of the tenant's capital by Act of Parliament are not needed, and that if they were needed they would be ineffective. The principal portion of the Duke's paper is directed against compulsory legislation; but any one who reads the article attentively will see that the arguments as a whole are distinctly opposed to any legislative control over agricultural contracts whatever, since the only benefit that he admits will result from the passing of the Act of last session is that every landlord and tenant must for the future enter into a contract in writing, in the framing of which the Duke thinks the tenant can look after his own interests far more effectually than Parliament could secure them for him. In the space at our command it is impossible to enter into a detailed reply to the arguments of the Duke, and we shall therefore have to content ourselves with a review of the main objections upon which His Grace's opposition to the principle of legislative control over contracts of land-tenancy are based.

The Duke argues, then, that compulsory legislation is neither needed nor to be desired—first, because agricultural tenants already "enjoy greater security for all the capital they invest than almost any other professional class;" and secondly, because "in the long run, better security cannot be given by any legislation of the kind proposed." In support of the first of these positions the Duke insists that tenant-farmers have ample security for their capital, either under long leases or by means of preference rents—that is, rents below the fair letting value of their farms. Now, under a long lease we fully admit that the tenant usually enjoys sufficient security for the capital which he actually invests, although some very striking exceptions might easily be quoted; but how is this general security obtained? Simply by a very careful abstention from improving farming during the latter years of the lease, unless it is renewed some considerable time before its termination. This is not enough; for the advocates of legalised compensation for unexhausted improvements have never rested their case entirely upon a demand for security for capital invested in the ordinary course of farming as at present pursued, but also upon the plea that a more liberal expenditure on the part of the tenant than it is at present safe for him to make should be encouraged by giving him a legal claim to all the unexhausted capital which he has sunk in his landlord's property, as assessed in an impartial valuation at the time of his quitting his occupation. With respect to preference rents, in the cases of farms let from year to year, it is an obvious fallacy to represent that they either secure or encourage a liberal expenditure of capital by the tenant, since under them the poor and the high farmer are treated precisely alike. No doubt a man who gets his farm at five or ten per cent. less than it would let for if put up to public competition has ample remuneration for an average system of farming; but it is equally indisputable that one who sinks his capital in permanent or durable improvements gets no compensation for their unexhausted value in the shape of a discount off the rack rent of his occupation, which he would receive if he had not

made those improvements. As a matter of fact, we believe that the assumption that agricultural land is generally let at too low a rate will before long be somewhat rudely shaken. Taking into consideration the present state and prospects of farming, with working and living expenses and taxation immensely increased, with losses by cattle disease, and with low prices for corn, we are convinced that rents on the average are far too high to enable farmers to secure a fair return for their capital and their enterprise. This, however, is somewhat beside the line of argument in which we are following the Duke of Argyll. Until recently, we may admit that on some of the large estates farms have been let at a lower rent than could be obtained for them if they had been put up for public competition—a process which we are given to understand the Duke of Argyll has some experience of. But what then? We have shown that low rents do not secure compensation for unexhausted improvements, or encourage liberal farming. Besides, low rents almost invariably go with restrictive covenants, or over-preservation of game, or both—sometimes, we fear, with political coercion as well—and their advantage to tenants is immensely overrated. The Duke of Argyll, in a general way, is in favour of free trade and the commercial principle; and it is difficult to avoid the suspicion that, if he were not a landlord, he would wish to see them applied to farming as completely as to all other professions. The perquisite system, to whatever class it applies, is altogether out of joint with modern progress, and we are convinced that its continuance is as distinctly antagonistic to the interests of tenant-farmers in the long run as it is undoubtedly opposed to the advantage of the community at large. It may be that the passing of such a measure as the Landlord and Tenant Bill of Messrs. Howard and Read would do away with the perquisite of preference rents; but those who are most competent to assess the comparative advantages of a system of approximately exact payment for results, and one of haphazard perquisites in the form of preference rents, will be the first to see the superiority of the former to all concerned directly or indirectly. There is no need to assume that a hard-and-fast schedule of compensatory allowances must be prescribed. The advocates of legislative Tenant-Right would almost unanimously consent to the adoption of the elastic principle that provisions fixed in the case of the absence of contract might be overruled by any individual bargain which, in the opinion of competent and impartial adjudicators, would give adequate security for a tenant's investments by some indirect arrangements, such as a long lease with compensation for temporary improvements in the event of non-renewal, or a low rent on an improving lease; but it is for the advantage of landlord, tenant, labourer, and consumer alike, that, in the absence of lease or agreement effectually securing to a tenant in one way or other compensation for the unexhausted value of his improvements, the law should prescribe conditions which would make payment for value received imperative. In this way the utmost freedom of contract that is consistent with such a strict regard to *meum* and *tuum* as in the commercial world is not commonly regarded as a hardship might be allowed. No English advocate of legislative Tenant-Right wishes a landlord to pay compensation twice over, as the Duke of Argyll says he would have to

pay in some instances if a compulsory Act were passed. In the Landlord and Tenant Bill it was expressly stipulated, "That, in making their award, the arbitrators shall, in reduction of the claim of the tenant, take into consideration any benefits which the tenant may have received from the landlord in express consideration of the improvements made." Some such clause as that would sufficiently guard against double payment.

But the Duke of Argyll not only contends that tenants already enjoy good security for their outlay, but that no better security could be given by compulsory legislation. He says: "If under the new law it is found that the chances are that he (the tenant) will be able to make up a book of charges, say to the amount of £2, or £4, or £5 per acre, the effect of competition will be to make each offerer count upon this chance as rendering the contract worth so much more than it would have been without it. Consequently, the whole prospective value of this new privilege would be discounted in the rent market." Now it is no doubt true that farms would be worth more to hire if every tenant were assured that his investments would no longer be liable to confiscation as at present; but it by no means follows that all the benefit would be discounted in the rent market. A tenant might agree to pay a few shillings an acre more rent for his security, but if his liberal investments, rendered safe for the first time in the history of land-tenancy in this country, were remunerative, he would reap an advantage far in excess of the increase of rent. We have before now had occasion to show that the old argument here used by the Duke of Argyll, if pushed to its legitimate conclusion, would prove that nothing can possibly benefit a tenant-farmer, because as soon as he gets any benefit competition for farms increases, and rents rise. If this be true, agricultural improvement, good prices, low taxes, and economic management are all useless to the tenant-farmer—which is something very like a *reductio ad absurdum*.

We cannot now follow the Duke of Argyll any further, though if we had space we believe we could show that most of his arguments, however specious, are fallacious. We must not conclude, however, without pointing out the suggestive fact that the Duke very prudently refrains from dealing with the important question of the interest of the nation at large in providing the utmost inducement to the investment of capital in agriculture. Whatever they may be to the few tenants who pay them, preference rents are obviously of no advantage to the consumer, whose interest it is, not that land should be let at the lowest rate, but that it should be made to produce the largest possible quantities of corn, meat, milk, cheese, and butter; and this object can never be attained until every landlord is compelled by law to yield up to his quitting tenant the equivalent of all the property which the latter leaves behind him.

### SALE OF THE LATE MR. FISHER'S SHORTHORNS,

AT LECONFIELD, ON WEDNESDAY, APRIL 5TH, 1876.  
BY MR. THORNTON.

There was a very numerous attendance, and the lots were competed for with great spirit, buyers from the West and East Ridings, as well as other parts of England, paying high prices. One animal was sold to Mr. Locke, of Hessele Mount, for £210, and Mr. J. Torr, M.P., of Aylesby Manor, Liverpool, who bought several lots, paid £141 15s. for a roan cow. The total amount realised was about £2,800.

#### COWS AND HEIFERS.

Rock Rose 37th, by Lord Greta.—Mr. Bethune, Fifeshire, £19 7s.

Twilight 13th, by Lord Greta.—Mr. Atkinson, Helpthorpe, £35 14s.  
Rock Rose 41st, by Lord Greta.—Mr. Kirby, Market Weighton, £58 16s.  
Danthorpe Lady 7th, by Lord Greta.—Mr. T. C. Dixon, Brandesburton, Barff, £84.  
Rock Rose 45th, by Lord Greta.—Mr. Bethune, £54 12s.  
Fair Frances 8th, by Genuine Prince.—Mr. T. C. Dixon, £32 11s.  
Rock Rose 47th, by Sir Robert.—Mr. Robt. Thompson, Selby, £30 9s.  
Rock Rose 48th, by Genuine Prince.—Mr. J. Torr, M.P., Aylesby Manor, Liverpool, £39 18s.  
Rock Rose 50th, by Lord Greta.—Mr. Outhwaite, Baineses, Catterick, £42.  
Rock Rose 51st, by Genuine Prince.—Mr. J. Torr, M.P., £39 18s.  
Heifer calf.—Mr. Dixon, £7 7s.  
Bull calf.—Mr. Dixon, £1 4s.  
Isabel, by Lord Greta, out of Red Rose by Falstaff.—Mr. Torr, M.P., £141 15s.  
Rock Rose 54th, by Lord George.—Mr. T. M. Hopkinson, Worcester, £19 7s.  
Amelia 1th, by Genuine Prince.—Mr. J. Torr, M.P., £64 1s.  
Amelia 15th, by Genuine Prince.—Mr. J. Torr, M.P., £65 2s.  
Lady Somerset 12th, by Lord George 2nd.—Mr. T. Ludlow, Mansfield, £43 1s.  
Bull calf.—Mr. J. Crompton, £5 5s.  
Danthorpe Lady 10th, by Genuine Prince.—Mr. T. C. Dixon, £73 10s.  
Danthorpe Lady 11th, by Genuine Prince.—Mr. Laycock, Skipton, £32 11s.  
Cowslip 16th, by Genuine Prince.—Mr. Smith, Goole, £43 6s.  
Lady Somerset 13th, by Genuine Prince.—Mr. Laycock, £27 6s.  
Danthorpe Lady 12th, by Genuine Prince.—Mr. T. B. Locke, Hessele, £79 16s.  
Rock Rose 56th, by Roan Prince.—Mr. Hopkinson, Worcester, £34 13s.  
Amelia 16th, by Roan Prince.—Mr. Shackleton, Kirby Moorside, £33 12s.  
Amelia 17th, by Roan Prince.—Mr. Outhwaite, £36 15s.  
Rock Rose 57th, by Roan Prince.—Mr. Torr, M.P., £64 1s.  
Amelia 19th, by Genuine Prince.—Mr. Locke, £84.  
Rock Rose 58th, by Genuine Prince.—Mr. Locke, £92 8s.  
Fair Frances 9th, by Genuine Prince.—Mr. Torr, M.P., £43 1s.  
Danthorpe Lady 14th, by Genuine Prince.—Mr. Locke, £210.  
Amelia 20th, by Genuine Prince.—Mr. Bethune, £35 14s.  
Danthorpe Lady 15th, by Lord George 2nd.—Mr. Rhodes, Pontefract, £26 5s.  
Rock Rose 59th, by Lord George 2nd.—Mr. Rhodes, £12.  
Lady Somerset 14th, by Lord George 2nd.—Mr. J. H. Stephenson, Langton, £37 16s.  
Rock Rose 60th, by Genuine Prince.—Mr. Joseph Thompson, Anlaby, £43 1s.  
Rock Rose 61st, by Roan Prince.—Mr. Rhodes, £34 13s.  
Danthorpe Lady 16th, by Rosary Monk.—Mr. Dixon, £60 18s.  
Cowslip 17th, by Rosary Monk.—Mr. Dixon, £32 11s.  
Rock Rose 62nd, by Rosary Monk.—Mr. Torr, M.P., £35 14s.  
Rock Rose 63rd, by Genuine Prince.—Mr. Croise, Flamborough, £25 4s.  
Rock Rose 64th, by Genuine Prince.—Mr. Dixon, £36 15s.  
Rock Rose 65th, by Rosary Monk.—Mr. Braikenridge, Somersetshire, £64 1s.  
Isabella, by Rosary Monk.—Mr. Braikenridge, £79 16s.  
Danthorpe Lady 17th, by Rosary Monk.—Mr. T. C. Dixon, £42.  
Lady Somerset 15th, by Rosary Monk.—Mr. Thos. Dawson, Driffield, £28 17s.  
Rock Rose 66th, by Genuine Prince.—Mr. Shackleton, £27 6s.  
Amelia 21st, by Rosary Monk.—Mr. Torr, M.P., £23 2s.  
Amelia 22nd, by Rosary Monk.—Mr. Torr, M.P., £38 17s.  
Rock Rose 67th, by Rosary Monk.—Mr. Smith, Goole, £31 10s.  
Danthorpe Lady 18th, by Genuine Prince.—Mr. Crompton, £33 12s.  
Rock Rose 68th, by Genuine Prince.—Mr. Bethune, £28 7s.  
Amelia 23rd, by Rubicon.—Mr. Torr, M.P., £22 1s.  
Rock Rose 69th, by Rubicon.—Mr. Dawson, Driffield, £13 13s.

## BULLS.

Saucy Monk, by Rosary Monk.—Mr. Dixon, £26 5s.  
 Rocket, by Rosary Monk.—Mr. Dixon, £35 14s.  
 Franciscan, by Genuine Prince.—Mr. Hopper, Kelleythorpe, £53 11s.  
 Doctor, by Rosary Monk.—Major Worsley, £53 11s.  
 Expectation, by Genuine Prince.—Mr. Dixon, £59 17s.  
 Auditor, by Rosary Monk.—Mr. Rhodes, £52 19s.  
 Royal Monk, by Rosary Monk.—Mr. Lee, Gardam, £28 7s.  
 Adjutant, by Rosary Monk.—Mr. Coulthurst, Somersetshire, £24 3s.  
 Ronald, by Rosary Monk.—Mr. Topham, £48.  
 Tindall, by Rosary Monk.—Mr. Martin, £28 7s.  
 Snowflake, by Romulus.—Mr. Kirkpatrick, £13 13s.  
 Donald, by Rubicon.—Mr. Park, Catterick, £10 10s.  
 Elegant Prince, by Rubicon.—Mr. Dixon, £34 13s.  
 Amateur, by Rubicon.—Mr. Wilson, £6 6s.  
 Roundabout, by Rubicon.—Mr. T. Danby, Routh, £9 9s.

**SALE OF SHORTHORNS AT BROADLAND.**—The sale of the draft of cows, heifers, and young bulls, from the Shorthorn herd at Broadland, on Thursday, was largely attended. The postponement of the sale, owing to the late storm, was rather against the exposé, several buyers who were on their way to Broadland on the day first fixed not having been able to return. Still, there were plenty of buyers; and, in spite of a moist atmosphere, with a good deal of ploughing to do and commencement of sowing not within sight, plenty of spirit was displayed. Mr. Mitchell found brisk bidding, and the lots went, some under value, some above value, but on the whole at as safe rates for the buyer as for the exposé. Mr. Grant, Drundelgie, acted as judge of the sale, and Mr. Taylor, Huntly, was clerk. Twenty-three females were catalogued, and they all found buyers, bringing an average of £36 1s. 4d. Thirteen of the lot were cows, and they realised an average of £58 1s. 6d. Five were two-year-old heifers, which brought an average of £34 13s., and five were yearling heifers which brought an average of £26 9s. 2d. Baron Killerby, which was on hire from Baines, left a dozen bull calves at Broadland. These were all catalogued for sale, and formed an unusually well-fleshed lot. For their age, the bulls had more substance and quality than are usually found in a lot of the same number from herds in Aberdeenshire. One of the dozen was taken in, but all the rest found ready purchasers, realising an average of £43 14s. 4d. Baron's Heir, bought by Mr. Cantlie, was the bull of most substance, and is descended from the Countess. The highest price was paid by Mr. Bruce, for a long, well-ribbed, and finely-coated red, from the Jenny Lind family. Lord Clarence, bought to Mains of Orton, is also of the Jenny Lind family, and of much promise. The total amount realised at the sale was £1,358 14s., giving an average for thirty-five animals sold of £38 16s. 4d.

### SALE OF MR. THOMAS BARBER'S SHORTHORNS.

AT SPROATLEY RISE, NEAR HULL, ON THURSDAY, APRIL 6TH, 1876.

BY MR. THORNTON.

Following closely after the dispersion of Mr. Fisher's herd came Mr. Thomas Barber's "thinning" sale, principally composed of Bates blood. Amongst those who were present at the sale were Sir Talbot Constable, Bart.; Mr. Drewry, the Holker agent of the Duke of Devonshire; Mr. Coleman, agent to Lord Wenlock; the representative of the Earl of Bective; Mr. John Tindall, representative of Mr. John Torr, M.P., Aylesby; Mr. Groove, Kentucky, U.S.; Mr. Stone, Canada; Mr. Browne, agent to Mr. Ayscough Fawkes, Farnley; Mr. Laycock, the Skipton agent to the Duke of Devonshire; Mr. Foster, Killow; Mr. R. Scratton, Devon-hire; Mr. R. Blegard, North Wales; Mr. Charles Miller, Shepherd's Bush; Dr. Kendall, Heath, near Wakefield; the Rev. J. J. D. Stephenson, Thickett's Priory, York; Mr. Botterill, Waulby; Mr. R. Fisher, Leconfield; Mr. Taylor, agent to Colonel Gunter, Wetherby; Mr. Partington, Manchester; Mr. John Ferriby, Wootton Hall, Lincolnshire; Mr. Sharpley, Lincolnshire; Mr. Crust, Mr. George Bland, and a number of the local gentry and farmers. Although the biddings were scarcely so animated as were expected, as soon as Mr. Thornton

got to work he got through the forty lots in just over two hours. The highest price of the day was made by Bright Eyes 9th, for which Mr. Botterill struggled hard, but he shook his head at 300 guineas, and at that figure she was bought by Lord Bective to join the Underley herd. The two female specimens of the Wild Eyes averaged 252½ guineas, Mr. R. Blegard purchasing the other one, Bright Eyes 4th, for 265 guineas. The Wild Eyes bull, lot 31, remains in the neighbourhood, having been secured by Mr. J. Wood, of Hudderton. In the catalogue there were originally four of the Wild Eyes tribe entered for sale, but Lady Wild Eyes 3rd had died since it was issued. The females of the Duchess Nancy tribe also made good prices, the five going for an aggregate of 1,055 guineas. Mr. Scratton purchased no less than three out of the six. The two Tellurias made 175 guineas between them, and the two Waterloo heifers 365 guineas. Two animals were purchased by Mr. Stone for exportation to Canada; but although Mr. Groove was present, and cut in for several, he did not make any investments. The total amount realised by the sale was £3,590 9s. The females averaged £103 12s., and the bulls £49 9s. At the close of the sale a heifer-calf of the Waterloo tribe, belonging to Sir Talbot Constable, was offered, but as no advance was made upon the reserved price of 200 guineas placed upon her, she was bought in.

### SALE OF MR. BOLTON'S SHORTHORNS,

AT THE ISLAND, WEXFORD, ON TUESDAY, APRIL 11th, 1876.

BY MR. THORNTON.

There was a large assemblage of farmers at the sale, though the weather was very cold and snowy. Most of the Bulls were good, but many of the Cows were old, and a little doubtful. The sale was lively, and prices fully up to expectation.

#### COWS AND HEIFERS.

Moll Gwynne.—Mr. C. M. Doyne, 19 gs.  
 Buttercup.—Mr. R. Jefferson, 35 gs.  
 Polly Gwynne.—Mr. J. J. Hetherington, 32 gs.  
 Flora Gwynne.—Mr. H. Franks, 31 gs.  
 Evelyn Gwynne.—Mr. J. J. Hetherington, 30 gs.  
 Island Glossy.—Mr. B. H. Luce, 35 gs.  
 [Her roan Cow-calf.—Mr. R. Jefferson, 15 gs.]  
 Margery Gwynne.—Mr. J. M. Hopkins, 49 gs.  
 Sall Gwynne.—Mr. W. Fox, 45 gs.  
 Rosy Gwynne.—Mr. T. M. Hopkins, 52 gs.  
 Bloom of the Heather.—Mr. W. Butler, 31 gs.  
 Agnes Gwynne.—Mr. J. J. Hetherington, 31 gs.  
 Glossy 6th.—Mr. J. Baldwin, 25 gs.  
 Anty Gwynne.—Mr. R. Jefferson, 30 gs.  
 Pauline Gwynne.—Mr. T. K. McClintock, 40 gs.  
 Edith Gwynne.—Mr. R. Jefferson, 61 gs.  
 Buttercup 6th.—Mr. R. J. M. Gambleton, 145 gs.  
 Woodbine 1<sup>st</sup> h.—Mr. J. A. M. Cope, 65 gs.  
 Ladylike.—Mr. C. M. Doyne, 50 gs.  
 Glossy 8th.—Mr. W. Walsh, 32 gs.  
 Glossy 9th.—Mr. Hannan, 33 gs.  
 Pretty Gwynne.—Mr. T. K. McClintock, 100 gs.  
 Alicia Gwynne.—Mr. W. Burayeat, 91 gs.  
 Apple Blossom.—Earl Fitzwilliam, 53 gs.  
 Maude Gwynne.—Mr. W. Smith, 42 gs.  
 Glossy 10th.—Mr. M. H. Franks, 35 gs.  
 Sarah Gwynne.—Mr. W. Fox, 41 gs.  
 Anna Glossy.—Mr. T. K. McClintock, 74 gs.  
 Plum Blossom.—Earl of Durtrey, 29 gs.  
 Fanny Gwynne.—Mr. R. Jefferson, 30 gs.  
 Troutbeck Gwynne.—Mr. A. Graham, 28 gs.  
 Maria Gwynne.—Mr. W. Smith, 38 gs.  
 Adelaide Gwynne.—Mr. W. Taylor, 20 gs.  
 Buttercup 7th.—Mr. R. J. M. Gambleton, 80 gs.  
 Sylvia Gwynne.—Earl of Durtrey, 33 gs.  
 Penelope Gwynne.—Mr. M. H. Franks, 27 gs.

#### BULLS.

Alfonso Gwynne.—Mr. R. H. Farrer, 56 gs.  
 Brigadier.—Mr. J. H. Jones, 41 gs.  
 Pompadour Gwynne.—Mr. H. Eustace, 63 gs.  
 Baron Downe.—Mr. H. Higginbottom, 40 gs.

Arthur Gwynne.—Mr. C. M. Doyne, 41 gs.  
 Paul Gwynne.—Mr. E. Hall, 41 gs.  
 Lord Gough (Pat. McGill's).—Colonel Alcock, 31 gs.  
 Royalist.—Mr. J. Moffatt, 50 gs.  
 Phebus Gwynne.—Mr. J. C. Ponnden, 17 gs.  
 Roseberry.—Mr. W. Walsh, £3 gs.  
 Woodhouse Gwynne.—Mr. H. Bruin, 39 gs.  
 Governor.—Mr. Myles Smith, 21 gs.

Generalissimo (Mr. A. W. Connon's).—Mr. T. Slattery, 27 gs.

## SUMMARY.

	£	s.	d.	£	s.	d.
35 cows and heifers averaged	48	9	0	1,695	15	0
11 bulls	41	4	9	453	12	0
—						
46 head	46	14	6	£2,149	7	0

## AGRICULTURAL REPORT.

## CORK COUNTY.

[ORIGINAL.]

Although growth is far advanced for the season, and the pastures have assumed the mantle of green so suddenly as to appear almost instantaneous, even to the most attentive observer of nature, field work was never more behind than it is at the present moment, there having been little possibility in the past of doing anything to good purpose, and up to the present the weather is so unsettled as to afford small prospect of concluding the sowing of spring corn, and other crops for some time to come. The winter was entirely too fine to give any chance of a favourable spring, December, January, and a portion of February having been almost summer-like in character, both as regards the temperature of day and night, and freedom from cold wind or heavy rainfall, the description of the majority of the days' of the whole of that period being mild, genial, and delightfully fine. With St. Valentine's day, however, the winter began to show itself in earnest, raw white frosts, with almost immediate heavy dashing rains becoming almost continuous, scarcely any interval of good weather of several days continuance occurring up to the present date. Lea-oats is the only crop that has been got in satisfactorily, being drier, more friable, and in every way sooner fit and easier worked than soft spongy tillage land, and many fields now look beautifully green. With broken land, the opportunities for getting on it were so few and uncertain, even when a beginning could be made, that an interval of a full week elapsed between the sowing and final harrowing of a great many fields, there being no possibility whatever of getting near it, although looking at the seed actually starting into active growth. With the view of enabling the crop to resist the blight when it sets in, potatoes have been planted in considerable quantity all through the month of March, when the slightest cessation of rain permitted the operation to proceed, but much of the work has been done badly, the glazed and sodden-look of the fields so finished, being highly suggestive of a hard-caked surface on the approach of dry weather, and a poorly-grown, half-matured crop when taken up. Under almost any conditions or circumstances there is scarcely an excuse for going on the land in wet weather, even in the preliminary operations, performed it may be months before the seeding season, as the labour is vastly increased, and the prospect of a paying crop materially lessened, the diseases which most seriously affect the swede being distinctly traceable to this very cause. The extremely open winter and spring has been very favourable to live stock of all kinds, and cattle which have never had one night under shelter, but the open canopy of heaven, appear at the spring fairs in capital store condition. Indeed it is something extraordinary in the face of the very advanced views regarding the shelter and comfort of animals during winter, held by the bulk of stockowners at the present day, how grandly young stock do in the open field throughout the year, seemingly in practice defying all the deductions and conclusions of theory, however well supported by the promptings of common

sense. Strange to say, if a comparison was made between two lots of cattle during the present month, when the winter treatment of each lot may be concluded to be nearly over, the one lot to have been wintered in sheds or houses, and the other in the fields, the chances would be altogether in favour of the latter; and that, further, if the decision required stronger confirmation, it would be conclusively determined by exposure in open market by superiority of value. It must not be supposed, however, that this highly satisfactory end could be accomplished by merely permitting the animals to roam over the pastures picking up the rough tufts of grass left during summer; on the very contrary, they must have food carried to them in great plenty—hay, straw, turnips, and mangolds, and this treatment begun not later than November. Some men are adepts at this mode of managing cattle, and would on no consideration alter or adopt the slightest modification of their favourite system, alleging, with arguments incontrovertible, that they have no occasion to do so, when they can turn out on the first week of May two-year-old bullocks fit for the butcher, or, if not quite so good, at the very least more presentable at any part of the spring than the cattle of their opponents, which were wintered under apparently far more favourable conditions. Food has held out well, few men being so short of provision as to require to help out the season by purchase of either roots or fodder. Hay is very abundant throughout the country, great ricks of many tons standing untouched in nearly every district; and in some cases, although offered for sale, either by auction or private treaty, failing to secure a single offer. This state of things is in extraordinary contrast to this time twelve-months, when fodder was scarcely to be had at any price. Beef has been in good demand all through the winter, at a good, but by no means a high price; but many stalls being now cleared out, there is a very good prospect for the future for those who have held on and can do so for some weeks longer. The trade in store cattle opened very briskly in January, and continued for about a month, when it again languished, and is only now recovering animation. The dealers from Limerick, Tipperary, and Queen's counties have been able to take the best lots from the buyers for Bristol and Cardiff, having a much better market and less expense for carriage. "Strippers" of good quality make at present from £12 to £16 each; two-year-olds from £10 to £12, and yearlings from £6 to £7 10s. Calving cows have been in good demand at high prices, young cows making easily from 18 to 21 guineas, and old animals, fit only for town dairies, and to be fed on grains and wash, from £12 to £15. The whole of these figures refer only to cattle of good quality and condition, lean badly brought out stock of indifferent breeding being of no value, and are passed by with contempt, reading a wholesome lesson to those who, amidst so much facility for procuring good blood, are still so blind to their own interests as to continue breeding from cross-bred sires. The high prices received for butter during

the closing months of 1875, has given an impetus to the business of the dairy which is likely to show itself in largely increased manufacture during the year on which we have now entered. The past season has been an exceedingly prosperous one in the Cork butter trade, and a largely increased business has been done, 431,803 firkins, averaging 70lbs. each, having passed through the Exchange, as against 368,483 in the previous year; showing the enormous increase of 63,320 firkins. Taking the average price of butter to be only 1s. a pound, we have over one million and a-half pounds sterling as the product of this important industry passing through one market. The stringent rules enforced by the committee of butter merchants, as regards cleanliness of casks, oversalting, and general freedom from water and all other impurities, has greatly raised the standard of quality during the past few years, as makers have by the diligent inspection and serious loss of quality which the slightest neglect unavoidably entails, been actually compelled to study their own interests by complying with the rules of the market, and making butter of good quality. Contrasting the enormous prices paid by the consumer in London, Liverpool, Manchester, Glasgow, and other large shipping and manufacturing towns, producers have a strong feeling that the average they receive for their produce should be higher than it is, increased expenses of all kinds, servants wages, not being the least item, rendering it absolutely necessary that it should be so to cover the cost of production, and leave some little margin for profit. Sheep have been gradually getting scarce for about nine months, and there is now a famine of mutton, butchers being scarcely able to supply themselves and meet the wants of their customers at any price. Wedder mutton touches 1s. a pound in the wool, and they are bought at a word, although the price fixed may be certain to lose several shillings a sheep to the buyer—a bad way of doing business, but it must be occasionally done to meet the exigencies of the times, in the hope of better days to come. Store sheep, although high in price, are neither so scarce or dear as mutton, but as the season advances and keep becomes plentiful good sorts will command profitable rates. Although the weather was frightfully severe in the beginning of the lambing season, it passed off with few casualties, and lambs mostly everywhere were well spoken of as sturdy, well-conditioned, and round-backed. The description you give in your Leader of April 3rd of the apathy displayed by English farmers with regard to hiring land, and the extraordinary reaction which has taken place in men's minds, in reference to the duties of the landlord, and the conditions under which a farm should be taken, illustrated by one land-steward having up to, or over twenty farms, going begging for suitable tenants, is in wonderful contrast to the state of affairs in this country, where the rivalry is so great, that on a man retiring from his farm enormous sums are given for his interest. It matters not how low-rented a property may be, or how desirous a landlord to see his tenantry with their land at its fair market value, the system of selling the interest by public competition bids fair to see, in a comparatively small number of years, a very large extent of the country rack-rented by the free act and will of the farmers themselves, balling every effort of the "Home-rule" politicians in the contrary direction, the desire to occupy land engrossing the minds of those who see no other opening for their capital so completely, as to exclude every other consideration, whether political, religious, or commercial. This system, although largely in favour of the out-going tenant, does not tend to improve either the condition of the land, or the man who holds it, as he too often exhausts his capital in the purchase of his farm, and is ever after compelled to live from hand to mouth on borrowed

money, ample facilities for which are held out to him on the mortgage of his lease. Under such circumstances a man has not much heart to spend money on improvements, and he tries at once to save himself by cutting off the expense of labour, by establishing a dairy, letting the cows at so much per head per annum to a man who, with the assistance of his own family, does all the work, and henceforth lives a queer kind of half-idle life, supporting himself on the margin which remains after squaring accounts with the landlord, and the office which advanced the money.—April 12th.

**LORD ELCHO'S GAME BILL**—A bill for amending the Game Laws, so far as Scotland is concerned, has just been issued. It has been introduced by Lord Elcho and Sir Graham Montgomery. The bill proposes to confer upon any tenant in occupation to the right kill and destroy hares upon land in his occupation where the exclusive right of killing hares is not specially reserved to the proprietor by the lease, just as tenants in occupation are allowed now to kill rabbits. By Clause 4 it is provided that a tenant shall not require to take out a licence to kill hares or rabbits; and by Clause 3 he is authorised to appoint one person who may also kill either hares or rabbits on his occupation without a licence, or without being liable to any duty of assessed taxes as a game-keeper. The sixth clause of the bill empowers a tenant to recover compensation for damage by increase of game, and is as under: "From and after the passing of this Act, a tenant shall be entitled to recover compensation from his lessor for any damages he may sustain in consequence of or by reason of the increase of hares, rabbits, or game unduly encouraged, or not duly prevented by the lessor on lands occupied by the tenant during the currency of his lease, provided that such increase shall arise subsequent to the passing thereof, and such compensation shall be sued for and recoverable only in the Sheriff Court of the county wherein the lands in respect of which the said damage is alleged to have been sustained are situate, and the judgment of the Sheriff-Substitute or Sheriff, in so far as the same consists of findings in point of fact, or fixes the amount of damages, shall be final and not subject to review, it being competent to appeal from the decision of the Sheriff-Substitute to the Sheriff, but provided always that the judgment of the Sheriff-Substitute or Sheriff, in so far as the same consists of findings in law, shall be subject to the review of the Supreme Courts."—*See Advertisement.*

**THE CONTAGIOUS DISEASES (ANIMALS) ACT.**—At the Mansion-house, the London, Tilbury, and Southend Railway Company (Limited) were summoned before the Lord Mayor for having on the 12th and 13th of March last, at Thames Haven, unlawfully contravened a certain Order made by Her Majesty in Council, under the provisions of the Contagious Diseases (Animals) Act, 1869, in having placed 338 head of cattle in certain railway trucks which had not previously been cleansed, disinfected, and limewashed in the manner there prescribed. Mr. Wontner, solicitor, prosecuted at the instance of the Treasury; Mr. Straight was counsel for the company. A formal plea of Guilty was recorded. Mr. Wontner explained to the Court that under the very salutary provisions of the Order in question it was made illegal for any cattle truck to be used twice in succession, without being, meanwhile, thoroughly cleansed, washed, and disinfected. That was rendered necessary by the extensive importation of foreign cattle and for the prevention of the foot-and-mouth and other diseases to which cattle were liable. The Railway Company carried on a large cattle traffic, and it would be proved that not only on the days named in the summons, but generally from October to the present month, cattle had been conveyed in trucks which had either not been cleansed at all or improperly cleansed. The Government inspector had frequently communicated with the authorities of the company upon the matter but without avail. On Sunday evening, the 12th of March, five trucks, all of them extremely dirty, left Thames Haven with 657 head of foreign cattle, and on the next day 26 trucks, with 279 beasts, were similarly despatched. He added that the company had been treated with great leniency by the Government, and that they had till now put up to defiance the Orders in Council on the subject. Mr. Straight said that he had advised the company that they were techni-

ally liable under the summonses, but he denied, on their part, that there was any foundation for stating that they had been engaged in a systematic infraction of the Order in Council. The company fully recognised the wisdom and justice of the provisions made to prevent the spread of cattle disease, and in these instances, while admitting that they were negligent, their servants had scraped, washed, and to a certain extent disinfected the trucks. He might state that during last year the company conveyed no fewer than 72,059 head of cattle, 20,311 calves, 4089 pigs, and 255,823 sheep, and he felt that if their had been any cause for previous complaint it would long since have been made. The 12th of March was very tempestuous, and the five trucks left unfinished by the men received a more effectual cleansing from the heavens than they would otherwise have had. As for the other trucks, they had also been exposed to a thorough drenching, and besides, instead of animals, they had been previously used for conveying bricks. The Orders in Council were now being minutely obeyed, and he thought that the case would be met by a most moderate penalty. In support of these respective statements, Mr. John Ward, Mr. Ricketts, and Mr. Hancock, inspectors of the Veterinary Department of the Privy Council, and Mr. Arthur Stride and Mr. Joseph Lowth, officers of the railway com-

pany, gave brief testimony. It was incidentally stated that all diseased cattle were slaughtered on landing, and the rest of the cargo immediately reshipped to the Foreign Cattle Market at Deptford and killed there. The company had attempted to wash their trucks at a neighbouring station to Thames Haven but desisted because the farmers were afraid of the possible contagion being spread through the water running through the gutters and ditches. The Lord Mayor observed that in his view the matter was a most serious one. The railway company, by their own showing, conveyed 332,000 head of cattle over their line last year, and their regulations for cleansing seemed to have been conducted in the most careless and indifferent way. The mischief they might have caused in the farms and homesteads of England it was impossible to calculate. They were all the more responsible as being a public body, and, having large means, they ought to have been in a better position and the more ready to carry out the valuable provisions of the statute in question. They had been warned time after time, and the greatest leniency had been shown them. He fined them £338, being a pound per head for the animals conveyed in the uncleaned trucks, and five guineas cost. The sum, £343 5s., was at once paid.—*Times*.

## SURREY CUSTOMS.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—“Inquirer” wishes to know what the Surrey Customs are, “which are said to be so unjust and burdensome to incoming tenants.” As lawyers differ in their opinions on common law, so valuers differ in opinion sometimes to what extent the custom goes; but I believe the following is pretty near what Surrey customs are, but they are subject and subservient to covenants in agreements and leases, where such exist.

First, The manure and sheep foldings are to be paid for; also all fallows with the manure and labour thereon, and the expenses incurred in cleaning and setting out the root crops if any are sown, and including rent, tithe, and taxes of such land in fallow in which no crop has been sown since Michaelmas for sheep feed or other purposes—that is to say, it must have been a winter and spring fallow to be entitled to claim for rent, tithe, and taxes. Also half fallows, half manures, including sheep foldings, but not artificial manures, except perhaps bones, which I believe are now pretty generally admitted to be unexhausted with the first crop. Also all leys are valued according to the state of cleanliness they are found to be in, and the tillages and manure expended on the previous crops, varying from no value to that for which it is considered the outgoing tenant ought to be paid. This custom applies to all old leys of the arable land when not excluded by covenant. The hay and straw to be valued at fodder price, and not market price, excepting when the outgoing tenant can show by his valuation inventory that he paid the market price when he entered, or except there be anything in the agreement or lease which may be construed to the contrary. And now that steam thrashing is in use I believe that valuers are introducing into the custom that outgoing tenants shall stack and *thatch* the straw that is thrashed in the field.

The foregoing are, I believe, the chief points of what are called the Surrey Customs, and I will offer a few observations upon them. The principle involved in these customs is just and equitable; it gives the right to an outgoing tenant to be paid for unexhausted outlay of capital and labour lying buried in the soil, and for which either landlord or incoming tenant ought to pay. Like most other good customs, in course of time abuses have crept in, gradually and uneventfully; but having crept in under the cloak of the equitable customs, and not being challenged soon enough in the law courts, these abuses

claimed to be part and parcel of the Surrey Custom, and *time* has given them the force of law. These abuses never could have gone to the extent they in some cases have, if the valuers for the outgoing tenants had not advocated for their clients claims for compensation beyond what strict equity warranted, and the referees or umpires having sanctioned these claims in many instances, they were cited as precedents, and gradually were established as the *custom*. Valuers, like barristers, too much consider it to be their duty to obtain as much for their clients as they can, and therefore think themselves justified in stretching the really equitable custom beyond its fair application. The consequence is, that the valuers of the present day consider they are bound to value in accordance with the terms and payments of the outgoing tenant's valuation inventory, when he entered the farm, *unless* there should be special covenants in his agreement or lease, *defining* what acts of husbandry are to be paid for, and how the hay and straw are to be dealt with. It is, therefore, only in the *absence* of special covenants in leases and agreements, directing what shall be or shall not be paid for, that the customs are considered to have the force of law; for instance, except the outgoing tenant can show by his incoming valuation inventory that he then paid market price for the straw and hay, the custom only gives him fodder price, although in the agreement or lease nothing is said about them. These so-called Surrey customs I believe run into the West Kent chalk hilly district: the land is of the same character. They no doubt originally arose from the covenants inserted in old leases, and continued to this day on some estates where the landlord has not bought up all the half-fallows and half-dressings of the farms. The object of the landlords, without doubt, was for the purpose of having the farm well cultivated, and left in better condition on change of tenancy; and to effect this they bound themselves to pay for half-fallows and half-dressings, and also leys, rightly considering that farmers could not be expected to leave buried in the soil more than they could avoid. The principle and the intention were both good, and valuers ought to have set their faces against these abuses of half-fallows and half-dressings when they found any fields were not in a clean state sufficient to warrant the supposition that they had not been properly fallowed and cleaned, and only allowed

what they considered the state of the land warranted; that is to say, between nothing and the full claim if the state of the land justified it, and this view ought to be more exercised in the present day than it is. I don't think it will be much out of place if I make some allusion to two or three clauses of the Agricultural Holdings Act which have some little relation to the foregoing observations. The 5th and 6th clauses enacted that compensation for tillages and bought manures and food should not extend *beyond* two years. Now, in my humble opinion, if Clause 13, instead of shortening the time for compensation to one year and one crop only in *all* cases—manifestly an injustice—had confined that one year to lands from which root crops had been carted off from where they had been grown, and specially enacted that in the other cases it should be left to the judgment and discretion of the valuers whether any and what amount of value was left in the land after the first crop had been taken, and if it became necessary to refer the case to an umpire, then

his decision should be final, but before such umpire could act, he should be sworn by a magistrate to do justice to the best of his power between the parties. No valuer, however high his standing might be, ought to object that such a proceeding would be an imputation upon his honour. Magistrates and gentlemen of the highest standing in society are sworn as grand jurymen. Of two evils—a court of law or a final decision by a valuer (as a *class* a more respectable and honourable body of men does not exist)—whose technical knowledge of the subject enables him to render justice better than the court of law—is by far the least evil, and fewer wrongs will ensue, and expenses will bear no comparison. Whether the Surrey customs are right or wrong I will not enter upon, but that as a tenant entered his farm and paid, so in strict justice he should be repaid again upon leaving. It is the fault of the valuers if justice be done.

I am, Sir, your obedient servant,  
April 14th, 1876. A TENANT FARMER.

## FANCY AND FASHIONABLE SHORTHORNS OF AMERICA.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—I see by your last issue that a Toronto correspondent has been criticising the fanciful "*Shorthorn Speculators*" with much truth. I am very glad to see that your paper is open to have all breeds impartially discussed, allowing no families, fashions, or fancies to have any advantage over those of less note, and who possess more real merit under sound practical judgment. Pedigree has such a strong hold on certain fancy men, that form, quality, and substance is of no consideration, and money, *credit*, and *partial transfers from herd to herd* coming under the hammer, has become so glaring that price is no criterion, nor can it be viewed in any other light than that of lottery, the pool-box, or that of the gambling-table. I have seen so much of this fanciful way of doing business in this country that I have looked upon the mania as a perfect farce, and reasonable men view it with suspicion. I have always said that the best Shorthorns were very superior animals; but when you talk of "*pure pedigree*," from whence is it derived. Is it possible for "in-and-in breeding" to produce symmetry, quality, substance, and constitution? I say not, notwithstanding what visionary scribes, and the palaver they have made about it, imagine; any practical breeder can see plainly where the various crosses have been made, from the red Galloway cow, or the West Highland heifers. The Devon cow has converted *Durhams into dark red*, and the frequent eropping out of the whites shows plainly the descent from the whites of Chillingham Park. You cannot deceive a practical breeder conversant with these breeds. The long hair, thick mellow hides, and quality, are derived from the Galloways, the West Highlands, and Chillingham—the original Durhams had none of them—and either of these breeds have reduced their extreme coarseness. The fancy men of Bates' are exceedingly anxious to note the long hair, but are very *shy* of telling from whence it sprang. Let me ask if it is not derived from that "*beautiful cross-bred heifer*" Mr. Bates presented to Mr. Colling, in his friendship of 1805, or others of the same sort, from his own breeding, and clandestinely brought into his herd? Will not Mr. Bates's own testimony of this valuable cross, and improvement in his Shorthorns, justify me in believing and stating this? Read his confession in "*Bell on Bates*," and no practical man can be otherwise than convinced where the *improvement* of his Duchess tribe came from. The nearer you get to the two Scots and the Chillingham crosses the better the produce. Mark the whites in all prominent herds,

and they are more frequently the best in them. The roans spring from the whites, the spotted Teeswaters, and the varied colours of the West Highland, the dark red from the Devon, that being a race, hold to the colour, which is a new feature in Durhams. I have yet to discover a good symmetrical dark red Shorthorn of quality. I think I have given your readers a fair text for discussion, therefore allow all men who will confine themselves to facts, a fair field and no favour, to show their *practicability*, regardless of profit or loss, and fearlessly meet those visionary, fanciful, fashionable schemers, who suppose the high prices they give for animals, with pedigree only as their *endorser*, to be the animals desired. Such shortcomings are the ruin of *good breeding*, and I can only say that if such prices as the press has proclaimed, and as I have seen knocked down to popular individuals at auction, have actually been realised, I cannot help saying that those gentlemen have more money, or *credit*, than brains. Good judgment is out of the question when visionary schemers back each other beyond the bounds of reason for the sake of notoriety, or to obtain an advertisement by their silly extravagance, which reasonable and practical men have no desire to maintain. As long as this visionary mania exists, farewell to *good breeding*. It is this principle that has created this general panic in this country. Let me tell you where I consider these fanciful men at fault—their lunacy for *stylish*, *coarse Duke Bulls*. Let me instance a few of them. Bates never bred a Duke but was long and coarse in the leg, deep and narrow in brisket, flat in sides, light in crops, scant in twist, heavy in rumps (called fool's fat), high bare hips, hide thin, and pummy, until he pronounced the West Highland cross so great an improvement over his Shorthorns. He knew where the long hair, the thick mellow hide, quality, and constitution came from; hence this visible cross in his herd. Whether he derived it through Collings from the "*beautiful heifer*" presented to him, or clandestinely bred it into his own herd from similar heifers selected, was best known to himself. Who registered the one presented to Mr. Colling in the English Shorthorn Herd Book? As Mr. L. F. Allen, in preface of American Shorthorn Herd Book, volume second, represents Mr. Colling as a "*closet man*," and as Mr. Bates and Mr. Colling were so extremely *intimate*, as the former as frequently expressed it, might they not have been silently and confidentially combined in this great improvement? and



with Mr. Coates, had so much control over the pedigrees in the first volumes of the English Herd Books, they might have registered these animals to show in-and-in breeding, while the sucking calf might be changed from one dam to another, and thought no harm when pedigree was not of so much importance; thus making the *out*, and none but themselves would be any the wiser. My impression is, that outs must be made in all so-called *pure breeds*, and it is this, though done in secret, that has made the Short-horns. You will excuse me for bringing a few of the Dukes to your notice, not with a desire to injure any breeder, for I esteem many of them highly. Mr. Alexander's Duke of Airdrie was a fair bull, not possessed of what I should call quality, was not symmetrical; still he had obtained a great name. His son, bred by Mr. A. Renick from a very superior cow, excelled him far. His long hair, thick mellow hide, quality, and symmetry, on short legs, all of which was transmitted to his offspring, although not in aristocratic keeping, he established his *real worth*, and his breeder reaped his true reward. You may call this practical breeders' herd, "*pure Bates*," Booth, Knightley, or Stevenson, but my impression is, that there is a mixture of all of these noted breeders. I will go further. In my opinion there does not a better herd exist, in America or Great Britain, and all of his own breeding, therefore the credit rests on the good practical judgment of its *bona fide* owner. What was 17th Duke of Airdrie? Is there a "*pure breeder*" who can pronounce him anything but a plain, coarse, overgrown brute, without either symmetry or quality, running back to that coarse sort of original Dukes and Duchesses, with nothing but a name to sustain them. I saw one of his sons at Counsel Bluff's, Kansas, a *facsimile* of his sire, but so stricken in poverty, that this overgrown Duke, as he walked, looked as if he was going to fall to pieces, or wandering staggering *abroad*, in search of his *title*, for his support. He had been pampered in his youth, and sold at a *fancy* price by his noted breeder; while, in his poverty, his eyes, which were sunk in his head, shed tears to relieve him in his forsaken and forlorn condition. The Colonel purchased him for his title and pedigree, combined with the low price asked; but before he had long known him, was amazed at the amount of food he consumed, without any prospect of remuneration. His thin, short-haired hide, stuck to his flat ribs, as if glued there, and his paunch filled with prairie hay, and Indian-corn in the ear, looked as if it was equal to a bay in the barn, or a limited corn-crib. This was the Colonel's "*fi st love*" for a Shorthorn, for he had no other. He represented one of Bates' *best pedigrees*. 9th Duke of Airdrie was of similar stamp to that of 17th Duke, only, if possible, still more coarse and rough. 23rd Duke of Airdrie, although full of flesh, could not hide his family faults. Duke Balder is another so-called *Bates' pedigree*, much of the same character, and has had continual pulling from an editorial scribe, who accompanied an exceedingly kind breeder to purchase him, and a heifer of Mr. Thom. This vain scribe allowed fashion to lead him by the nose, and shaped his articles to meet the views of fancy men, and it was he who led this good man astray in the purchase by his want of judgment. Had this most worthy pioneer, honest in all his dealings, and upright in all his transactions, never seen these animals, he would have been one of the best breeders in the State of Michigan. The heifer never bred but one calf, which this scribe, after hearing of his birth, hastened to the good man's house, to rejoice over the prize, as he was the prime mover in his obtaining him, therefore he must have the privilege of naming him, and persuaded the good man that he should have a title above duke or lord. He named him King David, which was announced in his paper with "*ap-*

*propriate remarks*" to meet the occasion. After keeping his dam three years without breeding, she was sold to a butcher in Detroit, and a more uneven, flabby carcass of beef I never saw hang up in shambles. Her lean black flesh was unevenly covered with flabby fat—unsightly, unprofitable, and unpalatable for butcher and consumer. The fat would not set except when frozen, notwithstanding she was bred by Mr. Thom, and was "*high Bates*." Now for her only son, King David, who has been so highly extolled by this scribe on account of his pedigree. Having puffed him to extreme—and this noted scribe had used all the influence he possessed to persuade this worthy breeder to use him, telling him that *pedigree was everything, and Bates was all-in-all*—he *very reluctantly* put him to two heifers. One of them produced a dead calf, and the other was so inferior that a neighbour, and a good judge and breeder, advised him to shoot it on the spot, but it still lives, a disgrace to its companion and the *family name*. The sire at five years old, after being fed on meal and grass all last summer, was sent to Detroit for sale. He was kept in the market three weeks before an offer could be obtained for him, and he was ultimately sold for 51 dollars—about 3 cents per pound for Bates' beef, while the best was selling for 6 cents. A worse looking animal I never saw in the shape of a Shorthorn. This King David and Duke Balder has had sufficient pulling to make either sell for ten thousand dollars—if this scribe could have gulled a Bates man into such a speculation. This constant pulling has done this good man more injury than can be imagined, not only in a pecuniary way directly from his pocket, but seriously in his herd, and it will take him a long time to recover. Had the first article been put in stereotype it would have answered for the whole puffing; had this breeder kept to a cow he had called Gipsy, and selected the heifer-calves from the seventeen she produced him—although her pedigree ran back to Mrs. Mott, of the importation of 1817—and coupled them to proper bulls, he would have had a herd hard to be surpassed, and I know no man more deserving.

I have not written this with any design to injure any breeder, but there are many such cases as this of Duke Balder and King David that could be illustrated to advantage, and to encourage good breeding. There are some editors in this country who pull for the sake of the pay, no matter of what class of animals they are puffing, and if you make a reply to such, and it conflicts with them, it is *scratched out*, giving them the advantage over correspondents. Others dare not tell the truth, fearing the loss of a few subscribers, while the truth touching this Bates mania would add double to the number. Many cases like this are apparent.

WM. H. SOTHAM.

Cass Hotel, Detroit, Michigan, March 20th, 1876.

WHIPPING IN THE KITCHEN.—The object of this note is not to advocate corporal punishment, or bring before the reader anything of a more painful nature than the general neglect of whipping in the kitchen. That I may not be suspected of frivolity, I will say at once that the theme is at least not lighter than a heavy pudding, and one of its purposes certainly is to promote the perfection of custards. Now, why does the book—I mean the Cookery Book—recommend that eggs, cream, &c., &c., should be whipped? I hope Mr. Buckmaster—whom I have not heard, but have only heard of—has explained and enforced on his pupils the necessity of whipping. Let us compare a sample of cream as it comes from the dairy with another sample that has been well whipped. The difference between them consists in this—that the latter is in a sublime state of froth, owing to the admixture with it of a large body of atmospheric air. Now, in this result of whipping, we have entangled atmospheric air, and that is one of the secrets of the difference between good and bad cookery.



You provide a cook with a certain allowance of eggs, milk, and so forth, and she brings you in due time a custard or a pudding as heavy as lead and as indigestible. You provide another cook with the same ingredients, and you obtain in return a light, lovely, enjoyable example of clever cookery; and if you make a minute inquiry into the difference between them, you find that the first was made by the sloven's rule, and the second was well whipped. The difference is all the difference between a bad thing and a good thing—between money converted into muck and money converted into nourishing food. Yes; in the case before us the presence of atmospheric air makes all the difference, and it can only be caught by whipping. In all cookery that requires the ingredients to be beaten or whipped there must be some energy of action, or the result will be more or less unsatisfactory, whether the object be to make a pancake or a Christmas pudding: if the eggs are not well whipped the preparation will be heavy, or perhaps pasty, certainly far from perfect, and in some degree more or less unwholesome. It will be observed that in beating or whipping any viscid substance—such, for example, as a bulk of cream or raw eggs—the entanglement of air in the mass causes it to assume a

frothy character. When this frothy material is mixed with flour and other such materials there is confined in the mixture a considerable part of the air that was entangled in the froth in the first instance. Much of it escapes of course, but much of it remains. When the mass is subjected to heat this entangled air expands and forces apart the particles of the preparation, and the result is that the pancake, pudding, or whatever else it may be called, is *light*, when with the very same ingredients and no whipping it would be *heavy*. One of the consequences of the consideration submitted is that quickness of action is conducive to success in the cookery of a dish that requires atmospheric air as one of the ingredients. Having whipped the air into the eggs, your next business is to keep it; for if the business thereafter proceeds slowly the air will escape, and your labour will be lost, to the spoiling of the cookery. It is often a puzzle that a Christmas pudding turns out a heavy thing, though made according to a good receipt. A few cases of the kind have had my attention, and it seemed to me that the pudding was heavy because it had not been sufficiently knocked about in the mixing to entangle in its substance a considerable bulk of atmospheric air.—S. E. H., in *The Gardener's Magazine*.

### THE ROTATION OF CROPS.

The following paper was read on April 12th, at the monthly meeting of the Ballineen Farmers' Club, Co. Cork, by Mr. ANDREW DOW, land-steward to the Right Honourable the Earl of Bandon:

Colonel Bernard and Gentlemen,—It would have been a great pleasure to me had this paper been read by a better qualified person than myself; but having been requested to do so, I feel it my duty to oblige, as far as lies in my power, those to whom I am much indebted for many acts of liberality and kindness, and therefore, without further preface, enter on the subject. A more important question than that of the rotation of crops, or one of more general interest to the practical farmer, could scarcely be discussed by those who follow agriculture as their sole source of livelihood. Unfortunately for the farmers of this county, a regular and fixed course of husbandry has been sadly neglected, and its beneficial results to the land and their own pecuniary interests completely overlooked, by a large section of those whose position in life would be immensely improved by giving it the attention which it so richly deserves. Thus, for instance, how frequently do we see a field, naturally fertile and possessed of all the mineral elements necessary to the production of highly-successful and profitable crops, permanently injured for a man's lifetime by crop after crop being taken in succession, until actually no longer able to return the seed, when it is laid out to so-called grass, in the vain hope that it will renew itself by rest. This, however, it cannot do, the state of exhaustion to which it has been reduced having been too complete to permit such a favourable result; no kind of stock, whether sheep or cattle, being able to manure land by top-dressing, which cannot in the first instance, provide them with abundant means of sustaining life. Instead of improving, the animals placed on such a field are actually starved, and, under any conditions or circumstances, however favourable, are utterly incapable of giving any return in money to their owner, by which he would be enabled to pay rent, rates, and taxes, let alone leaving a margin to assist himself in maintaining his family respectably. In fact, the whole field, while it remains in this state, is a dead loss to the tenant who has the misfortune thus to mismanage his land, besides being a disgrace not only to himself, but to the property of which his holding forms a part. Instead of thus continuing to redden the surface year after year, had he put a little clean grass and cloverseeds in with the first corn crop that succeeded the potato or root crops,

when the land was fairly clean, and in moderately good heart, he would not only have husbanded the resources of his soil, both natural and acquired, but have had it in a condition to give him a profitable return by the grazing, of whatever stock he might find it suitable to place on it. After a lengthened acquaintance with the light land of the county of Cork, I consider that there is not a better rotation to follow than an extension of the well-known Norfolk four-course system to six years, or a year more or less, according to convenience, or the state of the land as to grass when the breaking-up period again comes round: I omit wheat, considering that the light-land farmer has now no chance in competition with the cheaply-grown and steam-carried grain of the foreigner; the low and unremunerative price we have been and are now at the present moment receiving for this cereal being able to convince the most sceptical of the utter uselessness of continuing its growth, unless under exceptionally favourable circumstances of climate, soil, and high manurial condition of land. The course of cropping would run thus: First year, oats; second, green crop; third, oats or barley, laid down with clovers and grasses in the best possible manner; fourth, hay; and fifth and sixth years, pasture. At a glance it will be seen that this course gives one-third of the land to corn, one-third to pasture, one-sixth to hay, and one-sixth to green crops. Every sixth year the soil undergoes the renovating influence of the high manuring, deep tillage, thorough cleanliness, and absolute freedom from weeds, which a well-managed root crop requires, and becomes in a manner renewed. In days gone by this could only be done under the bare-fallow system, and at the expense of the loss of a year's crop; the present mode of working the land being, however, infinitely superior, as a most valuable crop is raised, while the soil is being refreshed and invigorated, and rendered capable of growing profitable crops of corn and grass throughout every succeeding year of the rotation. By this arrangement of cropping there is the produce of four acres to provide manure-making material for one acre—namely, the straw of two acres of corn, one acre of hay, and one of roots; and if a portion of the green crop break is occupied in the spring and early summer with soiling crops, the pasture, amounting to two acres, will also lend valuable aid in providing manure. Soiling crops, of which vetches and trifolium are the most suitable, as they not only give a large amount of valuable and succulent food, but permit the land to be cleared in time for the root-crop, enabling the

farmer to keep his cattle half their time in the house, for the greater part of the summer, and thus the pastures carry more stock, and by the partial system of summer house-feeding, an immense amount of manure is made at a time when the yards would otherwise be completely empty. To be able to continue the house-feeding system into autumn, and thus connect it with the winter arrangements, the hay should be cut early, as by so doing a splendid after-crop of clover will be secured, which will come in almost immediately after the last breadth of vetches, and keep up the supply of carried food quite on until succeeded by the early varieties of turnips. This, gentlemen, I feel to be a most important part of the subject, but time does not permit me to dwell longer on it at present. With the large amount of manure-making material here indicated, and with the aid of artificial fertilisers, with which the country is now so largely supplied, no man holding land and depending on it as his sole means of subsistence should permit himself to run short of the article which is so indispensable in keeping up the fertility of the soil, and without which it is vain for him to expect to support himself and family with any degree of comfort. I have often found in certain cases when the soil is naturally thin and poor, or when it had been laid down to grass in an impoverished state, that it is excellent policy to omit the opening corn crop and substitute potatoes, turnips, or other roots. When this can be done, it greatly hastens the process of bringing the land into good heart, and it will invariably be found that the corn which succeeds a well-managed green crop grown in this way, will be so good as to give the monetary return of two ordinary crops, thus amply recompensing the farmer for his generous treatment. When a farm is situated conveniently for town-dung, either by road, rail, or water, there can be no better system than thus to begin the rotation with green crops, as the land can, with the assistance of the extra dung drawn to the farm, be laid down in splendid condition to grass, and carry not only a larger number of stock than is otherwise possible, but the individual animals become gradually bigger in bone and carcass, and of course bring more money when disposed of. With regard to extending the rotation as previously alluded to, and letting the grass remain a year or two longer than the time specified—viz., six years—I always like, unless there happens to be some special reason to the contrary, to break up at the exact time, as moss soon begins to occupy the place of the cultivated grasses, and old land when broken up, is generally tough and difficult to plough nicely, admitting the air in excessive quantity under the furrow-slice. This of itself is a very serious objection to permitting land to remain too long down, as every practical man before me will certify, and is a fruitful cause of the soft straw and blighted, half-filled head on sea oats, with which the farmers of the South are so familiar, and of which, I believe, there were but too many instances throughout the whole of this county during the harvest of 1875. As straw must be held as the leading ingredient in the composition and manufacture of farmyard-manure, giving the necessary bulk and mixing with the solid, while absorbing a great portion of the liquid droppings of the animals, it naturally follows that the treatment in the field which promotes the growth of straw has also a certain and valuable though indirect influence in increasing the quantity of manure in the yards. So as to increase the bulk of straw grown on an acre, I consider it an excellent system to top-dress the corn with a quick-acting fertiliser, harrowing it in with the seed, and thus securing, at a moderate outlay in money and but little additional labour, a much larger supply of a most useful and highly indispensable article in wintering cattle than could otherwise be obtained. For spring-

sown corn, nitrate of soda, at the rate of 1½ cwt. to the acre, and bone phosphate, or dissolved bones—which is better still when you are sure of the real article—in the same proportion, the whole costing, say, for the sake of even numbers, about 30s. to the statute acre, would give an increase of straw amounting in monetary value to the top-dressing; while the increase in corn would fairly remunerate the farmer for the time, trouble, and labour expended. Autumn-sown wheat responds very quickly to the action of a chemical manure, half laid on and harrowed in with the seed, and the remainder at a fitting opportunity in spring. With the latter application, the manure will be worked in with a light harrow and rolled immediately, when—if succeeded by moist weather, which will carry the manure to the roots of the plant—the vigour imparted will be extraordinary, showing itself most distinctly in about ten days, in a broad soft leaf, of an intensely green colour, and covering every portion of the field with healthy verdure. Wheat will stand a dressing of 40s. worth of nitro-phosphate to the statute acre, and give with ease, under favourable conditions, a clear return to the farmer of the same amount after paying all expenses. I may here remark that, to obtain the utmost possible advantage from chemically-prepared manures, the land must be only in moderate condition: in point of fact, the poorer it is the greater will be the result, unless in a complete state of exhaustion; and, in the corresponding scale, the higher the manurial condition of the land to which it is applied just so much the less will be the beneficial result of the top-dressing. Further, it is quite possible to sustain a serious loss when rich land is dressed with artificials, as, if the season proves wet, the luxuriance induced by a rich soil and a highly stimulative manure will cause the crop to lodge at a most critical period of its growth, to the subsequent injury of both straw and grain. Gentlemen, I consider it right to thus place before you both aspects of this very important question, and do so with all the greater confidence as I have experienced both the results I have now described. On the light land of West Cork there is comparatively little danger of injury from excessive luxuriance, and I therefore consider that this style of farming is particularly suitable to this immediate district, and may with safety be adopted by the farmers of an extended area, to their very great profit. To glance for a moment at the beneficial results which accrue from this expenditure, we may, as previously noticed, assume the value of the extra straw as that of the manure required to force it, and taking 30s. as the average sum laid out per acre, we have on a breadth of corn extending to, say, fifty acres, £75 worth of valuable manure-making material of the very best kind, over and above the ordinary crop, the additional comfort it gives to the animals during the mouths of winter still further increasing its value. How different this mode of filling the yards, or bedding down the cattle, from the laborious digging up and carting in soil from the headlands, or, as is too often done, from a trench cut through the centre of the field about to be broken up, in the vain hope that by allowing it to remain in a pool of rain-water for several months, it will by some mysterious chemical or mechanical process be turned into a manure, capable of imparting to the field on which it is afterwards placed all the elements of fertility. It surely does not require much intelligence, or a lengthened experience in farming, to know that this is a delusion, and that the time and labour both of men and horses in drawing this in too many instances poverty-stricken soil is a dead loss, and can by no possibility give a profitable return. I am sorry to say that the small farmers seem to regard this as the principal source of manure, as by so doing they materially retard their success in life, and lose much comfort which,

under a more enlightened system of management, they might undoubtedly enjoy. During the year the land is in green crop the most strenuous efforts should be made to thoroughly cleanse and deeply stir the soil, as well as to treat it with manure, both home-made and artificial, in the most liberal manner, as not only does the success of the crop in hand depend on the treatment now given, but also quite as much in degree the five remaining crops of the course. It is evident to almost the most unobservant that if the land is negligently worked, or poorly treated for this crop, it must of necessity remain in the same miserable condition until again broken up; whereas when liberally treated for the green crop, the succeeding corn, hay, and pasture, responding to the previous generous treatment, will not fail to give a corresponding return. It is excellent policy to plough the stubble deeply as soon as practicable after the harvest, so that the soil may be broken up, and otherwise benefited by the action of the atmosphere. I am very fond of putting three horses to the stubble plough, so as to get well down, and not only deeply stir the soil, but get up a little virgin earth to the surface, as at no other period of the year can this be done with safety. If weeds are unfortunately abundant, it is a great saving of time and labour in the future to grub first, both lengthways and across, harrow well, then plough deeply with three horses, when it will be found by the time the spring-work begins, that with this treatment the perennial weeds have been thoroughly eradicated. Any of the improved grubbers of the present day (it matters not by whom made), when fitted with duck-footed shares of medium size, perform this operation capitally, and the saving of spring labour is something immense. In preparing the soil for the reception of the seed, it is especially necessary, with every variety of green crop, that it is rendered very fine and free from lumps, as if this is not attended to, much disappointment will be the result, many blank spaces occurring, and the plants that remain have not sufficient vigour to form bulbs of large size. The mangold crop suffers considerably by careless or hasty preparation, and a large per-centage of the seeds often lie dormant, on account of the soil not being sufficiently flue to cover nicely, and exclude the air; hence a patchy and irregular crop of mangolds is, in some seasons, more the rule than the exception. This is much to be regretted, as this root is becoming every year more valuable, and on account of the tendency to premature decay exhibited by the swede on very many soils, is greatly more to be depended on. Its excellent keeping quality adds largely to its value, and I consider that this feature of its character recommends it highly to the farmers of this district, who keep dairy and other stock in such large numbers, as it enables them to keep the cattle off the fields until the grass is sufficiently advanced to afford them a full bite. The leading varieties of this bulb (mangold) are too well known to require description; but there is a variety new to our district, the merits of which were called attention to by our honourable and respected Chairman, without giving it at least a passing notice. I allude to the sugar-beet, and from what I have seen of its feeding qualities during the past season, I feel satisfied that it is worthy of a permanent position in the list of green crops. Altogether apart from its value in the manufacture of sugar, it is at once a palatable, wholesome, and nutritious article of food for live stock of all kinds, and horses in particular. For the latter it seems peculiarly adapted, as it is a firm, solid food, does not affect the bowels in the slightest degree injuriously, and during the winter months a horse may be kept at full work with a very small allowance of oats, while receiving as great a weight of this beet as he likes to eat. The specific gravity is extraordinary, and is strikingly evinced when a moderate

sized root is taken in the hand for the first time, the great weight to the size being at once apparent. Visiting an agricultural friend last January, I was struck with the extra good condition of the horses I saw at work, as they were, to use a familiar and expressive phrase, "hog-fat." On asking my friend why he was feeding so highly, he replied that I was greatly mistaken as to the high feeding, as he had never fed more economically in his life. On requesting to be favoured with the particulars, he told me that 12lbs. of oats, as many sugar beet as they would eat, and chopped furze in the same ratio, was their entire allowance for the twenty-four hours. The roots were given whole, although I consider that it would be an improvement to have them pulped, and mixed with crushed oats, bran, or even chopped hay. From what I have seen, therefore, of the good qualities of sugar-beet, I would strongly recommend every farmer present to give it a trial during the coming season, so as to be able to judge for himself. By manuring highly, and thinning out to the usual distance, when not specially grown for the manufacture of sugar, a great weight can be grown to the acre, the extreme density and solidity of the bulbs, as I have before observed, giving an immensely greater weight when lifted than could possibly have been anticipated by the appearance of the crop when growing. Unlike all other varieties of field beet, this variety forms the bulb under the surface of the soil, and would in this way disappoint those who had formed their opinions of its merits as a heavy cropper if their experience was confined to seeing it merely during the period of growth. Its value in the sugar manufactory must be largely increased by this very feature and habit of growth, as the exclusion of light and air tends in no slight degree to the development of the saccharine property, and thereby adding to the percentage of merchantable produce. Although fearing I have already detained you too long, I cannot close without calling your attention to the value of furze as a forage plant. It gives such a large supply of food at a minimum of expense, that it deserves not only the notice but the earnest attention of every stockmaster, from the humble owner of one horse and a couple of cows, to the wealthy possessor of several hundred head. Horses and cattle, when accustomed to it from youth, eat it in astonishing quantity, and when given not as the sole article of diet, but in conjunction with roots, thrive well on it, maintaining good condition and vigorous health throughout the most trying period of the whole year. In the cultivation of furze as a forage plant, it is a supreme mistake to assume that it is fit only for poor land, as, on the very contrary, the better the land on which it is grown just so much the more successful and bountiful will be the crop, always providing that the soil, locality, and climate are all favourable to the growth of furze, and that the plant is indigenous to the district in which its culture is attempted. It may, and probably does, suit the small farmers of hilly or mountainous districts, who are low-rented, whose families do all or most of their labour, and to whom the smallest assistance in bringing their stock through the winter is hailed as a wind-fall; but to the man with a large stock, and whose labour must be all paid for in ready cash at the end of the week, the crop grown on poor land would not pay the wages of the man who mowed it. To render its growth profitable to the general farmer the land must be so good as to give a full crop every season: nothing less will pay, and it is a serious loss both of time and money when a heavy cut can only be secured every alternate year, altogether apart from the question of inferiority of produce. In the first place when this is done each crop must pay two rents, a tax which the most sanguine supporter of furze would scarcely expect it to do on any land worth holding, and the labour of cutting the stroug growth of two seasons adds no in-

considerable item to the expense of preparation. Some writers on the subject have affirmed that it is wrong both in theory and practice to cut every year, as such management will soon destroy the plants; this, however, is an altogether mistaken view, as I have nearly twenty years' experience of a furze-meadow, which has been cut every year during that time, without even missing one, and the crop cut from it during the past season, finishing on the 31st March, was simply enormous, and probably one of the heaviest of the entire series. It is of the utmost importance to notice that in mowing it should be cut as close as possible to the ground, as if the stumps of the spray are left for even one year, it becomes next to an impossibility to cut the crop close afterwards, and the meadow is in imminent danger of being spoiled. So highly do I esteem this humble and generally neglected, though at the same time beautiful plant, as a plentiful and economical source of winter fodder, that I would not hesitate to devote five acres to the hundred to its cultivation on every suitable farm, and consider it by no means an immoderate breadth to be permanently occupied by such a useful crop; and further to stimulate the roots and keep the meadow in full bearing, I would and do top-dress occasionally, either with good rich friable earth, when it can be got handy, or with a phosphatic manure. When taken into consideration that it shows on analysis a greater amount of nutritious and strengthening food for the animals of the farm than any of the roots specially cultivated for them at enormous expense, some estimate of its great value may be obtained. Dairy stock thrive well on it; and if in milk, it has a surprising effect in sweetening the butter and neutralising the abominable taste imparted by the essential oil of the turnips. To give you a bit of every-day experience, I find that ten acres of well laid down and intelligently managed furze-meadow will, in conjunction with a very small daily allowance of turnips, supply fodder in great abundance for fifty cows of medium size during five months of the year—viz., November, December, January, February, and March, which is the duration of the furze season. As with all other food, care should be taken that nothing is wasted by giving too large a quantity at once. I prefer, therefore, to feed often, giving a moderate quantity at each feed—the turnips twice and the furze four times daily, by which arrangement it is truly astonishing how large a quantity the animals will get through in a day, eating it clean, and leaving nothing for litter, to which end a stranger to its value would at once say the largest half of it would ultimately tend; but in practice, with animals accustomed to its use, this is by no means the case, and litter must be provided from some other source. It is most interesting to observe the complete process of maceration to which it is subjected before being swallowed, which can be easily done by removing a portion from the mouth. If this is done at the moment it is about to be swallowed it will be found that the process of trituration has been complete, and that the whole has been reduced to a glutinous or jelly-like substance, admirably prepared for passing on to the stomach, without detriment to the delicate membrane of the gullet, injury to which, by supposed imperfect reduction of the spines, has been often urged as an insuperable objection to the extended or continuous use of furze as cattle-food. Young cattle may be brought through the winter with a morning and evening feed of chopped furze and a run on a coarse pasture during the day, when available, and will reach the first week of April in strong healthy condition, with wealth of thick curling hair; this mode of wintering young store cattle proving itself as economical as has ever yet been devised. Farm horses will work well for not less than four months of winter and spring on furze and a moderate allowance of oats, maintaining during the

whole time good condition and a noticeably sleek coat. On a farm possessing a properly laid-down and productive furze meadow, of the extent to its acreage which I have already indicated, less hay need be grown if considered desirable, and what is grown is spared for late spring and early summer, when horses being on full work with a long day, and probably pushed somewhat, require a generous diet; and milch cows, having calved, are the better of a bountiful supply of nutritious clover and ryegrass hay, an article which would probably have been exhausted weeks—nay, perhaps, months before—but for the contents of the furze meadow. A piece of land thus permanently under a productive crop, and giving annually such a large amount of food, adds in no small degree to the supply of manure for those portions of the farm which are manured by rotation, and its beneficial influence in this direction will be both considerable and highly acceptable. With regard to its preparation for placing it before the cattle, the hand-worked machine is, of course, the only one admissible on small holdings, rising to machines worked by one or two horses on larger occupations, the ordinary chaff-cutter, fitted with two knives, making it sufficiently fine for both horses and cattle. Machines intended to bruise furze into pulp seem to have become almost obsolete, and there is really no necessity for them whatever, as stock, after becoming habituated to its use, do not at all object to its being placed before them coarsely cut, but, on the contrary, in some cases, seeming to relish it all the better; many horses, for instance, refusing to eat it when cut fine, but eating it greedily when a knife is removed from the machine, the length of cut being thus doubled, and the taste of the animals apparently exactly hit by this simple expedient. Where steam-power is used on a farm, the furze machine can be capitally worked by a belt; but this power being so little used by our western farmers in any way but the portable form, I need not say a word more about it. Water-wheels being, however, plentiful, and in constantly increasing favour for their simplicity and extreme economy, I may mention that their use in furze-cutting effects an immense saving of labour—actually so great as not to be understood till seen; and every man who can possibly procure water for this purpose, either by "pond" or "running stream," should avail himself of it. It is richly worth any one's while to inspect the driving and cutting machinery erected a few years ago for the preparation of furze by Mr. Ben Scott, of Roughgrove, every expedient to save labour being availed of, and the expense of bringing it to the necessary state of comminution reduced to the lowest possible limit. The machinery was erected by the Messrs. Mackenzie, of Cork, but Mr. Scott having a talent for mechanics of no mean order, had the arrangement of the buildings and the disposition of the machinery so admirably managed in every detail as to render the labour of carrying it to the animals almost unimportant. Those conversant with the preparation of furze by powerful machinery will at once understand the convenience and saving of labour which he secures by having the cutter erected on an upper floor, the chopped furze dropping down through a pipe into a room underneath, to be taken as required; thus at once cutting off the attendance of a person to clear it from the machine by an extremely simple arrangement. I venture to predict that any of you paying Mr. Scott a visit, will, after being shown round, and having heard his description and explanation of his mode of working, and his experience of furze as food for stock, be both pleased and instructed. I have thus hastily sketched the leading points of a most important and interesting subject, and before closing would strongly press upon you the necessity of adhering to a well-defined and intelligently-worked rotation, as closely as circumstances, and the alterations incidental to the times, will permit, as by

so doing you will secure many advantages altogether unknown to those who are continually changing, with the professed object of having the article to sell which is for the time being highest priced and most in demand. It is almost needless to say that such an aim is never fulfilled, unless by the veriest chance, as by the time the crops are grown, or the cattle fit for sale, which were grown or reared for this ostensible purpose, markets have, by the inexorable law of supply and demand, completely changed; and the price of the commodities on hand may be so depressed as to render their possession a serious loss, instead of even a moderate profit. By sticking to one arrangement pretty closely, a farmer knows as nearly as is possible the quantity of pasture he will have available for the summer months, and the probable amount of roots and dry fodder for winter, regulating the number of stock for each season accordingly. By having the proportion of corn grown, and cattle bred and fed equalised, he has something to turn into money at all seasons, and can meet all claims as they fall due, escaping the humiliation of having to ask his landlord, or any other creditor, for a longer day. Moreover, he is almost sure of a fair average for his products, through every successive season, as everything is not depressed at the same time, and the high-priced article, whether it be corn or cattle, balances that which happens to be low; whereas if he has committed himself to all corn, or all cattle, a sudden and continuous depression of prices might, if not actually ruining him, yet cause such a serious loss as would embarrass his pecuniary affairs for a number of years. From the experience we have had of corn-growing for a good number of seasons in succession, and the extreme disappointment which has in numerous instances resulted, both in the weight of marketable corn, and the amount of money it made, it is impossible with any show of reason to advocate its growth in considerable breadth with a view to profit. I truly believe that corn in this country, for many years to come, can only be grown as a means to a certain end, that end being the comfort and food of live stock, and a source of manure, the whole profit of the farm, directly and indirectly, coming from the cattle and other stock. This seems to me to be the universal opinion of the Irish farmers of the present day, strikingly exemplified as it is by the declension of the great marts for the sale of corn, the empty sheds echoing every footfall, the grass-grown courts, where twenty years ago all was bustle and activity, and over and above all, the weekly receipts for tolls reduced to such a low ebb as scarcely to pay the expenses of management, however economically conducted. Gentlemen, my concluding advice to all is to fix on the system most suitable for the permanent good not only of your land, but your own interests, as they are identical and inseparable; and having fixed on it, stick to it with all the energy of which you are capable, never tire of feeding the land, apply in as great quantity as you possibly can collect, farmyard and other manure, bones crushed and dissolved, all and everything used as fertilizers in the practice of modern husbandry, and there is no fear but it will give you a profitable return. The land in this barony is mostly sharp, and consequently may be styled hungry; but it is at the same time grateful, and responds quickly to the action of manure, spare cash thus expended by the tiller of the soil proving a good investment by the percentage it returns. It is my firm belief, and it is borne out by the opinions of many old farmers with whom at different periods of my life I have been on terms of intimacy, that the farmer was never yet broken or sold out whose leading business idea was the collection and application of manure.

## REPORTS OF THE ROYAL AGRICULTURAL SOCIETY.

Two important reports were received, one being wholly and the other partially adopted, at the last Council Meeting of the Royal Agricultural Society. The first was the report on Mr. Raudell's motion, in favour of the institution of a series of field experiments, for the purpose of ascertaining the manurial value of various kinds of cattle food. Mr. Raudell wished that these experiments should be carried out by practical farmers; but the Committee, after taking voluminous evidence upon the question, decided that it would be a waste of money, and in other respects objectionable, to have scientific experiments conducted by unscientific men, and recommended that the trials should be made by Dr. Voelcker and Mr. Lawes upon land kindly placed at the disposal of the Society by the Duke of Bedford. The Council adopted the report, and decided to act upon its recommendations, and we think they have decided wisely. It is not easy to understand the soreness of Mr. Raudell and his friends at being told that farmers are unfit to carry out the proposed experiments. It is no more of a slight to tell a farmer that he cannot properly conduct a trial that requires the knowledge of a chemist for its satisfactory management than to tell him that he cannot make a respectable coat or a presentable pair of boots. Field experiments, even when managed by the most competent men, are apt to be deceptive unless they are spread over a long course of years; but there is nothing more delusive than the results obtained under any circumstances by a number of inexperienced experimentalists operating on various descriptions of soils and under the influence of different climates. The results of such experiments as Mr. Raudell desired to promote would in all probability have been contradictory, whilst they would certainly have been unreliable.

The other report to which we have referred is that of the Committee appointed to discuss the proposals of the Agricultural Engineers' Association relative to the regulations observed, or recommended for adoption, at the annual shows. The report as a whole appears to be well considered and discriminating; but only two clauses of it were adopted by the Council, the rest being left for further consideration. Of the two clauses adopted, one relates to the grievances which exhibitors of implements have against the railway companies, and the other is as follows:

"SEPARATION OF AGRICULTURAL FROM MISCELLANEOUS ARTICLES.—The Committee fully recognised the advantage it would be to both exhibitors and the public that this should be done, and therefore recommend that the Steward of General Arrangements should direct the Surveyor as to the position of the stands in the yard, and that they be placed as follows: (1) Agricultural machinery; (2) Mixed stands; (3) Miscellaneous stands."

Visitors to the shows, and reporters of the implement exhibits, will alike rejoice at this decision. People who visit an agricultural show to see the stock, or to note the improvements in agricultural mechanism, and those whose time is precious, will be glad to find that they are no longer obliged to spend half the day in ironmongers' shops and fancy bazaars.

## TRADE UNIONS AND BENEFIT SOCIETIES.

The combination of trade-unions and benefit societies is in many respects objectionable, even when separate accounts are strictly kept. A trade union *in extremis* through a prolonged strike or lock-out would be strongly tempted to draw upon the funds of its benefit branch, and might be able to induce the majority of its members to consent to such a course being taken. Under such circumstances a trade-union benefit society is utterly unsafe, and certainly ought not to be registered, although, as long as similarly rotten and delusive associations are permitted to exist, to the great loss of ignorant people, it cannot be prohibited. Is it possible that registration would be given to a society formed with such arrangements as are suggested by the General Secretary of the National Agricultural Labourers' Union in a scheme drawn out by him and published in the *English Labourer* of April 8th? Here are some of them:

"Although no one will be permitted to join the sick fund who is not a member of the Union, a Union member will not be compelled to contribute to the sick benefit, and as the Society will be registered under the 'Trades Union Act,' a member who ceases to belong to the Union—trade benefit—will have no further claim on any benefit whatever. Separate accounts shall be kept of sick and trade benefits, so that the sick benefit shall not be imperilled by strike or lock-out assistance—*unless under extreme cases, for which the Council shall make provision.*"

It will be observed that however long a member may have paid into the benefit society, he loses everything if, for any reason, he retires from the trade society. This is a monstrous proposal, but we believe it is carried out in other trade unions which profess to be benefit societies as well.

If any association with such a rule is able to obtain registration, the sooner an Act of Parliament prohibiting the sanction of such an abominable wrong is passed the better. But what we wish especially to call attention to in the above extract is the passage we have italicised. Here the danger which we have above stated to be inherent to a combination of trade union and benefit society is plainly hinted at, and virtually admitted. What is intended obviously is that whenever the Labourers' Union happens to be on the verge of ruin, as it was during the lock-out in the Eastern Counties, the Council will have the option of appropriating the funds of the benefit branch for the purpose of paying members on strike or locked out. Now we do not hesitate to say that to induce farm labourers—the majority of whom cannot read—to subscribe to a benefit society which is liable to have its funds confiscated in an emergency, is very little different from direct fraud. The poor men do not understand their danger, and it will be shameful if they are to be deluded by the supposition that they are making provision for sickness and old age in belonging to such a society as Mr. Taylor has planned.

The Lincolnshire Labour League, which has recently been pushing the trade in Essex, has a benefit branch. We should like to know whether the funds of that branch are liable to be used for trade union purposes in "extreme cases," as Mr. Taylor proposes in the case of the National Union.

## THE DUCHY OF LANCASTER AND ITS TENANTS.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—The other day, in taking up a copy of your paper, I caught sight of a letter headed "The Duchy of Lancaster and its Tenants." Having been a tenant upon the property for nearly forty years, will you allow me to point out one small error your correspondent has fallen into? That is, what moneys have been expended in the drainage of the low-lying part of the property the tenants have not paid any interest upon, but all buildings upon the property the tenants have been charged 5 to 6 per cent. upon the outlay. The other portion of the letter is quite correct, although the language is rather strong. Col. Taylor must have been most grossly misinformed, or he could not have said what he did in the House of Commons. For any outlay by the tenants in improved farming or claying the low-lying parts of the estate, or in making roads, or planting, or underdraining the high land, there is no allowance made, or any help given, in any way whatever. With regard to the treatment of the tenants for the last three years since the present gentlemen took office, it has been very unfair and unbusinesslike, to say the least of it, and highly displeasing. I could say much more upon the subject, but enough for the present.

I beg to subscribe myself, Sir,  
Yours most obediently,  
April 10. AN OLD TENANT.

## THE VOICE OF SPRING.

I come, I come! ye have called me long,  
I come o'er the mountains with light and song!  
Ye may trace my step o'er the wakening earth,  
By the winds which tell of the violet's birth,  
By the primrose-stars in the shadowy grass,  
By the green leaves opening as I pass.

I have breathed on the South, and the chesnut-flowers,  
By thousands, have burst from the forest-bowers,  
And the ancient graves and the fallen faunçs  
Are veiled with wreaths on Italian plains.  
But it is not for me, in my hour of bloom,  
To speak of the ruin or the tomb.

I have passed o'er the hills of the stormy North,  
And the larch has hung all his tassels forth,  
The fisher is out on the sunny sea,  
And the reindeer bounds through the pasture free,  
And the pine has a fringe of softer green,  
And the moss looks bright where my step has been.

I have sent through the wood-paths a gentle sigh,  
And called out each voice of the deep-blue sky,  
From the night-bird's lay through the starry time,  
In the groves of the soft Hesperian elime,  
To the swan's wild note by the Iceland lakes,  
When the dark fir-bough into verdure breaks.

From the streams and founts I have loosed the chain;  
They are sweeping on to the silvery main,  
They are flashing down from the mountain-brows,  
They are flinging spray on the forest-boughs,  
They are bursting fresh from their sparry caves,  
And the earth resounds with the joy of waves.

The summer is hastening, on soft winds borne,  
Ye may pluck the grape, ye may bind the corn;  
For me, I depart to a brighter shore—  
Ye are marked by care, ye are mine no more;  
I go where the loved who have left you dwell,  
And the flowers are not Death's—fare ye well, farewell!

MRS. HEMANS.

## AGRICULTURAL MEETINGS IN 1876.

- MAY .—Glasgow Agricultural Society.—Meeting at Glasgow. Entries close most probably April 19. President, Sir William C. J. Carmichael-Anstruther, M.P. Secretary, Mr. J. Dykes, jun., 79, St. Vincent-street, Glasgow.
- MAY 24 and 25.—Oxfordshire Agricultural Society.—Meeting at Henley-on-Thames. Entries close May 1. President, Holford C. Risley, Esq. Secretary, Mr. T. F. Plowman, 1, St. Aldate-street, Oxford.
- MAY 24, 25, and 26.—Devon County Agricultural Society.—Meeting at Tiverton. Entries closed. President, Sir J. H. Heathcoat-Amory, M.P. Secretary, Mr. J. L. Winter, Bridgetown, Totnes.
- MAY 25.—Royal Jersey Agricultural Society.—Meeting at St. Helier's. Entries close May 22. President, Capt. T. Sammarco, R.N., C.B. Secretary, Fra. Labey, Le Patrimoine, Jersey.
- JUNE 5, 6, 7, 8, and 9.—Bath and West of England and Southern Counties Agricultural Society.—Meeting at Hereford. Entries closed for Stock, Implements, and Arts; for Poultry, entries close May 6. President, The Earl of Ducie. Secretary, Mr. J. Goodwin, 4, Terrace-walk, Bath.
- JUNE 13, 14, and 15.—Gloucestershire Agricultural Society.—Meeting at Cheltenham. Entries close May 1. Secretary, Mr. E. W. Trinder, Cirencester.
- JUNE 13, 14, and 15.—Royal Cornwall Agricultural Association.—Meeting at Liskeard. Entries close May 3. President, Captain Evelyn Boscawen. Secretary, Mr. H. Tresawna, Probus.
- JUNE 14 and 15.—Norfolk Agricultural Society.—Meeting at Swaffham. Entries close May 6. President, Sir W. H. B. Folkes. Secretary, Mr. J. Bacon, Attleborough.
- JUNE 15, 16, and 17.—Preston Agricultural Society.—Meeting at Preston. Entries close May 20. President, Edward Hermon, Esq., M.P. Secretary, Mr. T. Nevett, 18, Winckley-street, Preston.
- JUNE 20.—Thirsk Agricultural Society.—Meeting at Thirsk. Entries close June 5. President, C. Elsiey, Esq. Secretary, Mr. P. Hutchinson, Market Place, Thirsk.
- JUNE 22 and 23.—North East Agricultural Association of Ireland.—Meeting at Belfast. Entries close May 15. President, Lord Lurgan. Secretary, Mr. G. G. Bingham, Ulster-buildings, Belfast.
- JUNE 22 and 23.—Suffolk Agricultural Association.—Meeting at Saxmundham. Entries close June 2. President, Sir Richard Wallace, M.P. Secretary, Mr. R. Bond, 6, Butter Market, Ipswich.
- JUNE 24 and 29.—Essex Agricultural Society.—Meeting at Colchester. Entries close May 29. President, James Round, Esq., M.P. Secretary, Mr. R. Emson, Halstead.
- JUNE 23 and 29.—Peterborough Agricultural Society.—Meeting at Peterborough. Entries close June 10. President, The Earl of Carysfort. Secretary, Mr. J. E. Little, Minster Gateway, Peterborough.
- JUNE 23, 29, and 30.—Doncaster Agricultural Society.—Meeting at Doncaster. President, James Brown, Esq. Secretary, Mr. J. D. Snowden, 14, Corn Market, Doncaster.
- JULY 4.—Ripon and Claro Agricultural Society.—Meeting at Ripon. Entries close June 17. President, The Marquis of Ripon. Secretary, Mr. J. Wood, Ripon.
- JULY 4 and 5.—Herts Agricultural Society.—Meeting at Watford. Entries close June 13. President, The Earl of Essex. Secretary, Mr. George Passingham, Benger Temple, Ware.
- JULY 4, 5, 6, and 7.—Royal Counties (Hants and Berks) Agricultural Society.—Meeting at Abingdon. Entries close June 5. President, Sir N. W. G. Throckmorton. Secretary, Mr. H. Downs, Basingstoke.
- JULY 11.—Bantshire Agricultural Association.—Meeting at Cornhill. Entries close July 1. President, The Earl of Fife. Secretary, Mr. G. Gunning, Banff.
- JULY 12, 13, and 14.—Lincolnshire Agricultural Society.—Meeting at Lincoln. Entries close June 10. President, The Hon. Alex. Leslie Melville. Secretary, Mr. S. Upton, St. Benedict's-square, Lincoln.
- JULY 19, 20, 21, 22, and 24.—Royal Agricultural Society of England.—Meeting at Birmingham. Entries close for Implements, May 1; for Stock, June 1. President, Lord Chesham. Secretary, Mr. H. M. Jenkins, 12, Hanover-square, London, W. [There will be no separate show of the Warwickshire Agricultural Society this year.]
- JULY 22.—Cleckheaton Agricultural Society.—Meeting at Cleckheaton. Entries close July 15. President, H. Mann, Esq. Secretary, Mr. B. Bastow, Cleckheaton.
- JULY 25, 26, 27, and 28.—Highland and Agricultural Society of Scotland.—Meeting at Aberdeen. Entries close June 9. President, H. R. H. The Prince of Wales. Secretary, Mr. F. N. Menzies, 3, George IV. Bridge, Edinburgh.
- JULY 26.—Huntingdonshire Agricultural Society.—Meeting at Ramsey. Entries close July 11. President, Edward Fellowes, Esq., M.P. Secretary, Mr. J. Dilley, Market-place, Huntingdon.
- JULY 26.—Durham County Agricultural Society.—Meeting at Sunderland. President, Sir Hedworth Williamson, Bart. Secretary, Mr. Thomas Wetherell, 32, Claypath, Durham.
- JULY 27.—Cleveland Agricultural Society.—Meeting at South Stockton. Entries close July 12. President, Joseph Dodds, Esq., M.P. Secretary, Mr. T. Gisborne Fawcett, Stockton-on-Tees.
- JULY 28.—South Durham and North Yorkshire Horse and Dog Show.—Meeting at Darlington. Entries close July 11. President, The Earl of Eldon. Secretary, Mr. W. Snyell, Darlington.
- AUGUST 1, 2, and 3.—Yorkshire Agricultural Society.—Meeting at Skipton-in-Craven. Entries close July 1. President, Lord F. Cavendish. Secretaries, Mr. T. Parrrington and Mr. Marshall Stephenson, Croft, Darlington.
- AUGUST 1, 2, and 3.—Shropshire and West Midland Agricultural Society.—Meeting at Oswestry. Entries close . . . Secretary, Mr. W. L. Browne, Hill's-lane, Shrewsbury.
- AUGUST 2 and 3.—Glamorganshire Agricultural Society.—Meeting at Cowbridge. Entries close July 5. President, John Samuel Gibbin, Esq. Secretary, Mr. W. V. Huntley, Welsh St. Donati's, Cowbridge.
- AUGUST 2, 3, and 4.—Royal Agricultural Society of Ireland.—Meeting at Cork. Entries close June 19. President, The Earl of Bandon. Secretary, Mr. J. B. Thornhill, Upper Sackville-street, Dublin.
- AUGUST 10.—Northumberland Agricultural Society.—Meeting at Bervick-on-Tweed. Entries close . . . President, Earl Grey, K.G. Secretary, Mr. Jacob Wilson, Woodhorn Manor, Morpeth.
- AUGUST 10.—Whitby Agricultural Society.—Meeting at Whitby. Entries close July 27. President, Colonel the Hon. Octavius Duncombe. Secretary, Mr. William Stonehouse, 2, Esplanade, West Cliff, Whitby.
- AUGUST 10.—Richmondshire Agricultural Society.—Meeting at Leyburn. Entries close July 14. Secretary, Mr. J. Wetherell, Richmond, Yorkshire.
- AUGUST 10.—Worsley and Swinton Agricultural Society.—Meeting at Worsley. President, The Earl of Eblesmere. Secretary, Mr. Alfred Spencer, Worsley, near Manchester.
- AUGUST 23.—Lytham and Kirkham Agricultural Society.—Meeting at Lytham. Entries close August 12. President, J. Talbot Clifton, Esq. Secretary, Mr. Joseph Parkinson, 5, Chapel-street, Preston.
- AUGUST 26.—Halifax and Calder Vale Agricultural Society.—Meeting at Halifax. Entries close August 12. President, Lieut.-Col. Sir Henry Edwards. Secretary, Mr. W. Irvine, 18, Cheapside, Halifax.
- SEPTEMBER 4.—Leominster Agricultural Society.—Meeting at Leominster. Entries close August 18. President, John H. Arkwright, Esq. Secretary, Mr. E. Gregg, Leominster.
- SEPTEMBER 5, 6, and 7.—Royal Manchester, Liverpool, and North Lancashire Agricultural Society.—Meeting at Southport. Entries close August 1. President, Lord Skelmersdale. Secretary, Mr. T. Rigby, 1, Old Ropery, Fenwick-street, Liverpool.
- SEPTEMBER 6.—North East Somerset Farmers' Club.—Meeting at Brislington. Entries close August 1. President, The Earl of Warwick. Secretary, Mr. John Tudball, Chew Magna, near Bristol.
- SEPTEMBER 6.—Dorbyshire Agricultural Society.—Meeting at Derby. Entries close August 7. President, John Gilbert Crompton, Esq. Secretary, Mr. G. Corbett, Derby.
- SEPTEMBER 8.—North Shropshire Agricultural Society.—Meeting at Wellington. Entries close . . . President, Thos. Charlton Meyrick, Esq. Secretary, Mr. W. D. Green, Market Drayton.
- SEPTEMBER 12.—Carlow Agricultural Society.—Meeting at Tullow, Co. Carlow. Entries close Sept. 6. Secretary, Mr. Thos. P. Butler, Ballin Temple, Tullow, Co. Carlow.



- SEPTEMBER 12 and 13.—Northamptonshire Agricultural Society.—Meeting at Brackley. Entries close August 12. President, The Earl of Ellesmere. Secretary, Mr. John M. Lovell, Harpole, Weedon.
- SEPTEMBER 13 and 14.—Wirral Agricultural Society.—Meeting at Birkenhead. Entries close President, Richard Barton, Esq. Secretary, Mr. A. F. Gardiner, 86, Hamilton-street, Birkenhead.
- SEPTEMBER 14.—Waterford Farming Society.—Meeting at Waterford. Entries close September 7. President, The Marquis of Waterford. Secretary, Mr. Robert S. Blee, Waterford.
- SEPTEMBER 16.—Tarporely Agricultural Society.—Meeting at Nantwich. Entries close September 2. President, Baron von Schroder. Secretary, Mr. William Vernon, 4, Lane-end, Tarporely.
- SEPTEMBER 19.—North Lonsdale Agricultural Society.—Meeting at Ulverston. Entries close Sept. 7. Patron, The Duke of Devonshire, K.G. Secretary, Mr. Thos. Postlethwaite, Smith's-court, Ulverston.
- SEPTEMBER 20.—Norton Farmers' Club and East Derbyshire Agricultural Society.—Meeting at Chesterfield. Entries close Aug. 30. President, Lord Edward Cavendish. Secretary, Mr. J. N. Jephson, Knifesmith Gate, Chesterfield.
- SEPTEMBER 20.—Carmarthenshire Agricultural Society.—Meeting at Carmarthen. Entries close Sept. 8. President, David Pugh, Esq. Secretary, Mr. D. Prosser, Carmarthen.
- SEPTEMBER 20 and 21.—Staffordshire Agricultural Society.—Meeting at Stone. Entries close August 19. President, The Hon. E. S. Parker Jervis. Secretary, Mr. W. Tomkinson, Newcastle, Staffordshire.
- SEPTEMBER 29 and 30.—Cheshire Agricultural Society.—Meeting at Chester. Entries close September 1. President, Sir P. de M. Grey Egerton, M.P. Secretary, Mr. J. Beckett, Oulton Pool Cottage, Tarporely.
- SEPTEMBER —Lauderdale Agricultural Society.—Meeting at Lauder. Entries close September . President, The Earl of Lauderdale. Secretary, Mr. T. Broomfield, Lauder.
- SEPTEMBER —Merionethshire Agricultural Society.—Meeting at Harlech. Entries close about August 20. President, Lord Harlech. Secretary, Mr. T. Ellis, Henblas, Bala.
- NOVEMBER 23 and 24.—Chippenham Agricultural Society.—Meeting at Chippenham. Entries close November 17. President, Sir John Neehl. Secretary, Mr. E. Little, Lambill, Chippenham. [No Implements exhibited.]
- DECEMBER 4, 5, 6, 7, and 8.—Smithfield Club Fat Cattle Show, in the Agricultural Hall, Islington. Entries close, for Implements, October 2; for Stock, November 1. President, Lord Chesham. Secretaries, Mr. B. T. Brandreth Gibbs and Mr. D. Pullen, Half-moon Street, Piccadilly, London.
- DECEMBER 5.—Carmarthenshire Agricultural Society's Fat Stock Show, at Carnarthen. Entries close Nov. 18. Secretary, Mr. D. Prosser, Carmarthen.
- DECEMBER 6.—Edenbridge Fat Stock, Corn, and Root Show, at Edenbridge. Entries close Nov. 14. President, Lord De L'Isle and Dudley. Secretary, Fred. Stanford, jun., Edenbridge, Kent.
- DECEMBER 6 and 7.—Rutland Agricultural Society. —Meeting at Oakham. Entries close November 17. [No implements.] Secretary, Mr. Edward Wortley, Ridlington, Uppingham.
- DECEMBER 8 and 9.—Canterbury Fat Cattle Show. —Meeting at Canterbury. Entries close November 4. President, Lord Sondes. Secretary, Mr. George Slater, Canterbury.
- DECEMBER 12, 13, and 14.—Yorkshire Society's Fat Stock Show, at York. Entries close November 23. President, The Earl of Zetland. Secretary, Mr. J. Watson, Lendal Bridge, York.
- DECEMBER 13, 14, 15, 16, and 18.—Birmingham Agricultural Exhibition Society.—Meeting at Bingley Hall, Birmingham. Entries close November 14. Secretary, Mr. John B. Lythall, Bingley Hall, Birmingham.

[We shall continue the occasional insertion of this List throughout the year, and add to it as other Societies make their arrangements, of which we shall be obliged by early notice.—EDITOR, M. L. E.]

## ON THE THEORETICAL AND PRACTICAL VALUE OF PURCHASED FOOD, AND OF ITS RESIDUE AS MANURE.

BY DR. AUGUSTUS VOELCKER, F. R. S.

*From the Journal of the Royal Agricultural Society of England.*

In the capacity of Consulting Chemist to the Royal Agricultural Society I frequently receive for analysis samples of oilcakes, cereal-grains, and other kinds of food for stock, and am requested not only to determine their nutritive value but also to express an opinion with regard to their money-value. The questions put to me may appear simple enough and not difficult to answer; and yet I am bound freely to confess that no inquiries are, in my judgment, more difficult to answer satisfactorily than those with respect to the comparative money-value of various articles of food. There is no difficulty in determining by analysis with tolerable precision the fertilising and commercial value of guano, sulphate of ammonia, nitrate of soda, superphosphate of lime, and other portable manures, because the commercial value of artificial manures depends mainly upon their composition. The amount of ammonia, nitric acid, soluble and insoluble phosphate of lime, or potash, in a manure, can be ascertained with certainty by analysis. The various constituents upon which the fertilising properties of the various kinds of artificial manures mainly depend may either be bought separately—some in the form of simple saline compounds, others in commercial products, which, like dried blood or wool-refuse, owe their fertilising properties to the nitrogen they contain—or they may be purchased in articles of commerce, which, like bone-dust, contain more than one manuring element. In either case, we have to do with commercial products, the money-value of which is regulated by the kind and amount of the real fertilising constituents contained in them; and although the market-price of ammonia or of phosphate of lime, &c., is subject to fluctuations, the money value of compound artificial manures can, nevertheless, be ascertained by analysis with sufficient precision to guard the purchaser against frauds on the part of the dealer. But a far more difficult case is sub-

mitted to the agricultural chemist when he is requested to analyse an article of food and to give an opinion of its nutritive and money value. By appropriate analytical processes the proportions of starch, albumen, gluten, oil, woody-fibre, and other constituents which enter into the composition of feeding-stuffs, may be determined readily enough; but as these constituents are not sold separately in a form in which they may be used economically by the feeder of stock, it is not possible to assign a separate money-value to them. Most kinds of cattle-food, such as cereal grains, oilcakes, and roots, are compounds containing variable proportions of starch, sugar, oil, albuminous substances, woody fibre, and mineral matters. Their market-value does not simply depend upon the proportions of their food-constituents, but also, and to a very large extent, upon the economical use which can be made of various kinds of food in common life, or in farm-practice; and as we do not know exactly to what extent the starch, or the sugar, or the albuminous substances in foods, severally contribute to produce the total practical effect which follows from their use, it seems to me that the requisite data are wanting from which the money-value of various articles of food can be calculated with anything approaching precision. Attempts have repeatedly been made by agricultural writers to place a certain money-value upon the starch, sugar, albuminous substances, and other food-constituents; but as all such attempts have brought to light inconsistencies and discrepancies between the calculated and actual price at which various articles of cattle-food are sold in the market, I need not dwell further upon the practical mistakes of those who have proposed certain scales or rates for a given weight of starch, oil, sugar, albumen, &c., in estimating the money-value of purchased foods. In the earlier periods of the history of the trade in artificial manures, valuation scales were used with much benefit in



checking unscrupulous dealings; and even at the present time such scales materially assist the agricultural chemist who is neither a mere calculating machine nor a purely theoretical man, and who makes a discriminate use of them to give a trustworthy opinion of the proximate and the comparative money-value of artificial manures which may be submitted to him for analysis. In a paper "On the Commercial Value of Artificial Manures," published in this Journal in 1862, I directed attention to a number of practical considerations which have to be taken into account in estimating the commercial value of artificial manures, and showed that serious mistakes will be made, and possibly undeserved injury to honest traders may be done, if such estimates are entirely based upon the figures given in valuation tables. Difficulties, no doubt, occur sometimes when the agricultural and commercial value of some kinds of artificial manure is sought to be determined with great precision; but far greater and more numerous are the obstacles which present themselves in attempts to put a money-value upon articles of food; and it may be as well to state, in plain language, that the money-value of cattle-foods cannot be determined simply by analysis. Nevertheless, the chemical examination of feeding-stuffs must not be regarded as void of all practical interest, for it enables us to get at least some insight into their characters, and affords useful hints to the stock-leader in the selection of the most suitable food which he may require for fattening stock, as well as for working-horses or milch-cows. In oilcakes, corn, hay roots, and most articles of food, we find the following group of food constituents: 1. Nitrogenous, or albuminous compounds, as flesh-forming matters. 2. Non-nitrogenous, or fat and heat-producing compounds. 3. Mineral matters, or ash-constituents.

1. The first class includes: *Vegetable Albumen*, a substance identical in composition and chemical properties with the white of eggs. *Gluten*, or vegetable fibrine, a compound occurring in considerable proportions in wheat, and in smaller proportions in other cereal grains: it closely resembles the fibrine of blood and the substance of lean flesh and muscle. *Vegetable Casein*, or legumin, a substance identical in composition with the casein of milk. Like milk-casein, legumin is curdled or precipitated from its solution in water on the addition of dilute acids, but is not coagulated like albumen on boiling. It occurs in large quantities in peas, beans, lentils, and other leguminous seeds. The nitrogenous compounds constitute a remarkable class of organic substances. They all contain about 16 per cent. of nitrogen, and small quantities of sulphur or phosphorus, or both, in organic combination. Vegetable albumen, identical in composition and properties with animal albumen, may be regarded as the type of this important group of compounds, which frequently figure in scientific works or in food-analyses under the generic name of albuminoids or albuminous compounds. They are also called flesh-forming matters, because they not only closely resemble muscular fibre in composition and general properties, but are absolutely necessary for the formation of the substance of lean flesh. Peas, beans, and all leguminous seeds, linseed, rape, cotton, and other oilcakes, are rich in flesh-forming matters or albuminoids; and most cereal grains also contain considerable proportions of such compounds; whilst roots, green produce, straw, chaff, and similar bulky feeding-materials are, comparatively speaking, poor in albuminoids. No food entirely destitute of albuminous compounds is capable of supporting life for any length of time, for direct experiments have proved beyond dispute the fact that the animal organism does not possess the power inherent in plants of transforming saline, or other compounds containing nitrogen, into flesh-forming matters. Thus it has been shown that animals fed exclusively upon starch, sugar, fat, and other food entirely destitute of albuminous compounds, rapidly lose flesh, and die at the end of the fifth or sixth week, or but little later than they would have died if no food at all had been given. Recent experiments, moreover, have established the fact that albuminoids, like starch and other non-nitrogenous compounds, are capable of becoming oxidised in the animal system and furnishing animal heat; and it has likewise been shown that the albuminous compounds of food, in addition to their power of forming muscle, have the property of becoming split up into fat and urea during the process of digestion. Indeed, some physiologists maintain that the fat of animals is mainly, if not entirely derived from this source, and not from starch or sugar, or any other non-nitrogenous constituents of food. Recent

physiological experiments with reference to the formation of fat from albuminoids, however, are not quite decisive; and they certainly do not invalidate the well-established experience that a large proportion, at all events, of the fat of animals is derived either from ready-made fatty substances, or from starch and other readily assimilable non-nitrogenous compounds in food such as is given to fattening oxen, sheep, and pigs. Whichever view may be entertained with regard to the fat-producing power of albuminoids, they are certainly a most important class of compounds; and it may be laid down as a fact, established alike by practice and science, that the nutritive value of food depends in a great measure upon a certain amount of albuminous compounds, which may be more or less, according to the description of the animal, or the purpose for which it is kept on the farm.

2. The non-nitrogenous, or fat and heat-producing substances, may be conveniently divided into three groups: *a.* Ready-made fat; *b.* Carbon-hydrates; *c.* Woody-fibre, or cellulose. Ready-made fats and oil are by far the most valuable of all food-constituents in an economical point of view, for oil or fatty matters fetch a higher price than any nitrogenous compounds, or than starch, sugar, or any other non-nitrogenous substance. Oil and ready-made fatty matters are particularly well adapted to the laying on of fat in animals, inasmuch as the composition of vegetable fats is analogous to that of the several kinds of fat which form part of the bodies of animals. The fatty matters of food, without undergoing much change, are therefore readily assimilated by the animal organism, and, when given in excess, are stored up as animal fat. The proportion of carbon in fat amounts to about 80 per cent., and is much larger than in starch or sugar. In round numbers, one part by weight of fat or oil is as valuable a feeding material as 2½ parts of sugar or starch. Besides this, fat serves important functions in the processes of digestion and nutrition. It has been shown by actual experiments, that albuminous substances deprived of fat remain longer in the stomach, and require more time for their conversion into cells and muscular fibre, than when associated with fatty matters. There is good reason for believing that fat is largely concerned in the formation of bile, and that the digestive power of the pancreatic fluid is due, in great measure, to its presence. Fat certainly possesses high digestive powers, and appears to assist the solution of food, and its absorption into the blood. Colourless blood-corpuscles receive, perhaps, the first impulse of their formation from the metamorphosis of fat, and thus it may be an important aid in the formation of blood. Fat thus takes an active part in the processes by which the nutritive constituents of food are converted into butchers' meat. Not only is it concerned in the formation of new tissue, but it also pervades, and finally disintegrates, the older structures, especially when their vitality is low. In this manner it helps in the solution of effete nitrogenous products and their subsequent removal from the animal body. Starch, gum, mucilage, and sugar are appropriately called carbon-hydrates, for in them carbon is combined with the same relative proportions of oxygen and hydrogen in which the two latter elements form water. In starch, sugar, and analogous carbon-hydrates, the hydrogen is therefore fully oxidised, and the carbon only is capable of oxidation, and of generating animal heat by its oxidation or combustion. As already stated, the heat-producing power of fat or oil is about twice and a-half as great as that of starch or sugar. The carbon-hydrates of food not merely generate animal heat, which is, in reality, the final result of their oxidation, but they likewise give rise to lactic and other organic acids, which perform important functions in the digestion of food. The presence of lactic acid in the stomach appears to be essential to the digestion of the albuminous compounds of food, and its occurrence in the juice of flesh probably assists the solution of effete tissues. When food rich in starch or sugar is given to animals in larger quantities than is required to support respiration, and to generate animal heat, the excess of the carbon-hydrates supplied in the food is converted into fat, which is stored up in the body. It was denied at one time that animals possess the power of eliminating from starchy compounds and analogous substances the elements which are subsequently reconstructed into fat; but Boussingault's, Liebig's, and Lawes and Gilbert's experiments have clearly proved that fat may be, and always is, derived from the carbon-hydrates of the food of fattening stock; and common experience fully confirms the results of these experiments, for it is well known that the meal of cereal grains, and of other

food rich in sugar, is highly esteemed as good fattening material. Cellulose, or woody fibre, according to its condition of digestibility, depending upon the more or less matured state of the vegetable containing it displays similar, or the same, functions in the animal economy as starch and sugar. The tender cellular fibre of unripe straw, or of hay, is certainly assimilated to a very large extent by herbivorous animals, whilst the hard woody fibre of over-ripe grass or straw is digested less perfectly, and rejected in larger proportion in the dung. Oxen appear to be capable of digesting cellulose, and deriving nourishment from it in a larger measure than sheep; but it appears doubtful whether pigs are able to digest cellulose or woody fibre at all. Thus a bulky food, containing much straw-chaff, may be given with more advantage to cattle than to sheep.

3. The *saline* or *mineral* constituents of food are largely concerned in the metamorphosis of matter, for it is a special function of these substances to give a soluble form to the plastic constituents of food and of the animal tissues. They are, in fact, the chief, if not the only, media for the transference of organic matter from place to place in the animal body, being on the one hand the conveyers of nutritive materials into the system, and on the other the carriers of effete substances out of it. The saline or mineral constituents of food thus play an important part in the phenomena of digestion, assimilation, and secretion, being required for the formation of blood, the juice of flesh, and other animal secretions. A considerable proportion of the mineral constituents of food consists of earthy phosphates: they not only supply to the animal body the materials of which the greater part of bones consists, but they also enter into the composition of flesh. Nearly the whole of the mineral matters of food pass into the liquid and solid excrements, only a small proportion being retained in the system, except in the case of young growing animals, which, requiring much phosphate of lime for the growth of bone, extract the earthy phosphates from food to a greater extent than full-grown fattening stock. The soluble portion of the mineral food-constituents, consisting principally of common salt and potash salts, is constantly rejected in the urine; whilst the insoluble portion, consisting chiefly of phosphate of lime and magnesia, carbonate of lime and silica, passes away in the solid excrements. It is hardly necessary to state that no animal can live, for any length of time, exclusively upon starch or sugar, or upon albumen. The requirements of the animal body necessitate a mixed food containing all the constituents, to the functions of which brief notice has been made. With the exception of treacle, which is occasionally used for feeding purposes, there is no feeding-stuff which consists entirely or mainly of one group of alimentary matters. All feeding materials, whether they are cereal grains, leguminous seeds, roots, grass, or chaff, are mixed foods, containing variable proportions of nitrogenous and non-nitrogenous organic matters, and of saline and phosphatic earthy compounds. In its natural state the animal eats no more than the necessary amount of food to provide, firstly, carbon for the support of respiration and for keeping up the animal heat; and secondly, enough nitrogenous and mineral constituents to keep in healthy action the complicated processes of digestion, assimilation, and secretion. A full-grown animal, in a state of perfect health, neither increases nor decreases in weight when it is allowed to help itself with as much grass, or whatever else may be its natural food, as it pleases, uncontrolled by human agency. The larger portion of the non-nitrogenous constituents of the food is oxidised, and passes off as carbonic acid from the lungs, whilst the mineral matters contained in the food are ejected from the system almost entirely, either in the urine or in the solid excrements. The nitrogenous constituents of food are decomposed more or less completely before they are ejected by the animal. As the result of this decomposition, two new classes of substances are produced. One class comprehends compounds containing all, or nearly all, the nitrogen of the decomposed albuminoids, united with comparatively little hydrogen, carbon, and oxygen; the second class contains the remaining quantity of carbon, hydrogen, and oxygen. Urea, uric, and hippuric acids are the principal highly nitrogenised organic products; lactic acid, fatty matters, and some other combinations of a less definite chemical character are the products destitute of nitrogen which result from the decomposition of the albuminoids of food. Whilst thus the greater part of the non-nitrogenous constituents of food is wasted in the exhalations from the lungs, nearly the whole of the mineral and

nitrogenous constituents of food pass into the solid and liquid excrements of animals. As a rule, food rich in nitrogen is also rich in phosphate of lime and other animal matter; and hence the excrements of cattle fed upon such food are both richer in phosphates and in nitrogen, and possess a greater fertilizing value, than the excreta voided by cattle fed upon less nitrogenous and more carbonaceous food.

**MONEY-VALUE OF THE CONSTITUENTS OF ARTIFICIAL FOOD.**—Having considered the functions of the several constituents of food in the animal economy, I will offer a few remarks on their comparative practical or money-value.

*Oil and Fatty Matters.*—As indicated already, oil and fatty matters are by far the most valuable and expensive ingredients of feeding stuffs. In round numbers, one part, by weight, of fat or oil is worth as much for feeding purposes as 2½ parts of starch or sugar. In examining various articles of food for the purpose of obtaining an insight into their nutritive value, it is necessary, therefore, to determine accurately the amount of oil or fatty matter which they contain. The fattening value of some kinds of cattle food in a great measure depends upon the amount of ready-made fat which they contain. For instance, the feeding and commercial value of palm-nut meal or cake rises or falls with the percentage of fatty matter which the oil-crusher leaves in the meal or cake. Some crushers extract the fat from palm-nut kernels much more perfectly than others; and as the commercial value of this kind of food is regulated in a large measure by the percentage of fatty matters, palm-nut meal is sold at from £5 5s. to £8 8s. per ton, the difference in the price being caused solely by the smaller or larger proportion of fatty matter which has been left in the expressed palm-nut kernels. The cheaper kinds of palm-nut meal, selling at from £5 5s. to £6 10s. per ton, usually contain from 3 to 6 per cent. of fatty matter, whilst the more expensive and more valuable palm-nut meals contain from 15 to 18 per cent. of fat, and no more, or rather less, albuminous compounds than the cheaper kinds. Assuming ready-made fat to be worth 3d. per lb. for fattening purposes—and this perhaps is too low an estimate, considering that 1 lb. of fat is worth as much as 2½ lbs. of starch or sugar, and that the latter cannot be bought in the cheapest kinds of food at a cheaper rate than 1½d. to 1½d. per lb.—the difference in the fattening and commercial value of the poorest samples of palm-nut meal, containing only 3 per cent. of ready-made fat, and the richest yielding 18 per cent., amounts to about £4 per ton, or £1 more per ton than the difference in the actual selling price of the cheapest and most expensive samples. It therefore follows that the higher priced palm-nut meals at £8 per ton are comparatively cheaper, in reality than those which contain only 3 per cent. of fat, and are sold at about £5 per ton. A practical proof of the commercial value of oil or fat is presented to us in dried brewers' grains and rice-meal. Notwithstanding the large amount of husks in both these feeding-stuffs, they find a ready sale at about £7 per ton; and as they contain only a moderate amount of albuminous compounds, but from 5 to 8 per cent. of ready-made oil and fatty matter, and have been found in practice to be well worth the money for which they are sold, there can be little doubt that it is the comparatively large amount of oil and fat contained in them which enhances their feeding value. *Starch, Gum, and Sugar.*—In the next place we have to consider the practical value of starch, gum, and sugar for feeding purposes. Next to oil and fatty matter these are probably the most valuable constituents of food. Starch is readily transformed into gum and sugar; and direct feeding experiments have shown that starch and sugar, and analogous carbon-hydrates, weight for weight, have practically the same value as constituents of food. In the shape of treacle sugar is used occasionally for rendering straw-chaff, or insipid badly made hay, more palatable. A solution of treacle in hot water, poured over straw-chaff, no doubt gives a greater relish to cattle for such bulky and innutritious food; but the question may well be raised whether the practical benefit of this treatment of straw-chaff is commensurate with the expense. Treacle, or molasses of a quality usually sold as cattle-food, and costing about £9 per ton, contains on an average from 54 to 60 per cent. of sugar, the rest being water and saline and other impurities. A ton of sugar in the form of molasses thus costs from £15 to £16 12s., on an average; and this is about one-half more than the price at which wheat, beans, oats, or barley meal can be bought. It is evident, therefore, that the price of treacle is far too high to admit of its being employed economically for feeding or fattening purposes. It may be said that although

treacle is dear in comparison with the market price of other feeding stuffs, it nevertheless is a very useful substance to stock feeders, who have plenty of straw to spare, and who require a sweetening substance to induce cattle to consume a larger quantity of straw chaff than they would eat if it were not made more palatable; and that for that purpose not a very large quantity of treacle will meet the requirements of the case. This may be so; but a farmer, who has at his command a good supply of well matured mangolds or swedes, surely may attain the same object if he mixes straw chaff with pulped roots, and allows the mixture to heat to some extent, by keeping it for twelve hours before giving it to his cattle. In well ripened mangolds, swedes, or carrots, as is well known a large proportion of the solid feeding matter consists of sugar; and unquestionably it is in the shape of root crops that sugar is employed for feeding and fattening purposes in the most economical manner. If root crops have been more or less a failure, or if a sufficient breadth of land cannot be put into roots, and the root supply is in consequence too scanty to meet the requirements of the stock feeder, especially if he wishes to consume much straw chaff, I would recommend him to buy locust beans, and to sweeten the straw chaff with an infusion of these palatable bean pods. They need not be ground into powder, but it will suffice to pass them through a chaff-cutter, or to cut them by hand in o's half-inch or such pieces. Boiling, or even moderately warm, water poured upon the broken locust-beans, and allowed to remain in contact with them for a couple of hours, readily extracts the sugar in which these bean-pods are very rich; and this infusion, together with the more or less exhausted locust beans, may then be poured over straw chaff, which thereby will be rendered quite as palatable to stock as by employing syrup as a sweetener, if not more so. Locust beans, as will be seen by the following analysis, which was made in my laboratory some time ago, and which fairly represents their average composition, contain in round numbers fully half their weight of sugar. In consequence they are very palatable, and much liked by every kind of farm stock.

## AVERAGE COMPOSITION OF LOCUST OR CAROB BEANS.

Moisture .....	17 11
Oil .....	1 19
Sugar .....	51 42
Mucilage and digestible fibre .....	13 75
*Aluminous compounds .....	7 50
Woody fibre (cellulose) .....	6 01
Mineral matter (ash) .....	3 02
	100 00

\*Containing nitrogen..... 1 20

Weight for weight, locust beans contain nearly as much sugar as molasses. In addition to sugar, they contain a little oil, a moderate amount of aluminous or flesh-forming matters, and about 14 per cent. of mucilage and digestible fibre, or altogether 83 per cent. of solid feeding matter; whereas treacle contains no appreciable amount of aluminous substances, and only from 54 to 60 per cent. of dry feeding matter, consisting mainly of sugar. At present locust beans can be bought at about £7 10s. per ton, whilst treacle or molasses of good quality costs about £9 per ton. Locust beans are thus not only much cheaper than molasses, weight for weight, but they likewise possess a higher nutritive value, and are equally well adapted to the sweetening of unpalatable bulky food.

*Nitrogenous Food-constituents.*—In the next place we have to consider the nutritive value of the aluminous or nitrogenous constituents of food. It is admitted on all hands that a certain amount and proportion of nitrogenous matter is essential in the food of all animals. Foods, like locust beans, or rice meal, or dari grain (a species of sorghum), which contain less than 8 or 9 per cent. of aluminoids, are too poor in nitrogenous substances to suit the requirements of the animal. Hence these and a few other feeding materials equally poor in nitrogen should not be given to fattening stock in too large proportions, or without the addition of other meals, or of oilcakes, richer in nitrogenous compounds. In wheat, oats, and barley, however, the proportion of aluminous substances is sufficiently high to meet the requirements of fattening stock; and in leguminous seeds (such as beans, lentils, and peas), and in oilcakes, the proportions of these compounds are considerably in excess of the requirements of the animal. According to the views of not a few writers on agricultural

chemistry and physiology, it is chiefly the proportion of the nitrogenous, or so-called flesh-forming substances contained in different kinds of food, which determines their comparative value for feeding purposes. If I am not mistaken, it was Boussingault who made the first attempt to construct a theoretical table of the nutritive value of articles of food, based upon the amount of nitrogen they contain; but it is due to this most careful observer to mention, that in testing the correctness of his own tables by actual feeding experiments, Boussingault frequently found the results of the experiments at variance with the theoretical indications of his tables; and he frankly confessed that the amount of nitrogen in a feeding substance must be regarded as one factor only in estimating its nutritive value. Presuming that the proportion of nitrogenous substances in the food given to fattening stock is about the same as that in which we find them to exist in cereal grains, it may be asked, what will be the effect upon the animal when it receives in addition feeding materials rich in nitrogen; or, on the other hand, when it is more liberally supplied with food which is, comparatively speaking, poor in nitrogen, and rich in readily digestible starchy or sugary compounds? Will the increase in the live weight be determined by the excess of the nitrogenous, or by that of the non-nitrogenous constituents (the carbon-hydrates) of food? These questions can only be answered satisfactorily by experience; and numerous carefully conducted feeding experiments, as well as the experience of fatteners of stock on a large scale, have clearly decided the fact, that the comparative feeding value of most of our stock foods depends more upon the proportion of the digestible non-nitrogenous substances (or carbon-hydrates) which they contain, than upon their richness in aluminous or nitrogenous compounds. A few examples will show that it is not the proportion of nitrogenous matter in articles of food of the same or similar kind which regulates their comparative nutritive value. Tail wheat is richer in nitrogen than fine pump wheat, yet nobody I suppose would use tail-wheat for fattening purposes if he could get wheat rich in starch, producing much flour in the mill, at the same price as inferior samples. I well remember that, a good many years ago, the late Mr. Henry Stephens, author of the "Book of the Farm," sent me, for analysis, two samples of wheat, and requested me to determine their comparative value. My report was made in accordance with the then all but general theory, that the proportion of nitrogen in different samples of the same kind of food regulated their comparative value; and having found a good deal more nitrogen in one than in the other of the two samples of wheat, to my surprise I was subsequently informed by Mr. Henry Stephens that the sample which I pronounced to be a good deal the more nutritious, in point of fact was tail-wheat, and the other a much superior and more highly priced wheat. Again, grass from irrigated meadows, or Italian ryegrass grown with sewage, invariably contains more nitrogen than grass from dry pastures, or ryegrass grown without manure; but no good farmer prefers the grass from irrigated meadows, or ryegrass formed by town sewage, to the better matured and less nitrogenous produce of non-irrigated land. The same remarks apply with equal force to the comparative feeding value of mangolds, swedes, turnips, and other root crops. It is not the proportion of nitrogenous matter in roots, but their percentage of sugar and other equally digestible non-nitrogenous constituents which regulates their comparative feeding value. Thus the percentage of nitrogen in monster roots, weighing over 15 lbs., is larger than that in roots of the same kind, but weighing only from 3 to 4 lbs., and everybody knows that abnormally big roots possess very little feeding value. Or if we compare the practical feeding value of beans and peas on the one hand, with wheat or oats on the other, we do not find the fattening qualities, or the power to produce butcher's meat, of leguminous seeds superior to those of the cereal grains mentioned, although the former contain about twice as large a proportion of nitrogenous compounds as the latter. Again, the nutritive or fattening value of various kinds of oilcakes does not depend so much upon the relative proportions of aluminous or nitrogenous substances in them, as upon the larger or smaller amount of readily digestible non-nitrogenous food-constituents which they severally contain. If it were otherwise, decorticated cotton-cake, which contains fully 2 per cent. more nitrogen than the best linseed-cake, would have been found in practice more valuable for feeding purposes than the latter, which we know is not the case; and rape-cake also

would have to be regarded as superior to linseed-cake in feeding value.

**Woody Fibre.**—The least valuable of the constituents of cattle-food is woody fibre. Bulky feeding materials, such as straw and chaff, and certain kinds of mill-refuse obtained in preparing wheaten flour, oatmeal, rice &c. for human consumption, contain considerable proportions of woody fibre or cellulose. The larger the proportion of woody fibre, and the more indurated its condition, in articles of food, the less is their practical feeding value. The tender cellular fibre of well-ripened turnips, mangolds, and other root-crops, the cellular fibre of grasses, and the woody fibre of the straw of cereal crops, reaped somewhat green, or before the cereal grains have arrived at full maturity, however, is digestible by herbivorous animals in a large measure, and to a larger extent by horned cattle than by sheep. Consequently it possesses a certain nutritive value which is greater or smaller according to the degree of induration in which it occurs in the food.

**Mineral Constituents of Food.**—Although the mineral or ash-constituents of food play an important function in the animal economy, as explained already, we need not take special account of them in considering the comparative nutritive value of the various food-constituents, for all our ordinary stock foods contain an ample supply of mineral matter to meet the requirements of the animal. It is worthy of observation, however, that articles of food, such as the seeds of leguminous plants, rich in nitrogenous constituents, and specially well adapted as food for young growing stock or for milch cows, contain more phosphate of lime than feeding materials which are richer in non-nitrogenous substances, and therefore more suitable for fattening stock. Provision is thus made, in food which is rich in nitrogenous substances, to meet the extra demand of young stock for the mineral matter of the bony structure.

From the preceding observations it will be gathered that the following is the order of the nutritive value of the constituents of food. 1. Oil and fatty matters. 2. Sugar, starch, and analogous carbon-hydrates. 3. Albuminous or nitrogenous compounds. 4. Digestible cellular fibre. 5. Indigestible woody fibre. 6. Mineral matters or ash.

**MANURIAL VALUE OF PURCHASED FOOD.**—Practical men are well aware that the manure produced by fattening stock liberally supplied with corn or cake possesses greater fertilising powers than the dung from store-cattle; and they also know in a general way that the manure produced by cattle or sheep fed upon cake in addition to roots is more valuable than that of animals fed upon roots and hay alone. In the selection of purchased foods for stock, it is important to consider how much of the cost price of the food should be charged to the manure account, and how much should be allowed for its feeding value. This is by no means an easy matter, for although it may be ascertained which are the elements of the food that pass into the dung, and their relative proportions may be determined with tolerable precision, the practical benefit resulting from the use of the dung produced from various kinds of food will greatly vary on light and on heavy land, and on different soils varying much in their physical and chemical properties. Hence it is difficult to put upon the manure a money-value which will be generally accepted as correct. However, the only way to escape from this difficulty appears to be to value the fertilising constituents of the food which pass into the dung at the rates at which they can be severally bought in the manure-market, and to adopt subsequently such modifications of the total estimated value as may be suggested by the experience of farmers residing in different localities. Generally speaking, different articles of food of the same class differ far less in their feeding value than in their manure value. For instance, it will make comparatively little difference, so far as the increase in the live weight of the animal is concerned whether, in addition to a liberal supply of their ordinary bulky food, such as straw and turnips, a ton of linseed-cake, or a ton of decorticated or of undecorticated cotton-cake, or a ton of corn, be given to fattening oxen or sheep; but the value of the manure resulting from the consumption of a ton of each of these foods will show great differences. The manurial value of food depends mainly on the amount of, 1st, nitrogenous matter, 2nd, potash, and 3rd, phosphoric acid which passes through the body into the dung of the animals. Practically speaking, the whole of the potash and phosphoric acid

contained in the purchased food pass into the dung of fattening stock. The loss in nitrogen which the food sustains passing through the animal has been variously stated by different experimenters. By some it is estimated at one-tenth, by others at one sixteenth part of the total amount of the nitrogen in the food; the former estimate probably is the more accurate. On the whole, no great mistake will be made if it be assumed that 90 per cent. of the total amount of nitrogen of such concentrated food as oilcake, when given to fattening-stock, is recovered in the solid and liquid excrements, presuming that these can be collected without loss. In the case of young stock or milking-cows not over well supplied with concentrated purchased foods, the dung will not be quite so valuable as that of fattening-stock, inasmuch as a small proportion of the nitrogenous and phosphatic food-constituents will be stored up during the increase in the live-weight of the young animal, or will be expended in the production of milk; still, even in the case of growing store-cattle or milking-cows, by far the larger proportion of the nitrogen and the phosphates of the food will be rejected in the solid and liquid excrements. It is well to bear in mind that the estimated manure-value of purchased foods has nothing to do with mere speculation, but rests upon well-ascertained facts, brought to light by numerous feeding experiments in this and other countries. The rate of valuation that may be adopted by different persons may vary; but the statements that the food of fattening-stock, in passing through the animal, losses little (if any) of its nitrogen by exhalation, and none of its mineral constituents, and that, practically speaking, the whole of the mineral matter and about nine-tenths of the nitrogen of the food are recovered in the dung and urine of the animal, are based on carefully ascertained facts. In this country, a long series of most carefully conducted and intelligently conceived feeding experiments have been made by Mr. Lawes, of Rothamsted. These experiments extended over several years, and they were carried out at great expense, with a variety of feeding-stuffs which were given to oxen, sheep, and pigs, care being taken to put up a sufficient number of fattening animals to eliminate the irregularities arising from the different feeding capabilities of individual animals. The food consumed was carefully analysed, the gain in the live-weight noted, and the loss in food by respiration ascertained; and the amount and quality of the manure produced by the consumption of various foods were determined by laborious weighings and analyses. In illustration of this part of my subject, I may be permitted to quote the following tabulated results (Table I.), which are copied from one of Mr. Lawes's important and highly interesting published papers relating to experiments upon fattening beasts, sheep, and pigs.

It will be noticed that the greater portion of the nitrogenous and mineral matters of the food is recovered in the manure, and that the greater part of the non-nitrogenous substances is lost by respiration and other exhalations, whilst a comparatively small proportion of the nitrogenous substance and of the mineral matter of food is retained in the increase. It will further be observed that for a given amount of increase produced, oxen void more as manure, and expend more in respiration, &c., than sheep; and sheep very much more than pigs. And lastly, that for a given weight of dry substance consumed, oxen void more as manure than sheep, and sheep much more than pigs; but oxen respire rather less than sheep, and sheep rather less than pigs. The proportions of certain constituents in a ton of various articles of food which are stored up in the animal, and the proportions which pass into the manure by the consumption of a ton of different kinds of food, have thus been ascertained with tolerable precision by actual experiments. If, therefore, the composition of the various kinds of food that are given to fattening-animals is known, we can determine beforehand, without actually analysing the manure produced from the consumption of a ton of each kind, how much nitrogen, potash, and phosphoric acid existing in the food will be recovered in the manure produced. And as nitrogen (or its equivalent expressed as ammonia), potash, and phosphoric acid (or its equivalent expressed as phosphate of lime) have a certain market-value as manuring constituents, we can likewise ascertain the money-value of the manure produced from the consumption of a ton of any of the ordinary stock foods, the average composition of which has been ascertained. By allowing 8d. per lb. for ammonia, 2d. per lb. for potash, and 1d. per lb. for phosphate of lime, rates which fairly represent the present market-value of these fertilising constituents, the

value of the manure obtained by the consumption of different articles of food may thus be estimated with sufficient accuracy to be of considerable service in a practical point of view. In illustration of the mode in which the manurial and money-value of the various feeding-stuffs mentioned in Mr. Lawes's tables has been estimated, I wish to direct

TABLE I.—SHOWING THE AMOUNT OF FOOD, INCREASE IN WEIGHT, MANURE, &c., OF FEEDING ANIMALS (CATTLE).

1. OXEN.									
	250 lbs. Oilecake 600 lbs. Clover Chaff 350 lbs. Swedes and supply				produce 100 lbs. increase,			100 Total Dry Substance of Food supply	Amount of each Constituent stored up for 100 of it consumed.
	In Food.	In 100 lbs. Increase.	In Manure.	In Respiration, &c.	In Increase.	In Manure.	In Respiration, &c.		
Nitrogenous substance .....	lbs. 218	lbs. 9.0	lbs. 323.0	lbs. 636	0.8	29.1	57.3	4.1	
Non-nitrogenous substance ..	808	58.0	81.4	...	5.2	7.4	...	7.2	
Mineral matter .....	83	1.6	...	...	0.2	...	...	1.9	
Total dry substance .....	1109	68.6	404.4	636	6.2	36.5	57.3	...	

2. SHEEP.									
	250 lbs. Oilecake 300 lbs. Clover Chaff 4,000 lbs. Swedes and supply				produce 100 lbs. increase,			100 Total Dry Substance of Food supply.	Amount of each Constituent stored up for 100 of it consumed.
	In Food.	In 100 lbs. Increase.	In Manure.	In Respiration, &c.	In Increase.	In Manure.	In Respiration, &c.		
Nitrogenous substance .....	lbs. 177	lbs. 7.5	lbs. 229	lbs. 545.5	0.8	25.1	60.1	4.2	
Non-nitrogenous substance ..	671	63.0	62	...	7.0	6.8	...	9.4	
Mineral matter .....	64	2.0	...	...	0.2	...	...	3.1	
Total dry matter .....	912	72.5	291	548.5	8.0	31.9	60.1	...	

3. PIGS.								
	500 lbs. Barley Meal produce 100 lbs. increase, and supply				100 Total Dry Substance of Food supply.			Amount of each Constituent stored up for 100 of it consumed.
	In Food.	In 100 lbs. Increase.	In Manure.	In Respiration, &c.	In Increase.	In Manure.	In Respiration, &c.	
Nitrogenous substance .....	lbs. 52	lbs. 7.0	lbs. 59.8	lbs. 276.2	1.7	14.3	65.7	13.5
Non-nitrogenous substance ..	347	66.0	10.2	...	15.7	2.4	...	18.5
Mineral matter .....	14	0.3	...	...	0.2	...	...	7.3
Total dry matter .....	420	73.8	70.0	276.2	17.6	16.7	65.7	...

attention to the subjoined tabular statement, which gives the average composition of good linseed-cake, decorticated and undecorticated cotton-cake, rape-cake, barley-meal and barley-straw.

TABLE II.—SHOWING THE AVERAGE COMPOSITION OF CERTAIN FOODS.

	Linseed-cake.	Decorticated Cotton-cake.	Undecorticated Cotton-cake.	Rape-cake.	Barley-meal.	Barley-straw.
Moisture .....	12.00	10.00	11.00	11.00	16.00	15.00
Oil .....	11.50	14.00	6.00	10.00	2.50	1.50
*Albuminous compounds .....	29.70	40.60	22.50	31.23	10.50	3.00
Mucilage, starch, and digestible fibre .....	27.80	20.90	33.50	23.75	61.80	34.00
Woody fibre .....	12.00	6.50	21.00	11.00	7.00	42.00
† Mineral matter (ash) .....	7.00	8.00	6.00	8.00	2.20	4.50
	100.0	100.0	100.00	100.00	100.00	100.00
*Containing nitrogen	4.75	6.50	3.60	5.00	1.65	.50
Equal to ammonia ...	5.75	7.90	4.37	6.07	2.00	.60
† Containing potash ... and phosphoric acid equal to phosphate of lime .....	1.65	3.12	2.00	1.76	.55	.63
	4.92	7.00	4.50	5.75	1.33	.37

Assuming the loss of nitrogen in the consumption of the cakes to amount to one-tenth of what they contain, and to 15 per cent. in the case of barley-meal and barley-straw, and making slight allowance for the loss in potash and phosphate of lime, Mr. Lawes has calculated the amount of ammonia, potash, and phosphate which will pass into the manure resulting from the consumption of the several kinds of food. Thus he has calculated to exist, in the manure from one ton of linseed-cake, decorticated cotton-cake, and barley-meal respectively :

	Linseed-cake.	Decorticated Cotton-cake.	Barley-meal.
Ammonia .....	116.3	159.1	38.1
Potash .....	36.4	69.2	12.1
Phosphate of Lime.....	104.7	149.0	28.7

At 8d. per lb. for ammonia, 2d. per lb. for potash, and 1d. per lb. for phosphate of lime, the preceding quantities of these constituents in the manure from a ton of these three kinds of food are worth

	In Linseed-cake.	In Decorticated Cotton-cake.	In Barley-meal.
	£ s. d.	£ s. d.	£ s. d.
Ammonia .....	3 17 6	5 6 1	1 5 6
Potash .....	0 6 3	0 11 6	0 2 0
Phosphate of Lime.....	0 8 9	0 12 5	0 2 6
Total money-value of the manure from 1 ton of food	4 12 0	6 10 0	1 10 0

In a similar manner the manure value of a ton of undecorticated cotton-cake has been estimated at £3 18s. 6d.; that of rape-cake, at £4 18s. 6d.; and that of barley-straw at 10s. 9d. per ton. The present price of linseed-cake in London is £12 10s. per ton; of decorticated cotton-cake £10 per ton; undecorticated cotton-cake £8; rape-cake £8 15s., and barley meal £9 5s. per ton. It will be seen that whilst the estimated value of the manure resulting from the consumption of a ton of rape-cake, selling at £8 15s. per ton, is £4 18s. 6d. the manure value of a ton of barley-meal, costing £9 5s. per ton, is only £1 10s. The price of linseed-cake is £12 10s. per ton, and its estimated manure value £4 12s. 6d.; whilst decorticated cotton-cake, which is sold at present in London at £10 per ton, has a manurial value of £6 10s. The market prices of these and other feeding-stuffs thus have little connection with their manure value. Deducting the value of the fertilising matters resulting from the consumption of the preceding articles of food from their respective market price, the feeding value of linseed-cake would be £12 10s. minus £4 12s. 6d., or £7 18s. 6d. per ton; that of decorticated cotton-cake £10 minus £6 10s., or £3 10s. a ton; whilst the feeding value of an undecorticated cotton-cake will be £8 minus £3 18s. 6d., or £4 2s. 6d. a ton; that of rape-cake, £8 15s. minus £4 18s. 6d., or £3 16s. 6d. a ton, and that of barley-meal, £9 5s. minus £1 10s., or £7 15s. Whatever value may attach to the preceding estimates of the feeding and manure-value of different cakes and of barley-meal, they afford convincing evidence of the importance of taking into account the manure-value of purchased foods in estimating their comparative total money-value. In my intercourse with agriculturists I have frequently met with intelligent and otherwise well informed persons who have openly confessed that they had not much faith in Mr. Lawes's estimates of the manurial value of purchased food. In their minds evidently lurked the idea that these estimates are in a great measure fanciful, and rest on no solid foundation. It cannot therefore be stated in too plain language that the recognised superior fertilising properties of the manure of fattening stock fed upon cake is mainly due to the high percentage of its nitrogenous constituents, and that by far the greater portion of the nitrogen of the food is recovered in the manure. Associated with nitrogenous substances we always find phosphates and potash; and food rich in nitrogenous substances will generally also produce manure richer in phosphates and potash than food which is comparatively poor in nitrogenous constituents. The fact that decorticated cotton-cake is very rich in nitrogen, and also contains a good deal of phosphate of lime, is undisputed; nor is anybody likely to deny that the superior fertilising properties of this description of cake depend mainly upon its richness in nitrogen. It is chiefly for the purpose of supplying available nitrogenous food that rape-cake is employed as a manure for cereal crops. On the light lands of Norfolk, in many parts of Kent, in some localities in Cambridgeshire, and in some other counties of England, rape-cake is a favourite manure with many farmers; and they willingly pay £6 per ton for manure rape-cake, which on an average contains not more than about  $\frac{1}{2}$  per cent. of nitrogen, or somewhat less than good green German feeding rape-cake. It is well known that rape-cake, and other residual cakes from the presses of oil crushers, decompose with facility in light and porous soils, furnishing thereby readily available food to plants, whilst on retentive clay-soils the decomposition of such cakes is too slow to meet the requirements of those crops which especially benefited by nitrogenous food. Applied direct to light land, rape-cake thus has a greater practical manure-value than on heavy land. Although it may pay a farmer to give £6 a ton for rape-cake on certain descriptions of soils, I cannot help thinking that not quite so much would be

given for it if rape-cake were not held generally in great esteem as a remedy against the wire-worm. As a direct manure, rape-cake is certainly dear at £6 a ton; and it would pay better a farmer who requires cake as a manure to buy slightly damaged or mouldy decorticated cotton-cake, which occasionally is offered in the market at £8 10s. to £7 per ton. Decorticated cotton-cake contains nearly one-half more nitrogen, and considerably more potash and phosphate of lime, than an equal weight of manuring rape-cake; if a farmer, therefore, finds it answer his purpose to pay £6 per ton for the latter, the fertilising ingredients in a ton of decorticated cotton-cake, in comparison with those in manure rape-cake selling at £3 per ton, will be worth to him one-half more, or £9 per ton; and, consequently, decorticated cotton-cake at £6 10s. or £7 a ton will be a much cheaper manure than rape-cake at £6 a ton. Manure rape-cake presents an example showing that the theoretical or estimated manure-value of the cake does not necessarily coincide with its practical value or its actual price on the market. In the case of rape-cake the estimated manure-value amounts only to about £4 10s. per ton, whereas £6 is actually paid for it by farmers who are in the habit of using it for manuring purposes. On the other hand, the practical money-values of the manure produced from the consumption of various foods, I am inclined to think, are much below the estimated values as given in Mr. Lawes's table. In attempting to get some better insight into the commercial manure-value of various foods, I believe considerable deductions will have to be made from their estimated money-value. My reasons for entertaining this view are the following: In the first place, the nitrogenous constituents of food which pass into the manure of fattening-stock occur in it only partially in the form of ammonia-salts, by far the greater part existing in a variety of organic combinations, yielding their nitrogen in the shape of ammonia less rapidly than the salts of ammonia, though some more rapidly than others; whereas the estimated manure-value of purchased foods is calculated on the supposition that the whole of their nitrogenous constituents which is recovered in the manure exists in it in the shape of ammonia. Now the practical fertilising effects of nitrogen in the form of ammonia, it is admitted on all hands, are more energetic, and manifested by a more rapid action on vegetation than the same amount of nitrogen applied to the land in the shape of nitrogenous organic matters. In other words, nitrogen in the shape of ammonia-salts has a greater money-value than nitrogen in combination with organic matter. A higher price, for instance, is paid for the nitrogen in sulphate of ammonia than for the nitrogen in blood or for the nitrogen in shoddy. Too high a value for practical purposes, therefore, is put upon the manure-constituents of purchased foods if the calculation is made on the supposition that the whole of the nitrogen recovered in the manure from their consumption exists as ready-formed ammonia, for which an allowance at the rate of 8d. per lb. is made. In the second place, I would notice that 8d. per lb. is the market price at which ammonia is sold at present in concentrated portable manures, but that its money-value is much less when offered for sale in bulky fertilisers, in which a comparatively small amount of ammonia, say 2 per cent., has to be taken with a large proportion of water and bulky materials of no great fertilising value. The manurial residue of 1 ton of linseed-cake given to feeding beasts with straw and roots would be distributed through several tons of farmyard-manure. After purchasing such voluminous manuring matters, expense must be incurred for carriage and for their distribution upon the land. All this is saved to the farmer who buys the ammonia he wishes to apply to his crops in the shape of concentrated portable manure, which admits of ready application to the land, and can be placed upon it where it is most wanted, that is, in more direct contact with a starting crop than is the case with farmyard or bulky compost manures, which have to be ploughed and mixed with a large portion of the soil. The practical advantages obtained by the use of concentrated or portable manures, in enabling the farmer to incorporate them with only a small portion of the soil in more direct contact with the starting crop, receive a practical acknowledgment in the higher comparative price which practical men find it answer their purpose to pay for ammonia in concentrated ammoniacal manures than they have to give for the same amount of ammonia in bulky manures. A reference to the composition of ordinary farmyard-manure, and the price at which it is usually sold, I trust will put this argument in a

clear light. According to analyses made by me many years ago, the composition of fresh and rotten farmyard-manure, being the mixed manure of horses, cows, and pigs, is the following:

COMPOSITION OF FARM-YARD MANURE (COMPOSED OF HORSE, COW, AND PIG-DUNG).

	Fresh Dung.	Rotten Dung.
Water .....	66.17	75.12
*Soluble organic matter.....	2.49	3.71
Soluble inorganic matter:		
Soluble silica .....	.237	.254
Phosphate of lime .....	.299	.382
Lime .....	.048	.117
Magnesia .....	.011	.047
Potash .....	.573	.443
Soda .....	.051	.023
Chloride of Sodium .....	.030	.037
Sulphuric acid .....	.055	.054
Carbonic acid and loss .....	.218	.103
†Insoluble organic matter.....	1.51	1.47
Insoluble inorganic matter:	25.76	12.82
Soluble silica .....	.967	1.424
Insoluble siliceous matter .....	.561	1.010
Oxide of iron and alumina, with phosphate .....	.598	.947
Containing phosphoric acid .....	(.177)	(.274)
Equal to phosphate of lime .....	(.386)	(.573)
Lime .....	1.120	1.667
Magnesia .....	.113	.091
Potash .....	.009	.015
Soda .....	.019	.033
Sulphuric acid .....	.061	.063
Carbonic acid and loss .....	.184	1.295
	4.05	6.58
	100.03	100.00
*Containing nitrogen .....	.149	.297
Equal to ammonia .....	.181	.363
†Containing nitrogen .....	.434	.309
Equal to ammonia .....	.599	.375
Total nitrogen .....	.643	.606
Equal to ammonia .....	.780	.735
The manure contains ammonia in a free state .....	.034	.016
The manure contains ammonia in form of salts .....	.033	.057

It will be observed that both fresh and rotten farmyard manure contain but very small proportions of either free or combined ammonia. Nearly the whole of the nitrogen in the dung exists as nitrogenous organic matter. In fresh dung the greater portion of the nitrogenous substances are insoluble in water, and in the rotten dung about one-half of the nitrogenous matters are soluble, and the other half insoluble in water. As the manure analysed was produced by well-fed animals, liberally supplied with cake and corn, in addition to hay and c<sup>o</sup>ff, we may presume that manure obtained by the consumption of all kinds of purchased food, in addition to ordinary farm produce would be of a similar character, and approach in composition the fresh and rotten dung analysed by me, and consequently would contain very little ammonia, either in a free state or in the form of ammonia and salts. Now, if we express the whole of the nitrogen in dung in its equivalent of ammonia, and allow 81. per lb. for ammonia, and estimate the potash in the manure at the rate of 2d. per lb., soluble phosphate of lime at 2d., and insoluble phosphate of lime at 1d. per lb.—which certainly are moderate rates for these constituents when they occur in concentrated artificial manures—and at these rates calculate the money-value of a ton of fresh and rotten dung, we obtain the following results. According to the preceding analysis a ton of rotten farmyard manure contains:

8½ lb. of soluble phosphate of lime, worth, at 2d. per lb.	s. d.
13 „ insoluble phosphate of lime, „ 1d. „	1 1
11 „ potash, „ 2d. „	1 10
Nitrogen equal to 16½ lb. of ammonia, calculating ammonia at 8d. per lb. ....	11 0

Total estimated money value of a ton of rotten dung... 15 4

In a ton of fresh farmyard manure we have:

6½ lb. of soluble phosphate of lime, worth, at 2d. per lb.	s. d.
8½ „ insoluble phosphate of lime, „ 1d. „	0 8
13 „ potash, „ 2d. „	2 2
Nitrogen equal to 17½ lb. of ammonia, calculating ammonia at 8d. per lb. ....	11 8

Total calculated money value of a ton of fresh dung... 15 7½  
It thus appears that if we estimate the money value of good farmyard manure according to the same rates at which the principal fertilising constituents in the dung can be bought in concentrated artificial manure, 1 ton of farmyard manure would be worth in round numbers 15s. However, good dung can be bought in many places at 5s. per ton, or one-third its estimated money value; and probably the highest price which a farmer would be inclined to pay for good dung would not exceed 7s. 6d. per ton, or one-half its estimated money value. The difference between the estimated money value of farmyard manure (calculated at the market rate of the constituents when sold as concentrated artificial manures), and the actual market price, may be fairly taken to represent the difference in practical value caused by the greater expense of the carriage and application of farmyard manure, and the less vigorous action of organic nitrogenous compounds as compared with ammonia salts. It is evident, therefore, that the manuring-constituents of purchased food, which are recovered in the manure from farm-stock in this bulky and less available form, possess a much lower practical or market value than the estimated manure-value which different stock-foods are assumed to possess in Mr. Lawes's table. Mr. Lawes's estimate of the manure-value of different kinds of feeding stuffs, however, are based on carefully ascertained facts, and, so far, have a permanent value, affording important and useful data for comparative valuations. But in their application in practice, it appears to me that we shall be nearer the mark if we deduct from 30 to 40 per cent. from the estimated money-value which is given in the table to the manure constituents of a ton of the several articles of food, in order to arrive at the additional practical value in the land which is given to several (or a good many, say, 15 to 20) tons of farm yard manure by the consumption of a ton of those several articles of food. Mr. Lawes is fully alive to the fact that it is not possible to recover in practice the full estimated manure-value of purchased food, for in his valuable paper on the "Valuation of Exhausted Manures," in Part I., Vol. XI. of the *Journal*, he says, at page 12, "If purchased food be consumed with a root-crop by the outgoing tenant, and he take no crop grown by the manure produced, he should be allowed compensation at the rate of 17s. for every 20s. of the original manure-value of the food if it have been consumed on the land, or 16s. if consumed in the yards." Mr. Lawes thus makes a deduction of 20 per cent. from the calculated manure-value of purchased food; whilst I am inclined to allow the larger deduction of from 30 to 40 per cent., if the food be made into bulky farmyard-manure, the market-value of which, we have seen, is scarcely one-half that of its calculated money-value. On the other, if the food be consumed by sheep, with a root-crop, practically no loss in manuring elements is sustained when the urine and solid excrements of sheep are spread at once on the land, without being first put up into a dung-heap, like the excrements of cattle kept in yards or feeding-stalls; no additional expense is incurred in carting, distributing, and ploughing-in the manure, and in that case Mr. Lawes's estimated manure-value of linseed and similar concentrated nitrogenous articles of food, with a deduction of 20 per cent., I believe, gives a fair and correct estimate of the practical manure value of oilcakes, and similarly constituted food. The composition of feeding materials certainly affects their nutritive and manurial properties; at the same time the mere proximate analysis of an article of food does not give a sufficient insight into its real economical value. There is nothing, for instance, on the face of comparative analysis of linseed and rape-cake which affords any indication of the great difference in the money-value of the two kinds of cake. Rape-cake contains nearly as much oil as linseed-cake, and rather more albuminous substances, and not a much larger proportion of indigestible fibre; and there is nothing in the analytical results representing the composition of the two cakes contrary to the supposition that the one is as valuable a feeding cake as the other; and yet the market price of linseed-cake is £11 10s.



and that of feeding rape-cake about £3 10s. to £3 15s. per ton. For certain purposes it is true that rape-cake is quite as useful as linseed-cake. For instance, for young growing stock, or as an auxiliary food for milch-cows, rape-cake goes as far as an equal weight of linseed-cake; but general preference is given to the much more expensive linseed-cake as a food for fattening-stock. This preference cannot reasonably be ascribed to blind prejudices; for surely fatteners of stock would prefer to buy cake at £3 10s. per ton, if it answered their purpose as well as cake which is sold at £12 10s. per ton? The reasons which decide men to use linseed-cake in preference to rape-cake, in order to fatten off oxen or sheep for the butcher, lie close at hand, if we look practically into this matter. The art of getting an animal ready for the butcher in the shortest possible time may be said to consist in passing through it the largest possible amount of well selected, properly prepared, and readily digestible food. These conditions are given in a mixed food, of which linseed-cake forms no considerable item. Fattening-oxen or sheep are fond of this cake, do well upon it, and consume large quantities. On the other hand, accustomed to palatable, readily digestible food, fattening-beasts dislike the bitter, and somewhat acrid, taste of rape-cake, and in consequence do not eat more of it than they can help; and altogether do not get on so well upon rape-cake as upon linseed-cake. Bearing in mind that fully one-half of the weight of the food supplied to animals is wasted by respiration and other exhalations, and that the longer an animal is kept in the feeding-stall the larger the waste in food, it is clearly a good policy to give to fattening-stock a food which agrees with their appetite and digestive powers. Notwithstanding its higher price, linseed-cake in the end is a more economical food than rape-cake, if it be used in the latter stages of the fattening process, as a means of bringing on the animal rapidly for the butcher. Similar purely practical considerations frequently decide the choice of feeding matters, and in a large measure influence their market-value. Another example illustrating the truth of the preceding remarks is presented to us in cotton-cake. On comparing the composition of decorticated with that of undecorticated cotton-cake, it will be noticed that the former contains on an average 24 per cent. of oil, 49½ per cent. of albuminous substances, and only 6½ per cent. of indigestible woody fibre, whilst undecorticated cotton-cake contains only 6 per cent. of oil, 22½ per cent. of albuminous matters, and as much as 21 per cent. of indigestible fibre. There is thus a great difference in the apparent feeding properties of the two kinds of cake. Moreover, the estimated money-value of the manuring matters produced by the consumption of a ton of decorticated cotton-cake amounts to £6 10s., whilst the estimated manure-value of the undecorticated cake is only £3 18s. 6d. per ton; the difference in manuring-value alone of the two cakes thus amounts to £2 12s. 6d. We might therefore expect that the decorticated cotton-cake would be sold at a much higher price than undecorticated; but the actual market-price of the former is £10 per ton, and of the latter £8 per ton. The difference in the manure-value alone of the two kinds of cake thus is greater than the difference in the price at which the two are sold at present, while the much higher feeding value of decorticated cake is not represented in the market price. The explanation of this apparent anomaly is in part found in the circumstance that decorticated cotton-cake is too rich in albuminous substances to suit the constitution of herbivorous animals, and in consequence is too indigestible to be given to stock in the same way in which linseed-cake is usually administered. Most agriculturists have as yet to learn how to make the most of this species of cake, which is produced only to a limited extent, and not so largely employed for feeding purposes as undecorticated cotton cake. Want of experience in the economical use of decorticated cotton cake no doubt accounts, at least partially, for the fact that it is sold at present below its real value. The hard husks of cotton seed have no intrinsic feeding value, but when reduced to a coarse powder, in the act of crushing the seed for oil, they act as a useful diluent of the extremely rich and too indigestible kernels; and hence the practical feeding value of cake made from whole seed has been found greater than might be supposed, in comparison with the theoretical value of decorticated cotton cake. Moreover, the hard woody shells of cotton-seed possess an economical value, in virtue of the astringent principle they contain which renders whole seed or English cotton cake very useful to cattle out on pastures at periods of the year when they are apt

to become affected by scour, as well as to stock fed upon an abundance of succulent food, which has a tendency to keep the bowels in too loose a state. In such cases English cotton cake acts medicinally as a corrective, and this useful property gives a certain value to the undecorticated cake, which that made from the shelled seed does not possess. Other examples might be readily quoted in support of the fact that the practical or market value of feeding stuffs is dependent in a large measure upon the use which the farmer has found by experience to make of them; but sufficient evidence, I trust, has been given in this paper showing that the real market value of purchased food is affected by purely practical considerations, and that the proximate composition of articles of food, although giving useful hints to the intelligent stock feeder, does not afford a full insight into their relative merits, nor supply data for estimating with precision their market or money value.

## TANNERY REFUSE AS MANURE.

[TRANSLATED FROM THE "JOURNAL D'AGRICULTURE PRACTIQUE. ]

The industry of tanning is widely diffused in the west of France, more particularly in Brittany, from Nantes and Rennes at the one extremity to the Département of Finistère at the other. It is in the latter district that tanneries are most numerous. The processes of this industry yield a certain quantity of residues which are susceptible of a more free utilisation in agriculture than has hitherto been attempted. These residues admit of a natural division into animal waste and vegetable waste. Agriculture can only profitably employ as manure those residues which cannot be used for any other purpose, as competition would render the prices too high for farmers. The animal residues are much the richer as fertilisers. Their source may be thus described: In the tanneries, the fresh skins are first submitted to the prolonged action of milk of lime. They then undergo two operations, which provide the manure under consideration. The hair from the outer side of the skin is first removed, and remains, of course, largely mixed with lime. The second operation is, the removal of the flesh adherent to the inner surface of the hide, and also the thin cuticle. These waste matters are mingled, and placed in heaps till sold. They contain on an average—water 75½ per cent., and dry matter 24½ per cent. The dry matter is composed of 84½ per cent. of organic, and 15½ per cent. of mineral matter. In 100 parts of the latter there are 3½ silica, 17½ phosphate of lime, and 69 lime, besides 10 of various salts; while the mean amount of nitrogen is nearly 7 per cent. For the most part the heaps stand for two or three months, in which case they lose one-fifth of their volume of water and three-tenths of their nitrogen. This loss is due to the rapid decomposition of the animal matter under the action of the lime. The manure is afterwards priced at 3 francs to 5 francs per cubic metre. It is very beneficial to fruit-trees, and on the farm is available on all non-calcareous land, but is most useful on light soils, where its decomposition is more speedy. It has been tried at the School of Irrigation at Lézardeau, with excellent results, for the nitrogen enriches the soil, while the lime is beneficial to vegetables. Hay has been more abundant, and of superior quality. It must be considerably decomposed before it is spread, as otherwise the hair might remain on the land, to be raked up with the ensuing crop, when it would prove injurious to stock. Perhaps the best mode is to mix it with farmyard manure.

The vegetable residues are the result of the process proper of tanning, which takes place subsequent to the preliminary treatment above described. This process is achieved by means of the employment of oak-bark, reduced to a fine powder, layers of which are placed between the hides in the pits, after which water is admitted.



Tannin is the active principle in the operation, possessing, as it does, the property of forming, in conjunction with the animal matter, combinations favourable to the preservation of the latter. Great quantities of bark are thus used, and when exhausted, are, naturally, of no further value for the industry of tanning. The fibrous and spongy appearance of the refuse suggests the idea that it is capable of absorbing much liquid; hence the advantage of using it in the form of litter for farm stock in districts where that commodity is scarce and dear. The exhausted tan contains an amount of water varying in accordance with the length of time which has elapsed during the process, its mass, and the season of the year. It further contains in 100 parts of its substance 94.9 parts of organic and 5.1 parts of mineral matters. The minerals subsist in the following proportions: Potash 0.3, soda 0.2, lime 3.7, magnesia 0.2, phosphoric acid 0.3, sulphuric acid 0.1, and silica 0.1—5.1. The properties of this refuse are such that it will, when mixed with wheat or oat straw, absorb more than double its own weight of water. It is of insignificant weight, of easy transport, and obtainable at a low price. It is requisite that it should be mixed in this manner, because of its acidity, which, however, may be combated by mingling with it lime, phosphates, or ashes; while another effect of this would be to hasten its decomposition. Above all, if it be mixed with the animal refuse obtained from the preparatory processes of preparing the hides, it forms a most excellent manure. It may be mentioned, in conclusion, that tan has already been applied in horticulture, with most happy results, as it is found that it checks evaporation, and the consequent desiccation of the soil, whether it be applied in its normal state or in a prepared form.

## AGRICULTURAL REPORT. SOUTH LINCOLNSHIRE.

[ORIGINAL.]

It is extremely perplexing, for I know not how to give anything like a correct report of this district at the present juncture. The weather has been so variable and inclement as to stop all farm operations connected with arable culture. On Thursday last, the 15th instant, the fall of snow was so heavy and continuous as to cover the whole country for several inches in thickness, and the rapid thaw on the following day caused the inundation of almost all lands, which the heavy and frequent showers which have supervened since keep sorely saturated. What is to be the consequence it is painful to contemplate. At present all field-work is thereabouts suspended, and to finish the spring sowings and potato plantings under such conditions is all but impossible, and much remains to be done. The wheat plant is suffering much from a prolonged saturation, and the potatoes already in are in danger of rotting. A field of spring-sown corn is scarcely to be seen up anywhere, and when the fallows will be in a fair state for working no one can tell, as the rain continues to fall daily. Verily, it is one of the most perplexing and disastrous seasons ever known. The grazing lands are showing evident symptoms of danger—every flat or hollow is under water, and should the forthcoming season continue warm and showery, much loss from sheep-rotting may be expected. Graziers will do well to look immediately to this. The great preventive is getting rid of the water; but if this is too difficult, by all means supply the sheep with rations of dry food—*i. e.*, cake, corn-meal, &c. Change of pasture in certain holdings may do much. *Sheep-rot is the great danger this spring!* Graziers, be forewarned: don't delay your remedies!—April 20.

**BURGH FAIR.**—This was one of the smallest ever remembered for the April fair. The show of stock was remarkably small, and buyers were scarcely to be found. The day was one of the most unfavourable we have known in the most unfavourable spring. Trade was almost a nullity.

## "COW HOUSES."

TO THE EDITOR OF THE TIMES.

SIR,—The epidemic at Easley caused by the impurity of the milk supplied from a neighbouring farm is of such importance that I have ventured a few remarks on the treatment of cows from a sanitary point of view. I have lately visited several large dairy farms in some of the Northern counties and in Lancashire and Cheshire. In most cases I found the farm buildings and premises in which cattle are stored and fed in a deplorable condition. The cowhouses occupied by the milk cows are about seven feet high, the room above is used for storing hay and corn; the width behind the cows from three to five feet. The heads of the cows are placed against a wall in which is a small opening for food to be served; the breath of the cow rebounding upon herself. The drinking ponds for the cattle are generally so placed that the refuse water from the yard and buildings runs into them, and in some instances I found soakage from the manure heap mixed with the water, and in every case the water was stagnant and filthy. The manure heap is generally placed in the middle of the yard, the effluvia arising therefrom making its way into the cowhouses, so that the cattle live in a foul, acrid, and most unwholesome atmosphere proceeding from the decay of their own excreta. It is a truism that milk and butter are affected by the nature of the food and water given to the cow; and the cow herself is affected by noxious vapours, and often casts her calf from the impurity of the place in which she lives. I have a small home farm in my own possession of about 200 acres, and have generally a herd of 50, half of which are milk cows, the other half young heifers of my own breeding. I do not allow more than 14 cows in one place; in front of the cows there is a flagged passage four feet wide, ventilated at each end to prevent the rebound of their breath; behind the cows an open space of seven feet, with channel stones, and a top of water at the head of the place for flushing the drains. The cowhouses are open to the roof, with three slate ventilators in each place. There is a drain from every building, which carries off all liquid into a tank in a field below the farm premises. The manure heap is away from all the buildings, and enclosed with a stone wall. The water is brought in pipes into large stone troughs fixed in the yard, out of which the cattle drink. These are kept pure and clean. I have a hospital on the premises for sick cows. I am glad to say I have little occasion for it. In towns where the Public Health Act is enforced the Local Authority will not permit houses of any description to be erected unless the plans are first submitted and approved by them. The width and height of each room and the sanitary and ventilation requirements are strictly adhered to. Is it not equally necessary to protect the sanitary condition of animals who contribute produce so essentially necessary to the well-being of the rising population? Spacious, well-drained, and ventilated cowhouses improve the health and condition of the cattle, and to a great extent prevent those diseases among them which afflict the country and cause the high price of meat. If the Government would bring in a short bill empowering local authorities in every parish and district to enforce sanitary measures in farm buildings, by a thorough inspection of the premises, and restrictions as to the character of the buildings, we should hear less of epidemics among cattle, their condition and health would be improved and restored, the production would be increased in quantity and quality, and, instead of the cow being disposed of for slaughter after having produced four or five calves, she would continue useful and productive until 14 or 15 years old, thereby increasing stock in the country and reducing the price of animal food.

HENRY GARTSIDE.

Wharfedale Tower, Saddleworth, April 18th.

TO THE EDITOR OF THE TIMES.

SIR,—As a dairy farmer with 20 years' experience, I endorse all that Mr. Gartside, your correspondent in *The Times* of to-day, says. Could what he suggests be carried out, both "the cows" and "the public" would be great gainers; but legislation must go a long way further before such epidemics as we have lately had at Easley and elsewhere, caused by polluted milk, can be prevented. These epidemics have not arisen from unhealthy cows, or because the cows have been ill kept, but from the treatment the milk has received and the

influences to which it has been exposed after being taken from the cow. Milk may be polluted either by being put into vessels that have been washed with polluted water, by having polluted water added to it, or by being exposed to the influence of polluted atmosphere. The extraordinary power of absorption from the surrounding atmosphere possessed by milk is well known to medical and scientific men. No article of food is so easily tainted. Now, in London and other large towns, how is milk treated? In nine cases out of ten the sipping of milk is a sort of refuge for the destitute, or, at all events, the trade is in the hands of "little people," who, if they do not try to earn a scanty living from selling a few gallons of milk daily, combine the sale of milk with their other wares, as recently described by the medical officer for Marylebone in his report. If it is necessary to license public-houses and slaughter-houses, it appears to me ten times more necessary to require that all places in which milk is stored or sold should be subject to inspection, and that the trade be not carried on in any unfit place. It is well known that most of the milk vendors obtain their supply from contractors or middlemen, who import from the farmers. The vendor purchases on the arrival of the midnight trains the milk he is going to supply to his customers the next morning; and what in many cases does he do with it for the five or six hours it is in his possession? He carries it home, and it is either kept in his shop, or, perhaps, what would otherwise be the kitchen has been turned into a sort of dairy. In either case, the house being closed, and shop or cellar communicating directly with the dwelling rooms in which he and his family live and sleep, the milk is exposed to all the tainting influences proceeding from the position. In a word, milk stores ought not to communicate with dwelling-houses. With regard to selling milk from unhealthy cows, say cows suffering from foot-and-mouth disease, I would imprison, without the option of a fine, any person who should draw the milk from any animal so affected into any vessel. Let the cow be milked on to the ground. Apologizing for troubling you with so long a letter, I am, Sir, your obediently,

AN OLD DAIRY FARMER.

*The Farmers' Club, Adelphi-terrace, W.C., April 20.*

## SALE OF SHORTHORNS,

THE PROPERTY OF

LORD FITZHARDINGE, LORD MORETON, MR. J. W. LARKING, AND MR. H. D. DE VITRE,

AT BERKELEY CASTLE, GLOUCESTERSHIRE, ON WEDNESDAY, APRIL 19TH, 1876.

BY MR. THORNTON.

The widespread interest attaching to the sale may be gathered from the fact that not only were the most eminent breeders of Great Britain either present or represented, but foreign nations had also their representatives, and some of the best lots will be taken abroad. America was represented by Mr. Croome, and Canada by Mr. F. W. Stone, names well known in the agricultural world. There were about 2,000 people present, including Lord Beville, Colonel Kingscote, M.P., Colonel Blithway, Lord Moreton, Duke of Manchester, Lord Fitzhardinge, Earl of Ducie, Lord Calthorpe, Colonel Gunter, Sir William Miles, Captain Henry, Major Turberville, Captain Williams, General Hale, Captain Young, Rev. W. H. Bever, Messrs. J. W. Larkin, E. Bromley, H. Banfort, Stone, Broom, C. Williams, T. Mace, G. Garne, Lovett, T. Morris, W. Woodward, H. D. de Vitre, Thompson, Norris, F. Burnett, Bland, Sheldon, J. Roit, R. P. Davies, O. Long, E. Bowly, Savage, Chapman, Jefferson, Brassey, Richardson, A. C. Wheeler, H. W. Bruton, J. M. Batt, J. Richards, Ashburner, Dunning, Sheepway, R. Jakeman, Hulbert, Pedler, Yolland, Langham, Bizard, Matthews, Jobbins, Earnshaw, Parker, Bennett, Whiteside, Hatill Foll, B. St. John Ackers, Captain Sumner, D. McIntosh, R. S. Holford (Market Harborough), F. Harvey, H. Jenner, Homfray, H. Mousell, H. Theyer, W. Batt, T. Tanton, D. Vick, T. Lawrence, W. Surman, J. Chandler, D. Phelps, H. Awre, D. L. Willey, P. Ricketts, D. Phillimore, G. Robinson, J. Watts (Norton Court), Daniel Long, T. Nicholas, J. Cummins, J. Cadle (Vestbury), and many others. The weather was very unfavourable during the auction, heavy showers of rain falling at intervals.

The catalogue comprised a large number of very choice animals of the fashionable Bates, Knightley, and Towneley strains. About equal numbers were contributed from the Berkeley herd, from Lord Moreton's, at Tortworth Court, and from Mr. Larking's, at Asludown House. Among those from Berkeley were some excellent specimens of the Wild Eyes and Blanche tribes, originally from Kirklevington; the Musicals, from Siddington; and the Ursulas, from Didmarton. The Knightley strain comprised some very good animals of the Primrose, Rosy, and Walnut tribes; the Sweethearts, from Edenbridge; the Vestrises, originally from Towneley, but bred for several years at Preston Hall; and the Florentias, from Didmarton; whilst among those from Tortworth were several descendants of Earl Spencer's Nelly, and Mr. Wilkinson's Lydia tribe, from Lenton. There were also some very choice animals of the Towneley blood from Mr. de Vitre's herd at Charlton House, Wautage, including three of the Blanche tribe, one of the Acomb family, and one of the late Mr. Eastwood's favourite Rosette tribe. Included in the remainder were a few capital specimens of the Knightley blood from Brailes, as well as some of the Honey tribe, so favourably known at Kingscote. The bulls at this sale were about the largest and best bred lots that have been offered together for some time. They were headed by Grand Duke of Geneva (28756), of the unrivalled Duchess tribe, and were nearly all by the most fashionable sires—viz., the Earl of Dumore's Sixth Duke of Geneva (30959), the Earl of Beville's Duke of Underley (33745), and Second Duke of Trezunter (26622), Colonel Kingscote's Duke of Hillhurst (23401), Mr. Bowly's Third Duke of Clarence (23727), Mr. Coleman's Third Duke of Gloucester (33653), Seventh Duke of York (17754), and Second Duke of Colingham (23730), all of the Duchess tribe, while others were by Mr. Olver's Grand Dukes, the Duke of Devonshire's Oxford sires, as well as other first-class bulls. Many of the cows and heifers were in calf to the Duke of Connaught (33604), purchased by Lord Fitzhardinge at the Dumore sale for 4,500 guineas, who was exhibited during the sale, and to Third Duke of Hillhurst (30975), purchased by Mr. Larking at the same sale for 3,000 gs.

Mr. Thornton, in opening the business, said they had met again in that place to disperse the produce of that grand herd of Shorthorns that his Lordship had collected at Berkeley. The top figure was that obtained for Lord Fitzhardinge's Lady Wild Eyes, which fetched 555 guineas. It was expected, however, that this magnificent animal would have fetched a good deal more money; and it was stated on very good authority that only a few days ago his Lordship refused 800 guineas for her.

### SUMMARY.

	£	s.	d.	£	s.	d.
51 cows averaged .....	8	13	2	4,317	12	0
32 bulls " .....	60	3	0	1,924	13	0
83 head " .....	75	4	2	£6,242	5	0

Quite a gloom was cast over Berkeley on Wednesday by the sudden death of Mr. Woodward, an elderly gentleman, said to reside in the neighbourhood of Tewkesbury. Mr. Woodward had been at the sale, and had purchased two or three lots. He was returning to Berkeley, and when nearly opposite the Castle he fell down on the pavement, and was picked up a corpse.

### SALE OF SHORTHORNS AT THE NOOK.—

The entire herd of pedigreed Shorthorns and sheep, the property of Mr. G. J. Bell, of the Nook, Irthington, was brought to the hammer; and the circumstances attracted not only the principal agriculturists of the district, but many others from a distance. The 25 cows, heifers, and calves realised £502 4s., an average of £28 13s.; 11 bulls brought £273, an average of £24 16s. 6d. The ewes made as far as seven guineas. Cows and heifers: Lucy, Mr. Dagger, Kendal, 33gs. Miller's Daughter, Mr. Forster, Westward Parks, 24gs. Triplet, Mr. Askew, Kirkby Stephen, 27gs. Belle of Irthington, Mr. Milburn, Wragmire House, 25gs. Elvira 13th, Mr. Fotherill, Udale Hall 36gs. Rosy, Mr. Wauhop, Broadwash, 31gs. Princess Louise, Mr. A. Graham, Yanwath, 36gs. Hazeltop, Mr. Parkin, Bleathwaite Hall, 30gs. Lucy 3rd, Mr. Mitchell, Howgill Castle, 25gs. Early

Early Bird 5th, Mr. Nelson, Caddle, Preston, 29gs. Royal Butterfly Princess, Mr. Dalton, Cammersdale, 51gs. Village Belle, Mr. Hogarth, Julian Bower, 32gs. White Legs, Mr. Richardson, Newton, 27gs. Jessie Eglinton, Mr. Dixon, Irton, 28gs. Pearl Necklace, Mr. Parkin, Blaitwaite House, 22gs. Trip the Daisy, Mr. Richardson, 37gs. Silver Heels, Mr. Hutchinson, Brougham Castle, 27gs. Kate Kearney, Mr. Hutchinson, 21gs. Lucy Bertram, Mr. Patterson, Terrona, 23gs. Raby Bird, Mr. Mitchell, 18gs. Elsie Raby, Mr. Holliday, The Tarns, 30gs. Lady Elvira, Mr. Mitchell, 27gs. Patience, Mr. Nelson, 21gs. Maid of Lorne, Mr. Graham, 23gs. Diamond Necklace, Mr. Milburn, 26gs. Magenta, Mr. Graham, Faugh, 27gs. Lucy Neil, Mr. Graham, 14gs. Jessie Thorndale, Mr. Smith, Cotehill, 9gs. Bulls.—Duke of Thorndale, Mr. Hutchinson, Brougham Castle, 53gs. Tom King, Mr. Milburn, 29gs. King Tom, Mr. Milburn, 25gs. Harry Bertram, Mr. Laidman, Brampton, 21gs. Major Webb, Mr. Elliott, Clift, 26gs. Captain Boyton, Mr. Story, Beaton, 49gs. High Idea, Mr. Hogarth, 10gs. Julien Adams, Mr. Hogarth, 9gs. Butterfly Duke, Mr. Laidman, 16gs. British Yeoman, Mr. Armstrong, Lanercost, 123gs. Sim Reeves, Mr. Graham, 121gs.

SALE OF SHORTHORNS AT PRESTON HOWS.—On Wednesday, at Preston Hows, near Whitehaven, Mr. Thornton sold some young animals belonging to Mr. Robert Jefferson's high-class stock of Shorthorns, and at the same time a few belonging Mr. Fox, of St. Lees Abbey. There was a large attendance of breeders from all parts. It was a poor sale, not a few fine animals realising little above butchers' prices. The thirty cows and heifers brought 1,174 gs.; and fifteen bulls brought 605 gs. The two highest prices in the former class were 110 gs., given by Mr. Phillips, of Hybridge, for a four-year-old roan by England's Hero; and 71 gs., given by Mr. Scott, of Aberdeen, for a five-year-old cow by Lord Plymouth. The rest averaged between 30 and 40 gs. Mr. Twentymain gave 28 gs. for Belle of the Cottage, seven years old; Mr. Todd gave 25 gs. for Cestus, calved 1872; Mr. Wilson gave 30 gs. for Golden Link, calved in 1872; Mr. Watson gave 36 gs. for a two-year-old bull; Mr. Wood got a bull, calved in December, 1874, for 34 gs.; Mr. Foster bought two excellent cows at 43 and 30 gs.

## THE CIRENCESTER CHAMBER OF AGRICULTURE.

### EXPERIMENTAL DEPARTMENT.

Professor Wrightson has sent us the following letter and circular for publication:

Sir,—The accompanying synopsis of results will show you that we have arrived at certain conclusions regarding the general effects of artificial manures upon the swede crop in this neighbourhood. Before leaving the subject of swede culture, it has been proposed and approved by the committee to institute some trials upon the best method of applying artificial manures to this crop, and a series of experiments to illustrate this and other points is at present under consideration, and particulars will shortly be forwarded to those gentlemen who are wishful to co-operate with the committee in trying them. It is proposed to continue the experiments commenced last year upon Cobbett's 1,000-fold Acclimatized Indian Corn. Seed ripened upon the Cotswolds last season will be furnished to any gentlemen who would like to give it a further trial. The attention of members of the Chamber is also directed to the results obtained by drilling barley at double the ordinary width, and with half the usual quantity of seed. It would be satisfactory if members would undertake further experiments upon this point. Your attention is also directed to the 1,000-headed Kale, to be sown in April for October feed, and again in October for April feed. Public attention has been called to this forage plant by Mr. Robert Russell, of Horton Kirby Kent, before the Central Farmers' Club, and the experience of this well-known agriculturist is highly favourable to its more extended cultivation. You are requested to fill up and return the enclosed slip after determining upon one or other of the above experiments.

I am, Sir, yours obediently,

April 10th, 1876.

JOHN WRIGHTSON.

### SCHEME OF SWEDE EXPERIMENTS.

(Subject to modification).

- Two plots unmanured.
- Two plots superphosphate, drilled with seed, with water.
- Two plots superphosphate, half to be drilled and half incorporated with soil previous to drilling.
- Two plots superphosphate, drilled, and nitrate of soda, top-dressed subsequently.
- Two plots Strond sewage manure.
- Two plots phospho-guano.

### GENERAL STATEMENT OF RESULTS ARRIVED AT BY EXPERIMENTS CARRIED ON FOR SEVERAL SEASONS BY MEMBERS OF THE CIRENCESTER CHAMBER OF AGRICULTURE.

The following results obtained upon the swede crop commend themselves to the attention of members of the Cirencester Chamber, as having been obtained in their own neighbourhood; and as being in each case backed by the unanimous verdict of a large number of experiments carried out upon a uniform plan by agriculturists of position. Bearing in mind that in each case it is the swede crop which is specially referred to, we find:

- 1st. That poor land, and in poor condition, derives the greatest benefit from artificial dressings.
- 2nd. That land in high condition has been proved in many cases to derive little or no benefit from the use of artificial dressings.
- 3rd. That land in this neighbourhood appears to be easily satisfied with moderate dressings, and the use of heavier dressings is not attended with commensurate results.
- 4th. That 3 cwt. of ordinary mineral superphosphate per acre has given the best economic result during several years' experience, extending over hundreds of plots.
- 5th. That guano, nitrate of soda, organic matter, and even farmyard dung diminish the germinating power of swede seed, and cause a blankiness in the crop when they are brought into contact with the seed.
- 6th. That guano and nitrate of soda applied to the growing swedes increase the crop, but scarcely to an extent to warrant their general use.

7th. That the average increase in swede crops from the use of 3 cwts. of superphosphate amounts to 5 tons 6 cwt. per acre. That in some cases the increase has been *nil*, while in others it has been as much as 14 tons per acre.

In experimenting upon corn crops, we have found:

- 1st. That barley may be sown 16 inches apart, and with half the usual quantity of seed, without injuring the yield; although some doubt exists as to the quality of the grain.
- 2nd. That wide drilling and thin seeding is more applicable to barley than to wheat in this neighbourhood.

(Signed)

JOHN WRIGHTSON,

Secretary of the Experimental Sub-Committee.

April 10th, 1876.

## THE GOVERNMENT VALUATION BILL.

An adjourned meeting of the Bedale Chamber of Agriculture was held on Tuesday at the Black Swan Hotel, Bedale, the subject for discussion being the Government Valuation Bill. Captain Clarke, president of the Chamber, occupied the chair. The subject was to have been introduced by Mr. Teall, the hon. secretary, but, owing to family affliction, he was unable to be present, and it was introduced by Mr. Robinson, who quoted from the Act at some length, objecting principally to the clauses relating to the powers given to the surveyor of taxes—viz., the 7th, "for the purpose of correctly making the list, the overseers shall communicate with the surveyor of taxes, and wherever returns are hereinafter-mentioned, allow him to inspect them, and shall, as far as practicable, agree with him upon the hereditaments and gross value thereof to be inserted in the valuation list, and shall allow him to inspect the valuation list before it is signed by them; and the surveyor of taxes shall, to the best of his power, assist the overseers in making the valuation list correct." This the speaker objected to, as he considered it was introducing one of the worst features of the income-tax. He also objected to the clauses relating to the Assessment Committee to be appointed by the Court of Quarter Sessions. The 25th section of Clause 13—"The surveyor of taxes may object to a valuation list in

manner aforesaid, and moreover, any entry made by a surveyor of taxes in the duplicate of the last sent to him of any hereditaments appearing to him to be omitted, or of a gross value for an hereditament different from that inserted by the overseers, shall be deemed to be objections by him, and in either case he shall, within the time hereafter-mentioned in this Act, serve notice of such objection on the occupier of the hereditament," and Clause 32, respecting duration of valuation list. But what he objected to most was Clause 33, that "a declaration of a surveyor of taxes in any valuation signed by him, or any notice of objection or of appeal given by him, as to the amount in his judgment of the gross value of any hereditament referred to in such list or notice, shall be deemed conclusive evidence of such gross value (which shall be adopted in the valuation list accordingly), unless the contrary is proved to the satisfaction of the Assessment Committee at Special Sessions or Court of Quarter Sessions, after hearing the surveyor of taxes, or giving him an opportunity of being heard, and in case of the valuation list such declaration may be made with respect to all or any of the hereditaments in such list by a declaration at the end of such list." That left the onus of proof on the owner or occupier, and he argued it was a most objectionable clause. Let a surveyor of taxes, for any reason whatever, object to the valuation list, and disprove "his judgment of the gross value" would be difficult. Mr. Robinson concluded by expressing his regret that the Chamber had not had more time to examine this bill, which would be most injurious to the interests of the farmers.

The CHAIRMAN condemned the bill for several reasons. He agreed with Mr. Robinson's objections; but there were others nearly as bad. It was also a bill of pains and penalties. The Assessment Committee had power to require the production of books, documents, and returns, and a tendency from overseers, tax collectors, and also returns from owners and occupiers; and if these requirements were not to be complied with, penalties could be enforced ranging from £5 to £50. He also bitterly complained of the valuations of various kinds of property, but it was the fault of landowners and their agents that the system of valuation had not been altered years ago. Could anything more unfair be conceived than the allowances from the rateable value. Houses with a gross value under £20, one-fourth, or 25 per cent., was allowed. From houses under £40 value, one-fifth, or 20 per cent.; houses and pleasure-grounds, upwards of £40 value, one sixth, or 16 per cent.; land with buildings, not houses, one-tenth, or 10 per cent.; land without buildings, one-twentieth, or 5 per cent.; mills, manufactories, blast furnaces, kilns, &c., one-third, or 33½ per cent. off. That system was a gross imposition. Land was allowed only 5 per cent. off, whilst mills, manufactories, kilns, &c., making ten times as much money, were allowed 33½ off. He blamed the owners for that more than any one else.

Captain ORMER also condemned the bill, and argued that it was not required, and that counties should be allowed to manage their own affairs. They could do it better than persons at a distance.

Mr. J. SMITH said the bill was brought in for the purpose of equalising rating. It was well known to all that the rating was not fair in any sense. Farms in the same Union were unequally rated, and one Union was rated higher than another. Had Union Assessment Committees done their duties, this bill would not have been required. But some men were "cleverer" than others, and kept down the rateable value of their Unions, consequently the men who were honest had to pay for the cleverer ones.

Mr. ROBINSON proposed that, as the members had had such little time to consider the bill, the discussion be adjourned.

The proposition being seconded, was carried; and a vote of thanks to Mr. Robinson closed the proceedings.

A meeting of the Devonshire Chamber of Agriculture took place at Exeter to discuss the Government Valuation of Property Bill now before Parliament. Among those who took part in the proceedings were Earl Fortescue, Mr. W. E. Forster, M.P., Sir Thomas Acland, M.P., and Sir John Kennaway, M.P.—A paper on the bill was read by Captain Acland.—Earl Fortescue, in the course of his speech, said he felt satisfied that the advantages of the introduction of the surveyor of taxes into this matter in the way proposed in the bill outweighed the disadvantages. But though he approved of this leading principle of the bill, yet he certainly did think that the machinery of it was not well drawn. He disagreed

with the assessment committee, who were the most acceptable bodies in each union for deciding questions of value, being set aside in favour of a body of justices under the name of special sessions, in the way proposed. It would have been far better to have adopted the proposal of two former bills, and established county valuation boards, to which both owners and tenants would be elected. An appeal to sessions would be an appeal solely to magistrates, who were chiefly landowners, and this would not be satisfactory. He thought that in introducing this bill the Government had not availed themselves of the opportunity which presented itself for strengthening and invigorating county government and administration. Speaking of the bill generally, he considered its leading principle valuable, yet it would want a great deal of improvement in committee before it would be fit to occupy a place in the statute-book.—Sir J. Kennaway spoke against the proposal that the rent paid should be the sole basis of valuation, because very different circumstances might determine the rent paid to different owners. Mr. Forster elicited some information as to whether the appeal from the unions to the petty sessional divisions would not be an appeal from men in one capacity to the same men in another; but it appeared that in the local divisions no two were continuous. A resolution was passed recognising the bill as an attempt to establish a uniform and equitable assessment for local and Imperial taxation throughout the country, and recording approval of its main principles, although the Chamber was of opinion that much remained to be done to place on a satisfactory basis local management of county finance.—*The Standard*.

IMPORTANT ANNOUNCEMENT.—Speaking at a Conservative election meeting in North Norfolk, Mr. C. S. Read, M.P., said he had reason to believe that when his right hon. friend the President of the Local Government Board moved the second reading of the Government Valuation Bill he would state that he had no wish whatever to impose the Surveyor of Taxes upon Assessment Committee, or to invest the surveyor with any supernatural powers, but that he (Mr. Selater-Booth) thought it would be an assistance to Assessment Committees that he should furnish them with all the details of Schedule A, so that they might as a general rule take the rent, as he thought that in almost every case rent should be the actual basis of valuation. If Mr. Selater-Booth did this, he (Mr. Read) believed that the chief objections of the farmers to the Valuation Bill would be removed. He (Mr. Read) thought, however, that it would be much better if Mr. Selater-Booth withdrew the Bill altogether until he gave the farmers good County Boards, because he believed that we were going to have a Highway Bill, and that some large thoroughfares which had been turnpikes were to be made county roads, and he did not know how they were to be managed unless some kind of County Boards were established.

## AGRICULTURAL INTELLIGENCE.

BARNET.—At this fair there was a good supply of stock, and for which there was a brisk demand at the following prices: Shorthorn steers and heifers, warranted free from the foot-and-mouth complaint, and adapted for grazing purposes, £13 to £18 a head; Devons, good blood, £15 to £16; Welsh cattle, £9 to £13; and beasts in full condition, £19 to £24. Large framed well-bred cows, in full milk, £18 to £26; Alderney ditto, £14 to £20; cows down calving, £15 to £18; dairyng heifers, £10 to £16; yearling s ock, £6 to £8 per ditto. Sheep, store tegs, 46s. to 61s. a head; four-tooth wethers, 66s. to 70s.; and Scotch sheep, 2s. per ditto. Horses, nags, and roadsters, 18 to 28 guineas; saddle horses of superior stamp, 35 to 40 gs.; cobs and harness ponies, 10 to 25 gs.; horses suitable for vans, omnibuses, and town purposes, 25 to 40 gs.; harness horses of superior stamp 50 to 65 gs.; cart horses of good stamp, 30 to 40 gs., and inferior, 15 to 20 gs.; Welsh pony cobs, 7 to 12 gs.

CAISTOR PALMSUN FAIR.—The attendance of buyers was equal to the supply. Hogs came to hand in good condition, and prices, though not so high as on some previous occasions, were fairly remunerative, and steady progress was made in selling until almost a complete clearance was effected. The great bulk of the pens made between 60s. and 70s., but many useful making hogs did not

reach the former figure, and only a few choice lots exceeded the latter. The exhibitors for the cup offered by Messrs. Smith, Ellison, and Co., to the owner (being also the breeder) of the best pen of 50 wether hogs, were Mr. C. R. Fieldsend, Mr. R. Fieldsend, Mr. Joseph Burkenshaw (Grasby), and Mr. Wright (North Kelsey). The latter won the prize, and credit was due to him, as his exhibits were drawn out of 62 and the others out of perhaps 150 to 200. Mr. Edmund Davy, of Woolaby, Mr. Robert Walker, of Somerby, and Mr. Robert Johnson, of Seaway, acted as the judges. The prize hogs would fetch about 80s., and were a grand sample of North Lincoln excellence, both as regards fleece and mutton. The best fair was also a large one, the staple being, as usual, yard steers and drapes for grazing, most of which were fairly sold. The horse trade was on rather a small scale. Really good cart horses made from £40 to £50, while inferior sorts were difficult to dispose of, at even low rates—£15 to £20 being about the average price for this kind of animals. In nag and blood horses prices were unaltered.

**HOWDEN APRIL HORSE FAIR.**—At this annual fair the show of horses was not large the attendance of buyers was quite as numerous as we expected under the circumstances. The April fair is at all times of much smaller dimensions than the one held in September, and the occurrence of Good Friday, or what ought to have been the principal day of the fair, caused great uncertainty as to when it ought to be held. The horses shown were principally nags and riding and driving horses, with a small selection of team horses, and but few first-class animals of any kind. Mr. J. H. Fielder, of Bristol, one of the leading dealers in the West of England, has, with his local agent (Mr. Thomas Eland, of Howden), recently bought 28 harness horses of quality and action. Amongst the London dealers we noticed Mr. Bickman, Mr. Bramley, and Mr. East. The last-named gentleman buys largely for the English army. Mr. Robinson, of Hull, has a good selection of useful animals. Mr. Cuthill, of Edinburgh, Mr. Smith, of Hull, Mr. Stephenson, of Cottingham, Mr. M. Kirk, of Newport, and a number of other dealers were also present. We only observed two foreign buyers, and they did not appear to be purchasing very largely; in fact, the show of horses was so much below that of many former years that the business doing was necessarily on a limited scale. In heavy horses, suitable for vans, teams, huries, &c., the prices were very high, one being sold on Wednesday for £110. At the stock sales recently held in the district consequent upon changes of tenancy on farms the high prices of the better class of agricultural horses was the subject of universal comment. Many reached figures varying from £60 to over £100, these amounts being more than double their value a few years ago.

**LEICESTER PALM CATTLE FAIR.**—The Leicester Palm Cattle Fair was held at the New Cattle Market Ayleston-road. There was a good show of beasts for the season of the year, and they were generally in very good condition. Trade on the whole proved active, at firm prices. Milch cows were a good show, there being some very good use at Shorthorns. The demand, however, was principally for young milching cows, and the best sold speedily at £38 each, and secondary sorts at £25 each. Shorthorn bullocks sold at £16 13s. to £17 10s., and young heifers at £5 each. Several good lots of Herefords sold at £16 per head, and secondary lots at £12 to £13 10s. each. Irish bullocks were a good show, and sold well at from £5 10s. to £19. Irish barren cows changed hands less freely, at from £13 10s. to £17. Best Welsh ewes sold at £14, and runts at from £3 10s. to £12. Sheep were a good show, and met with a fair demand. Ewes and lambs sold at about 55s., and hogs at from 45s. to 50s. The attendance of buyers was large, and at the close of the fair scarcely anything was left unsold. Stock at fair: Beasts, 1,109, sheep 750, pigs 76, calves 16, horses 36.

**LYNN HOGGET FAIR.**—The show of hoggets at our fair was equal to an average, and numbered about 14,000 animals. The quality was equal to former years, and there appears to be every prospect of a good wool crop. Mr. Charles Young, of Partney, exhibited for several eminent graziers in the district, and received a large share of patronage, most of the lots entrusted to his care receiving buyers. Although of a good description, the hoggets did not surpass in value those shown a week or two previous, when 73s. 6d. per head was freely given, whereas to-day 70s. was the top price given, and 48s. the lowest. The rains of Mon-

day and Tuesday, together with the present excellent condition of the grass lands, caused graziers to buy freely, and at the close of the market very few pens remained on offer. Fat Sheep were a good show; trade was brisk and firm, prices remaining at from 10s. to 10s. 6d. per stone. A few store Cattle were on offer in the market, making from £10 to £20 per head. Fat Beef was plentiful; trade lively, at from 10s to 10s. 6d. per stone. Pork was in fair supply and moderate request, and prices remained at the reduced rates of last week viz., from 8s. to 8s. 6d. per stone.

**NORWICH TOMBLAND FAIR.**—The sun was just beginning to make his appearance to cheer the dismal aspect of Norwich Hill, with steam aukle deep and a fog hanging over the pens from the shaming jackets of the sheep, for it had been snowing continuously from five o'clock in the morning, and several inches of snow had fallen. Under such circumstances, with the fair at Lynn beforehand, it is not much to be surprised at that the number of sheep was but little above that of some good ordinary market days, for it certainly was not more than from 11,000 to 12,000. Messrs. Makins were the largest exhibitors with about 2,500. Mr. Stannard was next with something like 2,000, and then in a graduating scale stand Messrs. Youlls, Messrs. Goss Patteson, Messrs. Sutton and Sons, Mr. William Allen, Mr. Warner, Mr. John Cross, &c. The quality of the sheep was only middling—in fact, there was scarcely a prime pen in the show; but the trade was active, and clearances were being effected at prices ranging from 35s. to 57s. There was an exceedingly good show of store cattle, with but a solitary Irish lot of 46 on offer by Mr. T. Dolan. Horses, of which there was about the usual number, were but slightly in demand, for offers were few and far between. Messrs. Spelman submitted to auction something like 140 of all sorts and kinds.

**RUGBY APRIL CHEESE FAIR.**—This fair was held on April 11, when the pitch of cheese was hardly up to the average. The attendance of merchants was also limited, and a considerable quantity failed to attract purchasers. Best quality dairies realised 70s. to 79s. per cwt. Inferior quality dairies sold at 55s. to 65s. per cwt. A quantity of American cheese was also offered.

**STAMFORD SPRING FAIR,** April 11th.—There was, as usual, a very poor show of Beasts at this fair, and buyers were not very numerous. Good fresh scores realised high figures, but those in middling condition were difficult to dispose of. There was about an average number of Sheep penned, and a brisk trade was done, at an advance on the prices of the Mildent fair. A pen of splendid lam. bhogs, fit for the butcher, belonging to Lord Avcland, made as much as 70s. per head; and some very fine ones shown by Mr. Jelly and Mr. H. Whincup respectively, fetched 63s. and 62s. per head.

**WEYHILL SPRING FAIR.**—This fair was held on April 13, and was attended by the principal dealers and farmers in the neighbourhood. The supply of sheep was quite up to the average, between 6,000 and 7,000 being penned, for the most part in good condition, and amongst them some excellent pens of tegs and wether sheep. Trade was both dull and dear, and the greater part of the business was transacted in the most severe weather, snow falling at intervals, the hills around being covered with what had fallen but a few hours previously. The appearance of everything was somewhat discouraging to all concerned. Yet the sheep seemed to have stood the weather well, and no indication of a decline in prices was discernible, and imaginary notions, therefore, respecting a fall in mutton may, for the present at any rate, be set aside. Mr. T. E. Fowle and Mr. T. Child had some handsome wethers. Mr. Bailey, Appleshaw, made 60s. for his fat ewes, while Mr. Davis, Clanville, refused 55s. Mr. Jones, Little London, sold couples at 60s. Mr. Green, Charlton, sold 200 tegs at 52s., and Mr. Webb, 100 at 49s.

**BINGLEY SPRING FAIR,** April 4.—The half-yearly fair for the sale of cattle, sheep, pigs, horses, &c., was held to-day. There was a good attendance of buyers. The show of geld and laying-off beasts was good, and there was a ready sale. The show of spring calves was also good, but they hung rather, as the rates quoted were high. The pig show was good, chiefly store pigs. Prices were high, and the fair quick. Of sheep a moderate show, and few changed hands, although rates quoted were a little lower. The horse fair in the afternoon was better than any ever held before at Bingley, both as regards quantity and quality. Owners held

firm, and buyers demanded lower rates. This being the case, not many changed hands.

**DONCASTER FAIR, April 5.**—This fair, which is invariably the best of the year, was held to-day. The show of horses was not a very good one, though most of them were useful ones. There was a fair attendance of farmers and dealers, and trade was tolerably brisk. A few good draught horses realised from £100 to £110 a head, and carriage horses from £120 to £140 per pair; but the majority of the former class only fetched from £40 to £70, and the latter from £80 to £100. Nags sold at from £20 to £30, and ponies from £8 to £16 each. Beasts were not so numerous as they have been on several former occasions, the neighbouring farmers only having sent a small number. Anything good was easily sold, but inferior descriptions hung on hand. The quotations were as follows: Fresh drapes £12 to £18, milch cows £18 to £30. Sheep were scarce, and prices varied from 38s. to 56s. a head. Rates were generally rather higher than those obtained at recent markets.

**GLOUCESTER FAIR, April 5.**—This fair was well attended by farmers and dealers, but trade in some descriptions of stock was quiet. There were nearly 300 horses on offer, which is quite the average for this fair. Cart horses were in good demand, and sold at from £50 to £60 each. Irish and Welsh horses were in short supply, and the best description of animals sold at high prices. There were 710 cattle on offer, about the same number as last year, and quite an average. Calving heifers sold well, at from £18 to £35 each, and all of the best quality quickly changed owners. Bullocks found a slow sale, at from £18 to £25 each. There was about the usual number of bulls, but prices were not so good as in former years. Sheep were not numerous, the auction sales on Monday being generally well supplied; the total penned was 644, which was only about half the number of last year. Best tegs made from 48s. to 52s.; ewes and lambs from 50s. to 65s. a couple; sale slow. There were only 48 pigs offered, but these were in excess of the demand, and at the close many remained unsold. Messrs. Bruton, Knowles, and Bruton sold several bulls at fair prices. Mr. J. Villar sold 10 bulls for Mr. C. Hobbs at an average of 28 guineas; three for Mr. T. Hewer, average 26 guineas; five for the executors of the late Mr. W. Hewer, average 21 guineas; five for Mr. W. J. Edmunds, average 22 guineas; three for Mr. J. H. Elwes, average 20 guineas; three for Mr. T. Walker, average 39 guineas; one for Mr. T. R. Hulbert, and one for Mr. C. Hall, each at 25 guineas.

**HORNCASTLE SPRING MART.**—The show of sheep was large, a little over 13,000 being the actual number penned. There was a very good attendance of buyers, and many pens of splendid hogs were exhibited, and sold very early, several sales being effected by 7 o'clock. The trade at first was very brisk, but later on a lull ensued for a time, sellers being rather too elated, and buyers rather cautious; as the day wore on business transactions became general, but not at such high prices as in the early morning, though after then the prices ranged considerably higher than at any previous fair: some lots were turned out unsold. The following is a list of the highest prices realised for really good hogs: Mr. J. Walter, Thimbleby, sold 100 hogs at 73s. 6d. per head; Mr. J. Roberts, Hevesby, 80, at 73s.; Mr. Rt. Harrison, Horncastle, 10, at 72s.; Mr. E. Longstaff, High Townton, 130, at 71s.; Mrs. Swallow, Toft Grange, 127, at 70s.; Mr. Redmore, Hemingby, 70, at 68s.; and Mr. Robinson, Edlington, 190, at 67s. per head. The show of beasts was scarcely an average one, about 650 head of cattle being exhibited. Buyers were plentiful, and amongst the best animals high prices obtained. Mr. Robert Martin, Asterby, sold a lot of fine bullocks for £31 each; Mrs. Swallow, Toft Grange, a lot of 14 for £29 5s. 6d. per head. Mr. Rt. Kemp, Thimbleby, exhibited a splendid bull, weighing 23 cwt., which sold for £48. Mr. Parish sold by auction 20 young beasts, the property of Mr. Waud, Baumber.

**ILSLEY SHEEP FAIR, April 5.**—Colnbrook fair being held to-day somewhat affected the attendance of buyers, but there was a large number of sheep on offer, considering the time of year. Store working tegs sold at about the same figures as last market, while best meaty tegs were 1s. to 2s. per head cheaper. A prime lot of Down sheep realised nearly 8s. per couple. A good supply of beasts, and best things sold at full prices. Middling and inferior stock were dull sale, at prices in favour of purchasers. A number of cart-

horses were sold by auction by Mr. D. New, at prices varying from 30 to 70 guineas each.

**MALTON PALMSUN HORSE FAIR, April 4.**—This annual fair, which extends over the week preceding Palm Sunday, began on Monday, when there was very little doing and a small attendance. This morning the town presented a little busier aspect, though horses for sale are by no means numerous. Among the dealers present were Mr. Moore, of Hull; Mr. Johnson, of Brigham; Mr. Quail, of Liverpool; Mr. Nelson, of Barton-hill; Mr. Grayson, of Pickering; Mr. Swales, of Pickering; Mr. Richard Barker, Mr. Pexton, Mr. Adams, and other local dealers. Few horses have yet been shown, and these mostly draught horses, with a sprinkling of saddle horses and young ones. Best draught horses fetch from 38 to 50 guineas, and those of the next class from 20 to 25 guineas. Saddle horses make from 20 guineas upwards. There are no high class animals in the fair, they being bought up privately by Ireland, all the great dealers, both home and foreign, having representatives in the district.

**NEWARK STOCK FAIR.**—Good Beasts met a ready sale at high prices. Cows £24 to £28 each, in-calf heifers £15 to £18, milking heifers £17 to £18, three-year-old bullocks £18 to £20, two-year-old steers £13 to £14, and calves 30s. to 50s. each. Ewe sheep 54s. to 60s., store hogs 30s. to 59s., and ewes with lambs 70s. to 90s. A moderate show of horses, including some very valuable animals one of which, a cart horse, made £120; others fetched high prices.

**THIRSK LADY-DAY FAIR, April 5.**—There was a moderate show of beasts and sheep at this fair, and a fair attendance. Fat bullocks brought up to 9s. 6d., two years old bullocks 10s. to 11s., heifers 9s. 10d. to 10s., fat bulls up to 8s. 6d. per stone; calven cows £16 to £20. A limited supply of hogs, which brought up to 67s. each, whilst half-bred hogs ranged from 30s. to 40s.

## REVIEW OF THE CATTLE TRADE DURING THE PAST MONTH.

There has been no feature of importance in the cattle trade during the month. Throughout business has progressed very quietly, still quotations have been tolerably steady, although they do not leave off at their best points. The condition of the stock has improved, and there has in consequence been a greater choice of primer animals. From our own grazing districts the receipts of beasts have been rather larger than for the corresponding month last year, and Scotland has also contributed more freely, the latter coming to hand in good condition. As regards trade, the better sorts have generally commanded a full average amount of attention, and occasionally 6s. per 8lbs. has been paid for the best Scots and crosses, but the top price has mostly been 5s. 10d. per 8lbs. Secondary qualities have moved off quietly. The foreign receipts have been considerably less than last year, and have chiefly been composed of arrivals from Denmark, Holland, and Spain.

The sheep pens have been rather less freely supplied, owing to the diminution in the foreign receipts, the show of home-bred stock being quite up to the average. A rather larger proportion than usual of choice stock has been noticed, consequently the show has proved rather satisfactory. Although at times rather quiet, the trade has presented a healthy appearance, and for the best Downs and half-breeds, clipped, 6s. 4d. to 6s. 6d. per 8lbs. has been paid.

The lamb trade has continued steady, full prices being paid for all qualities.

Calves of choice quality were in demand at full prices; otherwise the trade was quiet.

Pigs were a slow sale.

The imports of foreign stock into London during April of the current and three previous years have been as under:

	1873.	1874.	1875.	1876.
Beasts .....	4,180	3,331	6,308	3,783
Sheep and Lambs...	43,822	37,216	71,202	43,002
Calves .....	1,444	1,212	1,095	393
Pigs .....	172	5,015	1,003	165

The arrivals of beasts from our own grazing districts, as well as from Scotland and Ireland, have been as under:

	1873.	1874.	1875.	1876.
Norfolk, Suffolk, Essex, and Cambridgeshire .....	6,800	7,100	7,400	8,200
Lincolnshire .....	104	89	—	—
Other parts of England .....	1,250	1,700	2,000	1,980
Scotland .....	245	356	300	743
Ireland .....	500	200	50	—

The total supplies of stock exhibited and sold at the Metropolitan Cattle Market during April of the current and three previous years have been as under:

	1873.	1874.	1875.	1876.
Beasts .....	16,010	15,420	17,060	15,420
Sheep and Lambs ...	132,750	137,760	158,270	131,610
Calves .....	1,070	1,770	1,905	1,910
Pigs .....	410	355	431	180

COMPARISON OF PRICES.

	1873.			1874.		
	s.	d.	s. d.	s.	d.	s. d.
Beasts .....	4	6	to 6 0	4	4	to 6 0
Sheep .....	4	10	to 6 0	4	2	to 5 8
Lambs .....	8	0	to 8 6	7	4	to 8 6
Calves .....	4	10	to 6 0	4	0	to 5 10
Pigs .....	3	8	to 4 10	4	0	to 5 0

	1875.			1876.		
	s.	d.	s. d.	s.	d.	s. d.
Beasts .....	3	6	to 5 10	4	4	to 5 10
Sheep .....	4	6	to 6 0	4	6	to 6 0
Lambs .....	5	0	to 8 6	3	6	to 9 6
Calves .....	4	6	to 5 10	5	6	to 6 8
Pigs .....	4	0	to 5 6	4	6	to 5 10

REVIEW OF THE CORN TRADE DURING THE PAST MONTH.

As the month of April drew to a close, the temperature, although still low, recovered from the unusual depression previously noticed; and quoting from *Mark Lane Express*, "the snow-storms have been succeeded by those genial showers which are characteristic of the present month. Under such revivifying influences vegetation has recovered from the temporary check caused by the sudden return of winter, and the tardy spring has once more brought us fine growing weather. It cannot be denied that, in spite of the improvement shown in the aspect of the country after the brief period of sunshine, it is still very backward for the time of year. Even in the most favoured localities on the southern coast the landscape is scarcely yet adorned with the verdant tints of spring, whilst in many parts the dull monotonous brown of barren soil and leafless trees is still the leading feature. With the exception of harrowing there is little active field work going on, which indicates that the seed-corn is now fairly consigned to its bed. The autumn-sown crops, although backward, are making a fair show, and do not appear to have suffered so much as was thought probable from the effects of the protracted winter. The wheat plant is somewhat thin and sickly on the heavy lands, but with a warm May will, doubtless, make fair progress, although a heavy crop can scarcely be expected. It is on the low-lying heavy lands especially that the want of the drying winds of March has been most felt, and the superabundance of moisture received by the soil must necessarily take some time to subside. The deficiency of the acreage under wheat this year, whilst no doubt attributable, in some measure, to the bad seed time, is also due to the improbability the farmer foresees of being able to cultivate the crop remuneratively, now that the low price and rapid transit of wheat from India render competition more severe. The heavy shipments of wheat from Calcutta have formed a very marked feature in the trade this season, and the facility with which this class of grain is saleable shows that to the miller it must possess gridding qualities of no mean order. Add to this the fact that the price ranges little over 40s. per qr., and it must be patent to all that, with the enormous resources of land and cheap labour in India, the prospect of selling English wheat at an average price of 50s. is rendered rather dubious. Now that such facilities are offered for the transit of wheat from the East, the low-class grain from America and Russia is almost entirely neglected,

and the influence thus brought to bear on the course of prices is a matter for careful consideration. As some quantity of Calcutta wheat has recently been taken for the Continent, it is plain that millers there begin to appreciate the article, and an extension of English trade in this direction may possibly be looked for."

From the same source pertaining to the Continent we have the following remarks: "The weather has been of a cold and boisterous character, and although it has somewhat moderated it is still far from being of that warm and spring-like nature which is looked for at this time of year. There have been considerable falls of snow in France, and in the neighbourhood of Bordeaux the vines are said to have suffered considerably. In Germany the temperature has been very low, with heavy storms of rain and snow. Spring sowing is going on as rapidly as circumstances will permit, but warm weather is much wanted for the winter-sown crops. At Paris an improvement has taken place in the prices of both wheat and flour, the former realising 50 to 75 centimes more money. Oats have also advanced 25 to 50 centimes, but other grain is unaltered. The demand for flour has been quiet. At Nantes the weather has been very harsh and cold, but as vegetation is but little advanced in this district no apprehension of danger is felt. In spite of the holidays prices of wheat have maintained their level, and ordinary red is now quoted at 43s. 9d., and superior 44s., both per 450lbs. free on board. Rye is rather cheaper, and barley quiet, with very little business passing. At Amiens wheat continues in small supply but fairly active demand, at an advance of 50 to 75 centimes. At Marseilles there has been an active business doing in wheat, and prices are very firm. At Antwerp considerable depression was lately manifested in the grain trade, but the continued inclemency of the weather, and the report of higher prices in Paris, produced increased activity, and a good business was done in wheat at former prices. Rye and barley were quiet, and quotations were unaltered, but oats met an active demand at full prices. At Groningen the weather has been very boisterous lately, and with small supplies there was a good demand for the interior, as well as for export to Belgium and the Rhine, at a decline of 3d. per qr. on the week. Barley was quiet and rather easier, whilst oats were in demand for the northern ports of France at an improvement of 3d. to 6d. per qr. Quotations are, for superior red winter wheat 50s. 9d., fine white wheat 50s. 9d. per 504lbs.; undried Poland oats



28s. to 28s. 9d. per 336lbs., cost, freight, and insurance to London. At Berlin wheat on the spot has ruled quiet, and rye has fluctuated somewhat. Fine qualities of oats have sold steadily at former quotations. At Hamburg the weather has been of a very wintry character, checking vegetation. At Königsberg the grain trade has been active, and the market closes firm for all articles. Wheat has advanced 1s. per qr. on the week, and owing to scarcity all feeding stuffs were 6d. per qr. dearer. There has been some important business doing in fine red and high-mixed wheat for export to the North of England, and as the demand for the Rhine provinces continues, sellers are holding very firmly. The weather has been fine but frosty. At Leipzig trade has been much interfered with by the holidays, and transactions have been on a very limited scale. Only the best qualities of wheat met with any attention, whilst rye was quieter, owing to increased supplies. Oats and barley were rather dearer. At Ibrail the weather is fine, but the farmers want rain, and business has been tolerably active for wheat at about late rates. At Alexandria there has been no alteration in the trade, and there is but little ready wheat offering, the Government not having yet delivered their March contracts. Beans are rather dearer, and have been in better supply, but other feeding corn is unaltered. At New York the visible supply of wheat on April 15th was 15,375,000 bushels, and of maize 5,100,000 bushels. The market for spring wheat has been unsettled, and prices are rather lower—winter is also slow, but without quotable change. Flour has been quiet, and maize, with light receipts, and stocks nearly exhausted, has again advanced in price. At Montpel the thaw has set in, and most of the recent heavy snowfall has disappeared. The wheat trade has been marked by great inactivity, and flour has been dull, and the turn lower for fine qualities, whilst coarser grades have maintained late rates. At Chicago the supplies of wheat keep pace with the demand, and the future course of prices must depend mainly on the necessities of other markets, but at present they are above a reasonable shipping margin. The growing winter wheat is reported to look thoroughly healthy, and is now strong enough to stand any weather that may be experienced without injury. At Milwaukee the weather has been so severe that seeding is much delayed by the continued frost. Everything seems to indicate a late spring, and with the roads in an almost impassable condition, farmers are disposed to hold their wheat for the present. Although advices from other markets report dulness, wheat has remained steady, and stocks are firmly held in the hope of more remunerative markets. The shipping demand has increased, and No. 1 hard wheat has advanced slightly. The market is unchanged for flour, and maize and oats are in fair request at advancing prices. At Valparaiso the receipts of wheat from the interior having increased prices have given way, and in the event of freights going up, sellers will probably require a further concession. There is no export demand for flour, and quotations are entirely nominal. Barley is in fair request, and prices are firm.

The weekly accounts from Mark Lane are as follows: The first Monday the arrivals were—English wheat, 4,681 qrs.; foreign, 13,073 qrs. Exports, 3,699 qrs. There was a moderate attendance of millers; and with limited arrivals of both English and foreign wheat, the trade ruled quiet, at nominally last Monday's prices; although where sales were forced, rather less money had to be taken. Country flour, 19,043 sacks; foreign, 4,029 sacks and 830 barrels. The demand was quiet, but prices were steady. English barley, 3,302 qrs.; Scotch, 1,591 qrs.; foreign, 6,463 qrs. A very slow sale for English descriptions; malting declined 1s. per qr.; grinding was dull at about late prices. Malt: English,

22,516 qrs.; Scotch, 679 qrs. Exports, 435 qrs. The trade ruled quiet without quotable change. Maize, 9,546 qrs. Owing to scarcity, a further advance of 6d. per qr. was established, with a fair inquiry. English oats, 529 qrs.; Scotch, 141 qrs.; foreign, 39,540 qrs. An improved demand was noticeable, and Russian descriptions realised an advance of 3d. to 6d. per qr. on the week. English beans, 194 qrs.; foreign, 5,171 qrs. Sales progressed steadily, at last Monday's prices. Linseed, 15,574 qrs. Exports, 2,964 qrs. No alteration in value. There is no change in the price of cloverseed, but the demand is somewhat quieter. All descriptions are held firmly, as the improvement in the weather is expected to give a fresh impetus to the trade. Mustard and rapeseeds very scarce, and dearer. Canary, with improved supplies, ruled dull and cheaper.

The second Monday: English wheat, 3,653 qrs.; foreign, 31,104 qrs.; exports, 3,219 qrs. There was a small supply of home-grown wheat fresh up to market, and samples in good condition realised last Monday's prices, but inferior sorts were neglected. Of foreign the arrivals were to a fair extent, and a quiet consumptive demand was experienced, at a decline of 1s. per qr. on the week. Country flour, 19,255 sacks; foreign, 2,097 sacks and 10,800 barrels. There was very little business doing, at about previous prices. The top price of town-made was reduced from 47s. to 43s. per sack. English barley, 2,235 qrs.; Scotch, 398 qrs.; foreign, 2,487 qrs. There was no quotable alteration in the trade. Malt: English, 20,364 qrs.; Scotch, 1,474 qrs.; exports, 290 qrs. A slow demand was experienced, but prices are steady. Maize, 321 qrs. Quotations advanced 6d. to 1s. per qr. since last Monday owing to scarcity, but the amount of business passing was very limited. English oats, 524 qrs.; Scotch, 50 qrs.; foreign, 39,415 qrs.; exports, 747 qrs. There was a quiet consumptive demand and prices were steady. English Beans, 392 qrs.; foreign, 1,409 qrs. The trade ruled quiet at last week's prices. Linseed, 20,054 qrs.; exports, 2,753 qrs. Without alteration.

Monday the 17th being Easter there was no market held at Mark Lane.

On Monday, April 24, the arrivals were—English wheat, 3,754 qrs.; foreign, 34,965 qrs. Exports, 1,308 qrs. The supply of home-grown fresh up to market this morning was moderate, and fine samples met an improved demand at fully previous prices. Of foreign the arrivals were above an average, and with a good attendance of millers a steady consumptive demand was experienced, at about late rates. Country Flour, 15,922 sacks; foreign, 3,358 sacks 7,960 barrels. Very little business doing, at unaltered prices. English barley, 839 qrs.; Scotch, 288 qrs.; foreign, 3,532 qrs. Malting descriptions steady, grinding quiet. Malt: English, 20,407 qrs.; Scotch, 730 qrs. Exports, 210 qrs. There was no alteration in the malt trade. Maize, 22,309 qrs. In rather slower demand, at a decline of about 6d. per qr. on the week. English oats, 293 qrs.; Scotch, 20 qrs.; foreign, 53,248 qrs. Exports, 11,771 qrs. In good request at an advance of about 6d. per qr. since last Wednesday, chiefly owing to the export demand. English beans, 314 qrs. No change in value or inquiry. Linseed, 15,427 qrs. Exports, 2,045 qrs. The trade rules quiet, but fairly steady.

#### IMPERIAL AVERAGES

For the week ending April 15, 1876.

Wheat .....	40,900½ qrs.	45s. 1d.
Barley .....	18,776½ "	33s. 7d.
Oats .....	2,100½ "	25s. 8d.



# THE FARMER'S MAGAZINE.

## C O N T E N T S.

MAY, 1876.

PLATE.—A "ROYAL" OXFORD DOWN RAM.

THE PROPERTY OF MR. A. F. M. DRUCE, TWELVE ACRE, EYNSHAM, OXFORD.

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1 lb. for 20 sheep, price, jar included	.....	50	2	0
1 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	0	20	0
50 lb.	250	0	25	0
60 lb.	300	0	30	0
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(Cask and measure included)

Should any Flockmaster prefer Boiling the Composition, it will be equally effective.

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From Mr. HERBATH, the celebrated Analytical Chemist:—  
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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 violence of the disease); also in wine quart bottles, 1s. 3d. each.

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 "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 Scabin 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 sweetest and best remedy now in use.  
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 "For JOHN TINGEY, Esq.,  
 "R. RENNEY.

"To Mr. Thomas Bigg,"

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