

AN AGRICULTURAL
FAGGOT



R. H. REW



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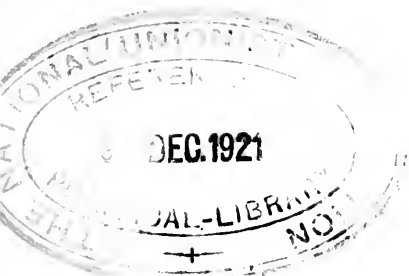
AN AGRICULTURAL
FAGGOT.

*A COLLECTION OF PAPERS ON
AGRICULTURAL SUBJECTS.*

BY
R. H. REW, C.B.

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1913.



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INTRODUCTION.

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HARDING
THIS is a bundle of sticks—slightly trimmed to lie more conveniently in the faggot—gathered from various hedgerows, where many of them have long remained undisturbed. In plainer phrase, this book contains a selection from papers on agricultural subjects written at varying intervals during the past five and twenty years and published in the transactions of the associations to whose members they were primarily addressed. Some carry the marks of their date and already have a flavour of antiquity, but the subjects with which they deal are perennial, and even the late-Victorian aspect of them is not quite out of date. It is hoped, at any rate, that they still possess some interest for those who are concerned for the well-being of Agriculture—a category which happily includes many more than those who actually live by the land.

Glancing back over the period covered by the contents of this book—the earliest paper was written in 1888—the superficial impression is one of changing times. The last quarter of the nineteenth century comprised years of tribulation for owners and occupiers of land. Farmers who in

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the later "eighties" were recovering a little from the staggering blows of the early years of the decade were confronted with still heavier buffeting in the "nineties." To many a man who had struggled through the "eighties," the "nineties" gave the *coup de grâce*. In reporting on the state of agriculture in Norfolk in 1894, I stated: "At the date of the Richmond Commission (1880-82) the 'good times' had been left behind for some years, but ever since then matters have gone from bad to worse, and in spite of transient gleams of hopefulness the dark cloud of depression has become blacker and blacker, until a positive gloom has fallen over the face of the country. Old families are gone, old houses are shut up or let to strangers, old acres are abandoned, or are owned or occupied by new men. Steadily, relentlessly, the depression deepened and spread, until the season of 1893 and 1894 aggravated and accentuated the trouble with startling suddenness."¹ What was true of Norfolk was true in more or less degree of many other districts of England. Like vessels on a long voyage, farmers who had survived the earlier gales, with strained timbers and torn canvas, were unable to weather the later hurricane. But though storms arise and vessels founder, the sea remains always changeful yet always the same, and the tides ebb and flow in eternal sequence. So also, through

¹ Report on Norfolk to the Royal Commission on Agriculture. C. 7915.

the fluctuations of the years prosperity and adversity come to the farmers, some succeed and others fail, but from one generation to another seed time and harvest, summer and winter, continue, and the cultivation of the soil goes on. The land remains, and those who till it, though outwardly different, are kindred in spirit with their forefathers. Endurance is the badge of all their tribe.

It is well that the community should have a sympathetic regard for those who till the soil, and that the State should anxiously consider the welfare of agriculturalists. But beyond the interests of individuals, above even the interests of the present generation, is the interest of the Land itself. There is much in the history of agriculture in this country which may be criticised ; its progress has not been achieved without hardship, and oftentimes injustice, to individuals, but, whatever may have been the defects in our land system, it has on the whole been successful in making and maintaining the fertility of the land. A similar result might no doubt have been attained under another system, but it is undeniable that the restrictions devised by owners to prevent the deterioration of the land—hardly as they pressed on enterprising and competent tenants who were willing to farm fairly—had on the whole the effect of preserving soil fertility. Freedom of cultivation is admirable when every occupier is skilled and conscientious, but, without reflecting on the

present generation, it must be admitted that all farmers could not at all times be so described. Landowners, like other men, were actuated by self-interest in devising safeguards for the protection of their property from injury, and these safeguards, formulated in many cases by persons having more legal than agricultural knowledge, were often needlessly, and in some instances grotesquely, irksome. But the point is that, while they frequently hampered an improving farmer and hindered progressive farming, they also served to preserve the land from being pilfered of its fertility. The old restrictive covenants have gone, and the principle of freedom of cultivation has been adopted by Act of Parliament. But whether its ownership remains in private hands, is vested in the State or in local authorities, or is transferred to the occupiers, the land must be fairly dealt by, and the maintenance of its fertility should, in the national interest, be the paramount consideration. Warnings are not lacking from new countries that the self-interest of the occupier is not always a sufficient protection for the land. Under whatever conditions the land may be farmed, no system can, from the national point of view, be satisfactory which allows the economic exigencies of the present generation to endanger the nation's wealth.

It is not a simple problem to reconcile free scope for the enterprise of the occupier with protection for the land, but its solution is facilitated in this

country by the fact that the land, as a great abstraction above all temporary interests, is loved, and one might almost say worshipped, by those who live by it. The service of the land seems to engender a personal devotion, especially among those whose roots in the soil go far into the centuries. Among the agricultural labourers this passion for the land is often most marked. In a recent book¹ containing interviews with a number of agricultural labourers it is remarked :—

“ Again and again one is struck by the intimate feeling of the labourer towards the soil.

“ ‘ They ought to look after the land. Ain’t she the mother of us all ? ’ said one man.”

And from the farmer’s point of view an old friend of mine, who has occupied the same farm for over half a century, voices the same affection:—

“ Born and bred on the land, the land has always called me. I hear the call now, although it reaches me too often within walls and not in the open field.

“ Love of the land makes me ask the readers of this little book² to stick to the land, because Mother Earth is kind to all her children, whose zeal is according to knowledge.”

Where the land is cultivated by men inspired by this devotion it is in no danger of unfair treatment.

¹ “How the Labourer Lives,” by B. Seebohm Rowntree and May Kendall, 1913.

² “Story of a Staffordshire Farm,” by T. Carrington Smith, 1913.

The present generation owes much to its forbears who have made the land. This little island in the mists of the northern sea cannot as a whole be described as a naturally fertile country, though its soil for the most part responds generously to generous treatment. The present fertility of large parts of it is the result of the lavish outlay of labour and capital. Millions of money, generations of men, have gone to the making of English land. It is a goodly heritage : let us cherish it !

Even on the surface of agricultural affairs, where, as observed above, movement and disturbance are apparent, a reference to the subjects dealt with in these papers justifies the saying that the more things change the more they remain the same. In summarising the history of British agriculture during the half century which had elapsed since the repeal of the Corn Laws (Chapter II.), an allusion to the public discussion of protective duties in 1897 was made : in 1913 the discussion is unfinished. The "rural exodus" (Chapter IV.) aroused great interest twenty years ago : the consideration of its causes and effects is equally insistent now. The conditions under which agricultural produce can best be brought to the consumer—the need for effective market facilities (Chapter III.)—are still of vital import. Even in the comparatively minor matter of the method of selling live stock (Chapter IX.), the inertia of the agricultural mind is exemplified.

Three of the papers (Chapters V. to VII.) deal with the subject of agricultural co-operation and the reduction of the middle profits which, largely in consequence of their unorganised state, handicap the producers of food. At the time when these were written the gospel of co-operation had, by Sir Horace Plunkett's persistence, begun to find acceptance in Ireland, but, except in rare instances, it fell on deaf ears in the English rural districts. Since then the patient work of the Agricultural Organisation Society has slowly fructified, the State has lent assistance, and progress in this direction, at any rate, may be reported.

Memory, in reviewing the associations of these papers, conjures phantoms. Many "agricultural worthies"—to use the old-fashioned term—who have passed away are recalled. Clare Sewell Read, mordant and pessimistic, who possessed as perhaps no one before or since has done the confidence of his fellow-farmers; Albert Pell, witty and incisive in his speech and writings; Jasper More, whose casual manner veiled an intimate knowledge of rustic psychology; Thomas Duckham, whose courage in the advocacy of cattle disease legislation was perhaps insufficiently appreciated; Charles Howard, sound of judgment and kindly of heart; John Treadwell, shrewd and practical, with his proud reminiscences of "Dizzy"; Samuel Rowlandson, the embodiment of caution in spite of his "advanced" political views; William

Little, a born statistician and model compiler of official reports ; Lord Winchilsea, whose ardent spirit glowed with too fierce a fire for his physical powers ; Sir John Lawes, sturdily tramping round his well-loved fields at Rothamsted ; Ben Druce, happier by the fireside of the Farmers' Club than in his chambers at Lincoln's Inn ; Wilson Fox, eager and strenuous, whose zeal for the public service too literally consumed him. These, and many others who are brought to the mind's eye in their habit as they lived, are still well remembered on the countryside and in places where farmers foregather. To those who knew them, and worked with them for the "good old cause," and to all who love the land, this little book is submitted.

I have to thank the Royal Agricultural Society and the Bath and West of England Society for permission to republish the articles which have appeared in their respective journals.

R. H. R.

September, 1913.

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AN AGRICULTURAL FAGGOT.

CHAPTER I.

FARMING IN OLDEN TIMES.¹

THE agricultural history of this country before the coming of the English is mainly a matter of guesses and inferences. Of the English invaders—a race of countrymen and farmers who detested the towns, and preferred the lands of the Britons to the towns of the Romans—we have a little more knowledge; but until William the Conqueror issued the first Royal Commission on Agriculture, and collected the first Agricultural Returns, our knowledge of English rural life is scanty. What we find when these records begin is—over the greater part of England, at any rate—an organisation of rural life in self-contained village units which, as the manorial system, formed the structural basis of English rural economy for centuries. Indeed, the skeleton of that system still remains, although its substance has been changed and its spirit transformed.

The Domesday Survey covered thirty-four counties, excluding Northumberland, Durham, Cumberland, Westmorland, Lancashire and Monmouth. The actual extent of agricultural land included is a matter about which competent authorities differ considerably. One writer

¹ Read before the Farmers' Club, May, 1913. (Abridged.)

says: "The evidence of the Domesday Survey seems therefore to show that at its date about five million acres were under the plough."¹ Another says that there was "a grand total of 6,060,000 acres sown with corn every year."² As it is certain that at least one-third of the arable land was in bare fallow each year, this estimate would imply a total area of about 9,000,000 acres under the plough. This, indeed, appears to be the figure adopted by another writer, who estimates, however, that of the 9,000,000 acres only 5,000,000 were sown each year.³ I cannot profess to be able to decide between these varying estimates, but I may observe that in the same counties in 1912 the total extent of arable land was 9,728,000 acres, of which 262,000 acres were in bare fallow. Considering the vast areas which during the past eight centuries have been reclaimed from the waste and fen, it is somewhat difficult to believe that there is no more land under arable cultivation now than in 1086.

All land in England is described in Domesday as belonging either immediately to the King or to his vassals of different degree, or to churches, which held it by direct grant from Kings and from persons whose grants have been confirmed by Kings, or to burgesses, whose tenure, though peculiar, still appears as a tenure—a form of conditional ownership.⁴

The unit of ownership was the manor, and was as a general rule coterminous with the "vill," which was the fiscal unit—for it must be remembered that Domesday was primarily a valuation list, and that an anxiety for taxation rather than a thirst for knowledge was the Royal motive for the great Survey. In some cases the vill contained several manors, traces of which still remain in such cases as Great Tew, Little Tew and Dun's Tew, in Oxfordshire.⁵ A manor was, in fact, an estate, and, of course,

¹ Seebohm, "The English Village Community," p. 103.

² Ballard, "The Domesday Inquest," p. 212.

³ Maitland, "Domesday Book and Beyond," p. 437.

⁴ Vinogradoff, "The Growth of the Manor," p. 293.

⁵ "The Domesday Inquest," p. 48.

one man might be lord of many manors. Let us very briefly try to realise the conditions of an agricultural estate—*i.e.*, a manor—in the eleventh or twelfth century.

The conspicuous buildings on a manorial estate were only the church, the manor-house, and perhaps the mill ; the remaining buildings were the homes of the cultivators of the soil, clustered together, as a rule, in a street. The ground plan, indeed, remains in hundreds of villages to-day, but the detached, isolated farmhouses are mostly of later date. The manor-house, with its outbuildings, garden and fishponds, was built either of timber and clay or of stone, for brickmaking was still a forgotten art. It often consisted of a single hall, open to the roof and earth-floored, which served as a court of justice, dining-room and bedchamber. At one end of the hall was a stable, at the other a kitchen, or larder. Below one part of the hall was a cellar, and above another part was a parlour, approached by an outside staircase. There might also be a detached building for the farm servants and a chamber for the bailiff. The outbuildings comprised bakehouse, dairy, cattle and poultry houses, granary and dovecot.¹

Beyond the lord's household the population of a manor consisted of three main classes, who in modern language may be described as tenant farmers (*villani*), smallholders (*cottarii*) and labourers (*servi*). (There were also, mostly in the Eastern counties, a number of " free tenants " and " sokemen," who were perhaps more analogous to the modern tenant farmer.) These three main classes comprised 79 per cent. of the total population of England, tenant farmers representing 32 per cent., smallholders 38 per cent., and labourers, or serfs, 9 per cent.² The last-named class held no land, and seem, in fact, to have been household thralls of the lord ; but there was, even in the thirteenth century, a certain amount of casual labour, the inhabitants of the towns migrating into the neigh-

¹ Prothero, " English Farming, Past and Present," pp. 5 *et seq.*

² " The English Village Community," p. 90.

bouring villages during the autumn for the harvesting.¹ Again roughly generalising, a tenant farmer (*villanus*) held from 30 to 120 acres, the normal holding being of the smaller amount, and the smallholder five acres. One main distinction between the two classes appears to have been that the one usually possessed an ox or oxen, and the other did not. Both classes held of the lord at what may be called customary rents. These "rents" were made up in the most varied manner, partly in kind, partly (in some cases) in money, and in all cases largely of personal service. The one obligation common to all was service on the lord's demesne. The gradual reduction and eventual disappearance of the servile element in the "rent" and the commutation of produce and service rents into money—a process extending over centuries—marked the emergence of the tenant into independence. At the time we are now considering he had, at any rate, "fixity of tenure," for he was tied to the soil, and indeed to the lord, by bonds which it was almost impossible to break.

The land of the manor was divided into three main parts—(1) the lord's demesne, which surrounded the manor-house, and was cultivated, by the service of the tenants of the manor, as a "home farm," though it might be, and in later times was, let; (2) the common arable field; (3) the common pastures and waste. The common arable field was divided into acre or half-acre strips, with "balks" of turf between. The tenant or the smallholder had his 120 or 30 or 5 acres, or whatever his holding might be, scattered all over the great common field, but with an equal number of strips in each division, according to the rotation of crops adopted. The whole field was cultivated on a co-operative or communal plan, a two or, more usually, a three-course system being adopted, and the field divided into two or three parts accordingly. The usual rotation was (1) wheat or rye; (2) spring

¹ Thorold Rogers, "A History of Agriculture and Prices," Vol. I., p. 252.

crops, such as barley, oats, beans or peas; (3) fallow. The arable fields were fenced against stock from seed-time to harvest, and the strips were cultivated for the separate use of individuals, subject to the compulsory cropping. A large tenant, apparently, might have his own plough, with a team of eight or ten oxen, the majority (each owning, perhaps, not more than one or two oxen) would combine for the joint use of a plough. On Lammas Day the fences were removed, and the livestock wandered over all the arable land under the charge of the common herdsman, shepherd or swineherd. The best meadowland was annually allotted in doles and put up for hay. These doles were fenced off, to be mown for the separate use of individuals from Candlemas or St. Gregory's Day to midsummer, after which they were common pasturage. On the waste of the manor the stock of the community grazed in common at all times, every occupier of land in the open field having his right of pasturage. The waste also provided fern and heather for litter, bedding or thatch, wood for hurdles, turves for fuel, etc.

On the outskirts of the arable fields nearest the village lay one or more "hams," or stinted pastures, in which a fixed number of stock might graze. Brandersham, Smithsham, Wontnersham, Herdsham, Tinker's field, Sexton's mead, suggest that special allotments were sometimes made to those who practised trades of such general importance to the village community as the stock-brander, the blacksmith, the mole-catcher, the cowherd, the tinker and the sexton, while Parson's close and Parson's acre denote a similar recognition of ecclesiastical claims.¹

This brief account of the typical manor may be concluded with a sketch of one of the many which were in the hands of the Church. The village, which at the time of Domesday nestled round the new minster just com-

¹ "English Farming, Past and Present," p. 26.

pleted by Edward the Confessor (now known as Westminster), was on the manor of an abbot.

It consisted of 25 houses of the abbot's immediate followers, 19 homesteads of *villani*, 42 cottagers with their little gardens, and one of them with 5 acres of land. There was also the larger homestead of the sub-manor of the abbot's under-tenant, with a single cottage and a vineyard of four half-acres newly planted. There was meadow enough by the riverside to make hay for the herd of oxen belonging to the dozen plough-teams of the village, and pasture for them and other cattle. Further round the village in open fields were about 1,000 acres of arable land mostly in acre strips, lying no doubt in their shots or furlongs, and divided by green turf balks and field-ways. Lastly, surrounding the whole on the land side were the woods, where the swineherd found mast for the 200 pigs of the place.¹

This was the structure of English rural life, which, except for a gradual tendency to commute personal service into more definite and less irksome forms of rent, and a tendency also to relax the rigidity of the bonds which held tenant and serf alike bound to the manor, remained practically universal and unchanged until the fourteenth century. The manor was not only the agricultural unit, self-contained and self-sufficient, but also the social unit holding the community together, by economic interests as well as by semi-patriarchal rules. But while the power of the lord was great, his authority was not altogether despotic. There were customs of the manor which regulated and circumscribed his rights, while in the common life of the village, the community was, subject to the lord's rights, self-governing.

In the middle of the fourteenth century we come to the "great watershed of English economic history"—the Black Death (1348-9), which destroyed from one-third to one-half the total population. It was no respecter of persons. The King's daughter was a victim, and three Archbishops of Canterbury perished in the same year.

¹ "The English Village Community," p. 98.

Persons of all degrees were carried off . . . servants and labourers working on the demesne ; farmers and freemen paying rent only ; freemen bound to boon-works in addition to their money payments ; virgaters and cottiers whose services had been commuted ; others whose lords had tentatively introduced the new fashion of money payments ; and finally yet others who continued to perform their services or some of them.¹

The economic effects of this catastrophe were immediate and inevitable. The people perished, but the land remained, and it had to be cultivated by a depleted population.

Those tenants who remained on the manor found in the landlord's difficulty their opportunity of demanding increased wages, of commuting labour services for money payments, of enlarging the size of their holdings, of establishing the principle of competitive rents. . . . There was a fall in rents and a rise in wages, because the supply of land exceeded the demand, and the demand for labour was greater than the supply.²

The Legislature, not for the first or last time, tried to stem the economic tide with Parliamentary mops, but the effects of its labours were transient. There were, indeed, from this time onward innumerable Acts of Parliament regulating the wages of labourers and their hours of work, the prices of corn and other produce, and the channels of trade therein, forbidding now exports and now imports, while a whole array of enactments was directed against the machinations of dealers in corn, live-stock, etc. Even the depopulation of the rural districts (an old story) was legislated against in various ways, one Act of Richard II. forbidding those who had served in agriculture until twelve years of age to be apprenticed in the towns, but "to abide in husbandry." In the sixteenth, as in the twentieth century, the undue slaughter of calves attracted attention, and a statute of

¹ Hasbach, "A History of the English Agricultural Labourer," p. 21.

² "English Farming, Past and Present," p. 41.

Henry VIII. forbade, for three years, the killing of calves between January 1st and May 1st, because so many had been killed by "covetous persons."¹ But the economic progress of English agriculture pursued its course, and possibly might have pursued much the same course had the Legislature left it alone. By the Black Death and by recurrent pestilences, attended by bad seasons, the manorial system, as a semi-servile, semi-communal organisation for cultivating the land received its death-blow, though it was, like Charles II., an unconscionably long time a-dying, and its outward form was visible over wide areas of the country until the completion of the Inclosures, in the early part of last century.

From the middle of the fourteenth to the latter part of the sixteenth century were troublous times for the countryside. In 1455 the thirty years' War of the Roses began, and even allowing for the view that the bulk of the people took no part in the fighting, it seems clear that the ravages of the combatants, in the days when the rule of war was to live on the country, must have ruined many an agriculturist. It is said that a tenth of the whole population were killed in battle or died of wounds or disease during the war. Later, the dissolution of the monasteries was a severe blow to agriculture, for, by general consent, the monks were good landlords and farmers. But the main cause of tribulation was the wholesale inclosure and conversion of arable land to grass.

On the subject of inclosure there is a whole library of literature—most of it polemical. It is hardly necessary to say that inclosure—in the sense of apportioning the land in compact holdings for exclusive occupation—is inevitable in all settled countries if agriculture is to be pursued as a commercial undertaking. The old communal cultivation was possible only to a self-contained community which mainly aimed at growing sufficient for its

¹ Curtler, "Short History of English Agriculture," p. 86.

own requirements. Under the manorial system crops of three or four fold the seed¹ might and did suffice, the object being not to grow for a market (which, indeed, scarcely existed), but only to feed the resident population. But from an economic point of view, such results for the labour expended were obviously unremunerative. The social revolution of the Black Death practically synchronised with the beginning of a general impulse towards the exploitation of the land on a commercial basis. Unfortunately for the social welfare, two causes combined to direct the movement in a direction which was disastrous to the countryside. These were the scarcity of labour—caused by the sudden death of an enormous proportion of the tillers of the soil—and the demand for English wool.

Wool was the chief source of the wealth of the traders and of the revenues of the Crown. It controlled the foreign policy of England, supplied the sinews of our wars, built and adorned our churches and private houses. The foreign trade consisted partly in raw material, partly in semi-manufactured exports such as worsted yarns, partly in wholly manufactured broadcloth. . . . In long-wool, or combing wool, England had practically a monopoly of the markets, and to it the export trade of the raw material was almost exclusively confined. Short wool, on the other hand, was used for broadcloth. . . . In the long-woolled class Cotswold wool held the supremacy, with Cirencester as its centre, though the "lustres" of Lincolnshire always commanded their price. Among short-wools Ryeland had the pre-eminence, with Leominster as the centre of its trade.²

When, therefore, farming for profit, as distinguished from farming for subsistence, began, it was natural that landowners should turn to sheep. And, as in those days, long before the turnip was introduced, sheep meant pasture, the old arable common fields were in many cases inclosed and turned to grass, and the busy communities subsisting upon them were replaced by a few

¹ "History of Agriculture and Prices," Vol. I., p. 51.

² "English Farming, Past and Present," pp. 80, 81.

shepherds. This, of course, was not done without strenuous opposition, and the common-field farmers were in a strong position to resist, and frequently did so successfully. Innumerable laws were passed to restrain the movement and mitigate its evils. But the statute-book is a very imperfect history of actual events. There is even in these days a difference between the law and its administration, and we may be quite sure that in the fifteenth or sixteenth centuries law-breakers and law-evaders had even greater immunity than in the twentieth. Of the progress of inclosure since 1700 we have an imperfect record in the Inclosure Acts passed since that date. The area dealt with in them can only be estimated, but, according to the calculations of a recent writer, the extent of common-field—*i.e.*, arable—land inclosed under them was nearly 4,500,000 acres.¹ From a still more recent writer² I take the following figures, showing the percentage of the total area of each county inclosed by Act of Parliament up to 1870. (Both common field and waste are included in these figures.)

Bedford	44·1	Middlesex	26·7
Berkshire	34·1	Norfolk	26·1
Bucks	35·8	Northumberland	12·5
Cambridge	38·4	Notts	32·0
Cheshire	3·4	Northampton	54·3
Cornwall	0·8	Oxford	43·8
Cumberland	23·9	Rutland	46·4
Derby	21·3	Salop	6·4
Devon	1·7	Somerset	12·7
Dorset	13·3	Stafford	12·4
Durham	17·8	Suffolk	6·1
Essex	3·1	Surrey	10·1
Gloucester	18·7	Sussex	3·6
Hants	11·1	Warwick	25·2
Hereford	4·8	Westmorland	16·3
Herts	15·2	Wilts	26·2
Hunts	55·8	Worcester	18·1
Kent	0·5	York, E.R.	38·3
Lancashire	5·7	„ W.R.	24·2
Leicester	47·9	„ N.R.	16·3
Lincoln	37·1		

¹ Slater, "The English Peasantry and the Inclosure of Common Fields," pp. 140 *et seq.*

² Gonner, "Common Land and Inclosure," p. 279.

These calculations, as already stated, cannot be more than approximate, but they show that the extent of Parliamentary inclosure accounts in no county for much more than half its area, and in some counties for a very small proportion. The extent of land now remaining uninclosed—*i.e.*, subject to rights of commons—in England and Wales is not known with any degree of accuracy, but it is only a small proportion of the whole area of the country. It appears, therefore, that a much larger area must have been inclosed prior to the date—about 1700—when Parliamentary sanction became necessary, than since that time. It is probable that greater hardships were endured and greater injustice done by the earlier inclosures, but men were then less articulate and their woes are farther removed from us. It is about the inclosures of the end of the eighteenth century and the beginning of the nineteenth centuries that the fiercest controversy arose. It may be observed that the great inclosure movement, which set in about the middle of the eighteenth century, synchronised with the period in which other influences were at work, which, taken together, revolutionised English farming and, to put it shortly, established modern agriculture.

Before jumping from Tudor to Hanoverian times allusion may be made to the two authors who in the sixteenth century formed the vanguard of the long array of agricultural writers. In the thirteenth century Walter of Henley was their forerunner, but Fitzherbert's "Book of Surveying" and "Book of Husbandry," both first printed in 1523,¹ and Tusser's "Five Hundreth Pointes of Good Husbandrie" (1573) may fairly be regarded as the beginning of English agricultural literature. Tusser's doggerel rhymes were very popular, and form a rich

¹ There were two Fitzherberts—brothers—and the authorship has been variously ascribed to both, but it seems now to be attributed to John Fitzherbert (see "English Farming, Past and Present," p. 90).

storehouse of proverbial wisdom and of information respecting the rural life, domestic economy and agricultural practices of our Elizabethan ancestors. He appears to have been a versatile but not altogether a successful man, as is suggested by the following lines published in 1608 :—

Tusser, they tell me, when thou wert alive,
 Thou, teaching thrift, thyself couldst never thrive ;
 So, like the whetstone, many men are wont
 To sharpen others when themselves are blunt.

He had a reputation for piety, but his standard of commercial morality might have been higher if, as I gather, he recommended that measled pigs should be killed, salted and shipped to the Flemings.¹

The foundations of modern farm practice were laid, as has been said, in the eighteenth century, and Jethro Tull's "Horse-hoeing Husbandry," published in 1733, may be said to be the corner-stone. Born in 1674, at Basildon, he farmed first at Crowmarsh, then at Shalbourn, where he died in 1740. He invented the first practicable drill, but his many mechanical inventions were less valuable than the reasons which he gave for their employment. The main principles he inculcated were clean farming, economy in seeding, drilling, and thorough cultivation. His principles were put in practice by large landowners, such as Lord Townshend, Lord Ducie, Lord Halifax and Lord Cathcart. To "Turnip" Townshend, who was born in the same year as Tull, more perhaps than to any, is due the credit for vigorous and enlightened application of Tull's principles, on which he established the Norfolk, or four-course, system of cropping.

The turnip and the four-course system not only introduced a new era for arable farming, but opened up the way for the improvement of live-stock. There was ample need for it. Some attention had been given to the production of wool, but from the grazier's point of view sheep

¹ "History of Agriculture and Prices," Vol. IV., p. 56.

had been neglected. If any care was shown in the selection of rams and ewes the choice was guided by fanciful points, which possessed no practical value. For cattle no standard of shape existed, size being the only criterion of merit. A writer in the early part of the eighteenth century divided the cattle of England into three sorts—black, white and red, but almost every county had its local variety. Some attention was paid to milking qualities, and still more to capacity for draught, but propensity to fatten was disregarded. Then came Robert Bakewell—born in 1725, and succeeding to his father's farm at Dishley in 1760—and by his extraordinary talent established the principles on which British stock-breeders have developed the breeds which have made this country the "stud-farm of the world." His system of breeding—secretive as he was about his methods—speedily spread, and in the hands of the Culleys and the Collings, of John Ellman, and other pioneers, the example of Bakewell was bettered. The Dishley Leicesters spread throughout the country, and most of our present breeds of sheep bear their impress, but Bakewell's Longhorns were soon supplanted by the Shorthorns. In other districts disciples of Bakewell applied his principles to the improvement of local breeds. Throughout the land a new spirit spread among farmers. Already, not only among progressive landowners, but among their tenants, men arose who were able to apply intelligence, judgment and ability to the cultivation of the soil and the breeding and feeding of stock. The daily life of a farmer in the early part of the seventeenth century was epitomised by Gervase Markham thus :—

He is to rise at four in the morning, feed his cattle, and clean his stable. While they are feeding he is to get his harness ready, which will take him two hours. Then he is to have his breakfast, for which half an hour is allowed. Getting the harness on his horses or cattle, he is to start by seven to his work and keep at it till between two and three in the afternoon. Then he shall bring his team home, clean them and give them

their food, dine himself, and at four go back to his cattle and give them more fodder, and getting into his barn make ready their food for next day, not forgetting to see them again before going to his own supper at six. After supper he is to mend his shoes by the fireside for himself and his family, or beat and knock hemp and flax, or pitch and stamp apples or crabs for cider or verjuice, or else grind malt, pick candle-rushes, or "do some husbandry office within doors till it befall eight o'clock." Then he shall take his lantern, visit his cattle once more, and go with all his household to rest.

There had been little change among the rank and file of farmers until the latter part of the eighteenth century. Farmers then lived, thought and farmed like farmers of the thirteenth century. They were suspicious of new methods and distrusted a young man who disobeyed the saws and maxims of their forefathers. Farmers like Bakewell began to impress them with the possibility that "new-fangled notions" might have some good in them, and great landowners began to devote themselves to agricultural education in its practical sense. Coke of Holkham was the most influential of these teachers, and his annual sheep shearings provided the earliest course of agricultural instruction. Nor was the written word wanting. Arthur Young and Marshall spread the light far and wide, and their descriptions of what was done by the more progressive farmers appealed even more forcibly than their injunctions of what should be done. The new race of farmers were better educated, and more enterprising than their predecessors. Holdings became larger and offered greater scope for energy and experiment. Of the Lincolnshire farmers Arthur Young, who was not addicted to needless compliment, wrote in 1799:—

Industrious, active, enlightened, free from all foolish and expensive show. . . . They live comfortably and hospitably, as good farmers ought to live; and, in my opinion, are remarkably free from those rooted prejudices which sometimes are reasonably objected to this race of men.

As enterprise, capital and ability were applied to farming, and as the art and practice of the cultivation of the soil and the management of stock were improved, so agriculture became organised more and more on commercial lines. The stimulus came from without. A hungry people required food, and looked to the land of their own country to supply it. Population, which had increased slowly and irregularly, began to multiply with unprecedented rapidity. Under any circumstances reliance on extraneous supplies was practically impossible, for other countries had little surplus for export except in specially plentiful years, and as supplies came chiefly from Northern and Western Europe a surplus abroad was most likely to coincide with a good harvest at home, and *vice versa*. During the long warfare with Napoleon the chance of supplies coming from abroad was still further reduced. Notwithstanding the progress of agriculture and the greatly increased productivity of the land, wheat rose to famine prices, the average per quarter during the ten years 1805-14 being 93s.

Under the stimulus of insistent demand landowners and farmers were spurred to expend capital on extending the cultivated area and increasing its productiveness. Much pasture was ploughed up to grow wheat, and land which might never have been brought into cultivation was "forced into productiveness by the sheer weight of the metal that was poured into it." Money made by farming was eagerly invested in the improvement of land. Wastes were brought under cultivation, large areas were cleared of stones to give an arable surface, heaths were cleared, bogs drained, buildings erected, roads constructed. War prices, therefore, did more than enrich the agriculturist; they led to much permanent improvement of the land. When the crash came, as it did with startling suddenness in 1814-16, widespread ruin overtook the agriculturists, but their work to a large degree remained, though much of the land which

had lately been so profitable became for a time derelict. For twenty-five years the depression continued. Distress was general, and fell with great severity on the labouring classes, who were goaded to riot and revolt in town and country alike. The Luddites broke up machinery, while gangs of rural labourers destroyed threshing machines, or avenged their grievances against farmers by burning farmhouses and ricks, or wrecking the shops of butchers and bakers. In the riots of 1830-31, agrarian fires blazed from Dorsetshire to Lincolnshire. This revolt of the labourers—"the event which never happened at all—the English Revolution on the lines of the French Revolution," as a recent writer paradoxically describes it,¹ was, like the French Revolution, though in a less degree, the culmination of a period of misery. Through times of agricultural prosperity and adversity alike the labourers had suffered. High prices had not benefited them, and low, or comparatively low, prices had brought them no relief. The causes were complex. Some historians seem to attribute all the woes of the poor to the callousness and brutality of the ruling classes. If this were so it is difficult to explain—except on the hypothesis of cruel hypocrisy—the immense amount of inquiry and discussion, the innumerable schemes for the alleviation of the distress, which fill the proceedings of Parliament and the literature of the time. It seems more reasonable to believe that attempts to deal with the distress were well-intentioned, but mistaken. Unfortunately, good intentions, though they may, as the old saying has it, be adapted for road material, are an inadequate equipment for social reformers. No single cause, perhaps, was more potent in demoralising and pauperising the poor than the Speenhamland system, the outcome of a meeting of magistrates in 1795, which started with a resolution "that the present state of the poor does require further assistance than has generally been given them," and

¹ Chesterton, "The Victorian Age in Literature," p. 17.

“very earnestly recommended to the farmers and others throughout the country to increase the pay of their labourers in proportion to the present price of provisions.”¹ The scheme adopted was in fact devised to provide for every agricultural labourer a living or minimum wage, an allowance in supplement of earnings being given in proportion to the price of bread. The object was laudable; the scheme, on paper, plausible; the results may be found recorded in all their horror in the Report of the Poor Law Commissioners of 1834. The revolt of 1830, while largely attributable to this and other long-continued causes, found its immediate incentive in the antagonism to labour-saving machinery.

The destruction of machinery was to be a prominent feature of this social war. This was not merely an instinct of violence; there was method and reason in it. Threshing was one of the few kinds of work left that provided the labourer with a means of existence above starvation level.²

The revolt was suppressed with the severity of an age when flogging was regarded as necessary for the maintenance of discipline, and hanging was the penalty for almost any serious crime. But reform followed quickly. The new Poor Law of 1834 struck at the root of the evil. It could not undo the past or remove the consequences of a disastrous policy—the effects of which scar the countryside still—but, at any rate, it lifted an incubus which was crushing farmer and labourer alike, and assisted agriculture to recover from the long-drawn depression. The Tithe Commutation Act of 1836 removed another obstacle to farming progress by abolishing almost the last relic of the old payment-in-kind system.

Perhaps the most significant and far-reaching effect of this long period of agricultural depression was the decline of the yeoman or small freeholder class. This is commonly attributed to inclosure, but it may plausibly be regarded as the result of the bad times.

¹ Hammond, “The Village Labourer,” 1760-1832, p. 162.

² *Ibid.*, p. 245.

The conclusion to which all evidence that we have points is, that during the period 1785 to 1802 there was an increase rather than a decrease of the yeomen proper. . . . When we pass to the next period—that is, from 1802 to 1832—there is a different tale to tell.¹

This class had been for generations the backbone of rural England, and their political influence, based on their sturdy independence and self-respect, was great. On them fell the main burden of those public duties the cheerful fulfilment of which forms the secret of that genius for self-government which is the pride of the race. From them Hampden and Cromwell drew their power.

Compared with the bulk of the population they were a privileged class, and stood by their own; it was they who restored the franchise to the 40s. freeholders in 1654, and refused to extend it to the copyholders. But the tenure of much of the land of England by men with whom, however poor, no landlord or employer could interfere, set a limit to the power of wealth, and made rural society at once more alert and more stubborn, a field where great ideas could grow and great causes find adherents.²

There is general agreement that there was at one time a very considerable proportion of the land occupied by men who owned the land they cultivated, although it seems clear that the "yeomen of England" included large numbers who were not freeholders, but held by different forms of tenure—as, for example, leases for lives and copyhold—which were, as regards security of individual possession during lifetime, almost equivalent to freehold. There is no sufficient evidence to show what proportion they bore to the total number of cultivators of the soil. It appears however, that there was a shrinking in the number of the smaller owners somewhere between the beginning of the seventeenth century and the year 1785, and again during the period of depression at the

¹ Johnson, "The Disappearance of the Small Landowner," p. 144.

² Tawney, "The Agrarian Problem in the Sixteenth Century," p. 39.

beginning of the nineteenth century. In any case, we know that in 1912 only 13 per cent. of the agricultural holdings of England and Wales were owned by their occupiers, a proportion which is probably very much less than it was a century ago.

In the "thirties," at the beginning of what we have come to term the "Victorian age," rural England recovered from its depression, shook itself free from ancient shackles, and began to feel the full impulse of the modern spirit.

There are proofs on all sides (wrote Philip Pusey in 1839, in the opening paper of the *Journal* of the Royal Agricultural Society), whether in the local societies which are springing up in every country, in the farmers' clubs which are being formed, the new machines which are invented, new manures, and new varieties of seed which are announced—above all, and practically, in the improving face of the country, which show that the British farmer is not liable to the charge of being blindly attached to ancient practice, but is ready, with the caution, however, which befits a man whose livelihood is in agriculture, as well as his pleasure, to adopt improvements in his art, and even to seek for them—that the spirit of inquiry is afloat.¹

The reign of Queen Victoria began in the midst of a transition stage from one state of social and industrial development to another.

Roughly speaking, the first thirty-seven years of the new reign formed an era of advancing prosperity and progress, of rising rents and profits, of the rapid multiplication of fertilising agencies, of an expanding area of corn cultivation, of more numerous, better-bred, better-fed, better-housed stock, of varied improvements in every kind of implements and machinery, of growing expenditure on the making of the land by drainage, the construction of roads, the erection of farm buildings, and the division into fields of convenient size. So far as the standard of the highest farming is concerned, agriculture has made but little advance since the "fifties."²

Some years ago³ I laid before the Farmers' Club a

¹ "On the Present State of the Science of Agriculture in England," *Journal R.A.S.E.*, Vol. I., 1839, p. 21.

² "English Farming, Past and Present," p. 346.

³ See "Agriculture under Free Trade," p. 21.

brief sketch of the progress of British agriculture during the fifty years 1846-96, and I will not attempt to go over the same ground again. It was a period starting with the most gloomy forebodings, for the Repeal of the Corn Laws was commonly believed to be the end of all things agricultural. In looking back we can see that it was an event which falsified the predictions both of those who supported and those who opposed it, for it neither ruined agriculture nor immediately reduced the price of wheat. The real blow to agriculture came not by legislation, but by the resistless march of the world's progress—the steamship, the railway, the refrigerating chamber—which abolished for many of his products the preferential advantage, which the British farmer had up to the “seventies,” of proximity to his markets. And the period closed, in the mid- “nineties,” in depression almost as deep as that which marked the “twenties.” Since then the tune of British agriculture has been pitched in a lower key. We have heard no more of “high farming,” the flow of capital into the land has been reduced, the fine fervour of improvement has been moderated, and farmers have adopted, so far as possible in the conduct of their business, the motto of “small profits and quick returns.” No farmer can read the story of the last three-quarters of a century without a feeling of pride. On the whole, it forms the best vindication of the farming class against the aspersions sometimes made upon them, for it demonstrates the enterprise, the intelligence, the technical skill, and the pluck with which British farmers have made the most of good times and the best of bad ones.

9 DEC. 1921

CHAPTER II.

AGRICULTURE UNDER FREE TRADE, 1846-96.¹

THE Repeal of the Corn Laws was one of the most important events recorded in the history of British agriculture. In the full sense of the term it marked an epoch, and the year 1846, in which it occurred, forms a dividing line on this side of which a new set of conditions arose which differentiate the subsequent period from certain periods, and may be said to have permeated the whole of the rural economy of these islands since that day.

The famous Corn Importation Act (9 & 10 Vict. c. 22), introduced by Sir Robert Peel, received the Royal Assent on June 26th, 1846, and it is from that memorable day that the period of Free Trade is commonly dated. It is true that Sir Robert Peel's Act contained provisions which continued a duty on imported wheat ranging from 4s. to 10s. per quarter, according to price, until February 1st, 1849, and that for twenty years afterwards a duty of 1s. per quarter was imposed, but substantially, of course, it is correct to say that the Corn Laws were repealed in June, 1846. But what were the Corn Laws?

For centuries the regulations with respect to the corn trade were principally intended to promote abundance and low prices. From the Norman Conquest down to the reign of Henry VI. the exportation of corn was prohibited, and its importation was substantially free. The first record of the importation of corn which I have found was in 1347; exportation had in early days been common, and Britain was during the Roman occupation "one of the great corn-exporting countries of the world" (J. R. Green).

¹ Read before the Farmers' Club, December, 1897.

In 1436 an Act was passed authorising the exportation of wheat whenever the home price did not exceed 6s. 8*d.* per quarter, and of barley when the price did not exceed 3s. 4*d.* In 1463 the importation of corn was prohibited until the price exceeded that at which exportation ceased. These enactments continued in force until 1562, when the prices at which exportation was allowed were extended, and in 1570 a new principle was introduced, viz., that of imposing a duty on the exportation of corn. During the following 100 years various minor alterations were made, and in 1670 the exportation price was raised to 53s. 4*d.* per quarter for wheat and other grain in proportion, and at the same time a duty of 16s. per quarter was imposed on the importation of wheat until the price rose to 53s. 4*d.*, a duty of 8s. between that price and 80s., and poundage of 4*d.* when the price exceeded 80s.

At the accession of William III. (1689) another new system was adopted by the grant of a bounty of 5s. on every quarter of wheat exported when the price was not above 48s., and on oats, barley and rye proportionately. This combined system of duties on imports and bounties on exports under the Acts of 1670 and 1689 continued, except for temporary suspensions and modifications for short periods, for nearly a century. In 1774 an Act was passed which stated that the several Acts heretofore made concerning the duties and bounties on the importation and exportation of corn had greatly tended to the advancement of tillage and navigation; yet, nevertheless, it having been of late years found necessary, on account of the small quantity of corn in hand and of the shortness of the crops, to suspend the operation of these laws by temporary measures, it was desirable that a permanent law should be passed, to render such temporary expedients unnecessary. This Act permitted wheat to be imported at a nominal duty of 6*d.* per quarter, whenever the price reached 48s. Exportation was forbidden unless the price was below 44s., and then a bounty of 5s. per quarter was

granted on exports in British ships. There were corresponding duties and bounties for other corn.

I digress for a moment to notice a branch of the Corn Laws which, though somewhat outside our immediate object, is not without interest, and to do so I quote from McCulloch's "Commercial Dictionary."

Besides attempting to lower prices by prohibiting exportation, our ancestors attempted to lower them by proscribing the trade carried on by corn dealers. This most useful class of persons were looked upon with suspicion by everyone. The agriculturists concluded that they would be able to sell their produce at higher prices to the consumers were the corn dealers out of the way, while the consumers concluded that the profits of the dealers were made at their expense; and ascribed the dearths, that were then very prevalent, entirely to the practices of the dealers, or to their buying up corn and withholding it from market. These notions, which have still a considerable degree of influence, led to various enactments, particularly in the reign of Edward VI., by which the freedom of the internal corn trade was entirely suppressed. The "engrossing" of corn, or the buying of it in one market with intent to sell it again in another, was made an offence punishable by imprisonment and the pillory; and no one was allowed to carry corn from one part to another without a licence, the privilege of granting which was confided by a statute of Elizabeth to the quarter sessions.

These laws were considerably modified in 1624, and in 1663 the "engrossing" of corn was declared to be legal as long as the price did not exceed 48s. per quarter. In 1773 the last remnant of the statutory enactments restraining the freedom of corn dealers was repealed, but notwithstanding this the "engrossing" of corn was subsequently held to be an offence at common law, and as late as 1800 a corn dealer was convicted of it though he was not brought up for judgment.

To return to the laws affecting the importation and exportation of corn, the next important Act was passed in 1791. The price when importation of wheat at the duty of 6*d.* per quarter was permitted was raised from 48s. to 54s.; under 54s. and above 50s. a duty of 2s. 6*d.* per quarter was imposed, and under 50s. there was a prohibitive duty

of 24s. 3*d.* The bounty on exportation was continued when wheat was under 44s., and exportation was prohibited when it rose above 46s. In 1804 a new Corn Law was passed, by which the prohibitive duty came into force whenever wheat was below 63s., the 2s. 6*d.* duty being charged between 63s. and 66s., and the 6*d.* duty above 66s. The bounty on exportation was granted at 50s., and exportation prohibited when the price was above 54s. It must be remembered that I am only mentioning the chief enactments, and that scarcely a year, or at most two or three years, passed during the latter half of the eighteenth and the early part of the nineteenth century without an Act or an Order in Council modifying, or suspending for short periods, the duties or bounties, or both.

In 1806 free trade in corn between Great Britain and Ireland was established. Hitherto it had been subject to various restraints. I may mention that there was both importation and exportation of corn to Ireland every year, and sometimes the one and sometimes the other predominated. In 1807, as an instance, the imports from Ireland were 23,048 quarters and the exports 524 quarters; in 1810 the imports were 8,321 quarters and the exports 18,432 quarters.

We now come to what may be termed *the* Corn Law—the Act of 1815. By this Act (55 Geo. III. c. 26), commencing March 23rd, foreign corn, meal or flour might at all times be imported and warehoused without payment of duty; but could only be taken out of warehouse for home consumption, or entered for the like purpose on importation, whenever the prices of British corn should be at or above the following sums, and then duty free:—

	For Corn not of the British Colonies in North America.	For Corn of the British Colonies in North America.
Wheat	80s. per quarter.	67s. per quarter.
Rye, peas & beans	53s. „	44s. „
Barley, bere or bigg	40s. „	33s. „
Oats	27s. „	22s. „

It will be seen that the principle of this measure was the entire prohibition of the sale of all imported wheat except Canadian until the price reached 80s., but there was no duty charged upon it. The preferential treatment of Canada in the Corn Laws is noteworthy. Canadian imports of wheat, I may observe, amounted in 1801 to 67,595 quarters, in 1807 to 249,713 quarters, and in 1812 to 10,797 quarters. Under the Act of 1815 they amounted in one year, 1817, to 311,436 quarters.

Probably no one nowadays will contend that the Corn Law passed in 1815 was a prudent or even a justifiable measure. The nation had just concluded its long and terrible struggle with Napoleon, and although, thanks to our command of the sea, trade and commerce had flourished to an extraordinary degree in spite of, and indeed to some extent in consequence of, the war, yet the canker of discontent was present among the masses, on whom the burden of high prices had fallen, and to those who looked below the surface the reaction from the stress of the long war had threatening possibilities. Food had been at famine prices and wheat had been sold at £5 and upwards per quarter. Yet this was the time chosen by Parliament to pass a law which prohibited the sale of imported wheat altogether until the price reached 67s. per quarter, and from all sources but one until it reached 80s. per quarter.

Now, the price of wheat had ranged as follows during the thirty-five preceding years, taking quinquennial averages :—

	<i>s.</i>	<i>d.</i>
1781-85	48	7
1786-90	47	3
1791-95	53	8
1796-1800	73	5
1801-5	80	0
1806-10	87	11
1811-15	94	3

Practically, therefore, what the Corn Law of 1815 proposed to do was to maintain prices in time of peace at

the level at which they stood in time of war, and indeed this was its avowed aim. Even a firm believer in the necessity for some measure of protection might admit that such a measure as this was unjustifiable. It was doomed to certain failure, and in fact it began at once to break down. To begin with it failed to keep up prices. In 1817, it is true, the average price of wheat was 96s. 11*d.*, but in only one other year did it ever subsequently reach 80s. So little good did it do to farmers, that five years afterwards (in 1821) a Committee of the House of Commons was appointed to inquire into the causes of the depressed state of agriculture. At the same time it exasperated the masses of the population almost to the verge of revolution, and aroused a prejudice in their minds against landowners and farmers the effects of which remain even to this day.

In 1822 an Act was passed which provided that when the price of wheat should have risen to the level at which free importation was allowed by the Act of 1815, the provisions of that Act should cease, and the prices above which wheat should be admitted should be lowered to 70s. for foreign, and 59s. for Canadian wheat. Duties were, however, imposed on corn so admitted. This Act need not detain us, for it never came into force except for Canadian wheat, as prices did not subsequently reach the level of 80s.

In 1828 a "sliding-scale" Act was passed, which allowed wheat to be imported on payment of a duty of 20s. 8*d.* whenever the price was under 67s. per quarter, and falling gradually to 1s. when the price was 73s. and upwards. In 1842 Sir Robert Peel introduced and passed a "sliding-scale" Act which imposed a duty of 1*l.* on imported corn when the price was less than 51s., falling, shilling by shilling, to a shilling duty when wheat was at 73s. and upwards.

The following figures give the quinquennial average prices of wheat during the period 1816-45 :—

	s.	d.
1816-20	80	10
1821-25	57	3
1826-30	61	7
1831-35	52	8
1836-40	61	2
1841-45	54	9

I may mention that wool had been imported free of duty down to 1802. A duty of 5s. 3*d.* per cwt. was then imposed; in 1813 it was raised to 6s. 8*d.*, and in 1819 to 56s. per cwt., or 6*d.* per lb. In 1824 it was reduced to 1*d.* per lb. of 1s. value, and $\frac{1}{2}$ *d.* per lb. under 1s. value, colonial wool being admitted free. In 1844 the duties on wool were abolished. From 1660 to 1825 the export of wool was prohibited.

Of the Anti-Corn-Law agitation and the oft-told story of Repeal, I need hardly speak. It may be noted, however, that, as so often happens, the actual event was precipitated by an accidental cause. Cobden and Bright had conducted their famous campaign for seven years without appearing to get appreciably nearer success in Parliament. Mr. Villiers, who was the leader of the small Free-Trade party in the House of Commons, had for several sessions brought forward motions in favour of the repeal of the Corn Laws, but without the remotest chance of securing a majority. Of the two great parties neither had accepted the policy. The leaders on both sides, viz., Lord John Russell and Sir Robert Peel, had both admitted the general principle of Free Trade as an abstract proposition, but neither believed that the free importation of corn was practicable. No doubt the end was inevitable, but it might have been some years longer in coming if a catastrophe had not suddenly occurred which upset all the calculations of politicians. As Mr. Bright many years afterwards said, "Famine itself, against which we warred, joined us." In the autumn of 1845 the potato crop utterly failed in Ireland, with the result that the gaunt spectre of famine smote the nation

with a dreadful fear. A great cry arose on both sides of St. George's Channel for the opening of the ports, and a letter from Lord John Russell to his constituents publicly committed his party to that proposal. The result is well known. Sir Robert Peel bowed to what he deemed to be the necessities of the case, and boldly went to the root of the matter by accepting the policy of the repeal of the Corn Laws, and introducing the measure to which I have previously referred. By the abolition of the duty on corn and of the duties on the importation of foreign cattle and wool, Protection, so far as it affected agriculture, was swept away.

The extraordinary changes in the condition of the country, and of all the circumstances under which every kind of industry is carried on, which have taken place during the last half century, have been so lately recalled to us in connection with the Diamond Jubilee, that I need not allude to them at length. I will only remind you of one or two pregnant figures. In 1841 the population of the United Kingdom was 26,700,000; in 1891 it was 37,800,000. The number of consumers of agricultural produce, therefore, has increased by over 42 per cent. The trade of the country has increased enormously. Going back only to 1854, the first year for which we have comparable figures, I find the total net imports amounted to £133,000,000, and the total exports of British and Irish produce to £97,000,000. In 1896 the corresponding figures were: imports, £442,000,000; exports, £240,000,000. Again, in 1855 (in which year the official returns commence), the total annual value of property and profits assessed to income tax was £317,000,000; in 1896 it was £710,000,000. Under Schedule A the figures are: 1855, £125,000,000; 1896, £210,000,000. Under Schedule D: 1855, £91,000,000, 1896, £351,000,000. These facts alone suffice to indicate the extent of the progress of the nation commercially and industrially.

Let us take now a few agricultural figures, and here we

are confronted with the difficulty that official returns of crops and stock only commenced in 1866 and of production not until twenty years later. There is no doubt that the returns nowadays are reliable, and probably the most trustworthy in the world, but it is difficult to say as much of the earlier estimates which I shall mention, not because those who made them were not careful, but because the data at their command were incomplete. With this general observation I will not (as this is not a statistical paper) give details, but will simply state the figures as they stand.

According to McCulloch, the area under crops—*i.e.*, arable land—in the United Kingdom was, in 1846, 21,930,000 acres. In 1867, according to the Agricultural Returns, it was over 23,000,000 acres, and in 1896 it was under 20,000,000 acres. It will be observed that twenty years after the adoption of Free Trade the land under the plough had increased by 1,000,000 acres, while within the last thirty years it has decreased by 3,000,000 acres. As this fact runs counter to what is probably the common belief, *viz.*, that there was more land under the plough during the existence of the Corn Laws than there has been since, I quote, in support of it, some figures recorded in a paper read by Major Craigie before the Royal Statistical Society in 1883. He there refers to an estimate laid by Mr. William Couling before a Parliamentary Committee on Emigration, which, he says, “we are told was the result of personal researches conducted both between 1796 and 1816, and again in 1824-27, involving journeys of over 50,000 miles in 106 counties of the United Kingdom.” The result was an estimate of the “arable and garden land” of the United Kingdom of 19,137,000 acres.

The acreage of the principal crops in England and Wales in 1846, as stated by McCulloch, is given as follows, and I have added for comparison the official figures for 1867 and 1896:—

	1846.	1867.	1896.
	Acres.	Acres.	Acres.
Wheat . . .	3,800,000	3,100,000	1,600,000
Oats . . .	2,500,000	1,500,000	1,800,000
Barley, etc. . .	1,500,000	2,800,000	2,300,000
Roots . . .	2,700,000	2,700,000	2,600,000
Clover . . .	1,300,000	2,500,000	2,700,000
Fallow . . .	1,500,000	800,000	400,000
	13,300,000	13,400,000	11,400,000

Here again we see no diminution in the first twenty years, but the whole decrease taking place in the last thirty years.

Turning to live-stock of the United Kingdom, we find a different story. I take for comparison the figures for the nearest year I have available, viz., 1855, and in this case again the estimate is McCulloch's :—

	1855.	1867.	1896.
Horses . . .	2,050,000	Not returned	2,116,000
Cattle . . .	7,955,000	8,731,000	10,942,000
Sheep . . .	27,972,000	33,818,000	30,854,000
Pigs . . .	3,686,000	4,221,000	4,301,000

One other point, *i.e.*, the average yield per acre of the principal crops. Of these I give estimates for wheat and barley for the three years 1837, 1850, and 1896. That for the first year is the mean of figures taken by McCulloch from the old Board of Agriculture reports, and really refers to a somewhat earlier period than the date mentioned; the second is an estimate carefully made by the late Sir James Caird, and the third is the official average for 1886-95 given in the Produce Returns of the Board of Agriculture :—

	1837. Bushels.	1850. Bushels.	1886-95. Bushels.
Wheat . . .	21	26½	29
Barley . . .	32	38	32

The increase in the average yield of wheat is no doubt partly the result of the decreased acreage, as the crop is now grown mainly on the soils most suited to it, and in the same way probably the decreased yield of barley since 1850 may be partly due to an extension of area involving the growth of the crop on somewhat less suitable land.

If I were going into statistical details I might show exactly when the maximum area was reached in the case of various crops, and when the decline took place, and I might also show how during the past thirty years the numbers of live-stock—and particularly of sheep—have fluctuated from temporary causes such as outbreaks of disease. The year 1867 has been taken for no other reason except that it is the first for which we have reliable official returns. As a matter of fact, both the breadth of land under wheat and the total arable area were greater in the period 1871-75 than in 1867. A fair index, in a general way, of the agricultural position is to be found in the annual value of lands in the United Kingdom assessed to Schedule A of the income tax. In 1862, the first year for which it can be given, it was £60,300,000, and in the next two years it was slightly less, viz., £60,100,000. From 1864 the amount annually and steadily increased until, in 1880, it reached its maximum, £69,500,000. From that point the value of lands fell year by year until in 1896 it reached £55,000,000.

It seems difficult from these facts to draw any general conclusion as to the influence of Free Trade on agriculture. It appears that for over a quarter of a century, farming, as shown by all the tests we can apply, was prosperous. The plough was kept going to the same extent as under the Corn Laws, the number of live-stock increased, and the value of agricultural land also increased. These con-

clusions, which are revealed by the dry light of statistics, coincide, I believe, with the facts as agreed to by what is termed general knowledge. I confess, therefore, that I do not see how it is possible with any show of reason to refer back to 1846 for the cause of depression which did not show itself for thirty years afterwards. It might, of course, be argued that the depression would have been prevented or mitigated if Protection had been continued ; but, on the other hand, it might also be argued that if Protection had continued the prosperity of the earlier period would have been less. But neither argument affects the historical facts.

Whether or no it was possible or desirable to continue measures limiting in any way the importation of foreign food supplies, there is, at any rate, no question about the enormous extent to which they have increased. The figures given on p. 33 for 1854 and 1896 respectively show the extent of the increase in the case of the principal agricultural products.

This table speaks for itself. Without professing to be exhaustive, it shows for the chief articles competing with British farm products an increase, measured by value, of over £100,000,000. Of course, owing to the fall in prices the measure by value does not represent the full facts. Thus in the case of wheat the increase has been five-fold in quantity but only double in value. One exception to this rule—which is in some respects ominous—is noticeable in the case of cattle and sheep, the value of which per head is much higher now than in 1854, in consequence, of course, of the great improvement in their quality.

The keynote of farming during the last half-century, apart from economic conditions, has, I think, been the application of science to practice. It was not long before 1846 that the Royal Agricultural Society had been started with its admirable motto of "Practice with Science," and earlier still the Bath and West of England

	1854.		1896.	
	Quantity.	Value.	Quantity.	Value.
	No.	£	No.	£
Live Cattle & Sheep.	297,774	1,434,621	1,332,145	10,438,689
Bacon and Hams	433,510	892,462	6,008,938	10,990,604
Beef	192,274	377,809	2,907,236	5,332,528
Butter	482,514	2,171,194	3,037,718	15,344,364
Cheese	388,714	906,078	2,244,525	4,900,342
Corn—				
Wheat	14,868,650	11,693,737	70,025,980	21,678,989
Barley	1,974,900	836,798	22,477,322	5,709,531
Oats	2,791,110	1,377,226	17,586,730	4,226,317
Maize	5,784,420	2,748,606	51,772,100	9,422,539
Other kinds.	—	1,102,499	7,240,903	1,961,717
Wheat Flour.	3,646,505	3,970,549	21,320,200	9,227,873
Other Meal.	—	30,868	1,459,497	573,117
Eggs	121,946,801	228,650	1,589,401,000	4,184,656
Lamb	274,595	707,082	1,739,463	2,268,693
Pork	160,898	379,135	554,750	979,207
Potatoes	16,446	17,467	2,244,627	907,975
Wool	947,518	6,499,004	6,371,207	25,342,330
Hops	119,040	1,033,649	207,041	591,582
Mutton	—	—	2,895,158	4,718,546
		36,407,434		138,799,599

Society had been carrying out the spirit of its Saxon equivalent, "Work and learn." Rothamsted, though it originated as far back as 1834, was not started with its present scope until 1843. The effect of the careful and patient labours of Sir John Lawes and Sir Henry Gilbert upon British Agriculture is beyond estimation. Their work has permeated farm practice and has influenced every phase of the cultivation of the soil and the treatment of live stock. It would be impossible to attempt to summarise the results of the Rothamsted experiments. The simple fact that the first original paper emanating from Rothamsted appeared in 1847, and that in the

following forty years, to come no later, there were published as many as 104 separate papers and memoirs, will sufficiently justify my hesitation.

Contemporaneous with the foundation of Rothamsted as an agricultural experiment station, the address by Baron Liebig to the British Association, in 1840, on "Chemistry in its Relation to Agriculture and Physiology," materially assisted in directing attention to the importance of scientific discoveries to the cultivation of the soil.

One immediate result was a great stimulus to the use of artificial fertilisers. Bones had been used as a fertiliser since 1774, but it was not until 1840 that guano was introduced. In 1842, Sir John Lawes introduced superphosphate. Nitrate of soda was first imported from Chili as far back as 1830, but it was some time before it came into general use. Sulphate of ammonia, a substance which is obtained as a by-product in the manufacture of coal-gas and in some other industries, was introduced, I believe, about 1851, and basic slag about fifteen years ago.

I should be afraid to guess how many millions of money have been put into the land in the form of artificial manures, and still more fearful of speculating how many of them have been recovered. In the chronicles of agriculture, we seldom nowadays meet with the phrase "high farming," which peppered the pages of Wren Hoskyns and Mechi, and other writers of thirty or forty years ago. But if "high farming" in the old sense has gone, or been forced, out of fashion, I fancy that artificial manures have settled down, so to speak, more into their proper place as valuable aids to agriculture than when in their earlier days enthusiasts appear to have anticipated that they would establish an agricultural millennium.

Geology has contributed much, and botany even more, to agricultural progress, but I am inclined to think that

in these latter days, at any rate, the science to which farmers have been most indebted is entomology. If this is so, it is largely due to the assiduous labours of Miss Ormerod, who may almost be said to have discovered the science of agricultural entomology, and who certainly has done more than any other person to popularise it. The newest science to come to the aid of the perplexed farmer is bacteriology, which appears to have great possibilities of usefulness, especially to the makers of cheese and butter.

Turning from the scientific to the practical side of the subject, the first point which naturally strikes one as characteristic of the past half century is the improvement in and the extended use of machinery on the farm. At the commencement of the period a large part of the arable land was ploughed by oxen, and the greater part of the corn was sown broadcast, and threshed out with the flail. But with the outburst of energy which marked the period of the Exhibition of 1851 a great impetus was given to the application of mechanics to agriculture. Steam was regarded by many as being certainly destined to supplant both oxen and horses for the cultivation of the land, and to be applicable to all farm operations. Improvements were made in the old forms of implements, and new ones were invented. Among the latter may be mentioned the self-binding reaper, first invented in 1851, introduced as a wire binder in this country in 1873, and as a string binder in 1878. The reaper, in substantially its present form, was invented in 1826, but its use in this country comes within the last half century. The mower in its present form dates from 1852. Haymakers, though first patented as long ago as 1814, have only come into general use within the last thirty years or so. The horse rake was first patented in 1841, but was not perfected for many years afterwards. The Crosskill roller dates from 1841, and the chain harrow from 1842. The threshing machine had its birth in the eighteenth

century, but its common use and its perfected form come within the period under review. The elevator was first patented in 1853, but did not come into general use for another decade or more. In 1883 a sheaf-binding apparatus was applied to the threshing machine. The exhaust fan was introduced for dressing corn after 1853, and the improvements which have been made in this branch alone would take a book to describe. I need only mention the substitution of rollers for stones in milling to indicate a revolution which ruined hundreds of country millers, and, as some think, has been a questionable boon to bread eaters. The turnip cutter was introduced, I believe, about fifty years ago, the chaff cutter in 1847, and the corn-grinding mill in 1857. In the department of the dairy, mechanical ingenuity has been very active during the past twenty years. All kinds of improvements, or alterations, have been made in churns. The most remarkable invention was the centrifugal cream separator introduced in this country at the Kilburn Show in 1879. Its principle has been applied in various ways, and latterly a machine has been devised in which the milk goes in at one end, and the butter issues at the other. A mechanical milking machine is also one of the latest inventions.

The change which has taken place during the past half-century might perhaps be concisely summed up by saying that the balance of power has shifted from the corn grower to the stock breeder and the dairy farmer. In some calculations which I made in 1895 I estimated the annual receipts for the farm crops of the United Kingdom at £64,000,000, for meat and live stock at £89,000,000, and for dairy products and eggs at £41,000,000. The development of stock-breeding has been very great, in spite of the disastrous and discouraging effects of outbreaks of rinderpest, foot-and-mouth disease, pleuropneumonia and other diseases. The increase in the national herds and flocks has been already noted, but

still more remarkable has been the improvement in their general character. Among the sciences to which agriculture has been indebted mention should be made of physiology and, particularly, veterinary science. To a fuller grasp of scientific principles is probably attributable the great development of early maturity, and consequently of economical meat production. It is sometimes doubted whether a knowledge of the principles of breeding farm stock has really advanced greatly beyond what was known and practised by Collings, Bakewell, and other heroes of the last century, but there can be no doubt whatever that there has been a wide diffusion of knowledge and a general levelling-up of the character of the farm stock of the country. One striking fact—at once a cause and an effect of this tendency—is the multiplication of societies for the publication of breed registers and the protection of the interests of particular breeds. The Shorthorn Herd Book dates from 1822 and the Hereford Herd Book from 1845, but with these exceptions and that of the Thoroughbred Stud Book, I believe all the present breed-register societies have come into existence since 1846, and most of them within the last twenty years.

The extension of dairying has been alluded to, but mention might also be made of the equally remarkable development of other branches of farming, which fifty years ago would hardly have been recognised as coming within the scope of agriculture, such as the cultivation of fruit and vegetables, and the keeping of poultry.

Time fails to refer to other points, such, for instance, as the crowding-out of the class of yeoman farmers, and still more the wholesale migration of labourers from the land. Both these facts, and all they imply, the historian of the period cannot overlook. The dominant fact of the latter half of the period has been the steadily continuous fall of prices. I complete the figures which I have previously given of the price of wheat :—

	s.	d.
1846-50	51	10
1851-55	55	11
1856-60	53	4
1861-65	47	6
1866-70	54	7
1871-75	54	8
1876-80	47	6
1881-85	40	1
1886-90	31	5
1891-95	27	11
1896	26	2

During the disastrous period of depression the fall in prices of corn and meat has been, comparing 1876-78 with 1894-96, wheat 52 per cent., barley 40 per cent., oats 40 per cent., cattle 33 per cent., sheep 23 per cent. Wool has fallen about 50 per cent., dairy produce nearly 30 per cent., and potatoes 20 to 30 per cent.

I am conscious of the inadequacy of my attempt to deal with this large subject, and I can claim to have done no more than select a few facts which may perhaps be suggestive of discussion. In doing this I may have failed in many ways, but at least I have tried to do so impartially. But it is, of course, impossible to ignore the controversial aspect of the subject.

I have endeavoured to sketch British agriculture under Free Trade. The question naturally presents itself, what would the history of British agriculture during the past half-century have been under Protection? Or, to put it another way, to what extent has the condition of agriculture been affected by the repeal of the Corn Laws? I honestly confess that I cannot supply a fair and complete answer to the question. So many diverse influences have affected the economic conditions that I am quite unable to disentangle consequence from coincidence, or distinguish between *post hoc* and *propter hoc*.

It is quite clear that Free Trade alone is not accountable for the depression of prices which has especially characterised the past fifteen or twenty years. Setting aside the consideration of changes in the currency laws—a

subject into which I will not enter—the great development of the means, and the cheapening of the cost, of transport from the uttermost ends of the earth, have obviously been a potent factor in bringing food supplies to compete with the products of British land. We know also that in neighbouring countries where agriculture is protected prices have fallen, and depression has been keenly felt.

On the other hand, it is also clear that if import duties on corn had been continued they would, to the extent of the duties, have kept prices for corn higher, and if they had been sufficiently high they would have prevented a large breadth of arable land from being laid down to pasture. But just as we know that in the United States the tariff on wool has been a very doubtful boon to farmers, by diverting their attention from other branches of production, and even checking efforts to improve the mutton qualities of their sheep, so it might have been that the live stock and dairying interests of this country would have been stunted in their development by the existence of Protection on corn-growing. And of course it must be remembered that if import duties had been continued on wheat they would certainly have been continued on articles which farmers buy, and we can only speculate about the precise effects upon a particular industry if this country had never adopted Free Trade.

If I refrain from dogmatising about the past, still more do I hesitate to forecast the future.

Twenty or thirty years ago it was hardly possible to discuss Protection. Free Trade was elevated upon a kind of pinnacle, as if it were a fetish which it was impious to examine. We have, happily as I think, outgrown that stage. It is now generally recognised that Free Trade is not a divine revelation but a human device, possessing obvious advantages, but having also certain imperfections and limitations. Events of late years have seemed to indicate that the working classes—who in the

long run, right or wrong, will have their will—do not shrink from Protection as at any rate a possible expedient. The claim set up in certain industries for a “ living wage ”—*i.e.*, a fixed minimum remuneration for workers—appears to involve, in the long run, protective duties. It seems clear that no industry can fix the cost of production—or any material part of it—and allow unrestricted competition from countries where the cost is lower. A return to Protection in some form by this country, whether for good or ill, may well be within the possibilities of the twentieth century.

I will not, at the end of a dissertation already too long, discuss the merits of Protection for agriculture. When I served on the Royal Commission on Agriculture I had the privilege of personally interviewing some hundreds of farmers in the different districts to which I was sent, and very many of them insisted on advancing arguments to demonstrate to me that a duty on foreign corn would be a benefit to British corn-growers. It was my duty to listen, and I listened. But, if I may be pardoned for saying so, it is not necessary to prove a truism. It is self-evident that an import duty on a particular article is, so far as it goes, an advantage to the home producers of that article. People sometimes assert, with an air of surprise, that the majority of farmers are Protectionists, and everyone will remember the outburst of indignation which was aroused at the declaration of opinion made by the Agricultural Conference, at St. James's Hall, in 1892. But, as I have always maintained, that declaration only proved that the Conference was representative. I venture to say that four-fifths of British farmers are Protectionists, but I also allege that not one-fifth of them believe in the present probability of obtaining protective duties on food. Even those who do not think that it is hopeless to expect Protection some day admit that it is in the dim and distant future.

I will conclude with a point which cannot too often be

insisted on. The Repeal of the Corn Laws took away an advantage which farmers had long possessed. They were an hereditary benefit. The nation incurred a debt to agriculture, which has not yet been paid. It seems to me that on this ground Protectionists and Free Traders may harmoniously meet. If the nation demands cheap food let it compensate in some measure those at whose expense it obtains it. Let it at least give fair play, if not favour, to what is after all its oldest and its greatest industry.

CHAPTER III.

ENGLISH MARKETS AND FAIRS.¹

IN these days of the telephone, the telegraph, and the train we are perhaps apt to underestimate the supreme importance which in a less advanced stage of civilisation attached to the provision of local facilities for the disposal of the produce of the soil. In a sense the farmer is still, and inevitably must be, the slave of his market, but in the olden days he was so in a much narrower and more absolute sense than now. When buying and selling were entirely matters of personal intercourse, the market or fair afforded practically the only means by which the producer and consumer came into contact. Consequently, all such institutions were of vital importance, alike to the inhabitants of the towns and to the tillers of the land.

The distinction between a market and a fair is well understood, though it is not very clearly defined. A market, viewed in its strictly legal aspect, is an authorised public concourse of buyers and sellers of commodities, meeting at a place, more or less strictly limited or defined, at an appointed time. A fair is a large market held less frequently, and commonly extending over a longer period. "Every fair," says Lord Coke, "is a market, but every market is not a fair." But though markets are now the most numerous, the fair is the older institution. The word "fair" signifies a gathering at the time of one of the annual religious feasts, and is derived, according to Messrs. C. I. Elton and B. F. C. Costelloe,² from *feria*, which is the

¹ *Journal Royal Agricultural Society*, Vol. III., 3rd series, 1892.

² Report to the Royal Commission on Market Rights and Tolls on Charters and Records relating to the History of Fairs and Markets in the United Kingdom.

proper ecclesiastical term for a saint's day. These feasts were no doubt frequently a continuation of still older pagan festivals, which, in addition to their character as religious functions, were from the earliest times utilised for purposes of trade and commerce as well as for pleasure. It appears to be impossible to dissociate the fair from the festival in early English history, and there is no doubt that, in their original form, the gatherings were held on those great occasions when the national sacrifices were offered and the public assemblies held.

There is very little reference to fairs either in the collection of laws or other authorities relating to the period of English history preceding the Norman Conquest, although there is no doubt that such annual gatherings took place in many parts of England throughout the whole period between the establishment of the Teutonic kingdoms in England and the imposition of the Norman constitution.¹

Domesday Book only mentions two fairs, and gives no complete list of existing markets. After the Norman Conquest the native British fair seems to have been reconstituted on the continental model, and it was recognised as a valuable source of revenue to the Crown. As foreign trade developed in the time of the Plantagenets, the institution of the annual fair rose in importance, and during several centuries it filled a not inconsiderable position in the commercial life of the country. The fairs were only shorn of their serious importance—except for special purposes—by the progress of the world, and by the discovery of swift means of intercommunication. When the growth of trade progressed faster than the improvement of the means of communication, the value of fixed centres of periodical exchange was great; but, as the means of communication improved, the great marts of Plantagenet, Tudor, and Stuart times have, as Professor Rogers observes, “degenerated into scenes of coarse

¹ *Ibid.*, p. 3.

amusement, and after having been granted and protected as the highest and most necessary franchises, have been tolerated for the sake of their traditions, and are now being generally suppressed as nuisances." Mr. A. J. Ashton, one of the Assistant Commissioners on Market Rights and Tolls, after holding thirty-four public inquiries in the south and west of England, reported that the fairs are decaying all through that part of the country. The cattle fairs, he observed, are being spoilt by the cattle markets, and the pleasure fairs are decaying and ought to be stopped.

The extent to which fairs have died out within the present century is indicated by a return given as an appendix to the report of Messrs. Elton and Costelloe, which has been already referred to. This gives a complete list of fairs existing in England and Wales in 1792, according to "Owen's New Book of Fairs," arranged in counties, and compared in parallel columns with the list of fairs published for the year 1888. The summary on p. 45 compiled from this list, may be interesting as showing the relative number of fairs existing in each county at the respective dates.

The extent to which the fairs have died out in some counties is startling, as, for instance, in Kent, where 130 have dwindled to thirteen. But it is, perhaps, even more surprising to observe that in other counties—though they are not many—the number of fairs has actually increased. Lancashire, Cheshire, Cumberland, and Cornwall, and one or two of the Welsh counties are chiefly noteworthy in this respect. It should be mentioned that the bare figures do not show the whole of the changes which have taken place. In several instances where little alteration is shown in the number of fairs existing in the county, some have been extinguished, and others have sprung up in different places. There is no doubt that a goodly number of the defunct fairs owe their decease to the operation of the Fairs Act of 1871, which enables a local authority,

with the sanction of the Home Secretary, to abolish any fair.

Counties.	1792.	1888.	Counties.	1792.	1888.
Anglesea . . .	8	8	Lancashire . . .	43	52
Bedfordshire . . .	16	14	Leicestershire . . .	15	14
Berkshire . . .	25	14	Lincoln . . .	52	39
Brecknock . . .	6	5	Merioneth . . .	14	11
Bucks . . .	24	20	Middlesex . . .	13	5
Cambridge . . .	12	8	Monmouth . . .	12	18
Cardigan . . .	13	8	Montgomery . . .	6	11
Carmarthen . . .	29	21	Norfolk . . .	76	27
Carnarvon . . .	18	9	Northampton . . .	21	18
Cheshire . . .	15	21	Northumberland . . .	20	19
Cornwall . . .	36	42	Oxon . . .	19	18
Cumberland . . .	18	24	Pembroke . . .	12	23
Denbigh . . .	24	6	Radnor . . .	7	9
Derby . . .	24	24	Rutland . . .	2	1
Devon . . .	72	37	Shropshire . . .	27	19
Dorset . . .	43	26	Somerset . . .	97	52
Durham . . .	10	16	Stafford . . .	29	24
Essex . . .	95	15	Suffolk . . .	69	13
Flintshire . . .	11	5	Surrey . . .	35	17
Glamorgan . . .	16	16	Sussex . . .	119	41
Gloucestershire . . .	37	32	Warwick . . .	16	18
Hampshire . . .	56	24	Westmorland . . .	10	14
Hereford . . .	15	14	Wilts . . .	43	28
Hertfordshire . . .	31	10	Worcester . . .	20	12
Hunts . . .	13	6	Yorkshire . . .	101	84
Isle of Man . . .	—	11			
Kent . . .	130	13	Totals . . .	1,691	1,055

Much has been said in condemnation—and, indeed, little can be said in defence—of the “pleasure fair” as it now survives. Those who have had the opportunity of observing a big pleasure fair, such as that of St. Giles at Oxford, will probably agree that, if it possesses redeeming features, they are, to say the least, not very conspicuous. But it would be unfair to include all in one anathema. No doubt a legitimate excuse for the survival of a fair often exists when it is made an occasion for selling live stock.

There is, and always has been, generally speaking, more direct agricultural interest in markets than in fairs. Obviously, the regular weekly or bi-weekly market must

primarily have been intended for the sale of food, while the periodical fair would naturally be devoted rather to the provision of commodities in less frequent use.

The English market system grew up by means of Royal grants; and, generally speaking, the ordinary means, up to a recent period, by which a market was established was by soliciting and obtaining a concession from the Crown of the franchise or privilege to hold a market. This prerogative of the sovereign dates in this country from the earliest times, and is stated by Messrs. Elton and Costelloe to be of Frankish origin. At any rate, in the early English kingdoms the right of holding markets was among the *jura regalia*, which might be made matter of grant and transferred as a franchise into the possession of a subject. It is noteworthy that the market right was always granted in England to individuals; even when the franchise was enjoyed by a corporation, its origin was, in theory, independent of the ordinary municipal privileges. In Scotland, on the other hand, the right of market appears as one of the ordinary privileges of a trading town.

The extent to which, when the country commenced to become developed, this prerogative of the Crown was invoked may be gathered from the fact that from 1199 to 1483 over 2,800 grants of markets and fairs were made, and more than half of these were made during the first seventy-four years of that period. It may be of interest to add, for comparison with a much later time, that during the period 1700 to 1846 the number of grants was ninety-three. Since the abolition of the system of Royal grants, many markets have been established under Act of Parliament, and subject to the supervision of the Local Government Board, which, however, only deals with markets in the hands of local authorities. The following table shows concisely the various authorities under which market rights are now exercised in England and Wales, and the different owners

to whom these rights belong. As regards the thirty-three instances where no rights are claimed and no markets are held it may be explained that they appear in this table because, in a return presented to Parliament in 1886, they were specified as places where "a resemblance of a market was at that time to be found."

Alleged title or authority for markets.	Owners.			Bodies of persons other than trading companies.	Quasi markets held under questionable rights, or information defective.	Places where no markets are now held.	Total.
	Local authorities.	Trading companies.	Private persons.				
1. By Royal grant, charter, letters patent, etc. . .	90	6	110	18	—	8	232
2. By prescription.	17	8	43	6	—	2	76
3. By charter or prescription, confirmed or regulated by statute . . .	41	—	4	1	—	—	46
4. By statute (general) . . .	40	—	—	—	—	—	40
5. By statute (special), local and private Acts . . .	42	20	5	7	—	—	74
6. By purchase or grant . . .	79	—	—	1	—	—	80
7. Particulars not ascertained . . .	1	14	97	3	4	14	133
8. No market rights claimed	3	16	15	3	18	33	88
	313	64	274	39	22	57	769

Of the 769 markets, or vestiges of markets, enumerated, it appears that 261 were in boroughs, 266 in other urban districts, and 242 in rural districts.

On the amount of the income which the various market owners obtain by virtue of the rights granted to them,

the Reports of the Inland Revenue Commissioners throw some light. In the year ending April 5th, 1890, the following was the amount of the gross assessment to Schedule D of the income tax under the head of " Markets, Tolls, etc." :—

England	£ 528,441
Scotland	25,413
Ireland	47,867
	<hr/>
United Kingdom	601,721

There has been no great variation in the amount during the last ten years at least. Thus, in 1880-81, the total amount was £601,577.

Closely connected with the right of holding a market was that of keeping standard weights and measures; and it may be added that the market owners in some cases at least provided sworn meters for measuring cloth, corn, salt, etc. Possibly to this cause—in part at least—is due the remarkable diversity of local weights and measures, each being recognised as a standard in its particular district. So far as the regulation of markets was concerned, the main object of all the ancient laws and usages was to promote fair dealing, and to prevent and punish chicanery. The following passage quoted from the *Liber Albus* of the city of London is a good instance both of the " tricks of the trade " current in mediæval times, and of the solicitude with which the authorities sought to defeat them :—¹

And whereas some buyers and brokers of corn do buy corn in the city of country folks who bring it to the city to sell, and give, on the bargain being made, a penny or halfpenny by way of earnest; and tell the peasants to take the corn to their house, and that there they shall receive their pay. And when they come and think to have their payment directly, the buyer says that his wife at his house has gone out and has taken the key of the room, so that he cannot get at his money; but that the other must go away, and come again soon and receive his

¹ First Report of Market Rights and Tolls Commission, Vol. I., p. 47.

pay. And when he comes back the second time, then the buyer is not to be found ; or else if he is found, he feigns something else, by reason whereof the poor men cannot have their pay. And, sometimes, while the poor men are waiting for their pay the buyer causes the corn to be wetted ; and then, when they come to ask for their pay which was agreed upon, [they are told] to wait until such a day as the buyer shall choose to name, or else to take off a part of the price ; which if they will not do, they may take their corn and carry it away ; a thing which they cannot do, because it is wetted, [and] in another state than it was when they sold it.

Any person " towards whom such knavishness " as this is committed is to complain to the mayor, and the shifty buyer, on conviction, is to pay " double the value and full damages as well," or, in default, to stand in the pillory.

Another of these enactments—which probably refers to the time of Edward I., and no doubt then merely codified long-established custom—states that two loaves of bread are to be made for 1*d.*, and that no loaf is to be baked of bran. The bakers generally were under severe restrictions, and it was provided that if " any default " were found in the bread of a baker of the city, he was, for the first offence, to be drawn on a hurdle from the Guildhall to his own house " through the great streets where there may be most people assembled, and through the great streets that are most dirty, with the faulty loaf hanging from his neck."

The necessity for guarding against dishonest dealing lies at the very root of the market system. One main object which the market served was to secure publicity of sale, so that there might be credible witnesses to the transfer of property. In the tenth century an effort appears to have been made to prevent all buying and selling, even of cattle, except in a market town. According to the laws attributed to William the Conqueror, sales were only allowed to take place in cities, walled towns, castles, and other safe places where there was sufficient good government and security to insure respect for the

authority of the common law and the maintenance of the rights of the Crown. These reasons, however, say Messrs. Elton and Costelloe, may have been due to "an after-thought of the Norman lawyers," the principle of the English laws on the subject having been based on the expediency of having a special class of witnesses for the transfer of property. The notion that only a class of persons of exceptional credibility should be allowed to attest sales runs through the whole of the enactments. In most of the English towns there was a class of persons who were the "good" or "credible" or "lawful" men of the town. These were regarded as an official class, and were gradually organised into an official body.

The chief officer of the trading town in Anglo-Saxon times was the "port reeve"—London, Canterbury, Bath, and Bodmin being instances of towns where records of such an official exist. All transactions in the market were made before the port reeve, or some person appointed by him, or in the presence of two or three "credible witnesses." Such a sale in "market overt" gave the buyer a title against all comers. Mr. G. Prior Goldney, the City Remembrancer, in evidence before the Market Rights and Tolls Commission, referred to this as one of the early advantages of the establishment of markets. Whereas, in the private sale of goods, the vendor could give no better title to the goods than he himself possessed, and therefore the purchaser would by law be compelled to restore them to anyone who could prove a better title, by sale in "market overt" the purchaser acquired a perfectly good title—of course, direct fraud being supposed to be absent. Thus, if a man stole a bullock and sold it in "market overt," the purchaser became the lawful proprietor, and could hold it against all claimants; but there was a rather odd exception to this rule made in the case of horses, which did not come under the law of "market overt." To constitute a sale in "market overt" the commodity sold must be actually in the market

during the whole of the transaction from the making of the contract to the delivery.

In close connection with these customs and regulations may be mentioned the Court of Pie Poudre, which is described in Blackstone's "Commentaries" as being

a court of record, incident to every fair and market of which the steward of him who owns or has the toll of the market is the judge, and its jurisdiction extends to administer justice for all commercial injuries done in that very fair or market and not in any preceding one, so that the injury must be done, complained of, heard, and determined within the compass of one and the same day, unless the fair continues longer.

The officer of this court was above all judges and justices, and could settle all disputes in a summary way, "like an oriental *cadi*."

It does not appear that the Pie Poudre Court now survives in any place, though in Bristol it existed in form up to a comparatively recent date. In the "Dictionary of Bristol" it is stated that, until about the year 1874, under the porch of the ancient hostelry known as the "Stag and Hounds," Old Market Street, a solemn farce was performed annually on September 30th, by the formal opening of this court. It is said to have originated in the reign of Alfred, and was established for the settlement of disputes which arose during the Bristol fair. The opening ceremony was as follows: A procession walked from the Council House to Old Market Street, consisting of the sheriffs, a seneschal, sergeant-at-mace, and other officers; on arrival at the "Stag and Hounds," toasted cheese, cider, and metheglin—a Saxon wine peculiar to the western counties—were distributed amongst the parties doing business at the court. This latter custom was abolished some years before the extinction of the court, because the people used to tilt the bowl, and upset the liquor over one another; consequently, fees were substituted for refreshments. The court having been duly opened, the business was conducted at the "Tolzey Court Office," from September 30th to October 15th

inclusive. The Pie Poudre Court is now incorporated with the "Tolzey Court," which is a tribunal of equal antiquity, being the "most ancient Court of Record by prescription." When the castle of Bristol became a Royal residence, the old court of the Hundred became united to the Palace Court, in which the King's seneschal was assisted by the bailiff. The court was held at the "Tolzey," a place where the King's tolls and duties were collected, and it was called the Court of Tolzey—the word being said to be derived from "toll." In this court all actions of debt, covenant, trespass, and other civil actions arising within the city could be prosecuted by action or by foreign attachment, and its jurisdiction extended to the whole of the county of the city on land, and by water to the Flat and Steep Holmes.¹

It goes almost without saying that, during the long history of market rights, abuses had crept in and disadvantages had been developed. Naturally, these were chiefly in connection with the tolls levied by market owners. Toll, it may be mentioned, was not incident to a fair or market without a special grant, though it is probable that all market owners possess the right to levy it. In many cases—if not originally in all as regards produce—the toll was in kind, and this antiquated form of payment still continues in a few instances. Thus, at Berwick, one egg from every thirty is taken; at Guildford, a pint of corn is taken from every sack; at Devizes, two quarts of corn are taken from each lot; and at Penzance, two quarts are taken from every bushel of corn.

The customs anciently payable in the city of London, according to the *Liber Albus*, were in many cases tolls in kind. Thus:—

The cart that brings planks of oak shall give one plank.

Every cart that brings leeks in Lent shall pay one penny and one fesselet of leeks.

¹ Two islands in the Bristol Channel.

The vessel that brings mackerel shall give six and twenty mackerel, the franchise excepted.

In "Smythefelde" the customary charges were one penny for every full-grown cow or ox, and for every dozen sheep sold.

It is difficult to give in a brief space any fair idea of the range of tolls in the various markets throughout the kingdom. As regards cattle markets, however, the following table may be of interest as showing the present tolls charged in a few representative markets :—

Market.	Cattle.	Sheep.	Pigs.	Horses.	Pens for animals.
	Per head.	Per head.	Per head.	Per head.	
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	
Islington .	6	0 1¼	0 1¼	0 7½	
Barnstaple {	3 <i>d.</i> if sold 1 <i>d.</i> if un- sold.	0 0½	0 1	0 6	
Guildford .	6	0 1	0 1	0 6	
Leeds .	2	¾ <i>d.</i> to 1 <i>d.</i>	¾ <i>d.</i> to 1 <i>d.</i>	0 3	
Liverpool .	6	0 1	0 1	1 0	
Oxford .	2	0 1	0 1	0 3	
Norwich .	6	0 1	0 1	1 0	
Reading .	6	per score.	per score.	0 6	
Taunton .	3	1 8	1 8	1 0	
Barnsley .	2	0 10	0 10	0 4	} 1 <i>s.</i> for 7 sq. feet in addition to toll.
Rochdale .	6	1 4	1 4	0 6 ¹	

Generally speaking, it is chiefly in regard to animals that tolls are taken upon the "quantity" exposed for sale. In the case of corn, vegetables, meat, fish, etc., the more usual practice nowadays seems to be to charge a certain amount of rent for the occupation of a stall or situation in the market. There is an increasing tendency to substitute "stallage," or rents for space, for tolls on goods brought into the market. One evident advantage

¹ Stallions, 1*s.*

is that the trouble of enumerating and checking the entries of articles, of examining the dimensions of baskets, etc., is avoided, and fewer disputes are likely to arise. On the other hand, the substitution of a system of stallage in place of toll tends to suppress the small producer and to drive all the trade into the hands of the middlemen. The cottager with his basket of eggs, or the small farmer or gardener with his load of vegetables, cannot afford to rent a stall, and is consequently compelled—under a uniform system of stallage—to reach the consumer through the stall-holder.

Tolls and stallage are quite distinct, and may both be charged in the same market. In fact, the proceeds of each might belong to a different person. There is no reason, therefore, either historically or practically—so far as appears—why both systems should not continue, as in many cases they do, side by side in the same market.

An attempt has been made, though with very partial success, to ascertain the ratio which tolls bear to the prices of commodities sold in the markets. Most of the market owners from whom information was sought either ignored that particular inquiry, or, if they attempted an answer, replied “infinitesimal” or “impossible to say.” A little information is forthcoming with regard to some of the chief London markets, from which it appears that, at the Central Meat Market, the toll amounts to $\frac{1}{441}$ of the price. At Deptford Foreign Cattle Market the toll ranges from $\frac{1}{35}$ in the case of calves to $\frac{1}{73}$ in the case of bullocks. At the Metropolitan Cattle Market the ratio is very much less, ranging from $\frac{1}{320}$ for calves to $\frac{1}{720}$ for bullocks. At Birmingham the toll on potatoes is $\frac{1}{30}$ of the price (or 8*d.* in the £), and on butter $\frac{1}{80}$. Generally speaking, on high-priced articles sold in considerable bulk the toll is inappreciable; but on others, such as baskets of vegetables, eggs, butter, etc., it bears a more serious proportion.

The rights under which markets are held being, to say

the least, in many cases rather obscure, it is not to be wondered at that instances are discoverable where the powers exercised exceed the limits laid down by charter or statute. The most frequent instance of this tendency is to charge tolls on other days than those authorised. Thus, for example, at Bridgwater, the market is authorised by Act of Parliament for three days in the week, but tolls are—or were in 1888—taken every day. In Ireland, the Royal Commission reported that in many cases the market charges are “wholly unauthorised,” but they observed that it would be somewhat hazardous, in the face of the enormous number of grants, to say with regard to any town of importance that a market had not been sanctioned for every day of the week except Sunday. In some cases two or three different charges appear to be imposed on the same commodity. Thus, at Carlisle, butter purchased in the market by a trader whose shop was in the suburbs paid four tolls, viz., (1) the in-gate toll, (2) the market toll, (3) a packing toll, and (4) the out-gate toll. At Dorchester an instance was given, at a public inquiry held there, in which five separate tolls, amounting to 2s. 2d., had been paid on one load of fish. Naturally, these reiterated charges give rise to much complaint—not always because their gross amount is excessive, but because of the annoyance and trouble which they occasion. A good many markets existed, no doubt, where, with a cheerful indifference to any Act of Parliament, the authorities had not published a list of tolls, and in some cases, indeed, had not even fixed them, the collector being allowed practically to follow the principle laid down by railway managers, and to “charge what the traffic will bear.” The visits of the Assistant Commissioners, no doubt, did much to call the attention of market authorities to their liabilities and duties. A characteristic incident was reported from Ireland. For many years, at a place called Gart, no toll board had been exposed on market and fair days,

“because it was lost.” On the very day on which the Assistant Commissioner held his public inquiry in that town, the missing board was found and produced before him.

In some market towns the inhabitants, the freemen, the burgesses, or some other privileged class are allowed certain advantages in regard to the market charges. In many instances auctioneers are charged an extra toll on all animals sold by them. At Leicester, Northampton, and Cambridge, for instance, they paid a triple toll. At Leeds they were still more discouraged, for no auctioneers were allowed to sell cattle either within or outside of the cattle market.

Among other anomalies the exemption from toll of certain commodities in some markets is curious. Thus, at Blackpool, butter, eggs, fresh fish and shell fish are specially excepted by statute. At Hastings, fish landed on the beach is toll free, while that brought by land pays toll—a very intelligible distinction. At Knaresboro', Northallerton, and other places, butter and eggs are toll-free by custom. At Londonderry, the corporation charge *2d.* for each cart with buttermilk entering the city, whether taken to the market or not ; but no toll is levied on carts with sweet milk. The explanation given of this remarkable distinction is that, when the Act was obtained, the members of the corporation of that day were the principal vendors of sweet milk through the town, and they did not wish to tax themselves.

It is a little surprising to find that, in at least two towns—Newcastle-on-Tyne and Carlisle—there exists a charge which is substantially the same as the *octroi* of the Continent, being, in fact, a toll levied on all goods, cattle, carts, waggons, etc., passing into the towns from the adjacent districts. They are known as “through” or “gate” tolls, and traces of similar charges under the name of street toll and passage toll are to be found at Cambridge and Dorchester. At Carlisle, in addition to

the market tolls and stallages, the corporation is entitled to what are known as "shire" and "gates" tolls leviable upon all goods taken into or out of the city of Carlisle or the county of Cumberland. The latter is now represented by a lump sum of £615 paid by way of commutation by the railway companies, and from the former a sum of about £1,400 is obtained annually. At Newcastle, the through toll is very similar, the main difference as compared with Carlisle being that its proceeds are much more valuable. The amount received at Newcastle for through toll in the year 1887 was £6,784, and the cost of its collection and other charges came to £1,243, leaving a balance of £5,541, which went in aid of the general rate of the city.

But, apart from the burden, or assumed burden, of the tolls and charges, there are other grievances of which many complaints have been made more or less articulately and vehemently. Injury done to the community by a market monopoly could scarcely arise very grievously out of London; but, at any rate, one well-known case has occurred in the metropolis where the owners of an East-end market successfully resisted the right of any other persons to open a new market for the sale of fruit and vegetables within seven miles of the existing market. In some cases the insufficiency of market accommodation vexes the souls of sellers, if not of buyers. This, perhaps, is also especially a metropolitan grievance. At Billingsgate, for instance, the superintendent is pestered for more space, and could let double the area if it were available. There are some who think that the concentration of the food supply in a few great markets is not advantageous either to producers or consumers, and that its chief result has been the aggrandisement of a comparatively small number of middlemen.

Without attempting to present anything like what may be termed the "case" against the market owners, we have touched upon a few of the points which had

engendered a certain amount of discontent in various parts of the country. With the view of inquiring into the reasons of that discontent, a Royal Commission on Market Rights and Tolls was issued in July, 1887, to inquire into the whole subject, and to report as to the alterations which might be desirable in the existing law relating to markets, having due regard to the interests of those concerned.

Among the conclusions at which the Royal Commission arrived, were two which were at once passed into law, and of which special mention should be made.

The first of these recommendations (which was the twenty-fourth made by the Commission) ran as follows:—

That it is desirable that markets which are now required to be provided with machines for weighing cattle should be furnished with sufficient and suitable accommodation for the same; the question of sufficiency and suitability to be determined by the Board of Agriculture, after inspection.

It will be remembered that, by the Markets and Fairs (Weighing of Cattle) Act of 1887, all authorities of cattle markets were directed to provide "weighing machines and weights for the purpose of weighing cattle," and, accordingly, machines were erected at the various markets throughout the kingdom. But the market authorities, compelled to incur an outlay for which they failed to see the need, complied in many instances only with the letter of the law, and ignored, or set themselves to defeat, its spirit. For instance, one of the Assistant Commissioners who visited a large number of the English markets reported to the Royal Commission that weighbridges were not generally placed in convenient situations. He observed that "Wherever you have an important market—as you have at Wakefield—for cattle, it struck me as being almost ridiculous to have a small weighbridge upon which it is exceedingly difficult to get a fat beast to stand." He remarked, further, that though some

market authorities had done their best to erect suitable weighbridges in convenient situations, others had not seemed to care about the efficiency of the machines. Other evidence bearing out this opinion might be cited, but it may be said that market authorities had taken, as a rule, no trouble to do more than the Act absolutely commanded, and, unfortunately, no provision had been made for seeing that the facilities provided were sufficient for, or suitable to, the requirements of the markets. Hence arose the recommendation of the Royal Commission on the subject.

The other recommendation referred to was the twenty-sixth, which was as follows :—

That it is desirable to collect statistics of the market prices of meat, and, in particular, that the prices of cattle at per stone, live weight, should be collected (in the same manner as the prices of corn are now returned) in such markets as may be selected for the purpose by the Board of Trade.

The official record of the live-weight prices of stock is a corollary of the practice of weighing cattle at markets. Nothing, it will be admitted, can be more unsatisfactory than a system under which the seller does not know—and has no means, other than personal observation, of knowing—what price his animals fetch. Yet, under the common system, no farmer who sends his beasts to a salesman is able to check any statement which is made to him as to the prices current for the class of animals which he sold. Thus, to quote from evidence given by Sir John Lawes before the Royal Commission, it is possible to know with considerable accuracy, by weighing them alive, what animals will weigh when dead ; but, said Sir John Lawes, “ If I send to the London market and look at the quoted prices for that meat in the paper, I find that instead of my animals weighing, when killed, 55, 56, or 58 per cent., as I know they ought to weigh, they only weigh, perhaps, 50 or 51 per cent. I know with absolute

certainty that the figures are misleading and incorrect." It is true that some attempt was made to publish the prices in the newspapers, and more recently, in *The Times* and other papers, live-weight prices have also been periodically given. The latter are, so far as they go, useful, but other prices were either so indefinite as to be meaningless or so inaccurate as to be misleading. As a rule the papers report the prices in the vaguest terms. Their value was illustrated by Mr. Pell in his evidence before the Royal Commission. The newspaper reports, in relation to the market at Liecester, week after week described the market as being "better," and stated that prices had risen a halfpenny per pound; so that, observed Mr. Pell, "If those reports were worth anything, beef would be standing now at something like 30s. a pound. I looked at the report yesterday, and I found just the same thing—that prices were about a halfpenny per pound better."

The advantage of accurate price records is two-fold: market reports, if inaccurate, may mislead farmers and producers in sending forward their supplies to market; again, inaccurate or incomplete market reports are misleading to the consumer, as showing the wholesale prices to be on a different level from that on which they really stand, preventing fair comparison with what is charged in the retail trade for commodities, and generally hindering business. They would be an advantage to agriculturists and statisticians and to the public generally, and they would have the effect of equalising prices, and perhaps preventing "gluts" by drawing supplies to the markets where the quotations were high.

These two recommendations of the Commission, viz., for the better provision of facilities for weighing cattle, and for the collection of live-weight prices at markets, were given effect to by the Markets and Fairs (Weighing of Cattle) Act of 1891. This measure provides that market authorities having to erect weighbridges shall provide and

maintain "sufficient and suitable accommodation" for weighing cattle to the satisfaction of the Board of Agriculture. Consequently, where insufficient or unsuitable facilities are given, farmers will be able to appeal to the Board of Agriculture to insist on their provision.

As regards the collection of live-weight prices, the Act compels the authorities of certain selected markets to send to the Board of Agriculture, in such a form as the Board may prescribe, returns showing the number of cattle entering, the number and weight of the cattle weighed, and the price of those sold. The market authority is given power, for the purpose of making a return, to cause any cattle to be weighed. The Act further provides that auctioneers, unless exempted by the Board of Agriculture, are to erect weighbridges in their saleyards and marts, and all auctioneers having marts in the towns from which returns of prices are made are also to make returns to the Board of Agriculture.

One other recommendation made by the Royal Commission may be said specially to affect agriculture. This was the twenty-fifth recommendation, which ran:—

That it is desirable to collect statistics of market prices of commodities, through the agency of market owners, as far as may be possible.

As regards grain and live stock, certain machinery now exists for the collection of prices. In reference to the former, it may be mentioned that at the beginning of February, 1892, the responsibility for the issue of the weekly corn returns was transferred from the Board of Trade to the Board of Agriculture. But the twenty-fifth recommendation of the Commission had reference to produce other than corn and cattle—such, for instance, as cheese, butter, vegetables, meat, fish, etc. The statistical and commercial advantages of a reliable record of prices are practically the same in reference to every consumable commodity. As yet no steps have been taken to give

effect to this recommendation, and no doubt it is a rather difficult problem to solve ; but we may hope that, before long, farmers will be placed in a position to know with practical certainty what are the real prices current in the markets of the country for everything which they produce.¹

¹ A weekly return of market prices was established by the Board of Agriculture and Fisheries in 1902.

CHAPTER IV.

THE MIGRATION OF AGRICULTURAL LABOURERS.¹

HAVING briefly considered the bare facts of the case,² and having indicated that though there is a migration of agricultural labourers to the towns it is no novel or sudden movement, and, so far as we can see, is not at present proceeding at any exceptional rate as compared with previous years, or with other countries, I may call your attention to a few of the causes which have been alleged and the remedies which have been proposed for it.

To no class in the community can the question of retaining the agricultural labourer on the land be of more direct interest than to farmers. It must be obvious that, even on the narrow grounds of self-interest, they have every incentive to favour any practical means of improving the lot and of brightening the prospects of the agricultural labourer. I venture to say that the agricultural labourer will receive in all fair and legitimate aspirations more real sympathy from the farmers of the country, who know him well, than from many of those new-found friends whose affection for him has curiously coincided with political exigencies.

Perhaps the commonest reason for labourers leaving the land is the prospect of higher wages in the towns. No doubt the wages even of unskilled labour are, and must inevitably be, nominally higher in the towns than in the country, but the question is whether they have a relatively greater purchasing power. The net monetary difference is in reality very much less than it appears to the eyes of

¹ Read before the Farmers' Club, February, 1892.

² The earlier part of the paper dealt with the statistics of rural migration at that period.

the countryman, ignorant, until he learns from experience, of the much larger outlay required in the town to attain the same standard of comfort. But the standard of remuneration for labour is naturally less in the country than in the town, on the principle which Adam Smith long ago laid down that wages vary according to the agreeableness or disagreeableness of the employment. Work in the fields is, at any rate, more healthy, and one would think more agreeable, than work in the factory, the workshop or the streets.

Life here (eloquently wrote the special commissioner of the *Daily News* from Essex last August), as we drive along looks so placid, so pleasant, so easy, that, by comparison, the life of those who are crowding our dock gates, or are pent up in gas factories, or slaving at our great railway stations, conducting omnibuses, tramping the dull streets at night as policemen, or going through the drudgery of a city warehouse—such life seems a sort of nightmare. . . . These Essex villagers have fresh air, and flowers and fruit in their season. . . . If their wages are low, so are their expenses, and though they get none of the excitements and stir of town life, they know nothing of its struggle or strain either.

If to these advantages in favour of the country it were possible—as in the nature of things it cannot be possible—to add equal pecuniary prospects, we might expect a depopulation of the towns.

I cannot attempt to dwell on the large subject comprised in the word “wages.” It was exhaustively treated three years ago in a paper by Major Craigie, and the careful figures then placed before the Farmers’ Club remain substantially unaltered now. Tracing the range of farm wages over a period of some twenty years, Major Craigie summed up the result as follows :—

In the East (of England) the entire rise since 1860 in the mean wage of an ordinary labourer has disappeared, and the mean rate is little, if at all, over 11s. In the belt of thirteen counties surrounding the immediate home of wheat-growing on the West and South, and approaching it in arable character, the process has been exactly similar, but the level from which the start was made and to which wages have now returned was

higher, or nearly 12s. Next, the West and South-west of England—the traditional region of low weekly wages—starting from the lowest point of all, 9s. 10d., has, after a rise of nearly 30 per cent., seen wages fall certainly, but only by about 12 per cent. Lastly, in the very opposite region of the high-waged North, the process has been somewhat akin to this—a considerably greater rise in the periods 1860–80 than has since been lost, and a wage level now perhaps 12 per cent. below the ante-depression figure, or 15s. per week. A more considerable drop would seem to have taken place close to the manufacturing towns of the North, round which, when business was good some years ago, it was occasionally hard to get men.

Assuming these figures to hold good now, we have to admit that during the past decade the wages of agricultural labourers have fallen to an extent which, for the whole country, may be put at about 14 per cent. But if the remuneration of the labourer has diminished during the past ten years, the farmer's profits have not only decreased, but, in too many cases, practically vanished. It is obvious, too, that even the same number of shillings per week would represent—both to the employer and to the labourer—something very different now to that which it did in 1860; to the former, because his margin of profit has been so greatly cut down, and to the latter because the price of all the necessaries of life has so much decreased.

It is almost superfluous to refer to the truism that the quoted weekly wage is misleading as to the actual amount of the remuneration of an agricultural labourer. Mr. W. E. Bear has recently protested (in the *Nineteenth Century*) against the customary misrepresentation of the amount which farm labourers earn. He remarks—very forcibly—"Thousands of labourers and their children living at home together earn more than half the curates in the country." In this connection I would only observe that it seems highly desirable that employers of labour on the farm should remunerate their employés on as strict a cash basis as do employers of labour in a factory.

In comparing rates of wages at different periods it should be borne in mind that they may not represent the

same amount of work. To some extent and in some districts the number of hours worked in the week seems to be less now than it used to be. In a Parliamentary Return issued in 1890 some particulars were given for certain counties of the average number of hours worked by agricultural labourers as a week's work in the years 1850, 1860, 1870, 1880, and 1890. The return is on the face of it not exhaustive, but so far as it goes it shows that in twelve out of forty-one different districts the week's work had been reduced during the preceding thirty years. In two instances—South Devon and East Suffolk—the reduction was reported to have taken place within the past ten years.

There has lately been issued by the Board of Trade a report by Mr. T. H. Elliott¹ on the relation of wages in certain industries to the cost of production. This contains a summary of fifty-six farmers' balance sheets submitted to the Royal Commission on Agriculture,² from which has been calculated in each case the proportion which the cost of labour bears to the total value of the produce of the farm and to the total expenditure. Most of the accounts relate to only one year, and these figures might be so greatly affected by the season that they would not give reliable data on this point. In nine cases, however—comprising eight different counties—particulars are given for a series of years covering the greater part of the "seventies," and including in one or two instances some of the "sixties" as well. Taking the mean of these nine cases, it appears that the percentage of the cost of labour to the value of produce was 27·0, and the percentage of cost of labour to total expenditure was 28·5. Roughly, therefore, the labourer took rather more than one-fourth of the whole of the produce of the farm as his share.

It would take far too much time to go into these figures at length or to compare them with those given for other

¹ Now Sir T. H. Elliott, K.C.B.

² The "Richmond" Commission of 1880-2.

industries. Taking as illustrations one or two of the most important of the other industries, it would appear that roughly the proportion of wages to total value of product is in iron mining about 60 per cent., in the manufacture of pig iron nearly 25 per cent., and in obtaining steel from pig iron about 15 per cent. In shipbuilding the proportion of wages to total expenditure is about 40 per cent., and in the coal industry about 55 per cent. In the cotton industry the percentage which labour bears to the total value of the product is put at about 27·8 per cent.

With regard to the share of the produce taken by the agricultural labourer, the total amount for the United Kingdom has been variously estimated. Major Craigie puts it (in the paper already referred to) at £50,000,000, but Mr. Elliott, in his report to the Board of Trade, thinks that it cannot be placed lower than £55,000,000 to £56,000,000. If we take the gross annual value of the farm produce of the United Kingdom at the amount estimated by Mr. James Howard, viz., £207,000,000, it will be seen that we arrive at practically the same conclusion as was reached by another set of figures, *i.e.*, that the labourer's share is rather more than one-fourth of the produce.

Another natural cause, so to speak, which is assigned for the decrease of agricultural labourers is that fewer of them are needed under the altered circumstances of farming. The chief of these circumstances are the increased use of machinery and the decrease of arable land.

No doubt in agriculture, as in all other industries, manual labour has been to some extent displaced by machinery, though I think it must be added that agriculture differs from other industries in the extent to which the use of machinery increases the output. Speaking broadly, it might be true to say that in agriculture the use of machinery tends rather to cheapen production than to increase it.

The returns of the census of 1881 gave some indication of the extended use of machinery in the fact that "the

proprietors of and attendants on agricultural machines," who only numbered 2,160 in 1871, had increased to 4,260 in 1881—that is to say, they had doubled in number in the course of ten years.

The other reason given for the diminished demand for labour in agriculture is the laying down of land to grass. During the past twenty years, the land under plough in Great Britain has decreased by nearly 2,000,000 acres, and on the face of it, this must be assumed to have displaced a certain amount of labour. Rather curiously, however, Mr. Druce in his examination of the figures of the 1881 census found that the decrease in the number of farm labourers in a particular county did not seem to bear any relation to the increase of permanent pasture. It is possible that the extension of the practice of milk-selling, and the increase of the number of stock in the country, may have tended to counterbalance in some degree and in some districts the decline of arable land as affecting the demand for labour.

One cause sometimes alleged for labourers leaving the country districts is the insanitary or dilapidated condition of their cottages. No one would wish to say a word in extenuation of the existence of bad cottages. The agricultural labourer has the common right of every man to protection against preventable risks to health in connection with his dwelling. Generally speaking, it seems to be admitted that for many years past there has been steady progress in this respect, and that there is nowhere now existing any such a state of things as that of which Charles Kingsley, for example, wrote forty years ago with so much vigour. If in any district unhealthy dwellings exist, a remedy has now been provided by the Housing of the Working Classes Act of 1890, which confers large powers on urban and rural sanitary authorities for the purpose of enabling them to improve the sanitary condition of the dwellings of the poor. It is expressly declared to be the duty of the local authorities to cause

their districts to be inspected with a view to ascertain whether any dwelling-house therein is in a state so dangerous or injurious to health as to be unfit for human habitation, and in the case of any dwelling-house which appears to them to be in such a state, forthwith to take proceedings for closing it. They are also empowered, when necessary, to take steps to secure the demolition of the houses. In the event of default by the rural sanitary authorities, the county councils are authorised to take the matter in hand, and to institute, at the cost of the authority, the necessary proceedings for the closing and demolition of insanitary dwellings.

Any person aggrieved, or any two inhabitant householders, may give information of a nuisance to the sanitary authority; or an aggrieved person, or any inhabitant, may go direct to a magistrate. If the local authority should make default, any person may complain to the Local Government Board, which Board may either set in motion a local officer of police, or make an order compelling the local authority to act, or finally, may act for them, and send in the bill to them.

Further, any four householders, by making a written complaint, may put in action the law against houses unfit for habitation; apparently also any person may give "information" to the local authority of any such house.

And in every new letting of a dwelling-house to any of the working classes there is implied a condition that at the beginning of the hire the house is, in all respects, reasonably fit for human habitation.

It is difficult to believe, even if all the "fearful examples," which from time to time are exhibited to public view in the press, were accurately described, that the risk of an insanitary or dilapidated dwelling is so much greater in the country than in the towns as to afford any reason for an agricultural labourer, however sensitive on the subject of drains, to migrate. Two blacks, notoriously, do not make a white; but, bearing in mind what is well

known of the slums of large towns (where the farm labourer would probably have to live), I do not understand how, on this ground, there is any adequate reason for preferring urban to rural life.

There is one other cause frequently assigned for the migration of farm labourers, which demands notice. We hear much nowadays of what is variously termed "the lack of incentive," "the want of a career," or the "hopelessness" which are said to enfeeble the energies and depress the life of the agricultural labourer. Substantially it amounts very much to this, that a man has more "scope," more opportunities for, and aids to, advancement in life in the town than he has in the country, which is in fact a platitude. At the same time, it is inaccurate to assert that the young farm labourer may not by the aid of intelligence, hard work, and thrift (the same qualities by which his fellows in other callings rise), become an occupier, and even an owner, of land, and an employer of labour. No doubt, members of this club could cite many instances from their own knowledge in which this has been accomplished.

Still, though there is in the country, no more than in the towns, no bar to ability, no difficulties which energy and perseverance cannot overcome, there is, it must be confessed, one cloud which overshadows the life of the rank and file, so to speak, of the agricultural labourers. This is the seeming inevitableness of the workhouse when their wage-earning life is done. In too many cases—except where private charity steps in—the last days of a farm labourer are days of pauperism. It may be said that the working man, and especially the unskilled labourer, in the town very frequently ends his days in the workhouse, and no doubt this is true. It would seem, however, that pauperism is more common in the rural districts than in the towns (excluding London), as appears by the following table, which I have compiled from recent returns :—

MIGRATION OF AGRICULTURAL LABOURERS. 71

Number of Indoor and Outdoor Paupers per 1,000 of population in 15 agricultural counties of England, and in the remainder of the country, on January 1st and July 1st, 1891:—

County.	Indoor Paupers, ratio per 1,000 of Population.		Outdoor Paupers, ratio per 1,000 of Population.	
	January.	July.	January.	July.
Bedford . . .	5·9	3·9	37·5	31·5
Bucks . . .	5·4	3·9	37·7	33·1
Berks . . .	8·8	7·1	28·1	24·3
Cambs . . .	6·7	5·2	38·2	33·9
Dorset . . .	5·6	4·4	44·8	42·0
Hereford . . .	6·3	5·0	41·5	39·3
Herts . . .	7·7	6·0	42·1	37·3
Huntingdon . . .	7·0	5·0	29·0	26·6
Lincoln . . .	4·6	3·9	32·9	34·1
Norfolk . . .	7·5	6·4	45·8	45·1
Oxon . . .	6·8	6·0	38·9	35·8
Rutland . . .	5·8	5·3	33·8	33·8
Suffolk . . .	6·5	6·4	38·3	45·1
Westmorland . . .	5·9	4·2	23·3	20·0
Wilts . . .	7·4	5·9	41·3	38·7
Mean of 15 agricul- tural counties . . .	6·5	5·2	36·9	34·7
Mean of remaining counties of Eng- land (excluding London) . . .	5·5	4·8	26·9	25·3

Taking the fifteen typical agricultural counties, it appears that their mean pauperism was in January 6·5, and in July 5·2 of indoor paupers, and in January 36·9, and in July 34·7 of outdoor paupers, per 1,000 of population, while the mean of all other counties of England was, in both months, less for indoor, and considerably less for outdoor, pauperism.

It is only possible—perhaps it is only necessary—to make a very brief reference to some of the many suggestions which have been made, more or less authoritatively,

with the view of checking the exodus of agricultural labourers from the land.

First on the list of what we may call "remedies," is the provision of facilities for obtaining allotments. The Allotments Acts of 1887 and 1890 were intended to remove the difficulty, which was said to exist in some districts, of obtaining land for allotments. The labourers have now the power of obtaining land, by compulsion if necessary, for the purpose; though only in two cases, I believe, has it been found necessary to put the compulsory powers in force, the demand having in most cases been supplied without difficulty.

There is nothing particularly novel in the idea of allotments. Many a farm labourer had an allotment for long years before he had the franchise. Whether it—the allotment, not the franchise—was, or is, invariably an unmitigated boon is a point on which some difference of opinion exists, even among the labourers themselves. There is, I think, a prevalent opinion among the labourers themselves that good gardens attached to their cottages are more desirable than allotments.

An authority from whom I have already quoted—the *Daily News* commissioner—gives some interesting but rather conflicting testimony on this point. He commenced one of his letters with the round assertion that the Allotments Act has proved "a wretched failure," although a few lines lower down he declared that in moving about the country he was struck "by the extent to which allotments are being provided." Then he referred to the case of a man in Oxfordshire, who was just getting up his potatoes on his allotment "between the showers," when his master sent for him; "his crop was spoiling, and he thought he would finish the job. For that very excusable act of insubordination, he found himself discharged." Surely it might have occurred to the commissioner that probably the farmer's crop was spoiling too, and that it was precisely "between the showers" that the man was

wanted at the farm. It can scarcely be expected that men should work on their allotments in fine weather, and on the farm in wet weather.

The economic fact that the tendency of allotments is to lower wages, or at any rate to prevent them from rising, cannot be overlooked. In the village where the *Daily News* commissioner found "the most thriving allotments" he found also the lowest wages.

The Select Committee on Small Holdings reported in favour of the creation, by the advance of a sum not exceeding £5,000,000 to local authorities, of a class of State-aided peasant proprietors. This proposal, if acted upon, would be presumably intended to provide for farm labourers the "career" which was alluded to above. The subject was brought before the Farmers' Club last year by Mr. Druce, and I need not therefore do more than mention it in passing, especially as no definite scheme is at present before the country. I would only venture to observe that in the proposals which I have seen, it is a condition precedent that the man wishing to acquire a small holding should possess a not inconsiderable amount of capital to provide not only the stock for the farm, but also a proportion of the purchase money. It appears that such a scheme would only avail to help the farm labourer who by thrift and industry has accumulated considerable savings; and it occurs to me that this is just the man who at the present time is best able to help himself.

In this connection attention may be directed to the suggestion made by Lord Thring in the *Nineteenth Century* for January, 1892. He suggests that succession duty should be paid in land—by an actual slice out of the estate—and that the same system should be adopted with respect to the redemption of the land tax. By this means the State would come into possession of a number of small parcels of land all over the country. Lord Thring further suggests that for the sale of these small estates recourse should be had to the Land Registry Act of 1875,

and that every county court should be made a land-registry office; and further that the post-office officials in every village should be made agents, at "a liberal commission," for the sale of these parcels of Government land.

The establishment of parish or village councils is another remedy which has been widely advertised—if I may be allowed the expression. It is an essential part of this scheme that the proposed council should meet in the evening. Some agricultural labourers, with a taste for administration, now gratify it at a self-elected Parish Council which meets *de die in diem*—or rather night after night—at the "Blue Boar" or the "Spotted Dog," and there settles—to its own satisfaction—the affairs of the Empire, as well as of the district. Parish councils, formally established by Act of Parliament, would, no doubt, gratify some of the politicians whose oratory is now wasted on the tap-room air, though it is to be feared that they would not entirely sweep away their earlier and more informal rivals. It is not yet quite clear in what way parish councils are to be made so much more attractive than vestry meetings, which do not, as a rule, thrill with excitement. It is true that a parish council would probably enjoy the delight of electing its own chairman, but even that exhilarating function seems scarcely sufficient to provide interest for any great length of time. Whatever the merits of parish councils may be, it is difficult to believe that they would add such a charm to country life as to form any substantial inducement to a farm labourer to remain in the parish, if he wished from any cause to remove to a town.

The proposal to establish a universal State-subsidised system of pensions for old age is one which specially affects agricultural labourers as the class who would perhaps most obviously benefit by it. Perhaps it is scarcely ripe for definite discussion, but there are signs that it will be pressed to the front, and may very shortly come

within the range of practical politics. According to Mr. Charles Booth—who dealt with the subject in a paper recently read before the Royal Statistical Society—a “universal pension list,” which would provide an annuity of £13 per annum (5s. per week) for every person over the age of sixty-five years, would amount to £13,000,000, and he estimates that an ultimate saving of £3,000,000 in poor relief might be set off against it, thus making the net extra cost to the nation a round £10,000,000.

I do not propose to discuss this scheme, but there is one point bearing slightly upon it to which I would refer, as it is brought out in a recent Parliamentary return. It is said that old-age pensions would tend to discourage thrift, though Mr. Booth—whose opinion certainly carries weight—thinks otherwise. But there is one thing which certainly does discourage thrift, and that is the insecurity of some benefit societies. In a return made by the Local Government Board to an order of the House of Commons in 1891, details are given for every union in the kingdom of the number of indoor paupers who had been members of benefit societies. The total number was 14,808, and of these no less than 4,593 had ceased to be members owing to the breaking-up of the society. Presumably, in most of these cases they had lost part, at any rate, of their savings, and it is scarcely surprising if in districts where this has occurred the virtue of thrift should be rather discounted.

Attention has lately been directed to the possibilities of the profit-sharing, or co-operative principle, as applied to farming. There are far abler and keener critics than I can claim to be of the details and results attained by Mr. Albert Grey¹ during his five years' experiment. Generally speaking, I believe, it is fair to say that though, as a landlord farming his own land, his enterprise was sufficiently successful, it does not appear

¹ Now Earl Grey.

to show that a farmer would have obtained any adequate profit from a holding of over 800 acres.

Apart from this particular instance, however, I venture to remark that the profit-sharing principle deserves at any rate as much consideration as some other loudly vaunted ideas. It at least differs from some other schemes by reason of being economically sound from a theoretical point of view. The carelessness and lack of interest in their work of many farm labourers are a common cause of complaint, and no doubt also the source of annual waste and loss. If it were possible to devise some practical means by which the labourer could be financially interested in the success of the year's operations, no one, probably, would dispute its desirability. In commercial undertakings we have seen of late years a very wide recognition of the principle of associating employés with employers, and I submit that the principle is at any rate worthy of the careful consideration of owners and occupiers of land.

It is not possible to conclude without one more word about wages, because it is frequently suggested as a "remedy" that farm labourers should be paid higher wages. It would be just as true—and equally practical—to say that the remedy for agricultural depression is better prices. There is one way—and apparently only one way—in which the level of wages can rise, and that is by increasing the efficiency of the labourer. This might be illustrated by a reference to the difference in the wages paid in the North of England and those paid in the East or South. The average weekly wage in the North is perhaps 20 to 30 per cent. higher than in the East or South, and why? Mainly because the work is more efficient. This is shown by the fact that the payment per acre for wages is, on the whole, no higher in the North than in other districts. It follows, therefore, that those who wish to improve the lot of the agricultural labourer can effectively do so by

helping him to become more skilful and expert. Happily, the means are at hand through the funds now available to county councils for technical education, and, if by the judicious use of a share of this money, assistance can be given to agricultural labourers to become more efficient, something at least may have been done in the direction of preventing their migration to the towns.

CHAPTER V.

THE MIDDLEMAN IN AGRICULTURE.¹

IN a primitive state of society the tiller of the ground may find a direct and immediate market for his produce ; but where the consumers are aggregated in cities it is obvious that there must be some machinery for bringing the products of the soil to them from greater or less distances. So soon as agricultural produce leaves the farm on its way to the ultimate consumer it begins to incur costs of distribution, but the term " costs of distribution " bears a wide meaning, and consequently it is not so easy as it may at first sight appear to define strictly who may be included under the designation of " middlemen " in agriculture.

The expense or conveyance from the farm to the market no doubt comes primarily under the head of cost of distribution, and it is fair to class railway companies and others who control the carrying agencies of the country among middlemen.

But setting aside the carrying agencies, and treating the term " middlemen " as applying mainly to a person who actually handles and obtains a profit from the handling of the produce, it is noteworthy to how small an extent the average farmer comes into direct contact with the consumer for any class of produce which he has to dispose of. No doubt the smaller occupiers, especially where they live in contiguity to centres of population, do to a considerable extent even now dispose of such products as poultry, butter, and eggs, without the intervention of any distributor. In such a town, for instance, as Preston,

¹ *Journal Royal Agricultural Society*, Vol. IV., 3rd series, 1893.

on the market day rows of small farmers or their wives may be seen in the market, each with a basket full of produce, brought direct from the farm, which is purchased directly from them by the consumers. In other cases farmers occupying a considerable acreage, and conducting a large business, have "gone into" the milk trade, and have sent out their milk from house to house in their own carts. But while other instances might no doubt be found in different localities, speaking generally it is true to say that the average farmer does not dispose of any appreciable part of the produce grown on the land without the intervention of one or more persons as distributors.

Perhaps the only branch of agricultural industry which is usually conducted on the principle of direct supply is the trade in pedigree stock. Whether the breeder holds a sale on his own farm, or sends his animals to a market or fair, he does no doubt dispose of them practically direct to the persons who use them. It is true that the middlemen has, especially of late years, crept into these transactions in the shape of the auctioneer, and it is a rather curious fact that in spite of agricultural depression farmers should have found it necessary to rely to so very great an extent on the auction system instead of upon the old plan of sale by private contract. Still, the auction system is unquestionably a convenient means of arriving at the result of the higgling of the market; and, at any rate, though one might be inclined on some grounds to regret the supremacy which it has attained, it would not be fair to say that farmers suffer any special detriment, or pay any extravagant amount, for the advantages which they obtain from its adoption.

One word may be ventured, in passing, on this subject, and that is that farmers have an undoubted right to resent any attempt, such as is alleged to have been made in some localities by the auctioneers, to dictate to them the way in which they shall sell their stock. It has been said that considerable opposition has been more or less overtly

displayed to the introduction of the system of selling stock by live weight. This practice, of course, is one which may be fairly argued upon its merits; but, whatever view may be taken of the desirability of its general adoption, no one will deny that every owner of stock ought to have the power, if he so desires, of selling his animals in such a way as he deems best.

Just as wheat is the typical farm crop of the kingdom, so bread is the typical food of the people. It is, perhaps, for this reason that, although nowadays the item of bread is by no means the most important in the cost of living of the average inhabitant,¹ yet the market price of that commodity excites a degree of interest which is far greater than is displayed with regard to other articles of food.

The millers and bakers are perhaps to some extent to be commiserated on their occupancy of so prominent a position. It seems sometimes as if the butcher might charge 50 and the greengrocer 100 per cent. profit without exciting any particular amount of public indignation, while the baker brings down upon his devoted head a torrent of indignation if he gets as much as a modest 25 or 30 per cent.

It must be admitted that on the face of it the bakers seem to stand in need of vindication. At the very least the prices at which bread is sold involve what appear to be anomalies. It seems curious that the 4-lb. loaf should

¹ The following is an extract from a letter received from a working man: "When I went to school in 1842 we had a 4-lb. loaf for 6*d.*, and at the present time I am paying 5*d.* We use eight loaves, which is 3*s.* 4*d.*, but we got good beef at 4*d.* Now I have to give 8*d.*, which would be:—

	IN 1842.		IN 1892.	
	s. d.		s. d.	
8 loaves at 6 <i>d.</i>	4 0	8 loaves at 5 <i>d.</i>	3 4	
Beef, 6 lbs. at 4 <i>d.</i>	2 0	Beef, 6 lbs. at 8 <i>d.</i>	4 0	
	6 0		7 4	

So I am 1*s.* 4*d.* out."

be selling in different parts of London at the same time at prices ranging from $3\frac{3}{4}d.$ to $7d.$; nor is this anomaly confined to the metropolis, for it appears that at the same time the 4-lb. loaf was being sold at Hampstead for $7d.$, at Kingston-on-Thames for $6\frac{1}{2}d.$, at Birmingham for $6d.$, at Shrewsbury for $4\frac{1}{2}d.$, and at Wolverhampton at a rate varying from $3\frac{1}{2}d.$ to $5\frac{1}{2}d.$ Again, the quotation given for certain Lancashire towns was $3\frac{1}{2}d.$ and that for some other English towns at from $4d.$ to $6\frac{1}{2}d.$ In the ante-railway days these divergences might have been easily explicable, but in these times, when wheat is practically of the same value in any part of the country, it would certainly seem that a range of 100 per cent. in the price for the same article, at the same time, is a circumstance which the public may regard with a pardonable amount of natural curiosity.

An interesting statement was published in September last showing the relation of the price of bread to the price of wheat during a period of about eighteen months, the retail price of household bread being that prevailing in a large Wiltshire village. The dates at which the price of bread changed were as follows, the official average price of English wheat, as recorded at the same dates, being added :—

Date.	Bread per 4-lb. loaf.		Wheat per quarter.	
	s.	d.	s.	d.
April 18th, 1891 . . .	0	5½	39	0
April 25th, 1891 . . .	0	6	40	1
May 23rd, 1891 . . .	0	5½	39	6
August 21st, 1891 . . .	0	6	40	3
February 10th, 1892 . . .	0	5½	32	3
April 30th, 1892 . . .	0	5	31	3
September 3rd, 1892 . . .	0	5	29	1

It may fairly be assumed that bakers do not sell bread at a loss, and that when they charge $6d.$ per 4-lb. loaf for bread, with wheat at 40s. per quarter, they are making a profit. It is seen that from August, 1891, to February, 1892, the price of bread was maintained at $6d.$ per 4-lb. loaf. In the first week of September, 1891, wheat rose to

an average price of 41s. 8d., which was the highest average of 1891. But it immediately declined, and before the close of September it had fallen by 7s. During the last three months of the year (October to December) the average price of English wheat was returned at 36s. 8d. In 1892 the average receded from 36s. 4d. at the beginning of January to 32s. 3d. at the middle of February. Whilst, therefore, the average price of wheat was gradually declining from 41s. 8d. to 32s. 3d., a fall of nearly 10s. per quarter, the price of bread was maintained throughout the period of six months at 6d. per 4-lb. loaf. A $\frac{1}{2}$ d. was then taken off the price, which stood at 5 $\frac{1}{2}$ d. per 4-lb. loaf for the next twelve weeks, during which the average *Gazette* price of English wheat was exactly 32s. per quarter, the extremes being 33s. 3d. and 30s. 7d. Bread was reduced to 5d. at the end of April, and has remained at that price since. During the same period the average price of wheat has been 29s. 11d., and the extremes have been 31s. 7d. and 29s. 1d. If it paid the baker to sell a quarter loaf of bread for 6d. when wheat averaged 40s. per quarter, it would seem to have paid him better during the last five months (April to September) to be selling bread at 5d. while wheat has averaged less than 30s. Whilst the price of wheat fell one-fourth the price of bread fell only one-sixth.

Mr. David Chadwick, who has given special attention to the subject, states that the following has been and is the current average price of bread of good quality, delivered over the counter for cash, in the years specified, and I have added thereto for reference the average price of wheat in the same years :—

Year.	Price of Wheat	
	Bread per 4 lbs.	per quarter.
	s.	d.
1839	0	8 $\frac{1}{2}$
1849	0	6
1859	0	5 $\frac{1}{2}$
1887	0	4 $\frac{3}{4}$
1893	0	5 $\frac{1}{2}$
		s. d.
		70 8
		44 3
		43 9
		32 6
		26 4

This statement is of interest in more than one way. Firstly, it gives a standard price ($5\frac{1}{2}d.$) of the 4-lb. loaf at the present time. The figures which have already been cited of the quotations of bread in various parts of the country show that this is not a very simple matter. Mr. Chadwick states that "the price to-day (February 21st, 1893) of the best household bread at the counter in 100 of the best bread-shops in London is $5\frac{1}{2}d.$ per 4 lb." More striking than this, however, is the evidence given by Mr. Chadwick's figures of the lack of relationship between the price of bread and the price of wheat. The current average price of wheat at the time of writing is 25s., while the price of bread is $5\frac{1}{2}d.$ But in 1859 the price of bread was the same, while the price of wheat was 66 per cent. higher. In 1887, when the price of wheat was 6s. per quarter more than now, the price of bread was $\frac{3}{4}d.$ less; and, again, in 1849, when wheat was practically at the same price as in 1859, bread sold for $\frac{1}{2}d.$ more. But the most startling comparison is that between 1839 and 1893; for we find that, whereas wheat has fallen during the interval 63 per cent. in value, bread has fallen only 38 per cent. In fact, relatively to wheat, bread was cheaper in 1839 than in any other of the years mentioned.

It ought perhaps to be mentioned that the fact that the price of bread has not fallen with the fall in wheat is denied. A correspondent of *The Times*, writing as "the chairman of one of the leading bread companies," stated, "from the experience of a close connection with the trade, that the price of best bread at this time last year was $6\frac{1}{2}d.$ per 4-lb. loaf, against $5\frac{1}{2}d.$ at the present time" (February, 1893). He added that

this reduction of $1d.$ is equal to 7s. 9d. per sack of flour, whereas the average price of the latter is only 7s. 3d. less than it was at the same time last year. This (he continues) will clearly prove that the reduction in the price of bread is even greater than the reduction in the price of flour; and this

is the case with all the principal producers of bread in the metropolis.

The remarkable range in the price of bread at any given time is explained with some plausibility by the allegation that it is due to the different qualities of flour used. Thus the commonest flour may be sold at 15s. per sack, while the finest flour may make 30s. or more.

Accusations are not infrequently made in the columns of the press that bakers use rice and potatoes and other adulterants in making bread. It is possible that such nefarious practices may still prevail in certain localities, and that

“Chalk and alum and plaster are sold to the poor as bread.”

But there is no evidence to show that this is common. On the contrary, so far as the reports of public analysts go, bread and flour would seem to be almost the least adulterated articles of food. Thus in 1891 there were 799 samples of bread taken and only eight were found to be adulterated; while out of 437 samples of flour taken only one was condemned. It is true that the taking of samples is done in a very partial manner. In several counties not a single sample was taken throughout the year, and in others the number taken was so few as to be practically useless. This, however, is the fault of the local authorities for not more stringently carrying out the law against adulteration, and on the evidence given it is fair to say that no general indictment would lie against the trade in this respect.

A striking fact which has done duty in many quarters during the past two or three months will bear repetition because of its obvious force. The Aerated Bread Company does an enormous business in London and its suburbs, as all who are familiar with the metropolis are aware. At its last annual meeting of shareholders held on October 31st, 1892, the chairman of the company

announced a dividend of 30 per cent., in addition to an interim dividend of $7\frac{1}{2}$ per cent., while an additional profit of £5,000 was put by. These remarkable results were attained, according to the explanation officially given by the chairman, "not by speculation, but by continuous and constant labour," a creditable fact which everyone will readily believe. But there was a further cause, which was thus explained by the chairman. He said :—

They had had a great fall in prices this year. A collapse in prices took place last year at the beginning of the company's financial year, and therefore they, as merchants, manufacturers, and retailers, had reaped the full benefit of that great reduction, while on the other hand it had been ruin to the importers and producers.

It is evident, therefore, that in such a case as this these large profits have been amassed simply because the cheapening of produce has benefited, not the consumer, but the middleman.

It is stated that it takes about 400 lbs. of wheat to produce by the roller process 280 lbs., or one sack, of flour. Thus a quarter of wheat of 496 lbs. will produce 347 lbs. of flour. In the case of wheat ground into flour by the old system of stones, it takes only about 388 lbs. to produce 280 lbs., or one sack, of flour, and a quarter of wheat will produce 362 lbs. of flour. A sack of flour of 280 lbs. will produce at least 390 lbs. of bread, or ninety-seven and a half loaves of 4 lbs. each, while the produce of a quarter of wheat ground by the rollers will be 347 lbs. of flour, or 483 lbs. of bread, or say 120 loaves of 4 lbs. each.

I have received from Mr. G. E. Francis, of Oxford, particulars of a bread-making test made by himself in his own kitchen in April last year which are of interest in this connection. The ingredients of a 4-lb. loaf, and their cost, were as follows :—

	s.	d.
3 lbs. of best seconds flour	0	4
1 oz. of German yeast	0	1
2 teaspoonfuls of salt mixed with the yeast }	0	0 $\frac{1}{4}$
1 $\frac{1}{2}$ pints of tepid water	0	0 $\frac{1}{4}$
Total	0	5 $\frac{1}{4}$

The resultant quantity of dough weighed 4 lbs. 12 ozs. This, when made into two loaves of bread baked and brought out of the oven and set two or three hours to cool, weighed 4 lb. 3 ozs., but when made into one loaf only it weighed 4 lbs. 6 ozs. The flour from which this bread was made cost 6s. 6d. per bushel, delivered at the house by the corn dealer. This would be 32s. 6d. per sack of five bushels of 280 lbs. weight at a time when the average price of foreign and home wheat ranged from about 34s. to 36s. per quarter. The flour presumably was composed of about two parts of foreign and one part of home-grown wheat. The baker would probably get it at about 28s. 6d. per sack, or, if he paid within seven days, at a net price of say 27s. 9d.

The cost of this home-made 4-lb. loaf of bread, supposing it to have weighed only 4 lbs. and not 4 lbs. 6 ozs., was 4 $\frac{3}{4}$ d., or say 5d. The baker who, according to custom, allows 5s. per sack, or 1s. per bushel, to cover all expenses, including the cost of yeast, making, baking, delivering, etc., would produce the 4-lb. loaf quite $\frac{3}{4}$ d., if not 1d. cheaper, or say at 4d., whereas he was at that time charging 5 $\frac{1}{2}$ d. for it. He would, therefore, have been making a profit of nearly 1 $\frac{1}{2}$ d. upon every 4-lb. loaf, or something like 27 per cent.

The case as regards wheat and bread is obviously capable of being presented in more detail than that with regard to any other commodity, one reason being that in this instance we have an official record of prices to work from. It is not so easy in respect to other produce to obtain an idea, except very generally, of the margin between the price paid to the producer and that paid

by the consumer. That the margin, however, is very wide in many cases there is no doubt. Take the case of milk, which is a simple one. It will be admitted by all who know anything of the trade, and might be proved, if need were, from many contracts, that an average of from 7*d.* to 8*d.* per imperial gallon is as much as the ordinary dairy farmer obtains for his milk, taking the year through. The retail price in the towns is, as a rule, 1*s.* 4*d.* per imperial gallon. In some cases it may be 1*s.* and in a few others 1*s.* 8*d.*, but 1*s.* 4*d.* is probably the most usual price. Assuming that the price paid to the farmer is 8*d.*, and the price paid by the consumer is 1*s.* 4*d.*, it will be seen that the "margin" for cost of distribution is 100 per cent. No doubt milk is an exceptionally expensive commodity to "handle" and deliver in small quantities, but it must be confessed that an addition of 100 per cent. to its price seems *primâ facie* rather a large allowance for the "middle profit."

Vegetables and fruit frequently supply remarkable instances of an almost ridiculous discrepancy between the prices paid to the grower and those current to retail purchasers. Cases have often occurred where the produce has been left on the land to rot, because it would not bear the charges of distribution, while at the same time probably in some not far distant town similar produce was making a fair price.

With regard to meat, the difficulty of arriving at accurate figures is considerable, and it is practically impossible to say what share the dealer and butcher obtain, but this brings up a question which has a very direct bearing on the subject of the middleman's share in the meat trade. There were last year (1892) 51,630 tons—or 2,140,000 carcasses—of frozen and fresh mutton imported into this country, almost all of it coming from New Zealand and Australia. Now this was sold at the London wholesale market at from 40 to 50 per cent. below the price of British meat. What it would be

especially interesting to know is whether these 51,000 tons were sold over the counter to consumers at this reduction. There is good reason to believe that a large part of it was sold, not at a price 40 or 50 per cent. below British meat, but at the same price and under the same name. This is a strong charge, but the evidence in support of it—though entirely circumstantial—is practically overwhelming.

Another instance of a frequent fraud upon producers, consumers, and honest traders alike, is the sale of margarine, or “blends,” as butter. The continued existence of this practice forms one of the disappointments of legislation. It is not, perhaps, singular in this respect, for the farmer has had more than one warning against putting his trust in Acts of Parliament. But it is certainly discouraging to find that, notwithstanding the existence of at least two distinct statutes prohibiting it under penalties, the ingenious industry of butter adulteration goes on almost as busily as ever. There are three main reasons for the practical failure of the law. One is the laxity and indifference of those who have been charged with its administration, another is the clever adaptability of those whose interest it is to evade it, and the third is the lack of any deterrent effect in the penalties imposed on those who break it.

There are three categories, under one of which the middleman's profits may fall. They may be: (1) fair, (2) exorbitant, or (3) fraudulent. As regards the first we have nothing to say. Granting, as we must do, the necessary continuance of the middleman, it follows that he is entitled to a fair and reasonable remuneration for his work and skill. As regards exorbitant profits, it must at once be admitted that they have in the nature of things a tendency to be decreased by competition. If in any business excessive profits are being made, there will be a natural tendency among persons outside it to take it up. But the potency of

competition only holds good so long as it is unchecked. There are artificial barriers in most cases against too great an inundation of new blood in the ranks of any business, while the existence of "rings" to maintain prices above their normal level is a disturbing factor in the situation. There is, however, one highly effective weapon, and that is co-operation.

The principle underlying co-operation is the union of producers or consumers for the purpose of saving the middle profits. Combinations of consumers have been immensely successful, as the case of the great "stores" in London testifies. The system has, however, found its greatest success among the working classes. Started in a very modest way by the "Rochdale Pioneers," the co-operative movement has now reached enormous proportions. There are at present 1,744 industrial co-operative societies throughout the United Kingdom, including over 1,100,000 members. Taking each member to represent a family, we have 5,500,000 of the population whose daily food is mainly purchased on the co-operative principle.

A suggestion has lately been made—which has not, perhaps, obtained so much consideration as it deserves—that English farmers should make an attempt to secure for themselves the supply of this vast organised demand, so to speak. Such an idea, however, predicates an organisation of producers large enough and solid enough to be in a position to make terms. At present, the co-operative societies buy, of course, in the cheapest and most convenient markets, which in many instances are foreign, even in the case of articles which are largely produced in this country. Whether they would be disposed to give any preference to the home supply—presuming that there were farmers' organisations in a position to deal with them on a large scale—is an obvious element of doubt in the matter. The idea is evidently very much in the air, and possibly

Utopian altogether, but it certainly possesses fascination. One would say that combinations, of producers on the one hand and of consumers on the other, contracting on either side for the sale and purchase of produce, formed an almost ideal method of dealing with the "middleman" question. Whether such an ideal is realisable is another matter.

That the present methods of distributing English farm produce are to a large extent careless, clumsy, and costly is self-evident. The case of the meat trade in London may be cited in proof. The 4,000,000 inhabitants of the metropolis are supplied with meat through three main channels—viz.: the Islington Cattle Market, the Deptford foreign animals wharf, and the Central Meat Market. The supply in 1891 was as follows:—

Islington Cattle Market.

		No.		
Home supply :	Cattle . . .	107,188		
	Sheep . . .	727,370		
	Pigs . . .	6,176		
				840,734
Foreign :	Cattle . . .	14,222		
	Sheep . . .	48,960		
				63,182
				903,916

Central Meat Market.

		Cwt.	
Country-killed meat ^{1 2}		2,345,960	
Town-killed meat ²		1,333,320	
General foreign-killed meat ²		501,140	
American-killed fresh meat		1,162,560	
Australian- and New Zealand-killed fresh meat		813,720	
			6,156,700

We may put aside the Deptford supply, as this would lead to considerations outside the scope of this article.

¹ This includes meat, poultry, and provisions.

² The weight of American cattle slaughtered at Deptford is included in *town-killed*, and the weight of those slaughtered at Liverpool in *country-killed*.

Practically all the beef and mutton grown in Britain and sent to London passes through Islington or the Central Meat Market. The figures quoted above show the extent of the carcass trade and the comparatively small proportion of the town-killed meat. The question arises why animals are sent to London for slaughter at all. Four-fifths of the butchers in the metropolis are said to buy dead meat only; why should not the other fifth do the same? There is no doubt an enormous waste annually entailed by the conveyance of live cattle to market. A finished beast is the worst possible traveller, and is bound to deteriorate every hour he is on the railway. The improved methods of carrying meat have really made the old system obsolete, a fact which our foreign competitors in many cases recognise. It would be absurd to suggest that the practice—which has been tried in a few instances in the north—of slaughtering on the farm can be generally adopted, but it would certainly seem that farmers might by some means of combination slaughter their beasts nearer home, and sell them in carcass instead of “on the hoof.” They would thus avoid the deterioration and waste necessarily incidental to a railway journey, they would know exactly how much dressed meat they had to sell, and the “fifth quarter” would more than pay the cost of slaughtering.

Farmers are buyers as well as sellers, and they are interested therefore in reducing, if possible, the middle profits on farm requisites, such as manures and feeding stuffs. A committee of the Central Chamber of Agriculture has just presented a report on the subject of Co-operation for Purchase, which is based on a considerable amount of evidence collected by them. They state that there are in the kingdom about thirty co-operative societies for supplying farm requisites. Some of them, however, like the well-known Lincolnshire Association, deal only in one commodity, while at least half do not deal in more than two or three articles. The report

gives brief particulars of a few typical associations. The following may be taken as representing a strictly local one of good standing :—

South Durham and North Yorkshire Association (established 1878), headquarters Darlington, has from forty to fifty members, who pay an entrance fee of 2*d.* per acre, and 2*s.* per ton registration fee on all manures ordered. Only manures are dealt in at present. The secretary sends in January to each member a list of manures, which is returned marked with the number of tons of each kind required, and the month in which it is wanted. All the requisitions having been scheduled, the secretary advertises for tenders from manufacturers, stating the quantity of each manure required, and the station at which it is to be delivered.

The committee reported that they were strongly impressed, from the information laid before them, with the advantages which may accrue to farmers by the adoption of the principle of co-operation. With careful management the risk of failure is small, as is proved by the fact that, so far as they had been informed, no agricultural co-operative association formed for the purpose of purchasing farm requisites had failed.

This fact, viz., that there is no instance on record of a co-operative purchasing society having failed, is very noteworthy. Candour compels the admission that this is by no means the case with regard to co-operative societies for the sale of farm produce. More than one is known to have come to financial grief. It would be of little avail to speculate on the causes of their failure, but it may be observed that not all who take the name of "co-operation" really adopt its principles. A real co-operative association of producers, dealing only—or, at any rate, mainly—in the products grown by its members, and dividing all profits fairly among the producers, has seldom, if ever, been tried on such a large and well-organised scale as to afford a complete test of the principle. Theoretically, the idea seems unassailable, but there are considerable practical difficulties, on the dealing with which success or failure depends.

The most successful application of the co-operative principle, hitherto, in agricultural production has been in cheese factories and creameries. The former have in a few cases been established for some time, but they have not been multiplied; the latter have never become very popular in Great Britain, but in Ireland a large number have been started and appear to be flourishing.

Reference has already been made to the fraudulent profits which are still obtained by some unscrupulous middlemen in the case of margarine and meat. As regards the former commodity, two suggestions have been made for the amendment of the law. One is that all margarine, or butter containing an admixture of it, shall be sold uncoloured, or coloured in a distinctive manner; and the other is that travelling inspectors shall be appointed by a central authority to carry out the law against adulteration.

As regards meat, the figures given of the supply at the Central Market showed that nearly half of it was foreign. When we see in the London butchers' shops anything like that proportion of foreign meat we shall believe that it is all sold openly and honestly, but until then it is justifiable to assert that a fraudulent profit is frequently made by selling foreign meat as English.

In summing up these rather disjointed observations on a subject of which it may be said that age does not wither, nor custom stale—but indeed increase—its infinite variety, let it be admitted that to talk of eliminating the middleman, in a country such as this, is absurd. He is at once the product and the organiser of civilisation.

Even in modern England we find now and then a village artisan who adheres to primitive methods, and makes things on his own account for sale to his neighbours, managing his own business and undertaking all risks. But such cases are rare; and in the greater part of the business of the modern world the task of so directing production that a given effort may be most effective in supplying human wants has to be broken up and given into the hands of a specialised body of

employers, or, to use a more general term, of business men. They "adventure" or "undertake" its risks, they bring the capital and the labour required for the work; they arrange or "engineer" its general plan, and superintend its minor details. Looking at business men from one point of view we may regard them as a highly skilled industrial grade, from another as middlemen intervening between the manual worker and the consumer.¹

The difficulty of definition which even the scientific economist finds may easily perplex common folk. The farmer has of late been clamouring—not without cause—against the "middleman," yet he is, in fact, a middleman himself. It is well, therefore, to recognise frankly that the middleman in agriculture is, to some extent at least, a necessity. But enough has been said to show that he is apt when unchecked to presume upon his intermediate position, and to use it without due regard to the interests of either the consumer or the producer. This fact naturally disposes both consumers and producers to regard with favour any scheme for rendering them less dependent upon the generosity and goodwill of the intermediaries. It is also a matter for grave consideration whether in the distribution of some articles of produce, especially those of a perishable nature which must go into consumption immediately, there are not too many "dealers" and "handlers," and it is, further, not a matter for consideration but one of certainty that where the middleman debases his calling by adulterating or wrongly describing the articles passing through his hands, stringent measures should be adopted to compel his honesty.

¹ Marshall, "Elements of Economics," Vol. I., p. 192.

CHAPTER VI.

COMBINATION AMONG FARMERS.¹

THE subject may be divided under the traditional three heads. The objects for which agriculturists may combine may be classed as—

1. Political.
2. Social and Educational.
3. Commercial.

The idea of this division may perhaps be put before many minds in a concrete form by remarking that, for the first object, a chamber of agriculture, for the second a farmers' club, and for the third an agricultural co-operative association, would be respectively the typical form of combination. There is nothing in the nature of things to prevent any chamber, club, or association taking up any two, or, in fact, all three of these objects, and cases might be quoted where this has been done effectively, and with economy of machinery and effort. But the popular distinction between the three classes of bodies mentioned runs very much on the allocation of objects which I have set forth.

As regards political objects—giving the word, of course, its broad and true meaning—the necessity for combination need hardly be argued. It is a truism that, if agriculturists wish for alterations in the laws or in their administration, whether imperially or locally, the only means of giving effect to their wishes is by combination. And, in these democratic days, it is equally self-evident that the stronger their combination the greater their

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chance of success. I do not propose to labour this point, nor to enter upon the field of controversial subjects which it suggests. The political combination of agriculturists in this country has never attained the formidable character which may be seen in some other countries. But, in spite of this, a good deal has been done by such combination as has existed, and, in proof, one illustration, which has now been practically removed from the category of debatable subjects, may be cited, viz., the statutes preventing the importation of diseases of cattle, and enabling effective measures to be adopted for suppressing outbreaks of disease if they occur at home. It will not be denied that the satisfactory security for the health of the flocks and herds of this country which farmers now enjoy has been obtained by combination, and would not have been obtained without it. *Ex uno disce omnes.* What applies, unquestionably, to cattle disease may be applied, at the reader's good pleasure, to other political matters affecting agriculture.

One enters perhaps on somewhat delicate ground in referring to combination for social objects—in other words, to farmers' clubs, in the "club" sense. It would be idle to ignore the fact that in olden days, and possibly to some extent now, the market-day club was not altogether a desirable institution. But the club, in the sense not of a mere arrangement for eating and drinking, but in its more civilised modern form, has, in my judgment, many advantages. Some remarks made by Mr. Clare Sewell Read, in the course of a discussion on a paper which I read before the Farmers' Club in 1896, impressed me, because they confirmed on the highest authority a notion which I had gathered in the course of my travels among farmers. He said :—

Farmers, of course, are the very worst men to combine about anything. Their isolation is the chief cause of it, I believe, and there is also that dogged independence which always has stuck to the British farmer. I believe our social intercourse

with each other does not exist now in the same way as it did years ago. There is another drawback to combination and confederation, and that is the loss entirely of our market dinners and teas. A man at market perhaps may snap up a chop somewhere, but he is more likely to get a glass of beer and a bun at a pastrycook's shop, and go home by train. I can remember when fifty or sixty farmers used to sit down at a hotel in Norwich, at three o'clock, and never think of getting up until five. The result was that during those two hours there was an immense amount of information imparted, and a confederation and co-operation resulted among those jolly men which really does not exist now.

A visitor to a market ordinary nowadays is sure to be confronted by a lament over its decay from the few farmers who still remain faithful to it. Perhaps in some cases the candid observer may mingle other feelings with regret, but at the same time there is indisputably very much shrewdness—as indeed there always is—in Mr. Read's observations. It is not good for man to be alone, and the farmer, by the nature of his calling, is too much alone—too constantly isolated. The plan admirably conceived and carried out by the Newcastle Farmers' Club—to quote the best within my knowledge in the provinces, the London Farmers' Club being of course exceptional—might well be adopted more generally. In that case a club room is provided which is not only well furnished with facilities for writing, reading, transacting business, or conversation, but has also a very useful library of agricultural books. This no doubt means expense, and can only be justified by a considerable membership. But the more common plan of reserving a suitable room, for use as a club room for members to meet in on market days, is, if properly managed, a good one. Some may perhaps object to this on the ground that the room is almost of necessity at a hotel or public house, and if other suitable accommodation were available it might be better to obtain it. But the man who abuses the fact that he meets his neighbours on licensed premises will certainly possess no more self-restraint if he does

not belong to the club. Nor is it necessary that there should be, I will not say abuse, but even use, of the facilities for obtaining intoxicating liquors. I have more than once attended meetings of the Blandford Farmers' Club when from thirty to fifty members were present, and not one of them indulged in anything stronger than tea or coffee. At other clubs also I have noted that if there has not been the same remarkable unanimity, there has been at any rate a proportion present who have either abstained altogether or have indulged only in non-intoxicating beverages. My experience, therefore, impels me to deny as a libel the insinuation sometimes made that a farmers' club in its social aspect necessarily involves anything that the most austere critic could object to, while I am sure that it has possibilities which, though often treated as trivial, are nevertheless of substantial advantage.

In considering the objects of an educational character for which farmers may combine we approach, in the first instance, the typical farmers' club from its graver side. Papers and addresses on practical subjects, followed by discussion, form the more serious side of its functions. It is to be regretted that in this direction also there appears to be degeneration. The problems and difficulties of practical farming have increased enormously during the latter half of the present century, partly because circumstances have compelled closer attention to detail, but mainly because the application of science in its various branches has thrown new light upon the cultivation of the soil and the management of stock. Forty or fifty years ago farmers' clubs discussed with vigour and animation the actual work of the farm. As I write I take down at hazard a volume of the *Farmers' Magazine*, and I find papers and discussions on the "Draining of Land," at the monthly meeting of the Durham Farmers' Club; on "Growing Potatoes," and on "Growing Swede Turnips" at the Wortley Farmers' Club; on "Manures,"

at the Bromsgrove Farmers' Club ; on " Economy in the Production of Farmyard Manure," at the Ecclesfield Farmers' Club ; on " Steam-power and Horse-power in Farming," at the Wakefield Farmers' Club ; on " Guano," at the Ecclesfield Farmers' Club, and so forth. This was in 1845. No doubt similar instances might be found now, but comparatively the farmers of to-day do not appear to discuss these practical subjects to the same extent as formerly. It may be that the wider diffusion of information in periodicals and newspapers may partly account for this, although there is no doubt that to many persons, but especially to those who are not students by training or habit, word of mouth is more useful and instructive than the printed page. It might be well worth consideration whether such practical addresses and discussions could not be advantageously multiplied at meetings of chambers of agriculture and farmers' clubs without interfering with their other functions.

Another and still more effective kind of educational work for which farmers may, and to some extent do, combine, is the arrangement and organisation of field experiments. The Bath and West and Southern Counties Society has set an admirable example in this direction ; but the very magnitude of its operations tends perhaps to obscure the element of agricultural combination on which it is based. This is more evident in such a case as the field experiments carried out year after year by the Norfolk Chamber of Agriculture. It cannot be too often insisted that a useful scheme of field experiments, or more properly perhaps demonstrations, can be conducted in a very simple way and without heavy outlay if farmers themselves co-operate. Every thoughtful farmer will be frequently making experiments for himself, and it needs only a certain amount of organisation and co-operation to enable a number of farmers in a particular district to agree on some definite method, and thus secure results which may be helpful to all. Nor need this be restricted

to field experiments, although these are in the nature of things easiest to arrange. Feeding experiments on animals may be also undertaken, as has notably been the case in Norfolk. Experiments or tests carried out in this comparatively simple way are, like mercy, doubly blest. Not only may the general results be enlightening to those who have never even seen the process by which they are reached, but the act of conducting a trial under specified conditions is in itself educational, even if the final results should turn out to be valueless.

The educational objects for which co-operation is desirable should strictly, perhaps, be limited to those which are educational to the co-operators. But I am tempted to include under this heading the combination of farmers for the technical education of their labourers. Complaints of the lack of skill among labourers are very prevalent, but it is sometimes forgotten that in the "good old days" inducements, which are often now lacking, were commonly offered to labourers to take an honest pride in their efficiency. Take, for example, the ploughing-matches and the sheep-shearing competitions which a generation or two ago were so popular. Not only did they embellish rural life with a picturesqueness nowadays too often lacking, but they certainly fostered among the labourers a sense of the dignity and importance of operations which demand quite as much intelligence and deftness of hand as many of those carried out by skilled artizans. The late Mr. W. C. Little—whose death deprived British agriculture of one of the most devoted and able men who have ever spent themselves in its service—put this point admirably in that general report on the agricultural labourer to the Royal Commission on Labour, which may be justly described as a classic. He wrote :—

The general impression respecting the ordinary agricultural labourer is that of a man engaged in work which requires little intelligence, skill, or training, but in reality there are few duties

which he has to perform which do not call for a certain amount of judgment, dexterity, and practice ; and the training and management of horses, the art of ploughing, mowing, or sowing, the use of a spade or fork, must be learned ; and the labourer who had not learned to economise his forces, and attack his work at the point of least resistance, would be worn out very quickly.

In the same connection Mr. Little quoted with approval from a paper read in 1868, in which after saying that an agricultural labourer is " a variously skilled workman," it was observed :—

It takes more varied qualities of mind and body to be a good labourer than to be a good carpenter, whose tools keep him square by line and by rule, etc., while the other makes parallel lines in a field with an awkward thing called a plough, and still more awkward things called horses.

It may be said that technical education in agriculture is now under the care of the county councils, but that consideration, with all that hangs thereby, lies outside our present scope. Co-operative education, so to speak, and subsidised education are two different things. Each may well supplement the other, and both may be joined in one enterprise. But the essence of what is here set forth is the combination of those who seek knowledge for the purpose of obtaining that knowledge for themselves.

By combination for commercial objects is meant that which is commonly called " co-operation " in the conventional acceptance of the term. And here we come to that branch of the subject which perhaps is naturally suggested by the heading of this paper.

There is no doubt that agricultural co-operation is a popular prescription for the ills of agriculture. It is the common panacea of the man in the street. Two facts have impressed themselves upon the public mind—two concrete facts—the first is Brittany butter, and the second is Danish butter. The magnitude of the supply, its persistent growth, and it must also be said the excellence

of these articles, have combined to persuade the average Briton that the French and Danish farmers are very clever folk, and that if farmers in this country would only imitate them they would be wise. The said average Briton is also persuaded that the secret of the Frenchman and the Dane's success is co-operation, and consequently that it is co-operation which will save British agriculture. This is very simple and plausible, but it is not the whole of the case. We may put aside the point that the trade in Brittany butter—most of which comes from Normandy—has been built up mainly by the commercial organisation of capitalist middlemen. In Denmark, although there has been some assistance from the State, it is in the main correct to say that the system of production and exportation is based on co-operative principles. One odd fact is the concentration of public interest on butter. The average Briton clamours for English butter most zealously, and when he gets it frequently refuses to eat it. But why this insistence upon butter-making? Butter is only one of the products which we import. We import, for example, far more meat of all kinds (reckoning by value) than butter, and we make nearly as much butter as we import. It is necessary to protest against the idea which seems prevalent that co-operation means butter-making, or otherwise we cannot make much progress with co-operation.

The parrot cry "make butter like the Danes" becomes monotonous to the dairy farmers of this country, who know perfectly well that in many cases they would be foolish to do so. Mr. W. J. Harris, who is a practical agriculturist and also a man of business, put the case clearly from a Devonshire point of view in a recent address. His object was to show "why it does not suit the farmers here to follow the advice of our critics, and lay themselves out for butter-making on a large scale." The passage is so pertinent that I quote it:—

In the first place we have very little female labour, unless we pay an exorbitant price for it. In the second place, we

have but few small farms. . . . Where small holdings exist, with the female labour always present in the shape of a wife or a daughter, there butter is nearly always made. On my own property I have made many such holdings, and the small tenants all produce butter, and I believe they make it pay to do so. The dairy enables them to keep pigs, and the woman's time is given up to the dairy, the pigs, the poultry, and the calves. We have no factory within reach. The necessary condition of having as many as 400 cows within easy reach could not be fulfilled on my estate, but we do not want a factory. We make our butter on the old scalding process, and whether the quality is better than the French or not, I know not, but I do know that although we sell it at home, and thus have no expense of carriage, we make a better price than good foreign butter is worth in London wholesale, taking the year round. Before coming here I took out the prices I had made for butter during the last twelve months, and I found that I had made over $13\frac{1}{2}d.$ per lb. for all I had to sell. I am aware of all the complaints that are made about us, namely, that no butter dealer in London would take the make of half-a-dozen farms in Devon and Cornwall all the year round on account of its varying in colour and quality. We really do not care whether the Londoner takes it or not. We should probably lose $2d.$ per lb. by sending it to him. There are people nearer home who know the flavour of well-made English grass butter, and they take all we have to spare. Butter made on the scalding process, whether a separator be used or not is, moreover, much wholesomer, in my opinion, than that made by any other process, and I expect we shall hold our price. If we adopted the advice of the Press, and sent all the butter after it is made to a factory to be made into one uniform quality and shape, I fail to see how we could do any better than the Frenchman, the Dane, or the Irishman. . . . I think I have shown that the conditions under which we farm are so different to those of the Danes, the French, and the Irish, that we do very wisely to choose not to make butter in any large quantity.

Let us therefore disabuse our minds of the notion that universal butter-making is a necessary, or desirable, consequence of co-operation as applied to agriculture. Butter-making is a mere branch, and not perhaps the most important branch, of a wide subject.

If, as I venture to think, the popular advocacy of co-operation for farmers is founded, to some extent at least, on misconception, the opposition of farmers to the idea

has, on the other hand, its tap-root in prejudice. The British farmer has the defects of his qualities. He is, by breeding, training, and habit, conservative, reticent, and, above all, egotistical. He forms in this age of socialist ideas the last bulwark of individualism. His jealousy of his neighbour is almost as strong as his jealousy of foreign competitors. To combine with his neighbours for any purpose whatever is irksome, and to combine for business purposes is repugnant. Nor should superior persons condemn him hastily. Let them reflect that thirty years ago his individualism would have been accounted for righteousness. We were all individualists then, as we are "all socialists now"; but the agricultural mind is not nimble enough to keep pace with the somersaults of our political economy.

If he were pressed for something more tangible than a general objection to co-operation, the farmer might possibly confess that he did not clearly understand what it meant. Here, again, let us not be too quick to condemn. Are we quite sure what we mean by co-operation generally, and by agricultural co-operation particularly? If we look for a definition of co-operation this is the sort of thing we find:—

The essential characteristic of co-operation is a union of capital and labour—a certain number of labourers form themselves into a society, and they supply the capital which their labour requires. Co-operation may thus be regarded as a modified form of socialism; but as in a co-operative society each member's share of the aggregate wealth produced is apportioned to the amount of capital he subscribes to the common fund, as well as the quantity and quality of the labour he supplies, it is evident that an influence is thus brought into operation to stimulate each individual's energy.¹

Or again:—

English co-operation is a system of commerce and industry, consisting of societies of working people in which the business profits of a store are given to the purchasers, and the profits

¹ Fawcett, "Manual of Political Economy," 6th edition, p. 103.

of the workshop to the workers. The division of profit in the store is made according to the amount of custom, and in the workshop according to the amount of wages. The original object of co-operation was to establish self-supporting communities distinguished by common labour, common property, common means of intelligence, and recreation. They were to be examples of industrialism, freed from competition.¹

It is evident that, so far, the farmer is not very much helped to understand the meaning of the application of co-operation to agriculture.

A better definition for our purpose is one given by M. Georges Michel, which is quoted by Le Comte de Rocquigny in his interesting book, "La Co-opération de Production dans l'Agriculture," published in 1896. It is as follows :—

La co-opération est une entente entre des personnes qui réunissent leurs forces pour lutter avec succès contre les obstacles qui s'opposent aux individus et pour être capables d'offrir ou d'obtenir des avantages supérieurs à ceux qu'elles pourraient offrir ou obtenir si elles restaient isolées.

We get here the principle—combination for such objects as can be more advantageously achieved by mutual agreement than by isolated effort. What are those objects ?

No one can dogmatise for the country as a whole. One cannot say that this or that object will everywhere be better achieved by co-operation than by individual enterprise. The nearest approach one might get to such generalisation would probably be in regard to the purchase of artificial manures, feeding stuffs, and other articles required in farming. Putting aside possibly the farmer-princes—to coin a word—the men occupying very large farms and having ample capital (although I know some who are members of local manure-purchasing co-operative associations), it is almost, if not quite, invariably true to say that farmers would gain by combination for such a purpose. The difficulty, of course, or at any rate one of the difficulties, is that, while the smaller

¹ Holyoake, "The Co-operative Movement of To-day," p. 1.

occupiers are those who would most benefit, they are the last to find it available, on account of the necessity for the adoption of a cash basis. There are a good many associations of this character in Great Britain, and, without exception, I believe, all are doing useful and successful work.

This side of agricultural co-operation has been greatly developed in France by the organisation of the *Syndicats Agricoles*, of which there were in 1897 no less than 1,371, with a total membership of about 600,000. A brief description of these associations may be of interest. The administrative staff of an agricultural syndicate consists nearly always of a president, vice-president, secretary, and a treasurer. Some of the larger bodies—for they range in size from a membership of twenty to one of 10,000—have two or even three vice-presidents, and sometimes a secretary-general with two or three assistants. These officers form the executive bureau or council. In cases where the membership exceeds 100 there is usually also a syndical chamber or directorate, with duties of a consultative character, but nevertheless exercising more or less control over the council of management. A salaried manager is employed in a few instances, but it more frequently happens that the whole of the work is performed by the president and other officials, who receive no remuneration for their services. The members of the council are elected for a term of years, either by votes at the general meeting, or, where there is a directorate, by the directors from amongst themselves. The directors are always elected at the general meetings for a period varying from two to nine years. When the operations of a syndicate extend over a considerable area it is usual to select a director for certain districts or divisions. Thus, in the large departmental syndicates a director is elected for each *arrondissement*. Smaller bodies, having members resident in several communes or villages, generally arrange that the syndical chamber shall be

comprised of delegates representing each village or commune in which not less than ten members reside. In both cases the director or delegate acts, as a rule, as the administrative agent for his district, and conducts the necessary correspondence with the central office. The syndicates derive their resources mainly from the members' subscriptions, and from a small commission levied on the sales and purchases effected. Some of the more fortunate among them have been the recipients of gifts and legacies, while others are subsidised by the *conseils-généraux* and by the agricultural societies. Usually the subscription ranges from 2s. 6d. to 5s. per annum, though in a few cases it is less than half the smaller sum mentioned. Sometimes there is a graduated scale of subscriptions arranged to meet the circumstances of the different classes of members, so that a poor peasant farmer pays less than his richer neighbour, while the labourer's contribution is merely nominal. Another system has been adopted by three or four associations whereby the ordinary members' subscriptions are proportional to the area of land they own or occupy, or to the amount of land tax to which they are assessed. Then, too, in many syndicates there are, in addition to the ordinary members, "founders" and "honorary members," chiefly country squires, retired officers, and other local magnates, who are candidates for the more prominent positions in the syndicates, and whose subscriptions always exceed those of the ordinary members. It is an almost general practice to charge a small commission on the transactions undertaken on behalf of the members, especially in respect to the purchase of manures. This goes to defray the expenses of analysis and distribution, and is usually fixed at 1 per cent. or 2 per cent. on the invoice prices; it seldom exceeds 4 per cent.

Nearly all the syndicates were originally formed for the purchase of artificial manures and for the suppression of fraud in the manure trade, two objects which still

constitute the main feature of their work. Co-operation in purchase has in recent years been extended to feeding stuffs, seeds, insecticides, machines, implements, and other requisites. The procedure is practically the same in all cases. Invoices are checked and passed by the council of the syndicate, and bills, payable at one, two, or three months, are drawn by the manufacturers and tradesmen on the individual members for the goods supplied. Few of the associations undertake responsibility in respect of payment of goods ordered on behalf of members. But although the syndicates offer no material security to the traders, their reputation for soundness in business affairs is in itself a moral guarantee. It very rarely happens that a member fails to meet an engagement contracted through his syndicate, for default invariably entails expulsion.

It will be observed that the principles on which these syndicates are conducted differ from those generally adopted by similar local associations in this country. We may take for instance a north-country association of twenty years' standing which has from forty to fifty members, who pay an entrance fee of *2d.* per acre, and *2s.* per ton registration fee on all manures ordered. Only manures are dealt in, but the inclusion of seeds, foods, and implements is contemplated. The secretary sends in January to each member a list of manures, which is returned marked with the number of tons of each kind required, and the month in which it is wanted. All the requisitions having been scheduled, the secretary advertises for tenders from manufacturers, stating the maximum and minimum quantity of each manure required, and the station at which it is to be delivered. Contracts are settled by the committee (of nine members), elected annually. The secretary then informs each purchasing member of the price of the manure, and the amount due from him must be sent before goods are delivered. After a certain quantity has been delivered,

the committee ballot for the farms where the samples shall be taken for analysis, and the secretary, accompanied by a representative of the manufacturer, goes round and takes samples. All manures are bought on stated values per unit, and for excess up to 10s. per ton above the agreed standard. Deficiency below standard is charged for on the same basis, with 25 per cent. in addition as a penalty.

In England the cash basis is, I believe, invariably adopted, while in France, as we have seen, credit is given. No doubt credit must be paid for in some way, but if membership of the association is considered to be a moral guarantee against bad debts—as is stated to be the case in France—no doubt the additional charge for, say, two or three months' credit would be very small.

The development of agricultural co-operation has been even more remarkable in Germany and Denmark than in France. In Germany there are no less than 7,762 registered agricultural co-operative associations, comprising 5,382 agricultural credit societies; 894 societies for the purchase of fertilisers, seeds, and implements; 1,262 co-operative dairies, and 224 other co-operative societies. A full account of the development and organisation of the co-operative dairies in various parts of Germany appears in the Report on Dairy Farming in Denmark, Germany, and Sweden (C. 7,019), published by the Board of Agriculture in 1892. They may be divided into three classes, viz., dairies which manufacture butter and skim-milk cheeses, and thus utilise the skim-milk; dairies in which only the cream is used, the skim-milk and butter-milk being returned to the members; and dairy stores in which fresh milk is sold on behalf of the members, and only the surplus converted into butter and cheese. Dairies of the second class are the most popular, as the skim-milk and butter-milk can generally be more profitably used for rearing calves and fattening pigs than by its conversion into cheese. Taking the accounts for 1892 of 288 of these co-operative dairy societies, it appears that the average

number of members in each society was forty-four, the smallest number returned being ten, and the largest ninety. The average quantity of milk dealt with in the year by each society was 210,000 gallons. The average working capital was £2,550, and the average reserve fund £189. The average net profits of seventy of the dairies on the year's working was £168, and fourteen of them returned an average loss of £60.

Denmark has a large number of agricultural co-operative societies which may be classified as follows:—

(a) For the breeding and rearing of cattle, horses, and pigs.

(b) For the manufacture of butter and cheese. There are from 1,100 to 1,200 of these, and roughly it may be said that there is a co-operative dairy society for every parish.

(c) For bacon-curing or pig-killing. There are about eighteen of these.

(d) For collecting and exporting eggs. These are now federated in a large central association.

(e) For bee-keeping.

(f) For fruit-gardening and horticulture.

To sum up on this point: the general advantage of co-operation among farmers for the purchase of artificial manures, feeding stuffs, etc., seems, as already noted, to be unquestionable, while as to the desirability of co-operation for the sale of farm produce, it is impossible to assert more than that, under certain conditions, it has proved highly successful, although it must also be added that success has been by no means uniform. I venture to think that the conclusion arrived at, after much consideration and inquiry, and drawn up in very measured terms, by a Committee of the Central Chamber of Agriculture, is sound:—

Nothing which has come before the Committee has led them to believe that the profits of all English farmers could be straightway increased by the adoption of any universal system of co-operation, even supposing that the establishment

of such a system were possible. Some farmers are producers on a sufficiently large scale to be able to make practically as good terms as they would be likely to obtain through an association, while many of the smaller farmers—especially near large centres of population—dispose of their produce direct to the consumers. Nor is it reasonable to suppose that in a country like England the producers of any class of commodities can in every case be their own salesmen and distributors, even by means of co-operation.

But the Committee nevertheless consider that the association of producers in particular districts for the joint disposal of certain classes of produce would be in many cases advantageous. The advantage appears to be most marked in the case of produce which is subjected to a process of manufacture ; as, for example, in the conversion of milk into butter or cheese, in the curing of bacon, or in the making of jam. In such cases there is an obvious economy of labour in dealing with large quantities of produce, and there is no reason, on the face of it, that the benefit of such economy should not be secured by the producers themselves in an association for the purpose, provided they are willing to find the necessary capital. It is further shown by the experience of the Farmers' Auction Mart at Darlington that combination for the sale of stock may be distinctly beneficial, and the same principle has been successfully applied to the sale of milk in bulk—an industry which entails special risks and difficulties upon individuals, and in which also the ordinary distributive agencies are very powerful and apt to be autocratic in their dealings with isolated producers. Such attempts as have been made to co-operate for the disposal of ordinary crops, as, for instance, corn, hay, straw, potatoes, etc., have not as yet been sufficiently long continued to enable any reliable opinion to be formed as to their ultimate success. In the case of small producers—when a number are to be found in one district—the benefits to be derived from co-operation may be considerable. Poultry-keeping in such hands loses much of its benefits without some kind of organisation for collecting eggs or chickens. This is supplied in certain districts, in a rough-and-ready way, by a system of intermediaries generally known as "higglers." This is an industry in which the co-operation of producers might be highly beneficial, and the establishment of poultry-fattening stations on co-operative principles in suitable districts seems a specially hopeful development.¹

¹ Report of a Committee of the Central and Associated Chambers of Agriculture on Co-operation for the sale of Agricultural Produce, May, 1898.

This forms a fairly complete summary of the results of the inquiries of the Committee with regard to such attempts as have been made in England, and they are not many, to co-operate for the sale of produce; and they go on to express their belief that co-operation for sale might advantageously be adopted in England in particular districts for particular products. They continue:—

A district where co-operation for the disposal of produce might be tried with the greatest probability of immediate success would be one where a considerable number of comparatively small occupiers of land, all engaged in the same class of farming, are clustered together. The products to which the principle of co-operation may be most usefully applied appear to be butter, bacon, milk, poultry, and eggs. In making this statement the Committee must not be understood as limiting the possibilities of co-operation, but only as indicating the direction in which from past experience they see most immediate hope of its successful application in this country.

In conclusion, the Committee express their conviction of the soundness of the view strenuously urged by Mr. Plunkett that associations of producers must be really co-operative. In other words, they must consist of and be managed by the producers themselves, who must risk their own money and give their own time to make the enterprise.

These conclusions were signed by Mr. W. Lipscomb (chairman), Lord Wenlock, the Right Hon. Horace Plunkett, M.P.,¹ the Right Hon. J. L. Wharton, M.P., Mr. Yerburgh, M.P., Mr. D'Arcy Wyvill, M.P., Mr. Clare Sewell Read, Mr. S. Rowlandson, Professor Long, Mr. J. Bowen-Jones, Captain Stuart-Wortley, Mr. F. E. Muntz, Mr. T. Latham, Mr. Barfoot-Saunt, and myself.

It is quite evident that the wide subject set forth at the heading of this article has only been incompletely and imperfectly dealt with. To exhaust it would need a volume. It is a well-worn theme—the desirability of greater combination among farmers—and I make no pretension to have anything very new to say upon it. All I have hoped to do is to touch upon one or two points

¹ Now The Right. Hon. Sir Horace Plunkett, K.C.V.O.

which might lead to further reflection and inquiry from those with whom lies the opportunity of giving practical effect to ideas. The power which in these days lies in effective combination is in many directions incalculable, and if that power can be more strenuously employed for helping the wagon of British agriculture out of the ruts among which it has lately laboured, more immediate benefit may result than from the most vigorous supplications for extraneous assistance.

CHAPTER VII.

CO-OPERATION FOR THE SALE OF FARM PRODUCE.¹

THE British farmer has more critics than admirers. This, perhaps, is natural, because the qualifications of the former are more common than those of the latter. You cannot well admire a man without knowing something about him, but you can criticise him quite brilliantly without any such necessity. Those who criticise the British farmer so readily might at least remember that, judged by results, he still holds the foremost place among the cultivators of the soil and the breeders of stock in the world. He still grows the heaviest crops per acre and he still produces the finest animals. Even his competitors, whether in foreign countries or the colonies, have for the most part acquired their skill from him.

Professor Marshall, in his "Economics of Industry," observes :—

England has learnt lessons in agriculture from many countries and especially the Netherlands, but on the whole she has taught far more than she has learnt, and there is now no country except the Netherlands which can compare with her in the amount of produce per acre of fertile land, and no country in Europe which obtains nearly so high returns in proportion to the labour expended in getting them.

In view of unbiassed testimony such as this—which it would be easy to support by official statistics, if necessary—the British farmer might at least be spared accusations of incompetence. If it be true that in certain products he is to some extent beaten in his own markets, do not the British manufacturer and the British mechanic lie under the same reproach ?

¹ Read before the Farmers' Club, February, 1896.

But the staunchest admirer of the British farmer will admit that he is intensely individualist. Forty or fifty years ago this would have been a term of eulogy. Now it will hardly be denied in any quarter that a fundamental fault in the economics of British agriculture is that the whole structure rests on a basis of individualism. It was not always so, for under the old common-field system there was a considerable amount of co-operation among the cultivators, and it is only since inclosure transformed the face of the country that agriculture has been on a purely individualist basis.

We take, then, as a starting point the fact that the British farmer is by habit and prejudice averse to co-operation. What we have to consider is whether co-operation would improve his position, and if so, whether it is possible for him.

There are three distinct forms which the co-operative principle may and does take, or more correctly, perhaps, three branches of co-operation :—

1. Co-operative production.
2. Co-operative purchase.
3. Co-operative distribution and sale.

The title chosen for this paper involves the consideration of only the third of these subjects, viz., co-operation for distribution and sale. We may, however, glance briefly in passing at the first and second of these subjects.

Co-operative production as applied to agriculture practically means the hiring of a farm by a number of labourers who agree among themselves to take the risks and share the profits. As long ago as 1829 Mr. John Gurdon, of Assington Hall, Suffolk, adopted this plan, as also did Mr. Vandeleur in Ireland in 1831, in both instances with some success. Two other more recent instances are on record. One commenced in 1883 on the estate of Mr. Bolton King, in Warwickshire, where the labourers formed themselves into the " Radbourne Manor Farming

Association," and hired the Radbourne Manor Farm on a lease, hiring stock and implements to the value of £3,304 from Mr. King, and borrowing from him £200. They agreed to pay interest at 6 per cent., and the surplus profits were to be distributed among the persons employed, who numbered sixteen. At the end of the first year the accounts showed a profit sufficient to enable a bonus to be paid at the rate of 5·8 per cent. on wages, but Mr. King stated that it was doubtful whether the accounts were properly made up, and the profit really earned. In the following year there was a heavy loss. In 1884 Mr. King rented a second farm and re-let it to the labourers, who formed themselves into a separate association, but with the same manager. In 1887 a new manager was appointed and a fresh start made, Mr. King writing off all losses and reducing the rate of interest to 5 per cent. In 1890 both undertakings came to an end, no bonus having been paid in either case except in the doubtful instance already mentioned. Mr. King stated that the loss on the two farms "mounted into thousands," and that the general result of the experiment was not satisfactory.

In 1886, Earl Spencer let the glebe farm of 296 acres at Harleston to eight labourers, associated as the "Harleston Co-operative Farming Association." The men elected two of their number to form a committee of consultation. By the scheme it is provided that after the payment of rent and interest on capital (£3,000) at 4 per cent., 75 per cent. of the surplus profits was to go to reserve funds for the repayment of capital and the creation of a reserve of £1,000 for contingencies, the balance to be divided annually among the co-operators (including the manager) in proportion to wages earned.

The yearly accounts of this undertaking for the seven years 1887-93 are published in Mr. Hunter Pringle's Report on Northampton to the Royal Commission on Agriculture. They show that in the year 1888-9 there was a profit of £33, but that in every other year there was

a heavy loss, amounting in the aggregate to £1,851. Consequently no bonuses have been divided.

In the cases just referred to, the men to a certain extent manage the farm, though in each case there was a manager appointed by the landlord. A more common form of co-operative production is the establishment of a system of profit-sharing among the labourers, who, however, have no share in the management; and the experiments of Earl Grey and Lord Wantage in this direction are well known. Lord Grey's interesting scheme was described by himself in the *Journal of the Royal Agricultural Society*, and again in Mr. Wilson Fox's Report on the Glendale district of Northumberland. It is, of course, only fair to remember that recent years have been particularly unfavourable for making experiments in farm management, but it cannot be said that the attempts at co-operative production have been marked by very great success financially.

Passing on to the second branch of the subject, viz., co-operative purchase, it may be noted that the practicability and desirability of schemes by which consumers of particular commodities combine for the purpose of buying in large quantities, and thus saving the retailers' profits, are well recognised. The great movement which started in 1844 with the Rochdale pioneers is now widespread throughout the kingdom. There were at the end of 1894 in the United Kingdom 1,674 societies, with a total membership of 1,343,518, a capital of £15,006,663, and a turnover of £49,985,065. This is a remarkable result in fifty years. I should add that of the 1,674 societies 1,484 are described as "distributive," that is ordinary stores, in which the customers share the profits; 175 are "productive," 12 are called "supply associations," and there are English and Scottish wholesale associations.

I need hardly refer to the success of the great co-operative stores of the metropolis. The late Mr. H. M. Jenkins in a paper read before the Farmers' Club in February,

1886, gave an account in some detail of their establishment and progress. I need only mention one or two facts in connection with the oldest of them, which have been given me by a gentleman who is well acquainted with its history. The Civil Service Supply Association started in 1866 at Monkwell Street, E.C., for the sale of groceries. In the first year its takings amounted to £27,000, and in the second year to £56,000. Soon afterwards it removed to more commodious premises, and in its twentieth year its takings were £1,759,000. There were 5,000 shareholders, the shares being £1, of which 10s. was paid, the remainder being paid by the Association out of surplus profits, which were then indivisible. The shares, I believe, are now divided into eighths, and an eighth is worth about £26. A dividend of 12s. for each eighth is paid every half-year.

Co-operation for purchase has been adopted among farmers to a considerable extent, the articles which they combine to procure being chiefly artificial manures, feeding stuffs, seeds, and implements.

In 1893 a committee appointed by the Central Chamber of Agriculture to consider and report upon the question of co-operation for the purchase of farming requisites stated that there were then in existence about thirty co-operative societies for supplying farm requisites, some of them, like the Lincolnshire Association, dealing in only one article, and about half dealing in not more than two or three articles. They gave particulars in their report of eight typical societies in different districts.

In some parts of the country, and notably in Yorkshire, farmers' clubs and chambers of agriculture have made arrangements for the supply of farming requisites to their members, and there seems no reason why the obvious advantages of this plan should not be more generally adopted.

In France, the agricultural syndicates, which are analogous to our chambers of agriculture and farmers' clubs, have, in the course of ten years, covered the country.

There were in 1885 only thirty-nine; now there are 1,500, and their total membership is estimated at 600,000. The purchase of artificial manures was their first, as it remains their most important, object, and it is estimated that since they commenced operations the yearly consumption of manures in France has increased from 60,000,000 to 120,000,000 francs, while if the value has doubled, the quantity used has probably trebled, owing to the fall in prices. The syndicates also buy feeding stuffs and fodder very largely, and to some extent implements. In some cases they have undertaken co-operative production and sale of produce.

We now come to our immediate subject—co-operative distribution and sale.

It is hardly necessary to point out that the ordinary methods of bringing agricultural produce from the farm to the consumer are often clumsy, complicated and costly. There is great waste of money and time attendant upon the system—or lack of system—which prevails. Generally speaking, there is a large—and sometimes an extravagantly large—margin between the price realised by the farmer and that paid by the consumer. In a paper which appeared last year in the *Journal of the Royal Agricultural Society* I attempted to estimate the total annual revenue from the produce sold off the agricultural land of the United Kingdom, treating it as one farm, and I arrived at the following figures:—

Crops of all kinds	£ 64,000,000
Meat, including poultry and rabbits	74,000,000
Horses and other live stock	6,500,000
Dairy produce, eggs, wool, etc.	49,000,000
	<hr/>
	£193,000,000

It is, of course, impossible to say with any accuracy what amount is added before the produce finally reaches the consumer, but I venture to guess that the cost of

conveyance, distribution and sale probably amounts to something like £50,000,000 per annum. Whatever the figures may be, we are all agreed that a considerable reduction—to the advantage mainly of the producer—might be made by an improvement in the existing methods of distribution and sale.

The first essential to improvement is organisation. Co-operation, of course, includes organisation, though organisation does not necessarily involve co-operation. Two instances may be quoted which happen to have come under my personal observation, of successful organisation without co-operation. One is the French butter trade. This has been built up by the merchants in Normandy and Brittany—some of whom are Englishmen—who purchase the butter at the local markets from the individual farmers, and work it up in their blending houses. Another instance is the poultry trade in the Heathfield district of Sussex. There the system is that the fatteners, or “higglers” as they are termed, purchase and collect the chickens from those who rear them; they are then duly fattened, killed and prepared for market, and again collected by the carrier or railway agent, by whom they are forwarded to London and other markets. Both these are instances of complete organisation without co-operation. The producer in each case sells his produce outright, and has no interest in it subsequently; and the organisation, it is well to note, is a system arranged for the producer, in a sense, but not by him.

Co-operation with its attendant organisation has already been partially adopted in the United Kingdom among farmers. The most notable example is that which Irish farmers owe to the energy and constructive ability of Mr. Horace Plunkett. According to a statement published in June last in the *Journal of the Board of Agriculture*, no less than fifty co-operative dairy societies were then opened, and this number is now, I believe, considerably exceeded.

The shares in the creameries are owned for the most part by the members. In some cases persons who do not keep cows hold shares, but they have become shareholders to help the associations as local institutions rather than for the purpose of investment. Shares are usually taken up by farmers in proportion to the number of cows they keep, at the rate of £1 for each animal. This arrangement, however, is not uniform in all the societies. It is the practice to pay for the shares by instalments, generally of five shillings at a time. After the creamery has been started these instalments are frequently paid in milk, either by way of a reduced price being allowed for the whole of the milk delivered or by the member delivering a certain quantity free of charge until the call on the share is paid up. The liability on the farmers is, in all cases, limited to the amount of their shares.

The dairy societies are registered under the Industrial and Provident Societies Act, and their operations are conducted under rules drawn up in conformity with the provisions of that Act. When they were first started the claim to a share of the profits of non-members supplying milk to the creameries was ignored. Most of the societies have now adopted special rules, which provide, after the payment of interest on the share capital of 5 per cent. per annum, and after provision has been made for certain charges and for the reduction in value of the fixed stock and plant, that not less than 10 per cent. of the profits shall be allotted to the employés of the creamery in proportion to the wages earned by them respectively during the period to which the division of the profits relates. The remaining profits are appropriated to the individuals from whom the society has purchased milk, in proportion to the value of the milk supplied by each during the same period, but an individual who is not a member receives a sum equal to only one-half the amount to which he would have been entitled as a member. The

difference between the half and full value of the dividend is placed to the reserve fund. It should be noted, however, that all payments of profits to individuals who supply milk are made by shares, or payments on account of shares, which are appropriated to the persons respectively entitled thereto, so that in this way every person supplying milk to the creamery eventually becomes automatically a member of the co-operative society. The share of profits falling to the employés is not paid in cash—it is accumulated as a loan in the society, bearing such interest as may be determined at the general meeting, and can be withdrawn only in case of distress or on leaving the employment of the society.

In Great Britain several butter and cheese factories have been established—I believe the first was the Longford Cheese Factory, started in Derbyshire in 1869. I find, on reference to the records of the Farmers' Club, that in March, 1868, at a meeting of the Club, Mr. C. S. Read being in the chair, Mr. G. Jackson, of Tattenhall, Chester, read a paper advocating the establishment of cheese factories in this country, in view of the success which had attended them in America.

It is not necessary to attempt to describe in detail the various undertakings of this character. There are three classes of establishment for dealing with butter, all of which have been tried with more or less success, local conditions and management being apparently the controlling factors which determine success or failure. These may be described as the butter factory, the creamery and the blending house. In the first case the farmer sends milk, in the second case he sends cream, and in the third case he sends butter. At the butter factory the milk is taken and separated, the cream churned, and the butter made up and marketed, the skim-milk being either returned to the farmer or used by the factory in its own piggery. At the creamery no milk is received, but it is separated at the farm and the cream only forwarded to

be churned and made up in bulk. At the blending house the butter is received in lumps from the farmers, and worked up, salted, graded, packed and marketed.

A comparatively new but fairly typical cheese factory is described in my Report on Dorset to the Royal Commission. It was started in 1891 by a limited liability company, with a capital of £5,000. The two completed years of working showed that the milk purchased averaged £4,478, and the cheese sold realised £5,885. A high quality Cheddar cheese was made, many prizes having been won at the leading shows. Cheese-making starts in March and goes on to November, and in the winter months the milk is sent to London. The enterprise met with some misfortune at starting, but now appears to be fairly successful.

Co-operative bacon factories have been established in a few districts, but not always with success. In Denmark they have, since the year 1887, sprung up rapidly, and there are now thirty-four in that country, seventeen of them having been erected by co-operative associations of farmers. As one result has been a great increase in the quantity of bacon sent from Denmark to this country, a few particulars may be of interest. In the case of the factories established by the farmers' associations, the funds for the erection of the necessary buildings were generally derived from a loan effected on the security of the founders, each member being expected to become a guarantor for an amount not exceeding £50, the sum guaranteed by each individual determining the extent of his ownership in the concern. The administration of the association is vested in a council elected by the members. The employés usually consist of a manager, a bookkeeper and a cashier.

The regulations of the different co-operative bacon factories agree very much in their general principles. It is usually stipulated that the members of the association shall deliver all their saleable pigs to the

factory for a period of seven years, unless in the meantime they remove from the district. This stipulation, however, does not apply to boars, to sows in farrow, or to young pigs under 56 lbs. (in some cases 112 lbs.) live weight, nor does it extend to pigs sold by a member to his labourers, or consumed in his own house. A corresponding obligation is nearly always imposed on the association to accept all the healthy swine consigned by a member of the factory.

A member may purchase any number of pigs from another member of the association, and send them to the factory, provided he has fattened them for a period varying from twenty to thirty days before delivery. But he is not allowed to send in one year more than ten pigs purchased from non-members. The association usually defrays the expenses incurred in conveying the swine from the nearest railway station to the factory; all other charges for carriage being paid by the consignors. On removal to the factory, the pigs are graded according to quality, the values of the different classes being fixed weekly by the council on the advice of the manager. In some cases the prices are paid by dead weight, but in the older establishments, payment by live weight is still the practice. The offal is generally sold to the members of the association, or to the general public at the current prices of the day.

The regulations do not, as a rule, contain any restrictions on the methods of feeding swine intended for the factories. Sometimes, however, the employment of fish and fish cake is prohibited, as is also the use of a ration containing more than 50 per cent. of maize.

Whenever it is found that the supply of swine is falling off, the manager of the factory is empowered to purchase pigs from non-members of the association at a price fixed weekly by the council, and posted up for the information of members.

At the close of the year the profits arising from the

operations of the association are distributed amongst the members, after provision has been made for the payment of the working expenses, the allocation of a certain sum to the reserve fund, and the part repayment of loans. Each member receives a share of the profits in proportion to the weight of pork he has delivered during the year. The amount carried to the reserve fund is determined annually by the council.

Returning to this country, it may be observed that among the articles of consumption in which the margin between farm price and retail price is largest, are bread, vegetables, milk and meat. In reference to the latter, Mr. Druce, in a paper read at a conference held in connection with the Health Exhibition in 1884, pointed out, that between the time of the birth of the beast and the placing of the joint on the table there are six, and commonly seven, profits to be made. First, there is the breeder ; second, the drover ; third, the grazier ; fourth, the railway company ; fifth, the cattle salesman ; sixth, the wholesale-meat salesman ; seventh, the retail butcher. This represents the state of affairs under the system of sending live animals to be slaughtered in London. The more economical method of slaughtering in the country and sending the meat in the carcass to London is gaining ground. In 1880 the quantity of town-killed meat sold at the Central Market was 1,618,100 cwts. ; in 1893 it was 1,227,220 cwts. A few attempts have been made to establish abattoirs in country districts, but these have been as a rule private ventures, and I am not aware of any instance in which very notable success has yet been attained.

At Darlington, the farmers of the district recently combined to establish an auction mart for live stock, which has been very successful. The capital is £2,000, in £1 fully-paid shares, and only farmers and butchers are allowed to hold shares, and no one person may hold more than twenty shares. The company manage the

mart themselves, having the advantage of a very energetic secretary in Mr. Pearce, secretary of the Darlington Chamber of Agriculture. They appoint their own auctioneers, taking the commission themselves. During last year, £130,000 was turned over without a single bad debt, and a dividend of 10 per cent. was paid to the shareholders.

I have already referred incidentally to the paper read, just ten years ago, by the late Mr. H. M. Jenkins. His subject was "Co-operation between Producers and Consumers of Meat," and he suggested the formation of a farmers' co-operative society, which was to commence with meat, but should in due course take in other produce. To quote his words:—

The number and variety of commodities dealt with would continually increase, and would include dairy-fed pork and every other description of dairy produce. In the course of time it is to be hoped (he continued) through such an agency better and more direct markets might be found for cereals, especially for oats, in large towns, as well as for hay and straw, hops, fruit, and vegetables.

Mr. Jenkins went into detail as to the formation and organisation of such a society. He suggested that everyone proposing to send meat should be compelled to be a shareholder, and also "that a limited number of consumers should be allowed to take shares and to be represented on the board of directors." He proposed to limit the dividend on capital to 5 per cent., and divide surplus profits, if any, among consignors, being of course shareholders, as a bonus of so much money per cwt. sent.

It may be worth remark that a considerable proportion of farm produce—especially small produce—is now sold direct. Anyone who will go into the market hall of Barnstaple, for instance, will see there precisely the same system which prevails in a market town in Normandy, *i.e.*, the farmer or the farmer's wife or dairywoman selling butter, eggs, cream, vegetables, poultry, rabbits,

and other articles direct to the consumer. There is, it is true, an absence of the large wholesale buyer of butter, who is so much in evidence at many markets in Normandy, but with this exception the system is the same. I understand that in some districts in the North a system of buying up butter by large wholesale houses at the local markets prevails.

But, admitting that the middleman cannot be entirely abolished where he exists, and that to a certain extent he does not now exist, there still remains ample reason to consider whether no improvement is necessary, and if necessary, practicable. I venture to think that the problem is at once more pressing and more hopeful than it was ten years ago. It is more pressing because the returns from farming were never less able than they are now to admit of unnecessary outgoings, and further, because the increased organisation of foreign competition renders it less easy than ever for the farmer as an individual to hold his own in the great markets. I think, too, that it is more hopeful—first, because of what seems to me an awakening sense on the part of the public generally of the necessity of encouraging home produce; secondly, because of a somewhat greater readiness on the part of farmers to work together; and thirdly, because the railway companies appear at last willing to give English producers the same facilities, under the same conditions, as they have so long granted only to foreigners.

It is common knowledge that Lord Winchilsea has, with characteristic pluck, attempted to grapple with this most difficult question. It does not come within my province to anticipate the details of any scheme which he has prepared. But I may be allowed to suggest one or two points which are essential to a successful experiment in this direction. It should, while starting experimentally and to some extent tentatively, be sufficiently comprehensive in scope to cover in due course the whole field

of agricultural production. It should aim at enlisting the co-operation of, and federating so far as possible, any local enterprises (and they are numerous throughout the country) established on co-operative lines—such as butter and cheese factories, bacon factories, abattoirs, etc. It should be as far as possible an association of producers, and the benefits should—whether by bonuses or dividends or increased prices—go primarily to the producers. It follows that the producers should form, at any rate, a large proportion of the shareholders. It should endeavour to collect produce at local centres and to send it in large quantities to the great markets, so as to save cost of carriage. I have already mentioned that the Irish Co-operative Agency act as salesmen for their creameries, charging $2\frac{1}{2}$ per cent. commission. The same kind of work might be done in this country, but it must be supplemented by providing an outlet for all the produce of its shareholders and by endeavouring to sell as much as possible direct to consumers. These are one or two of the principles on which such a scheme might be worked. But, above all, for its success it requires the cordial assistance of those primarily interested. Without this it is impossible, but with this it seems to me that something may be accomplished to lessen the wide distance which separates the farmers in many districts from those great centres of population where their produce may most advantageously be sold. If this be so, British agriculture may well be benefited by an application of those sound principles of combination and organisation which are properly involved in the word co-operation.

CHAPTER VIII.

THE NATION'S FOOD SUPPLY.¹

EARLY in 1816 the old Board of Agriculture (with which the name of Sir John Sinclair is so intimately associated), considering it "an incumbent duty to the public to take the necessary measures for ascertaining the real state of the kingdom, in whatever most intimately concerned its agricultural resources," sent out a circular letter of inquiry "to every part of England, Wales and Scotland." The replies received presented a doleful picture of agricultural calamity, and among the causes which had contributed to disaster was what a Scottish correspondent termed "an excessive glut of agricultural produce beyond the wants of the country." The imports of wheat and flour in 1815 were less than 500,000 cwts., of butter 125,000 cwts., and of cheese 107,000 cwts., while imports of meat were prohibited. The average price of wheat was 65s. 7*d.* in 1815, and 78s. 6*d.* in 1816, and the wholesale price of beef and mutton was from 7*d.* to 8*d.* per lb. in 1815, and from 6*d.* to 7*d.* per lb. in 1816.

It would be interesting to speculate as to the terms in which the Scottish pessimist of a century ago would describe the quantity of agricultural produce now annually supplied to meet the wants of the country.

In these days of popular statistics it may perhaps be thought that anyone who has access to the ordinary sources of information can, with a very trifling arithmetical effort, state at once the total quantity of food consumed by the nation. As a matter of fact, the figure

¹ Read before Section M of the British Association at Dundee, September, 1912.

is not known, and indeed in a literal sense cannot be known. In the last resort it can only be an estimate, and an estimate which, however carefully compiled, must be very approximate. The reason is apparent. Statistics are collected at the ports of all our oversea supplies, but for the food supplies produced at home there are no complete returns. Estimates of a very large part of the home supplies have recently been made in the Report on the Agricultural Output issued by the Board of Agriculture and Fisheries, but these cannot in the nature of things be exhaustive. Until we can calculate the amount of food grown or produced on private premises and consumed in the households of the producers, we cannot claim to make an accurate or complete statement of the food of the nation.

At the outset, it is necessary to define what we mean by food. In the Trade Returns one of the main groups in which imports and exports are classified is "Food, drink and tobacco." There is little difficulty in excluding the last item, for the most ardent devotee of My Lady Nicotine will shrink from contending seriously that tobacco can be classed as a food. At first sight it may also seem easy to exclude drink, but it is not quite simple. We may perhaps avoid controversy by excluding at once all alcoholic liquors, but are cocoa, coffee and tea also to be excluded? Even if we were to exclude them as doubtful, we are still left with one drink to which none can deny the claim to be classed as food, viz., milk. In the Trade Returns grouping, the term food includes not only human food, but the imports of such grains as barley, oats, buckwheat, maize, &c., which are only to a very small extent used directly for human food. It is evident that there is no ready-made definition by which we can make an unchallengeable list of articles of food, and we must, therefore, for the purpose of discussion, define the term for ourselves.

I propose to deal in this paper only with such commo-

dities as are directly consumed as food by man, excluding alcoholic liquors (with substances such as malt, hops and yeast, which are mainly or solely used in their preparation), but including cocoa, coffee, tea and milk.

To confine the subject within reasonable limits we must deal with only the main groups of commodities, and ignore for the most part details of separate articles. But there is one commodity, at any rate, which must stand by itself. It is that which represents the staff of life and is often spoken of as though it were the sole food of the people. The average annual expenditure on imported wheat and flour during the past five years was £46,500,000, or rather more than 20s. per head of the population. Fifty years ago the corresponding expenditure per head was 12s. 6d. In 1911 the total cost of imported wheat and flour was £44,187,000, and if to this be added the value of the home crop, or at least that part of it which is made into bread, the total value of the wheat supply was over £55,000,000, or, deducting about £1,000,000 for exports, an expenditure of £54,000,000, or say a little over £1,000,000 per week. This represents a total quantity of 138,670,000 cwts., or about 343 lbs. per head of the population, assuming that all imports are used as breadstuffs, but allowing a deduction for seed and tail corn from the home crop. The supplies come mainly from seven sources outside the United Kingdom, and the quantity and proportion from each are summarised in the table on p. 132. I have added to the figures for last year the average figures for the five years 1907-11.

The variations in the sources of wheat supply from year to year are often considerable, and it is, therefore, inadvisable to draw conclusions from one year's figures. India is perhaps the most uncertain, and the supply from thence, which amounted to over 20,000,000 cwts. last year, was in 1908 less than 3,000,000. From Russia, which sent 18,000,000 cwts. last year and nearly 29,000,000 cwts. in the previous year, we received in 1908 only

	1911.		Average, 1907-11.	
	Million cwts.	Per cent. of total.	Million cwts.	Per cent. of total.
United Kingdom . . .	29·29	20·7	26·83	19·1
Australia	14·53	10·3	10·59	7·5
Canada	18·91	13·4	18·37	13·1
India	20·23	14·3	14·81	10·5
Other British possessions	0·73	0·5	0·42	0·3
Argentina	14·87	10·5	20·82	14·8
Roumania	2·06	1·5	1·51	1·1
Russia	18·11	12·8	16·30	11·6
United States	20·05	14·2	27·26	19·4
Other foreign countries .	2·55	1·8	3·73	2·6
Total	141·33	100·0	140·64	100·0

5,000,000 cwts. The supply from Argentina ranged from nearly 32,000,000 cwts. in 1908 to less than 15,000,000 in 1911, while from the United States the supply fell from nearly 40,000,000 cwts. in 1908 to 18,000,000 cwts. in 1910. The United States, indeed, must be regarded as a diminishing exporter of wheat. The most trustworthy of our present sources of wheat supply is Canada. During the five years 1907-11 the quantity sent from the Dominion ranged from 15,000,000 to 20,000,000 cwts. and, on the whole, it tends steadily to increase. It is noteworthy that during the twelve months ending July, 1912 (the "cereal year" 1911-12), Canada exported more wheat than any other country in the world, and it was further noted in the *Corn Trade News* that the combined exports of the British Empire, viz., from Canada, Australasia and India, during that period would have been more than sufficient to supply the United Kingdom with all its requirements of imported wheat had it all been sent here. As it was, we received 38·5 per cent. of our total supplies in 1911 from British possessions, so that, if we include our home supply, about three-fifths of our breadstuffs came from within the Empire.

Of the imports which are classed in the Trade Returns as "grain and flour," amounting in all to nearly £76,000,000, when we have dealt with wheat and flour (£44,000,000) not very much of the remainder comes under our definition of food. Including rice, farinaceous preparations, oat-meal, and one or two smaller items, I think that, allowing for exports, £4,000,000 will cover all that we need take into account.

In quantity bread is much the largest item of our food bill, but in value meat greatly exceeds it. Our carnivorous tastes are fairly catholic, though for some not very logical reason we reject horseflesh, but we retain our traditional predilection for beef, which (including veal) constitutes about 44 per cent. of our total meat consumption; mutton and lamb constituting about 23 per cent., and pig-meat about 33 per cent. Imports comprise live animals from Canada and the United States, and dead meat from various sources, the principal being Argentina, Denmark, Holland, the United States, Australia, Canada, and New Zealand. The home production of beef, veal, mutton, lamb, and pig-meat I estimate at about 28,000,000 cwts. This includes the output of farms in Great Britain and Ireland, with an estimate for the amount of pig-meat produced by allotment holders, cottagers and private persons whose pigs are not included in the agricultural returns. The chief sources of our meat supply, and the quantities forthcoming in 1911 and in the quinquennium 1907-11, are shown in the table on p. 134.

In terms of value the proportions would be considerably altered. The total imports of meat, including lard, amounted in 1911 to £52,000,000, of which £40,500,000 came from foreign countries and £11,500,000 from British possessions. This sum is made up partly of the value of animals landed alive and partly of meat imported in the carcass. Exports of meat amount to about £2,000,000. The valuation of the home meat supply is a difficult matter. On the whole, the most satisfactory method is to take the

Country.	1911.		Average, 1907-11.	
	Millions of cwts.	Per cent. of total.	Millions of cwts.	Per cent. of total.
United Kingdom . . .	29'00	54'5	29'26	55'7
Australia	2'39	4'5	1'69	3'2
Canada	1'00	1'9	1'31	2'5
New Zealand	2'30	4'3	2'41	4'6
Argentina	8'45	15'9	6'17	11'8
Denmark	2'42	4'6	2'20	4'2
Netherlands	0'77	1'5	0'90	1'7
United States	6'04	11'3	7'94	15'1
Other countries	0'81	1'5	0'63	1'2
Total	53'18	100'0	52'51	100'0

value of the animals at the markets before slaughter, and this deducting exports and allowing for hides, wool, etc., amounts to about £76,000,000. Reckoning by value, therefore, the home supply would represent about 61 per cent. of our total consumption. The total average consumption of meat is 130 lbs. per head.

Poultry, eggs, rabbits and game may be regarded as part of the meat supply, and of these our total imports amounted in 1911 to nearly £10,000,000. The value of poultry and eggs sold from the farms of Great Britain is estimated at £5,000,000, and to this must be added the large Irish production. There is obviously a very large production of poultry and eggs by private persons for their own consumption, and a considerable quantity of the farm production is consumed on the farms. On the whole, with some allowance for the value of rabbits and game, I estimate the total home production under this head at £15,000,000, or about 60 per cent. of the total consumption.

Of fish the total value landed in the United Kingdom by British vessels—which may be treated as the “home production,” although the supplies are drawn from seas

as distant as the White Sea in the North and the Morocco coast in the South—was nearly £12,000,000, and in addition fish to the value of nearly £4,000,000 were imported, *i.e.*, landed by foreign vessels at British ports. On the other hand, the exports of fish are valued at £7,650,000, leaving apparently a little more than half the total supply for home consumption. But the exports mainly consist of dried or cured fish (herrings largely predominating), and it would probably be reasonable to assume that if they were expressed in terms of fresh fish the value would not exceed £4,000,000, so that the net value of the home consumption may be placed at £12,000,000, of which one-fourth is imported.

Next in importance to bread and meat comes dairy produce. The total value of butter and margarine imported in 1911 was £27,062,000, of cheese £7,140,000, and of milk (mostly condensed) £2,071,000. After deducting exports the value of dairy produce retained for home consumption was £35,211,000.

The value of butter sold by British farmers is not more than £3,000,000, but if we add the output of butter factories in Great Britain and the production in Ireland, and make a rough estimate of the quantity made and consumed by British farmers and private persons, the total home production probably amounts to over £13,000,000, or about 30 per cent. of the total consumption. Denmark supplies about 23 per cent., Holland about 13 per cent. (mostly margarine), Australia about 12 per cent., Russia about 8 per cent., and New Zealand about 4 per cent.

It appears probable that the consumption of cheese in this country has been materially reduced in recent years. The imports per head of population in 1911 were smaller than in the previous year, and about 1 lb. per head smaller than they were ten years ago, but the reduction of the home supply has probably been even greater. The output of cheese by British farmers is calculated at not

more than 500,000 cwts., and as there is practically no cheese made in Ireland and very little made by private persons, except, perhaps, a small quantity of soft cheese, this substantially represents the total home supply, which is not more than about 18 per cent. of the nation's consumption. Canada sends us about 52 per cent. of our whole requirements, and New Zealand 14 per cent., while 7 per cent. from the Netherlands and 5 per cent. from the United States account for nearly all the supplies obtained outside the British Empire.

The comparative smallness of the output of butter and cheese by British farmers is, of course, attributable to the ever-increasing demand for fresh milk, of which hitherto the home producer has retained a practical monopoly. As already noted, nearly all the milk imported is in the condensed form, but with the view of making a comparison I have converted these quantities into terms of fresh milk, and for the purpose of the calculation I have reckoned the small quantities of cream, separated, preserved and skim milk also as fresh milk. Making some allowance for private supplies, I reckon that the total consumption of milk in all forms in the United Kingdom amounted to about 913,000,000 gallons in 1911, of which over 95 per cent. was produced in this country. Of oversea supplies the Netherlands sent more than half and Switzerland about one fourth (2·77 and 1·23 per cent. respectively of our total consumption).

The quantity of fruit grown on agricultural holdings in Great Britain (exclusive of apples and pears used for cider and perry) is about 6,000,000 cwts., and the value, with a small addition for Ireland, is £4,500,000. The production in private gardens as well as that grown commercially under glass is not known, while nuts, which may properly be included in this category, are also an unknown quantity. We may perhaps estimate the home production of fruit and nuts at a total value of £6,000,000. The value of imported fruit and nuts is £16,000,000, but of this

total dried fruits (currants, raisins, figs, etc.) account for nearly one-fourth, and exotic fruits (bananas, oranges and lemons) for nearly one-third. The imports of raw fruit directly competing with home produce may be reckoned at about £5,000,000. Apples represent by far the largest item of our fruit supply, Canada, the United States and Australia sending nearly all the imports. Oranges come easily second, and bananas third in the fruit diet of the nation.

Of vegetables the farm production in Great Britain is calculated at about £11,000,000, of which potatoes represent over £7,000,000. Imports of vegetables amount to £4,000,000; potatoes, onions and tomatoes accounting for seven-eighths of the total. In some years there is a considerable exportation of potatoes, and in 1911 this amounted to £432,000. The Irish production of potatoes is very large, and adding this to the produce of private gardens I am disposed to estimate the total consumption of vegetables at £24,000,000, of which about 17 per cent. comes oversea.

To complete the items of the nation's food bill we must add £26,000,000 for sugar. The total imports of the beverages, tea, coffee and cocoa, which I propose to include as food, amount to £18,500,000, but the exports amount to over £5,000,000, so that the home consumption is about £13,500,000.

From this very rapid survey we are now able to summarise the nation's food supply in terms of money. Dividing home production from imports, and deducting exports, we get the statement on p. 138 of the value of food consumed in the United Kingdom.

If we deduct the two last items, for which there is no corresponding home production, it will be observed that the total of imported food is valued at about £13,000,000 less than the estimated total of the home produce consumed. In other words, the United Kingdom may be said to produce rather more than one-half of its total food

	Home produce.	Imports.	Total.
	Million £'s.	Million £'s.	Million £'s.
Wheat, flour and grain	10	48	58
Meat	78	51	129
Poultry, eggs, rabbits and game	15	10	25
Fish	9	3	12
Dairy produce	42	35	77
Fruit	6	16	22
Vegetables	20	4	24
Sugar	—	26	26
Tea, coffee and cocoa	—	13	13
	180	206	386

requirements, exclusive of sugar and the beverages which may be regarded as necessaries of civilised life. I have, I hope, sufficiently insisted on the fact that the calculations of home supplies are to a considerable extent estimated, and the margin of error in these figures is much greater than that which exists in the case of the values of imports. But another cautionary observation must be made in reference to the terms in which the calculation is expressed. There is practically no common measure except value which can be applied to all the items of the account ; but it is not altogether a satisfactory measure for the purpose. In the first place, as I have indicated in connection with meat, the general level of price of the imported food is generally lower than that of home produce, so that the same amount of money may represent a larger supply in the one case than the other. Then it must be borne in mind what the values taken purport to be. The figures of imports represent the declared value (cost, insurance and freight) at the place of landing, not including, in the case of dutiable articles, the amount of the duty. The total net amount of duty charged on sugar, tea, coffee, cocoa and dried fruits is £10,000,000. The value of home produce mainly represents the whole-

sale price of the raw product at the nearest market. It is clear, therefore, that the figures do not in any way represent the amount actually spent by the consumers. Cost of manufacture, as in the case of wheat, of slaughtering and dressing in the case of live animals, and in all cases cost of handling and distribution must be added before the amount spent by the consumers could be ascertained. This calculation I shall not attempt. I must be satisfied if I have succeeded on the present occasion in giving some approximate indication of the magnitude of the nation's food supply and the relative proportions of its native and extraneous supplies.

CHAPTER IX.

SELLING STOCK BY LIVE WEIGHT.¹

A TENDENCY towards exactitude is characteristic of farming in the present day. The scientific school-master is abroad, and his influence permeates even those quarters where his authority is still unaccepted. The last world left for him to conquer was perhaps the agricultural, and that may now be said to own his sway. There still doubtless remain many persons whose allegiance to the haphazard rule of tradition is unbroken, whose "stubborn hearts," as Spenser says, are not yet "mollified" by "sweet science." But the typical farmer of the day is not, as far as concerns his business, much behind the practitioner of other callings in appreciating the advantages of exact knowledge. And in so far as he aims at and achieves exactitude, and places his dealings on a strictly commercial basis, is there hope even in these dark days of depression that he may be able to weather the storm.

The present application of this general principle lies in the consideration of the desirability of substituting a sounder method of selling stock for the old rule-of-thumb proceeding which still generally prevails in this country. It is only necessary to consider the matter for a moment to see that the present system is logically indefensible. The breeder and feeder of stock is engaged in the manufacture of beef or mutton. Out of so much raw material in the shape of calves or lambs, of store cattle or sheep, of grass, of hay, of cake, of corn, and so forth, he

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turns out in a certain time an article which is worth so much in the market. The current price of that article is subject to fluctuation, and depends, firstly, upon its quality at the time of sale, and secondly, on the law of supply and demand. But unquestionably the return which should be made to the vendor for that article is contingent upon the quantity of it. If at a certain date he has succeeded in manufacturing, say, 1,000 lbs. of beef of a particular quality, he ought, on commercial principles, to receive just so much more than if he had only made 900 lbs. As it will be sold retail by weight, so it should be sold wholesale by weight. The manufactured article—in other words, the beast or sheep—may pass through half a dozen hands between the producer and consumer, but the basis of every transaction to which it is subject should be its weight.

So far, it is probable that all will be willing to go. The crux of the question is, whether the basis of weight is in the first place a practicable, and in the second place a convenient one to adopt in the sale and purchase of live stock; supposing the affirmative to be proved in both cases, there would then remain the further question whether such a change as would be necessary would be so desirable as to be, as the phrase goes, “worth making.” It is with these several considerations, and with others incidental thereto, that this present paper attempts to deal.

The idea of selling stock on the basis of their live weight is by no means a new one. But although the scales have been sometimes used, the favourite method of ascertaining the weight has hitherto been by measurement. It would astonish many, perhaps, to know how much time and labour have been expended on this subject by British agricultural reformers during the past hundred years. In the ninth volume of the first series of this *Journal*, published in 1799, a short article appears written by Lord Somerville, whose name is now less

honoured than it deserves to be for his enlightened efforts in the cause of agricultural progress, and the foremost part which he played in the farming reformation at the end of the last century. He was one of the earliest to devote careful attention to the subject of estimating the live weight of cattle, and the article above referred to was prefatory to a series of calculations which he termed "The Farmer's, Grazier's, and Butcher's Ready Reckoner: a short Table by which the Weight of Stock, according to the different usages in England, can be ascertained, and the Value of Stock of any Size, with the difference, at once discovered." This compendium was adopted by the Bath and West Society, was printed "in a convenient size for the pocket," and sold by the secretary at the Society's rooms.

Lord Somerville's table did not precisely deal with the method of ascertaining the weight of stock, being more immediately directed towards an equalisation of the various standards of weight in use throughout the kingdom. He observed, that

it is well known that in the London markets the mode of calculating the weight of both sheep and cattle is by the stone of 8 lbs.; in the North and East parts of England by the stone of 14 lbs.; and in the South, West, and North-West parts of England, as well as Wales, by the score of 20 lbs.

Very early in the nineteenth century tables for calculating the weight of cattle by measurement were certainly in existence. In the third volume of the Royal Agricultural Society's *Journal*, published in 1842, Mr. C. Hildyard, of Thorpeland, near Northampton, wrote a letter to Mr. Pusey, in which he remarked that thirty-five years previously he had met with computation tables, which he corrected and amplified in a small "ready-reckoner," printed for private circulation. This appeared in 1814. Shortly afterwards Dr. Wollaston, at the suggestion of Earl Spencer, constructed a sliding-rule, showing the weights in stones of 14 and 8 lbs. Cary's

well-known cattle-gauge was based upon the calculations of Dr. Wollaston. Other tables were at different times constructed by Messrs. Renton, McDerment, Douglas, Ainslie, and Stewart respectively, each of which is, or was, known by the name of its constructor. Youatt, in his "Complete Grazier" (12th edition), gives the following as the mode of ascertaining the weight of cattle by measurement :—

The farmer passes a string round the beast just behind the shoulder-blade, and then measures the length of that string. This, in simple language, is taking the girth of the animal, and he writes it carefully down. Next, from that bone of the tail whence a line would fall perpendicularly, just touching the buttock, he measures along the back to the forepart of the shoulder-blade, and he registers the amount of this. He has now the girth and the length of the beast. He multiplies them together, and he has the number of square superficial feet which the exterior of the beast comprises. He next multiplies the product of this by 23, the number of pounds allowed to each superficial foot in all cattle measuring less than 7 and more than 5 feet in girth, and he obtains the sum of 713 lbs., which, allowing 14 lbs. to the stone, is 50 stones 13 lbs., or, according to the old computation of 8 lbs., 89 stones and 1 lb. Suppose the animal weighed to be less than 9 and more than 7 feet in girth, 31 is the number of lbs. to each superficial foot, and under 5 feet, 11 lbs. For a half-fatted beast, 1 stone in 20 must be allowed, and 1 stone in the whole weight for a cow that has had calves.

Taking the tables of Renton, McDerment, and Cary, the following figures will show that they approximated fairly well to each other, although each was based on a different standard. The methods adopted for working out the weight from the measurement were, in fact, various and many. Stephens, in his "Book of the Farm," cites five distinct rules which give results from the same measurements with a difference between the highest and lowest of nearly 4 stones, or 56 lbs. These extracts show that the three tables above mentioned were fairly in accord. They are calculated upon the stone of 14 lbs.

Girth.	Length.	Renton's Table.	McDerment's Table.	Cary's Gauge.
ft. in.	ft. in.	st. lbs.	st. lbs.	st.
5 0	{ 3 6	21 0	20 11	21
	{ 4 0	24 0	23 11	24
5 6	{ 3 9	27 1	27 0	27
	{ 4 9	34 4	34 2	34 $\frac{1}{2}$
6 0	{ 4 6	38 8	38 8	38 $\frac{3}{8}$
	{ 5 0	43 1	42 12	43
7 0	{ 5 6	64 6	64 2	64 $\frac{1}{2}$
	{ 6 0	70 5	69 13	70 $\frac{1}{4}$
8 0	{ 6 6	99 8	99 0	99 $\frac{3}{4}$
	{ 7 0	107 5	106 9	107 $\frac{3}{8}$

With reference to the calculation of weight from measurement, Stephens, in his "Book of the Farm," remarks :—

Upon what principle the rules given in books are founded I cannot say, unless on the assumption that the ox is a hollow cylinder ; but when the measurement is correctly taken, and the ox of an ordinary size, the result is pretty accurate.

The error attendant upon these calculations is, that they form a rigid rule which does not adapt itself to the differences which are found in all animals. The tables upon which reliance was most confidently placed seem often to have been found erroneous, especially when the stock measured were above the average size. In the book on "British Husbandry," published by the Society for the Diffusion of Useful Knowledge in 1837, particulars are published of four bullocks which were exhibited at the Highland Society's Agricultural Show of 1834, showing their estimated weights according to several tables, and their actual dead weight. All of these calculations fell far short of the real weight, the highest coming only within 56 $\frac{1}{4}$ stones, or an average of 14 stones per head too little, and the lowest showing a deficiency of 79 $\frac{1}{2}$ stones, or nearly 20 stones per head. Thus, as the author justly remarks, taking the nearest calculation—

that made by Renton's table—there would have been a loss to the farmer of over 50 stones, or, according to the price of beef at that time in Smithfield Market, of £21 on four beasts. This case was doubtless an extreme one, but it is evident that a system under which such discrepancies were possible, was scarcely likely to find permanent favour among practical men. Its fallacy lay in the assumption that all cattle were of mathematical proportions, and that the offal of each was in an invariable ratio to the quantity of meat.

But there is a surer guide than the tape, and that is the scales. It is curious that there is an insular prejudice against weighing live animals, and this perhaps accounts for the length of time which the measurement system has been before the farmer, while the better and surer method of weight has been comparatively overlooked. In the valuable report on "American Agriculture" presented by Messrs. Clare Sewell Read and Albert Pell to the Royal Commission on Agriculture in 1879, attention was pointedly directed to the universal adoption across the Atlantic of weighbridges in marketing live stock. In the United States every town is provided with a number of public weighbridges, while every market and stockyard possesses an enclosed platform under cover, capable of weighing several bullocks at a time. Messrs. Read and Pell mentioned an instance of forty bullocks being driven on to the machine and weighed at one time, the total weight being over 41,000 lbs. As each bullock was estimated to turn out 56 per cent. of carcass weight, there was nothing to settle but the price per lb., and the "deal" was complete.

The platform, enclosed at both sides and roofed over, has two long gates, one at each end. One being set open, the drove or bunch of cattle pass on to the balancing platform, and the gate is shut behind them. A weight is recorded by a clerk in an adjoining room in the presence of buyer and seller. A ticket is given, the further gate is opened, and off the cattle

go. The whole operation does not take more than from two to five minutes.

There is a brisk, business-like air about such a transaction which cannot but offer a contrast to the long and tedious method whereby in this country forty beasts such as these would "change hands."

This account, supplemented by the reports of other visitors to the United States, gave an impetus to the movement in England in favour of substituting the scales for guesswork in buying and selling stock. The discussion upon the subject has become general; the powerful support of Sir John Lawes, and of a host of agricultural leaders, have pressed the question forward, so as to ripen it with more quickness than that with which such matters usually come in this country to maturity.

Instances might be enumerated of many stock-keepers who have sought the assistance of the scales in carrying on their business. Thirty years ago Mr. T. Horsfall, writing in the *Journal of the Royal Agricultural Society*, remarked that he had weighed his fattening cattle for a number of years, and his milch cows for two years, using the weights chiefly as a guide to their treatment, but incidentally also as a basis for sale.

The main difficulty in selling stock by live weight, and the point on which doubt chiefly can arise, is the percentage of offal. This has been the subject of much controversy. Mr. Horsfall, in the article above quoted, recommended that "the usual computation for a well-fed, but not over-fat beast is live to dead weight as 21 to 12," or about 57 per cent. carcass; "with such modifications as suggest themselves by experience." Mr. Robert Stevenson, from numerous experiments, calculated that every 100 lbs. of live weight would give 57.7 per cent. of dressed meat. Mr. Ewart constructed a table in which he estimated the proportion of beef to range from 45 up to 70 per cent. of live weight in proportional ratio to the size of the animal. The article, however, published by

Sir John Lawes and Dr. Gilbert in 1860, giving the results of a series of elaborate and exhaustive experiments on the composition of oxen, sheep, and pigs, first established a reliable standard. Among the conclusions arrived at were the following :—

Well-bred and moderately fattened oxen should yield 58 to 60 per cent. carcass in fasted live weight ; excessively fat oxen may yield from 65 to 70 per cent. Moderately fattened sheep (shorn) should yield about 58 per cent. carcass in fasted live weight ; excessively fat sheep may yield 64 per cent., or more. Moderately fat pigs, killed for fresh pork, should yield (including head and feet) about 80 to 82 per cent. carcass in fasted live weight ; large, well-fattened pigs, fed for curing, will yield a considerably higher proportion. In each of the three descriptions of animal, the proportion will, however, vary much, according to breed, age, and condition.

Sir John Lawes has recently referred to these conclusions in an article written during the present year (1886) for the Newcastle Farmers' Club. In quoting them, he observes :—

It will be observed that we here only speak of the fasted live weight. Most of our animals, however, were weighed both unfasted and fasted, and we have ascertained that the loss during the period of fasting, 24 hours, is subject to considerable fluctuations. In a large ox it may vary from 40 to 120 lbs.

The observations and experiments of many practical men have been published, and they all tend more or less to confirm the calculations of Rothamsted. One instance will suffice, taken from the columns of the agricultural press. Mr. T. E. Shrimpton, of Chalkpit Farm, Reading, weighed eleven cattle of various breeds and ages. They included a 7-year-old barren Shorthorn cow, two 3-year-old Shorthorn heifers, a yearling Shorthorn heifer, a Shorthorn cow in milk, a 3-year-old cross-bred polled steer, a 5-year-old Devon steer, a 4-year-old Devon steer, and three 3-year-old Devon steers. The individual live weights ranged from 819 lbs. to 1,932 lbs., the average being 1,465 lbs. The average dead weight was 888 lbs., or a percentage of 60. The percentages of dead weight

ranged from 56 to 67. It should be noted that all the animals were weighed unfasted.

We now come to the practical question whether an alteration of the existing methods is worth while. Why, it will be asked, should we change the present system? It works, so many will say, comfortably and conveniently enough. Why therefore introduce scales where they are not wanted? It is to these questions, perfectly natural and legitimate as they are, that an answer must be sought.

It may be observed at once that it is by no means every seller of stock who will propound the queries which have just been placed in his mouth. Not every farmer is even now satisfied that he gets the fair value for his stock. One thing, at any rate, he knows, and that is, that he knows very little about it. The average farmer does not know, and has no means of knowing, whether the beasts he sells fetch their full price. The purchaser, as a rule, does know with very remarkable accuracy. No ordinary farmer will attempt to say that his judgment of the size and weight of a beast is equal to that of a dealer or butcher. It is impossible that it should be so. The dealer or butcher spends his life in estimating the weight of stock. His eye and judgment are his stock-in-trade, and very efficient they become. He possesses, too, what the farmer does not possess—the means of training and educating his judgment. A farmer may estimate a beast to contain a certain quantity of meat; he may possibly be right, but if so, he never knows it. The butcher alone is able to check his judgment by the actual result in the slaughter-house.

There is no allegation of unfairness against butchers as a class in saying that they are scarcely likely to over-estimate the weight of a beast which they are buying. If they possess superior knowledge and experience, they are, by all the rules of business, perfectly justified in using them to their advantage. It is well to know to what

extent they possess the habit of under-estimating weights, which obviously tends to their favour in driving a bargain.

It was recently the good fortune of the present writer, on the occasion of a visit to Rothamsted, to hear from Sir John Lawes the views which he holds on this subject. It chanced that Mr. Westley Richards was present. This gentleman, who is well known as a prominent advocate of the scales in stock-dealing, has taken up the subject in a strong belief that the farmer is losing money very largely by his practical dependence on the judgment of the butcher. He has indeed gone so far as to estimate the average loss to the farmer at 45s. per head on fat stock sold, and at 20s. per head on store stock purchased. Now, Sir James Caird estimates the annual slaughter of cattle for the butcher at 2,100,000 head. At 45s. per head the loss would amount annually to the sum of £4,725,000, and to this Mr. Westley Richards adds £2,000,000 as the loss on stores purchased, making a total annual loss to the British farmer of £6,725,000.

Mr. Westley Richards has analysed the results of the Rothamsted investigations, and has based all his calculations as to the live and dead weight of stock upon them. That he is able to get very near the mark, the following account of eight bullocks, which he sold to butchers by weight in October, 1884 indicates :—

Unfasted Live Weight.		Offal calculated at 44 per cent.	Carcass calculated at 56 per cent.	Carcass calculated in stones of 14 lbs.	Actual Weight in stones of 14 lbs.	Price per stone.	Calculated Value.	Sold for.
cwts. qrs. lbs.	lbs.					s. d.	£ s. d.	£ s. d.
13 1 0	1,484	653	831	59·5	59·0	9 4	27 14 0	27 5 0
11 2 0	1,288	567	721	51·7	52·0	„	24 0 8	24 0 0
12 1 0	1,372	603	769	54·1	54·1	„	25 10 8	25 12 0
12 3 0	1,428	628	800	57·2	55·5	„	26 13 4	25 16 8
13 3 0	1,540	678	862	61·8	59·1	„	28 14 8	27 16 0
12 0 14	1,358	597	761	54·5	53·3	„	25 7 4	24 16 0
13 3 0	1,540	678	862	61·8	58·6	„	28 14 8	27 5 0
13 0 0	1,456	640	816	58·4	59·1	„	27 4 0	27 12 0
11,466		5,044	6,422	458·7	452·8		213 19 4	210 2 0
						Per head .	26 14 10	26 5 0

It will be seen that over five tons weight of stock, the estimated carcass weight only differed from the actual ascertained weight by about 10 lbs. per head; and this is probably a fictitious difference, inasmuch as butchers can get off, Mr. Westley Richards states, a stone and a half in cutting up a carcass.

As a contrast to the above, a duplicate lot of eight bullocks were sent on the same day to Smithfield, with the following result:—

Unfasted Live Weight.		Offal calculated at 44 per cent.	Carcass calculated at 56 per cent.	Estimated Weight in stones of 8 lbs.	Price per stone of 8 lbs.	Estimated Value.	Sold for.	Loss.
cwts. qrs. lbs.	lbs.				<i>s. d.</i>	<i>£ s. d.</i>	<i>£ s. d.</i>	<i>£ s. d.</i>
14 1 0	1,596	702	894	111·6	5 4	29 1 6	—	—
13 1 0	1,484	653	831	104·0	„	27 14 8	—	—
13 1 0	1,484	653	831	104·0	„	27 14 8	—	—
13 0 0	1,456	641	815	102·0	„	27 4 0	—	—
13 1 0	1,484	653	831	104·0	„	27 14 8	—	—
14 1 0	1,596	702	894	111·0	„	29 16 0	—	—
12 1 0	1,372	604	768	96·0	„	25 12 0	—	—
12 1 0	1,372	604	768	96·0	„	25 12 0	—	—
	11,844	5,212	6,632	829·4*		221 4 0	204 0 0	17 4 0
				Per head	.	27 13 0	25 10 0	2 3 0

* Equal 473 stones of 14 lbs.

It should be observed that 5*s.* 4*d.* per stone of 8 lbs. is equivalent to 9*s.* 4*d.* per stone of 14 lbs. The quotations of price for prime Shorthorns, as published for the London market that day, were 5*s.* 2*d.*, 5*s.* 4*d.*, and 5*s.* 6*d.* per 8 lbs. The bullocks were, it will be seen, somewhat heavier than those which fetched 9*s.* 4*d.* per 14 lbs. in the country. In commenting upon these facts, Sir John Lawes remarks: "I dare say that if a complaint had been made to the salesman, Mr. Westley Richards would have been assured that his oxen made fully 5*s.* 4*d.* per stone."

Another lot of four Welsh runts, sent by Mr. Westley

Richards to Smithfield on September 13th, 1885, made £14 6s., or £3 11s. 6d. per head less than they should have done according to the calculated carcass weights at the published price of the day. An account of sundry lots of bullocks, numbering altogether fifty-one, which were sold at various times, mostly by auction, showed a similar loss per head of £2 5s. 5d., or about 7d. per stone.

But for the most striking and instructive illustration of the accuracy of the scales when rightly used, we must revert to Rothamsted. In 1879, Sir John Lawes invited several competent experts—men practised in the estimation of the weight of cattle by the eye—to Rothamsted, and asked them each to give an opinion as to the weight of five Hereford bullocks. He had himself made his calculation from the live weight as given by the scales. The experts were told the purpose for which their opinion was asked, so that they had no other interest in the matter than—for their own credit's sake, and for the sake of maintaining the present system—to get as near the mark as possible. After their opinions had been taken, the bullocks were slaughtered, and the actual carcass weights ascertained. The following table shows the results. It must be remembered that the stones are here 8 lbs. and not 14 lbs.

No.	Estimated Weights by Experts.			Actual Carcass Weights.	Error of Experts' Estimates.		Carcass Weight as calculated from Live Weight.
	Highest.	Lowest.	Average.		Too little.	Too much.	
	st.	st.	st. lbs.	st. lbs.	st. lbs.	st. lbs.	st. lbs.
1	90	88	89 0	93 1	4 1	—	94 4
2	88	86	86 6	86 3	—	0 3	84 0
3	93	91	92 2	93 4	1 2	—	92 4
4	91	78	85 6	87 6	2 0	—	88 6
5	93	88	91 2	93 7	2 5	—	96 1
	455	431	445 0	454 5			455 7

It will be seen that only in two instances did the highest estimate given by an expert amount to so much as the actual weight. On the average their estimates were 9 stone 5 lbs. too little for the five bullocks, while the estimate calculated from the live weight varied only 10 lbs. from the actual result.

The principle which is applicable to cattle is, of course, equally applicable to sheep. At a debate held at the Central Chamber of Agriculture in April last, Mr. Albert Pell quoted a striking instance of the accidental adoption of the system at Melton, in Leicestershire, which had occurred only in the previous month. A large breeder of sheep arrived in the market too late for the auction. The butchers offered him a certain price for his sheep, which he refused to accept. The butchers then offered him "8½*d.* per lb. for the dressed meat, dead weight." This offer he also declined, one reason for his so doing being that he could not be present himself to see the animals weighed after slaughter. At last he said, "I will sell them at 4*d.* per lb. live weight on the scale, dirt and all, as they stand." The proposal was accepted, and his sheep, thirty in number, were weighed, and produced £8 more than the highest bid which had been made for them. The butchers who bought them were satisfied, and admitted that they had been mistaken in the weight of the sheep.

The figures which have been quoted conspire to show that the dead weight may be estimated from the live weight with very considerable accuracy. Wherever it has been possible to check a careful calculation by the actual weight after slaughter, the agreement has been very close. There is no doubt also that in the majority of instances the vendor gets a better price by weight than he does by guesswork. This is, indeed, only to be expected. The farmer is necessarily handicapped in bargaining with the butcher. The use of the scales as a basis of sale would indisputably tend to his advantage.

But apart from individual interests, it cannot be denied that the introduction of a sounder principle is desirable. It must inevitably be to the public advantage that the operations of the cattle markets should be conducted on strict commercial principles. The producer and consumer would be brought closer together, and the wide margin of profit which intervenes between them, and out of which so many middlemen now make their living, would be materially curtailed.

It must not be thought that the adoption of the system of selling by live weight would obviate the need for sound judgment on the part of both vendor and purchaser. "An eye for a beast" would still be as necessary as ever. The breed and quality, the ripeness and condition, would, as before, be matters for judgment. Upon these points would depend, first of all, the relative proportions of carcass and offal, and secondly, the price per lb. or stone. Sale by auction would by no means be abolished, as some persons have hastily assumed. It might possibly be restricted, but it is a matter for argument whether that would be in itself an evil to the farmer, or to the community at large. But stock would, no doubt, continue very largely to come under the hammer, the only change being that the bids would be made on the price per lb. or per stone, instead of on the whole animal.

No doubt the gravest objection, and that which would at first militate most seriously against the proposed system, is that a certain amount of calculation is required. The old-fashioned farmer, who goes into the market, and says, for instance, "I want £20 for that beast," will not so readily adopt a practice which entails a calculation of the price per stone. This difficulty, however, is more apparent than real, and certainly is not weighty enough to stop the way of a reform which might otherwise be considered desirable. Rough-and-ready methods would very soon come into use. The butcher at the present time makes a calculation of the weight and price per

stone. What he can do, the farmer, with the scales to help him, could as easily do.

I learn from Sir John Lawes, who has kindly given me invaluable information for the preparation of this article, that he proposes to publish, when a demand should seem to arise for it, a pocket "ready reckoner," for the guidance of the farmer in estimating the weight and value of his stock by means of the scales. The following table is a specimen of the mode in which he proposes to construct such a compendium.

Similar calculations would be made for all probable weights. Sir John Lawes writes :—

It appears to be almost essential that the lbs., 8 lbs. and 14 lbs. must all be used. To induce the farmer to use the scales he must understand them, and to understand them he must start with the present knowledge that a certain ox which he wishes to sell to the butcher should weigh, when dead, 48 or 47 stone. According as he uses 8-lb. or 14-lb. stones, he considers that his animal should make 5s. or 8s. 9d. per stone and be worth £21. He now opens his ready reckoner and finds what the live weight of such an animal would be.

Table showing the dead weight of an ox weighing 1,400 lbs. alive, in lbs., 14 and 8 lbs. stones, and price at 7½d. per lb., 8s. 9d. per 14 lb., and 5s. per 8lbs., according to the estimated ripeness of the animal.

Ox, Live Weight.	Dead weight.				Value at 7½d. per lb., 8s. 9d. per 14 lbs., 5s. per 8 lbs.
	Per cent.	In lbs.	In 14 lbs.	In 8 lbs.	
1,400 lbs.	56	784	56	98·0	£ 24 10 0
	57	795	57	99·6	24 18 9
	58	812	58	101·4	25 7 6
	59	826	59	103·2	25 16 3
	60	840	60	105·0	26 5 0

Sir John Lawes in another letter says, "I have not studied what would be the best form of table, as farmers have appeared to be so indifferent." With reference to the whole subject he remarks further :—

I am sure that the subject is worth the attention of farmers, and the dealers take advantage of their ignorance. I think, too, that when Mr. Westley Richards and myself are prepared to back our ignorance, with the help of scales, against the most experienced butcher or salesman, it is tolerably evident that they are a valuable help to the ignorant.

Sir John Lawes, it may be explained, refers to his ignorance with respect to the weight of an animal. He is, as is well known, a practical farmer as well as a scientific man, and is well able to judge of the relative quality and condition, and by that judgment to make his estimate of the percentage of carcass. So much knowledge, as Sir John Lawes himself urges, is necessary to any person who sets out to buy or sell by live weight ; but possessing this knowledge, the farmer, by the aid of the scales, can hold his own in the market against the most experienced butcher or dealer.

Reference has hitherto been made to the disposal of stock by the farmer to the butcher, but it is desirable to indicate—what is sufficiently patent—that selling by live weight implies also buying by live weight. In other words, if the system be adopted, the farmer will not only sell his beeves, but will also buy his stores thereby. So far as prospects of actual money gain are concerned, the farmer has possibly less interest on this side of the question. He buys probably on the whole more advantageously than he sells. Nevertheless he would very likely oftentimes reap an immediate benefit. Sir John Lawes in the article written for the Newcastle Farmers' Club, already referred to, says :—

I generally have a good deal of rough grass left by the dairy cows, and I am in the habit of purchasing about forty Irish shorthorns during the autumn for the purpose of consuming it. This year the shorthorns, with the carriage, cost me £13 5s. per head, and their average weight was 8 cwt. 3 qrs. 6 lbs. ; the cost therefore was not quite 3½d. per lb. This price was reasonable enough, but what I complain of is, that I had no voice in the matter, and if they had cost 1d. per lb. more I must have paid it. What is really wanted, and what every

farmer should strive for, is to bring every transaction within the range of calculation. Within reasonable limits, with regard to accuracy, we can calculate the amount of food which will be required to add 200 lbs. or 300 lbs. to a bullock, or 50 lbs. or 60 lbs. to a sheep. When purchase or sale by weight is established, one of the most important transactions of the farm will be settled on a sound commercial basis.

In the same place Sir John Lawes makes one or two other remarks which well deserve the attention of every practical farmer :—

Under the present system store stock is often purchased at a price which results in a loss upon the transaction far exceeding the value of the manure obtained. Twenty tons of turnips cut up and ploughed in, and a ton of rape-cake, possess more manure properties than the same weight of roots fed with a ton of linseed cake. Unless, therefore, the animals when fat make considerably more than the difference between the price of the two cakes, we should surely do better without them.

It is scarcely necessary to observe that the principle of selling by live weight is advocated for animals which are bred or fed for the butcher. No one suggests that breeding or pedigree beasts should be valued by specific gravity. They have an individuality which is the index of their price. The purchase and sale of them is, and must from the nature of things be, speculative. But food has an absolute value which is contingent only upon its quality, and upon the law of supply and demand. If a farmer sells a sack of wheat, a load of straw, or a dairy of butter, he knows just how much he disposes of, and expects to be paid according to the precise quantity. He does not guess the quantity, and leave the purchaser the chance of getting so much more than he bargained for. Surely the principle which is applicable in these cases ought also to be applicable to the beef and mutton which he sells.

Although the breeder does not immediately come within the province of this paper, it may be said, in passing, that he would probably benefit very considerably by the adoption of the scales as an aid to him in his

business. By periodical weighings of his stock he would find that his knowledge of their progress was very materially increased. In these pinched times it requires some courage to urge upon the farmer any additional outlay in machinery, but there are few appliances which would pay better interest on their cost to the stock-keeper than a weighbridge, apart altogether from its use in marketing.

Supposing that the advantage of substituting the system of the scales for that of rule of thumb in the cattle market be admitted, how, it may be asked, is the change to be brought about? Unquestionably it must be brought about by the farmers themselves insisting upon it. The producer has the right, and within certain limitations, the power of selling his produce in his own way. He is master of the situation. The key thereto is in his hands, and it is for him to recognise its value, and apply it. But there is a preliminary step needed. That step is expressed in a word of somewhat ominous sound—legislation. The legislation which is needed, however, is extremely small and extremely simple. It is that the authorities of every cattle market, licensed to take tolls, should be compelled to erect a weighbridge suitable for the weighing of live stock. By the Markets Act of 1847, a buyer at present possesses the right of having “commodities” purchased in a public market weighed, but it has been assumed—at any rate by the market authorities—that the word “commodity” does not comprise live animals. It is obviously fair, however, that sellers and buyers should have the power of effecting a sale on the basis which they think best, instead of being, as they now in most cases are, precluded from the use of the scales by the fact that there are no scales to use.

To quote a now historic phrase, “the flowing tide is with us.” The tendency of the age, to which allusion was made at the outset, scarcely leaves room to doubt but that the adoption of the system of selling stock by

live weight is a question of time. The principle is a progressive one, and these are progressive times. The subject demands from the farmer unprejudiced examination and consideration. He will be wise if he at once sets to work so to examine and consider it. Let him seriously ask first of all, Is the present practice a sound or satisfactory one? Is it even a business-like one? Familiarity breeds not only contempt but—more frequently—fondness. That which is habitual is easy; that which is novel is difficult. But few will maintain after frank thought that the custom now in vogue conduces to the interest of the farmer, or is incapable of improvement. The system proposed is no new thing. In China—the oldest civilised country in the world—stock has been sold by live weight from time immemorial. This at any rate is ancient prestige sufficient. In America the weighing machine has been well termed the stockowner's "sheet-anchor." Stock, it is generally agreed, is the hope of the British farmer. Let him then learn to make the most of it.

CHAPTER X.

BRITISH AND FRENCH AGRICULTURE.¹

SINCE the days when Julius Cæsar descended from Gaul upon our shores—and probably even before that date—our relations with our nearest continental neighbour have always been intimate. Whether the two nations have been at variance or in accord they have, at any rate, always been of absorbing interest one to the other. If, as Longfellow tells us, “there’s nothing in the world so sweet as love, and next to love the sweetest thing is hate,” we may fairly claim to have tried both. But whether we have loved or hated we have never ceased to respect each other and to be keenly interested in each other’s concerns. And the farmers of the two countries have special bonds of interest. No visitor to northern France fails to notice its agricultural affinity to southern England, while French farmers have proved themselves formidable competitors in the markets of this country, and have also been welcome customers to British breeders of live stock.

In attempting to consider very briefly a few of the points of comparison and contrast between British and French agriculture, I cannot but be conscious that I am retelling a tale which has been told many times before by distinguished observers on both sides of the Channel. Since Arthur Young wrote his “Tour in France” many writers have described the conditions and practice of French agriculture, and have in most cases drawn some comparison with the corresponding features of Great

¹ *Journal Bath and West of England Society*, Vol. XV., 4th series, 1905.

Britain. A recent visit to the north of France, in the course of which I traversed a good deal of country by road, and had an opportunity of visiting several typical farms, led me to put together some of the facts relating to the agriculture of both countries which may, perhaps, be of interest to those who are not familiar with them.

The total area of France is nearly double that of the United Kingdom—131,000,000 acres as compared with 78,000,000. Nearly one-fifth of the whole of France is covered by woods and forests, and nearly 10,000,000 acres are returned as moor and heath land. Whether any portion, and if so, how much, of this large expanse of woodland and moorland should be considered as contributing to agricultural production, by affording partial maintenance for stock, cannot be determined, but the cultivated area, including therein all returned as under crops and grass, amounts to almost precisely two-thirds of the whole country. In the United Kingdom, the cultivated area slightly exceeds three-fifths of the total surface; but, in Great Britain alone, 13,000,000 acres of mountain and heath land, in addition, are specifically returned as being utilised for stock grazing. If we were to reckon this (as it fairly may be reckoned) as forming part of the agricultural area, and if we were to assume that the moor and heath land in France were equally productive, we should find that a larger proportion of the surface of the United Kingdom than of France is utilised for agriculture. On the other hand, of the non-agricultural land it must be allowed that the advantage probably lies with our neighbours. We have no woodland wealth comparable to theirs, the latest return (in 1895) which we have of woodland in Great Britain, showing that we possess only 2,750,000 acres, while if Ireland be added, the total is only 3,000,000 acres, or 4 per cent. of the whole surface of the United Kingdom.

It may be convenient to recapitulate these facts in tabular form :—

—	France.	United King- dom.
	Acres.	Acres.
Total area	130,374,000	77,684,000
Cultivated acreage (crops and grass)	85,759,000	47,671,000
Moor and heath	9,481,000	12,788,000 ¹
Woods and forests	22,224,000	3,030,000 ²

But if the extent to which the land of the two countries is utilised for agriculture is not very dissimilar, the methods of its utilisation differ very widely. In France four-fifths of the agricultural land is under arable cultivation, whereas in the United Kingdom the plough holds sway over not more than two-fifths. The variety of crops capable of successful cultivation in France is no doubt one among the many and diverse reasons for this wide difference. It has been said that France is the only country in Europe where the soil and climate are capable of producing everything that is required by its inhabitants, whether for food or raiment. Arthur Young divided the country into three zones: the most southern being bounded by the line north of which maize will not produce corn as a farm crop; the central, situated between that line and the northern limit of vines; and the northern zone, of course, lying beyond that limit.

The principal crops grown in the two countries may be shown concisely in a table, giving the acreage under each in parallel columns, it being remembered in appreciating their relative importance that the proportion of, roughly, two to one represents the difference in the agricultural area of France and the United Kingdom.

¹ "Mountain and Heath Land used for grazing"—Great Britain only.

² For Great Britain in 1895, for Ireland in 1903.

	France, 1902.	United Kingdom, 1904.
	Acres.	Acres.
Wheat	16,212,366	1,407,618
Barley	1,713,968	2,002,854
Oats	9,465,371	4,351,183
Rye	3,289,435	65,177
Maize	1,241,452	—
Millet	72,897	—
Buckwheat	1,384,783	6,392 ¹
Mixed corn	417,904	—
Beans, peas, haricots and lentils.	683,923	430,826
Potatoes	3,601,868	1,200,419
Colza	86,630	—
Beetroot	1,941,926	475,313 ²
Turnips and swedes	—	1,898,010
Flax	54,330	44,856
Hemp	52,794	—
Hops	6,709	47,799
Small fruit	—	82,980
Vines	4,358,310	—
Tobacco	44,816	—
Lucerne	2,501,989	55,724 ¹
Clover, sainfoin and other fodder crops	6,454,849	6,470,565
Permanent grass	20,967,667	28,693,305
Orchards	2,085,211 ³	243,008
Bare fallow	8,317,769	437,927

Wheat, barley, oats, and rye are grown to a greater or less extent all over France, but many of the other crops are only partially distributed. Thus, maize is to be found in little more than half of the eighty-seven departments, and in only about one-fourth can it be said to be extensively cultivated. Buckwheat is mainly grown in the North-west, although there are but few departments without some land under that crop. Hops, which are confined in the United Kingdom to eight counties, are in France grown in eleven departments, although 97 per cent. of the whole crop is to be found in the three depart-

¹ Great Britain only.
Mangold.

³ In 1892. Including olives, almonds, mulberries, chestnuts, etc.

ments of Côte-d'Or, Meurthe-et-Moselle, and Nord. Tobacco is cultivated more or less in twenty-four departments, but chiefly in four contiguous departments of the South-west—Dordogne, Lot et Garonne, Lot, Gironde—in Isère, in Pas de Calais, and in the island of Corsica. Vines, although, of course, mainly to be found in the South, are more widely grown than is sometimes supposed; practically every department, except those actually bordering on the English Channel, having a certain acreage.

The extension or contraction of the acreage under one or two of the principal crops common to both countries is concisely indicated by the following figures.

The years 1882 and 1892 are taken as those for which the results of the decennial agricultural inquiry in France are available. The results of that taken in 1902 are not yet published, but the latest figures, as issued by the Minister for Agriculture, may be adopted. It should be noted that wheat in France includes spelt.

—	In thousands of Acres (ooo's omitted).					
	France.			United Kingdom.		
	1882.	1892.	1902.	1882.	1892.	1902.
Wheat . .	17,761	17,702	16,212	3,164	2,299	1,773
Barley . .	2,411	2,102	1,714	2,452	2,220	2,083
Oats . .	8,989	9,401	9,465	4,245	4,238	4,157
Potatoes .	3,305	3,641	3,602	1,388	1,277	1,215

If the latest figures (those of 1904) for the United Kingdom were taken, they would show a somewhat different comparison. They stand: Wheat, 1,407,618 acres; barley, 2,002,854 acres; oats, 4,351,183 acres; potatoes, 1,200,419 acres. In any case the salient point of this comparison is the relative change in the wheat area of the two countries. In both there has been a decline;

but whereas in France the decrease has been less than 9 per cent., in the United Kingdom it has been 44 per cent., if we take the 1902 figures ; and nearly 56 per cent., if the 1904 figures are taken. Barley, on the other hand, has declined rather more in France than here, while oats have increased about 5 per cent. in France, and have about held their own in the United Kingdom.

There are in France, of course, certain methods of farming to which we have no parallel on this side of the Channel. About one-tenth in value of the whole produce of the soil (and the decennial inquiry comprises a valuation of all crops including grass and woodlands) is accounted for by vines, while the silkworm industry is also one with which we have nothing to compare. So far as ordinary arable farming is concerned, the typical French system as described by Arthur Young and referred to by H. M. Jenkins,¹ viz., the three-course—two white crops (winter corn followed by spring) and a bare fallow in the third year—is still largely practised, although it appears to have been now very generally modified by the substitution of a green crop for the bare fallow. I do not know to what extent, or in what districts, this system now prevails in France, but it apparently exists over a good part of Normandy. Travelling by motor, we took occasion now and again to stop by the wayside and interview the men who were working on the land. In the country lying between Abbeville and Trèport, for example, we saw a farmer who was occupied in cutting his wheat, his wife tying after him, and the baby in a perambulator sleeping peacefully in the corner of the field—if field one may call a patch of ground in a wide expanse of country comprising many farms without a single fence in sight. He told us that his course was (1) wheat, (2) oats, (3) beet-root or clover, and it seemed that this was mainly the practice throughout that district. The land struck one as being clean and well-managed, with that rigid economy

¹ Report to Royal Commission on Agriculture, 1882.

of space which so impresses the Englishman accustomed to wide headlands, straggling fences, and hedgerow timber. Yet there can be little doubt, it seems to me, that this system of farming is essentially a survival from the time of the occupation of Gaul by the Romans, who probably introduced the three-field course into France, as they apparently did into Germany and this country. Dr. Seebohm¹ has pointed out that the homage of Hitchin Manor presented that the common fields within the township had immemorially been, and ought to be, kept in three successive seasons of (1) tilth grain, (2) etch grain, and (3) fallow—the first meaning winter corn and the second spring corn. The word “etch,” or “eddish,” which remains in use in many districts of England to this day, occurs frequently in Tusser, thus—under directions for October—

Seed first go fetch
For edish or etch,
White wheat, if ye please,
Sow now upon pease.

In the sixteenth century, when Tusser wrote, there appears to have been a diversity of practice, as he recognises wheat after a pulse crop, although he recommends a fallow :—

White wheat upon pease-etch doth grow as he would,
But fallow is best if we did as we should.

It appears, then, that for centuries a three- (or by omitting the fallow) a two-field course was the prevailing system in Great Britain, and it was probably not until the general introduction of the turnip that the four-course, or Norfolk system, with local modifications thereof, broke away from the old traditions and altered farm practice generally. It would seem that in France the three-course system with the fallow must have been persisted in extensively, having regard to the fact that nearly one-eighth of the

¹ “The English Village Community,” 4th edition, pp. 376 *et seq.*

whole area under the plough is returned as bare fallow, whereas the United Kingdom has not more than 2 per cent. As a matter of fact, however, in the districts I happen to have visited no large amount of bare fallow was noticeable, but the three-course system obviously holds sway among farmers of all classes. Thus on a farm of about 625 acres, near Magny, which I spent an afternoon in looking over, nearly the whole was arable, and a three-course rotation—wheat, oats, and beetroot mostly—was adopted.

On the excellently managed estate of the Vicomte Arthur de Chezelles, at Le Boulleau, Oise, where I spent a most interesting day, about 400 acres of the 1,500 acres, which the Vicomte himself personally farms and controls, were under sugar beet at the time of our visit. There is an admirably-equipped distillery on the estate, where alcohol is extracted from the sugar beet. The beet is grown in as close proximity as possible to the distillery, and consequently a large area is farmed on a two-course rotation, wheat alternated with sugar beet. Vicomte de Chezelles will be remembered as an enthusiastic advocate of the system of ensilage, which he did much to bring under the notice of English farmers on his visit to the Reading Show of the R. A. S. E. in 1882, and subsequently by permitting the publication of full descriptions of his own practice. He is still convinced of the advantages of the system, and, indeed, stated that after twenty-seven years' experience he believed in it more than ever. At the time of our visit the famous silo was filled with the product of about 300 acres of clover, lucerne, sainfoin, and grass. The stuff is tipped into the silo and trodden down by six oxen, who go backwards and forwards over it during the time of filling, and when full the whole is covered with 18 inches of earth.

This estate provides an excellent example of up-to-date farm management. Labour-saving equipment is

carried to its utmost development. The work of carting the immense quantity of beetroot to the distillery is facilitated by a portable tramway, which is laid down as required to any part of the land from which the roots are being drawn. The liquid residuum from the process of distilling is said to possess considerable manurial value, and this is conveyed back to the land by an elaborate system of movable conduit pipes. The pulp is stored in pits and used for stock feeding. The working oxen, of which there are sixty, are mainly fed on this pulp, with some green fodder and straw. A considerable breadth of land is devoted to lucerne, a crop which the Vicomte values highly. It is sown with oats and left down for five years. Among the many interesting features of this estate some admirably constructed open sheds, serving either as Dutch barns, or for sheltering waggons and machinery, were especially noticeable.

The diversity of farm practice, which may be met with even during a short and restricted tour in northern France, is remarkable. For miles along the coast one sees undulating downs, reminding one of Wiltshire or Dorsetshire, save for the fact that they comprise so much more arable land. Then again, one crosses a wide plateau, covered, as far as eye can reach, with golden corn, with interstices of sainfoin, clover, or beetroot, and now and again a brown patch of colza, or a ruddy oasis of buckwheat. Then the road dips suddenly into a valley, along which a stream flows, edged by two narrow meadows of rich grass. Or one finds, as between Mantes and La Roche Guyon, for example, a rich plain by the river edged with low southern-fronting hills, where *la petite culture* flourishes, and the land looks like a patchwork quilt with small plots of vines standing prominently amidst a variety of other field and garden crops.

The numbers of farm live stock in France and the United Kingdom respectively are shown in the following table :—

	France, 1902.	United Kingdom, 1904.
Cows	8,317,924	4,193,721
Other cattle	6,610,626	7,381,830
Total cattle	14,928,550	11,575,551
Sheep	18,476,788	29,105,109
Pigs	7,209,174	4,191,695
Horses	3,028,478	2,100,634

The relative density of live stock on the land is much greater in this country than in France. This is fairly shown by a comparison of the numbers in relation to the agricultural area of the respective countries. The number per 1,000 acres of land under cultivation, including, of course, permanent pasture, but not including moor or heath land, is as follows :—

	France.	United Kingdom.
Cattle	174	243
Sheep	215	610
Pigs	84	88
Horses	34	43

It will be seen that, relatively, France has only about two-thirds of the cattle, one-third of the sheep, and three-fourths of the horses, but nearly as many pigs as we have. Adding together all four kinds of stock, it will be seen that while we carry as nearly as possible one head of stock per acre, French agriculturists possess about one head of stock for every two acres of land under cultivation. It should be added that about 500,000 mules and asses, and about 1,500,000 goats, are enumerated in France, while there is no record of the number of these animals in the United Kingdom.

In both countries, town and pleasure horses are not included in the returns, which represent only those kept on the farm ; but it should be remembered that whereas in this country practically all the animal labour employed

in agriculture is included in the horses returned, in France a large proportion of the cattle are utilised for work as well as for beef. In 1892 the number of working oxen was returned as 1,387,050. It may be noted that this fact probably serves to swell the number of cattle returned, as compared with this country, as a working ox no doubt lives longer, and consequently figures more often in the annual census than a steer in this country.

It is many years since the question of the advantage of employing oxen for farm work was debated and finally settled in this country. Here and there it is still possible to find, even in southern England, a team of oxen ploughing, but the sight is so uncommon as to attract attention by reason of its rarity. To the vast majority of British farmers the superiority of horses over oxen for farm work is as much a settled question as the superiority of the threshing machine over the flail. But in France, the relative economy of ox and horse labour is a question of very living interest and frequent discussion. Certainly nothing could be further from the truth than the assumption that those who employ ox labour are in any sense unprogressive or unintelligent. They have a very intimate appreciation of the arguments for and against, and their practice is based on a careful calculation of the financial considerations involved. On the estate of Vicomte de Chezelles, previously mentioned, both oxen and horses are used—sixty of the former and forty of the latter. In one field of wheat on that farm three McCormick sheaf-binders were at work, each drawn by three horses. Ploughing and water-carting were being done by oxen. The cost of keeping an ox, especially on an estate where sugar-beet is extensively grown, and where he is fed largely on the pulp, which is in effect a bye-product, is very small, and much less than that of a horse. Then again, he is reared to a working age at less expense and with less trouble; if he goes wrong at any time, or meets with an accident, he is not,

like a horse, a dead loss, but can be at once turned into profit, and at the end of his life he has a value which is considerably greater than that of a horse. The agent of another estate which I visited mentioned, in discussing this question, that he reckoned the cost of a day's work of a team of three horses at nearly 50 per cent. more than that of a team of four oxen. It seems to be generally reckoned that three horses are equal to four oxen in haulage-power. Of course, it is recognised that oxen move more slowly, and, consequently, where speed is required, as in road work, for instance, horses have the preference. But in operations such as ploughing—though I have no data available on a point which no doubt has been carefully worked out—it is possible that the loss by reason of lower speed may be easily exaggerated. Some of our ploughing with horses is not done very rapidly, and it is to be remembered that it is not the possible speed of the horse, but the actual rate of walking of the man, which sets the pace. We have, of course, no breed of cattle in this country comparable, for draught purposes, with the Charolais or Charolais-Nivernais cattle of France. Most picturesque they look—big, upstanding, strong, with heavy fore-ends, massive heads and widespread horns, in colour either a pure white, or what a French writer terms "*café au lait clair*," placid, patient, and well trained, but with a deliberate, dignified gait, which, it must be admitted, gives such an impression of slowness that even the heaviest shire horse appears active by comparison.

But where oxen are kept in France the working horses are not slow. The favourite breed is the Percheron, and it may fairly be said that we have none better. On the well-known estate of M. Thome, at Pinceloup, Seine-et-Oise, where the stock of all kinds—horses, cattle, sheep, pigs, and dogs—are of the very highest excellence, I saw some fine specimens of the Percheron breed of horses. They are lighter and more active-looking than our Shires and Clydesdales. Those I saw here were

either white or black, but grey is, I believe, the prevailing colour. It is said that bay was the original colour of the breed, but that it was supplanted by grey in consequence of the drivers of night diligences always asking for grey horses for their relays, as being more visible by night.

We are accustomed to think that we possess in this country a goodly number of different breeds of cattle, and no doubt it would puzzle many people to give a complete list of them. If we may take the possession of a Herd Book as evidence of sufficient claims to recognition as an established breed, there are in the British Isles seventeen distinct breeds. There are, no doubt, some other local varieties which might claim to be regarded as distinctive breeds, but their numbers are few. Although it will be generally admitted that the Shorthorns are the most numerous and the most widely distributed throughout the country, we have no accurate knowledge of the number of pure-bred animals of the different breeds or the number which, although not pure-bred, possess the essential characteristics of a particular breed, and for practical purposes may be described by its name. In Ireland, where the collection of detailed information from farmers does not perhaps present quite the same difficulty as in Great Britain, statistics are available showing the number of bulls of each breed. From the figures for 1903 it appears that the numbers in that year were as follows:—

Breed.	Bred in Ireland.	Imported.	Total.
Shorthorn	10,566	243	10,809
Hereford	366	34	400
Aberdeen Angus	695	138	833
Norfolk Red Polled	121	17	138
Kerry	304	2	306
Dexter	83	1	84
Channel Island	35	15	50
Cross-bred	4,194	84	4,278
Total	16,364	534	16,898

These figures would hardly represent the relative importance of the same breeds in Great Britain. Probably the supremacy of the Shorthorn would be less marked, and there are several other important breeds—such as the Devon, Sussex, Galloway, Ayrshire, Black Welsh, Highland, Lincolnshire Red, and Longhorn—which would have to be taken into account. It is to be hoped also, though not perhaps with very great confidence, that the proportion of cross-bred bulls in use on this side of St. George's Channel is substantially less than the one-fourth which are found in Ireland.

In France, although the information collected at the time of the special agricultural census held every ten years is very much more complete and detailed than we are able to obtain in this country, no attempt is made to enumerate the number of animals of particular breeds. It happens, however, that this subject has recently been investigated with exhaustive care by M. de Lapparent, the Inspector-General of Agriculture,¹ and from the result of his inquiries it is possible to ascertain the relative importance and distribution of the different breeds of cattle. It appears that the number is considerably greater than in this country, although many of the older varieties are disappearing. In 1881, M. Demôle distinguished thirty-eight breeds, but M. de Lapparent considers that this should now properly be reduced to twenty-three without counting "les Durhams" (Shorthorns). The number of cattle estimated as belonging to a particular breed is about 7,000,000, which, applied to the census figures for 1892, would leave about 5,500,000 as cross-breeds "more or less indefinable." The most important breed is the Normande, which occupies the departments of Manche, Calvados, Orne, Eure, Seine Inférieure, and Eure-et-Loir, and extends its influence more or less into all the departments adjacent thereto.

¹ "Étude sur les races, variétés et croisements de l'espèce bovine en France": Ministère de l'Agriculture, "Annales," 1902.

It is estimated that the number of cattle of this breed is 1,600,000. It was the first French breed for which a Herd Book was established. This was started in 1884. The Normande is essentially a dairy breed, and it is reckoned that a good cow fed on the rich land of its own province will give from 616 to 660 gallons of milk during a lactation period of eight months. The breed which ranks next in importance is the Charolais, which is estimated to number 1,026,000 head, and is found chiefly in the departments of Allier, Saône-et-Loire, Nièvre, Loire, Cher, and Yonne. It is the draught breed *par excellence*, and is a poor milker, but hardy, and for furnishing working oxen it has probably no equal, its size and strength admirably adapting it for this purpose. Although not in any sense what could be termed "a good doer" it appears that its aptitude to fatten is in comparison superior to that of other draught breeds. The breed next in importance, which is estimated as being represented by nearly 1,000,000 head, is the Parthenaise, which is found in the west of France, mainly in the departments of Vendée, Loire Inférieure, Deux Sèvres, Vienne, and Charente Inférieure. Its area of influence is, however, decreasing, the reason apparently being that, although it is excellent as a draught breed, the oxen are slow to develop and hard to fatten when they have done working. The Flamande breed, which is found mainly in Picardy, is estimated at 670,000 head, the departments of Nord, Pas de Calais, Somme, Aisne, and Oise being practically monopolised by it and its crosses. Near Montreuil we passed through a small village, where a farmer was just rounding into his yard his herd of about a score of handsome dark-red Flemish cows. We pulled up to let them pass and had some talk with the farmer. He was evidently proud of his herd, and was pleased to hear them praised. He was emphatic in his opinion that there was no better dairying breed, and that the Flemish cows gave more and better milk than the Normandy cows. The breed has been

greatly improved from the original stock, partly by crossing with the Shorthorn, notwithstanding the fact that its amelioration was seriously checked by the war of 1870, and also by the ravages of cattle plague. While the Flamande breed mingles with the Normande on the west, on the east it is a good deal crossed with the Dutch breed, which occupies a good part of the department of the Nord. It is estimated that there are about 30,000 Dutch cattle in France, but the influence of the breed is widely felt throughout the dairying districts of the north and north-east.

The influence of the Shorthorn in France has been very great, not only by the direct effect of crossing with the native breeds, but also by providing the model, so to speak, which breeders might attempt to copy in their efforts to attain improvement of form and greater precocity. M. de Lapparent observes that there was a period in France of a veritable infatuation for the Shorthorn, which was regarded as the one source of amelioration for any and every breed of cattle. As the French author of a work on the "Races Bovines" of France, England, Switzerland, and Holland, enthusiastically wrote, about forty years ago, "Le Durham, voilà le vrai type améliorateur." But, with time and experience, it came to be recognised that certain breeds responded best to its influence, and its use became more limited. For nearly seventy years pure Shorthorns have been bred in France, and there are now many long-established herds of high reputation. One of the best known is that of Pinceloup, which we visited, and the owner, M. Thome, stated that he had bred Shorthorns for forty-two years. It is somewhat curious to observe, however, that the breeding of Shorthorns appears to be declining. In 1869 there were 305 Shorthorn herds in France, of which 130 were classed as "important," and 175 as "secondary." In 1897 the number was reduced to 200, of which 109 were important, and 91 secondary. A remarkable exception to the general

tendency to reduction is found in Finistère, where no less than sixty-three new herds were established during the period referred to. Among the reasons given for the decline of the Shorthorns are: first, that it is of little benefit for the improvement of breeds which have to provide working oxen, living in a climate and under conditions widely different from the native home of the Shorthorns; secondly, that while an infusion of Shorthorn blood has been beneficial to many breeds, the limit of the benefit which it can confer has been reached; thirdly, where Shorthorns have been most used they have now completely impressed their characteristics upon the original breed, which approaches so closely to the Shorthorn type that further crossing is unnecessary; and fourthly, that dairy farmers do not think the Shorthorn tends to improve the milking qualities of their cattle. It may also be that an additional reason is to be found in the general establishment in France, as in England, of Herd Books for the principal breeds, and the consequent exclusion, as far as their influence extends, of all foreign blood. There is one breed which has been not only improved but apparently absorbed by the Shorthorns. The Mancelle breed has now almost disappeared, and its place taken by the Durham-Manceaux breed, which is estimated to number 674,000 head, and occupies mainly the departments of Maine-et-Loire, Mayenne, Loire-Inférieure, and Ille-et-Vilaine.

The little Breton breed of cattle—the richness of whose milk has largely accounted for the fame of Brittany butter—are estimated to number about 850,000 head. The Salers and Limousin breeds, kept in the south of France, each reach nearly 500,000 in number, and among other breeds of importance may be mentioned the Garonnaise (365,000), the Comtoise, Béarnaise, Aubrac, Fémeline, Bressane, Tarine, Mezenc, Ferrando-Forézienne, and Gasconne.

The system of tethering cattle on the arable land is

widely prevalent, and naturally attracts the notice of the English visitor. Frequently one sees a line of stock along the edge of a piece of clover, or other fodder crop, each animal tethered at a measured distance from the next, and so that it can comfortably reach its allotted stretch of provender. There is economy in the practice—instead of cutting and carting the green food to the stock they fetch it for themselves.

The scarcity of sheep is very apparent, but to some extent it is more apparent than real. One farmer, whose farm I visited, had a flock of 500, which twenty years ago was Merino, but by the constant use of Southdown rams is now to all appearance Southdown. He explained that the practice was to keep them all housed for the greater part of the year. At that time (August) the ewes were folded on a piece of clover, but all the lambs were in the buildings as well as the rams. One interesting point was mentioned. The ewes are divided into two lots, one being served in August and the other in November, and he attributed the possibility of this practice to the Merino strain in the ewes. M. Thome possesses an excellent flock of Southdowns, which has taken high honours at the principal shows in France. At Le Boulleaume, part of the sheep are Southdowns, and part a cross between the Southdown and the Dishley-Merino. Rams had been imported from Sandringham and Babraham. There is no doubt that the Leicesters, to some extent, and the Southdowns, very largely, as well as some other English breeds, have been used in the improvement of the sheep of France. The earliest amelioration of the native stock came, as in so many other parts of the world, from the Merino. I visited the famous State farm of Rambouillet, over the stately portal of which is inscribed:—

“Curat oves oviumque magistros.”

It was established at the time when there was a general movement to introduce the Merinos, which Spain had so

long and jealously guarded, into other parts of the Continent. Sweden is said to have been the first country to obtain specimens ; but, although they were introduced into that country in 1723, it was not until 1793 that they became firmly established there. In 1765, the Elector of Saxony obtained from the King of Spain 100 rams and 200 ewes, which were the progenitors of the famous Merinos of that country, and three years later they were introduced into Prussia. In 1775, the Empress Maria Theresa imported them into Hungary, and in 1791 George III. secured a flock of Merinos and brought them to this country. The well-intentioned but, as is now recognised, ill-advised attempt to establish the breed here failed, notwithstanding energetic Royal support, seconded by an influential society founded for the express purpose of promoting the breeding of Merinos in Great Britain. There was no difficulty in acclimatising the sheep, or in maintaining their type and character, but they were not adapted to the requirements of British flockmasters, who had just learnt from Bakewell the art of breeding for economic meat production, and were not content to sacrifice everything for wool. Mr. Ellman was the most famous breeder who gave Merinos a trial, but he declined to continue the experiment. He stated that he could not get them to fatten, although he treated them as well as other sheep, and that he could fatten three Southdowns for one Merino.

The first attempt to introduce the Merino into France was made by Colbert in the middle of the eighteenth century, but his efforts were frustrated by the prejudices of the people. In 1786, Louis XVI. imported a considerable number of Merinos from Spain, and established a flock at Rambouillet, where, in handsome and well-arranged quarters, their descendants are housed to this day. In the various houses were 150 rams, representing, no doubt, the highest perfection of this class of sheep, and presenting an appearance of remarkable uniformity

of type. The manager stated that no outside blood had been used since the establishment of the flock, and even if this is not literally the case, there is no doubt that it has been very closely in-bred. The system of mating the rams and ewes and recording the pedigrees is evidently most carefully arranged. Each ewe is brought into the house to the ram, the ram and ewe having each its own number stamped on the fleece. As soon as the ewe is served, the number of the ram is also stamped upon her back. There are about 500 ewes, and the farm consists of about 890 acres.

I saw very little of the Merino sheep in the country, the prevailing native breed in the districts I visited being the Berrichon. At the farms attached to the Agricultural Institute at Beauvais, however, a flock of 400 Dishley-Merinos is kept, and I saw there one pure-bred Merino ram, and four rams of the Dishley-Merino breed. The latter struck one as having lost at any rate the size of the Leicester.

The Craonnaise breed of pigs was mostly kept, so far as I saw, and at Pinceloup there are some extraordinary specimens of this famous breed. Among the many honours won by this herd was the championship at the last Paris Exhibition. The size of the boars is enormous, much exceeding that of our largest Yorkshires, which they resemble more nearly than any other English breed. They are, however, larger, longer in the leg, with greater length and depth of body, and with a profusion of hair. Yorkshires are also kept on this estate, so that we saw them side by side; but the agent, M. Beaucy, insisted on the superiority of the Craonnaise pigs, which, he stated, gave a larger percentage of meat and a smaller proportion of lard.

I cannot attempt to discuss the difference in the land systems of the two countries, which would require an article by itself, but it may be noted that in 1892 53 per cent. of the land of France was farmed by the proprietor

(*culture directe*) either by himself and family alone, or with the aid of others, 36 per cent. was rented (*fermage*), and 11 per cent. was farmed under the system of *métayage* (*métayers*). In Great Britain about 13 per cent. is cultivated by the owners, and 87 per cent. rented.

The size of agricultural holdings in France may be indicated by the following figures, which refer to 1892 :—

Holdings.	No.
Under $2\frac{1}{2}$ acres (<i>très petite culture</i>) .	2,235,405
$2\frac{1}{2}$ to $12\frac{1}{2}$ " } (<i>petite culture</i>) .	{ 1,829,259
$12\frac{1}{2}$ to 25 " } (<i>moyenne culture</i>) .	{ 788,299
25 to 100 " (<i>moyenne culture</i>) .	711,118
Over 100 " (<i>grande culture</i>) .	138,671

5,702,752

So far as it is possible to give comparable figures, the following statement shows the relative size of holdings in Great Britain and Ireland respectively :—

Holdings.	Great Britain.	Ireland.
Above 1 and not over 5 acres .	111,357	62,292
" 5 " " 50 " .	232,892	363,305
" 50 " " 200 " .	—	80,504
" 50 " " 300 " .	150,055	—
" 200 acres " .	—	9,657
" 300 " " .	18,081	—
	512,385	515,758

It will be observed that in the French figures there is no lower limit, so that every "holding," however small, is included, while the figures for Great Britain and Ireland do not include any plot unless it exceeds an acre. In Ireland there are 74,890 holdings of 1 acre or less, while in Great Britain, if we were to include allotments of 1 acre or less, the number of "holdings" of land would be immensely increased. According to the special returns published by the Board of Agriculture, there are about

1,000,000 separate plots of land not exceeding 1 acre in extent, cultivated, of course, largely by persons whose primary occupation is not agriculture. While, therefore, it would no doubt be improper to suggest that a figure exceeding 2,000,000 (which would result from the addition of all the "allotments" to all the "agricultural holdings" in the United Kingdom enumerated above) could fairly be placed against the French figure of nearly 5,775,000 of "holdings" (*exploitations*), it would, on the other hand, be inaccurate to exclude from the comparison all the plots of 1 acre and less. In France it is evident that a large proportion of the holdings must be less than 1 acre, seeing that the average size of those under $2\frac{1}{2}$ acres (1 hectare) is about $1\frac{1}{2}$ acres. The minute sub-division of the land in France has been the theme of innumerable dissertations and frequent lamentations. Mr. Jenkins, who quotes from various authorities on this subject, remarks that the excessive sub-division of the land "used to be called in French *morcellement* until the progress of facts rendered the word too feeble to express the reality, and so of late years it has been replaced by the term 'pulverisation.'" ¹

In northern France the system of landlord and tenant, as we know it, largely prevails. At the market ordinary in the principal hotel at Yvetot, a cheery blue-bloused farmer informed us that not one farmer in 100 in that district owned his farm. I was sceptical at the time, and thought we must have misunderstood him, but on looking up the matter I found that, although this was no doubt an exaggeration, it might reasonably approximate to the facts. In the whole of that department (Seine Inférieure) more than 50 per cent. of the occupiers of land do not own it, and in one or two other departments of the North and North-west the proportion is considerably higher. This farmer, like many others in all parts of the world, was eloquent on the subject of the labourer. It was

¹ Report to Royal Commission on Agriculture, 1882.

interesting to gather that the harvest is largely got in by gangs, organised very much, it seemed, on the plan adopted in many parts of England. The ordinary labourer's wages amounted, said this informant, on an average to about £32 per annum. In districts more to the south his lot is a harder one, if we may accept the description of a recent charming writer on French country life.¹ In the department of Allier "the yearly receipts of a day labourer in good work, turn by turn haymaker and harvester, thrasher, wood-cutter, and so on . . . amount in English coin to twenty-one pounds twelve shillings."

I must not, however, pursue this subject, which leads to economic considerations quite outside the scope of this paper. One other sociological fact may, however, be noted. From the latest census returns of both countries, it appears that the number of persons engaged in agriculture amounts in France to 46 per cent. of the occupied population, while in the United Kingdom it amounts to 12 per cent. The difference in the position of farming in relation to the body politic could hardly be expressed more tersely.

A comparison of the actual results attained by the agriculturists of the two countries is practically impossible in detail. Official statistics of the produce of the land are in the United Kingdom only available as regards certain crops, and the figures for those which can be compared stand as follows for the year 1901 (see table, p. 182).

It should be observed that the production of hay is from permanent grass only, and that the yield of "beet-root" in France excludes that grown for sugar, and includes only that grown for "fodder."

It is not without significance that whereas the cultivation of the arable land, as indicated by the crops here given, appears to be much more successful in this country than in France, the management of the grass land—on

¹ "The Fields of France," by Madame Mary Duclaux, 2nd edition, 1904.

Crop.	France.		United Kingdom.	
	Total Pro- duction.	Yield per acre.	Total Pro- duction.	Yield per acre.
	Bushels.	Bush.	Bushels.	Bush.
Wheat . . .	301,328,000	18'0	53,928,000	30'9
Barley . . .	37,656,000	20'0	67,643,000	31'7
Oats . . .	218,321,000	22'7	161,175,000	39'3
	tons.	tons.	tons.	tons.
Potatoes . . .	11,823,000	3'1	7,043,000	5'8
Beetroot or Man- gold . . .	12,228,000	9'8	9,224,000	19'4
	cwts.	cwts.	cwts.	cwts.
Hay . . .	308,450,000	22'4	140,983,000	23'8
Hops . . .	63,000	8'5	649,000	12'7

which British farmers somewhat pride themselves— seems to give almost equal results in both countries. I cannot profess to give the reasons for this, but may suggest one consideration, which perhaps provides a partial explanation. In France, no doubt, large areas of poor and unkindly soil must be under the plough, and the comparatively limited amount of pasture probably consists mainly of the land most suitable for it. In this country, on the other hand, much of the poorest land goes down to grass, and the arable land comprises principally that which is best adapted for cultivation.

As regards meat production, the total produced in France in 1892, according to the decennial inquiry, was 1,300,000 tons (exclusive of about 12,000 tons of horse flesh), which somewhat exceeds the total at which the production of the United Kingdom was put in the report which I recently presented on behalf of a special committee of the Royal Statistical Society.¹ The quantity there arrived at, as representing the average annual output of meat by the farmers of the United Kingdom, was 1,245,920 tons.

¹ *Journal Royal Statistical Society*, Vol. LXVII., pt. 3, 1904.

There are several other points upon which I should like to have touched. Of the dairying industry of Normandy, which I had some opportunity of investigating in 1895, so much has been written that it is perhaps unnecessary to allude to it here. Another important industry of northern France—cider-making—has been the subject of interesting reports in recent volumes of this *Journal*. The subject of rural education in France has been exhaustively treated in recent reports.¹ I was greatly interested in a visit which I paid to the Agricultural Institute at Beauvais, but I can add nothing to that which has been written by high authorities on the subject.

When I undertook this article I hoped to be able to examine in much more detail the voluminous records of the rural economy of France. Other work has prevented this, and I am conscious, therefore, of a very inadequate and sketchy attempt to deal with a subject requiring much time and research. I can but hope, however, that I may have put in a concise form a few facts which will inspire others who have the opportunity to examine for themselves the manifold points, both of resemblance and difference, that equally serve to emphasise *l'entente cordiale*, which, throughout long years of political change, has subsisted between the farmers of France and of these islands.

¹ "Special Reports on Educational Subjects," Vol. VII. Rural Education in France (ed. 834), 1902.

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