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**FOUNDATIONS OF
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LINCHES AT CLOTHALL, HERTFORDSHIRE

FOUNDATIONS OF AGRICULTURAL ECONOMICS

by

J. A. VENN, M.A.

Gilbey Lecturer in the History and Economics of Agriculture
in the University of Cambridge; Ministry of Agriculture
Economic Advisory Officer; sometime Statistician
to the Food Production Department

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My young friend, as you have resolved on agriculture as the occupation of your future years, notwithstanding the very discouraging present, and 'the shadows, clouds and darkness' which rest on the future, in the opinion of a large proportion of those engaged in the cultivation of the soil, I am anxious that you should start upon a sound foundation.

From "A letter on agricultural education addressed to a youth who had resolved on farming as his future occupation," by Charles Lawrence, Esq., 1851.

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P R E F A C E

THIS volume represents an attempt to bring within reasonable compass some account of the origin and incidence of the numerous economic problems which affect the agricultural community. The bulk of what it contains has been delivered in the form of lectures to third year and Diploma students, for whose benefit it was originally planned. Subsequently, I felt that, by the inclusion of certain additional matter, it could be made to form a connected narrative rather than a series of essays, and thus might also appeal to that wider class of landowners and farmers who are interested in knowing something of the evolution and history of their "burdens," of the past struggles of their predecessors and of the alternative methods of land tenure and marketing practised in other countries.

It is inevitable in a work of this character that reference should frequently be made to bygone events, but I have purposely refrained from any excursion into agricultural history pure and simple, for in Lord Ernle's *English Farming Past and Present* there exists a monumental work which, so far as a descriptive account of the social life, the agricultural practices and the personalities of past centuries are concerned, must always hold the field. As regards the economic history of the subject, however, there does appear to be a gap in our literature. True, practically every branch dealt with in the following pages has its existing authorities, but it must be confessed that in almost every case there have been political axes to grind or particular theories to ventilate. Land tenure, for example, has provided lists for the breaking of many lances; taxation has involved the historian, the economist and the politician in a maze of conflicting statements and counter-statements; the subject of marketing and co-operation has too frequently been reserved for the eulogies of avowed partisans; it has been left to foreign authors to treat unbiassedly such questions as those raised in the consideration of large and small holdings or the past and present economic situation of the farm worker; finally, the

history of agriculture after the year 1914 is still mainly hidden in official publications. In these circumstances, I hope that all the more important factors have been dealt with as adequately as the assigned limits of two chapters will permit; I have certainly endeavoured to set forth all sides of the controversial questions that inevitably arise, and at the same time to point out the many pitfalls in this subject that await the impetuous users of statistics or the over hasty generalisers from events that occurred or customs that prevailed long ago or far away.

No apology is offered for frequent references to, and comparisons drawn with, the previous depressions that have affected British agriculture, for in producing a book on this subject at such a time as the present, it is imperative that anyone with either a sense of proportion or a respect for history, should recall former struggles; thus it is that the evidence adduced before the Royal Commission of 1893 and its predecessors, as well as their published *Reports*, has been freely drawn on. At this juncture, too, it might be thought incumbent upon an author to refer to the Government enquiries recently undertaken, but as my own views, together with certain suggestions of a constructive nature, will be found embodied in the following pages, I have refrained from commenting at any length upon the tentative proposals so far emanating from the Tribunal of Enquiry and other committees of investigation. In fact, I ought to state that the whole of this volume was written in the autumn of 1922, and that it was accordingly compiled in ignorance of what suggestions might result from the deliberations of the bodies just referred to; even now I do not know whether the full *Report* of the Tribunal will appear before or after these words are read.

Briefly, the general plan adopted has been as follows: first to give some description of the methods of land tenure practised at different periods here and abroad, and then to discuss the economics of its division; next follows an account of the statutory burdens placed upon it, succeeded by an analysis of the productivity of British agriculture prior to the Great War, accompanied by a narrative showing how it was expanded to meet that occurrence; then, in turn, will be found a description of

the utilisation of man-power on the land, of the methods of marketing adopted by agriculturists, with an amplified account of the output of two of the principal individual products; finally, the technical side is covered by a chapter on the basic sources of our knowledge, accompanied by statistical tables.

Certain features are the result of original research. For instance, the description of the incidence and collection of vicarial tithes appears to have broken fresh ground, which I hope to explore further in a separate undertaking; the history of the attempts made to collect agricultural statistics from 1830 to 1860 has been a forgotten field; the comparison of the yields of cereal crops in different decades (together with the illustrative maps) is the result of detailed investigation into a subject that is of interest at a time when the plant breeder was never a more potent factor; the statistics relative to yields on large and small holdings in Roumania afford evidence that has, so far as I am aware, never before been published in this country. The description of the ploughing-up campaign of 1917-19 was prepared by me at the time in question for the Ministry of Agriculture, whose permission to publish *in extenso* I secured (and hereby most gratefully acknowledge) in the summer of 1922. In this connection I should perhaps explain that, while this volume was actually in the press, I discovered that Sir Thomas Middleton, K.B.E., had also incorporated my Report in his book, entitled *Food Production in War*. However, I decided to retain this matter for two reasons; in the first instance, the Report adopted by Sir Thomas Middleton was based on my original figures, which compared the yield on the new arable land with the "ten-year average," while the subsequent passage of time had enabled me to effect a more just comparison with the actual yield of the "old" arable; secondly, the maps contained herein afford a graphic commentary on the results of a too little appreciated operation.

No excuse is offered for giving yet another description of the familiar survivals at Axholme, Braunton and Laxton, for I conceive it to be the duty of every writer on past customs to familiarise himself and, if possible, his own generation, with existing examples, and we owe it also to the memory of Young,

Cobbett and many others to make, in our turn, some small attempt to help in their researches the economist and the historian of the future. Here, it may be relevant to reiterate that a knowledge of what has gone before is always the best antidote against existing depression, and if this volume can encourage a single present-day agriculturist by describing the ultimate recoveries of his predecessors from worse economic handicaps than those of 1923, or persuade any town dweller that agriculture deserves his attention, it will not have been written in vain. Some few years ago, an East Anglian grammar school was wont to include in its prospectus the following words: "Where desired, a rural bias will be given to the curriculum"; it would indeed be well if such a bias could be applied to the knowledge of history and economics possessed by this urban nation.

The pleasant duty of thanking those who have assisted me in various ways remains. First, I must refer most gratefully to Professor T. B. Wood, F.R.S., C.B.E., for his kindness in reading through the whole of the proof sheets from the standpoint of the scientific agriculturist, and to Dr J. H. Clapham, C.B.E., who, as an economist and historian, performed a similar labour. Each suggested certain slight emendations that I was only too glad to incorporate. My former colleague at the Ministry of Agriculture, Mr R. Ross, read the chapter on "Statistics," as did Mr A. W. Lowe, also of the Ministry, that on "Tithe"; to both I am much indebted, and I am, moreover, fortified by the knowledge that these experts discovered in my description of their own subjects no serious errors of omission or of commission. My college friend and contemporary, the Rev. E. C. Hudson, now vicar of St Lawrence, York, when formerly vicar of Kellington, Yorkshire, allowed me access to his parish records, with results that will be found in Chapter V; again, I am similarly indebted to the Rev. E. Jauncey, B.D., vicar of Brotherton in the same county, who kindly permitted me to transcribe the very interesting eighteenth century account of the Ings in that parish and also of the system of tithing in vogue there at the same time. Mr E. S. Vidal, formerly of St Catharine's College, and now resident at Barnstaple, took

much trouble in supplying me with information relating to the past and present state of the Great Field at Braunton. To the Rev. C. H. Collinson, a former vicar of the parish, I owe it that the history of the open fields at Laxton has been adequately dealt with, and my account of the customs at present associated with their tenure, corroborated. Mr F. Willis of the School House, Laxton, also sent me valuable information, and a former pupil, Mr J. H. Turner, of St Catharine's, was instrumental in securing the three illustrations. The references to Danish agriculture and land-tenure have been checked by my friend Mr Knud Juël of Hverringe, Kjerteminde. I must also thank Mr J. E. Few, M.A., of King's College and Mr W. Dawson, M.A., Reader in Forestry, who have most willingly answered questions put to them on matters relating to law and forestry respectively. I wish to acknowledge the permission kindly accorded me by the Delegates of the Clarendon Press to reproduce the map of Lower Heyford, and I ought to state that the original of that of Rampton is in the possession of our own University Library. Acknowledgment of information derived from published sources has been made in the text, but I should add that the bulk of the figures and tables relating to British agriculture are taken from the official publications of the Ministry of Agriculture.

J. A. VENN.

SCHOOL OF AGRICULTURE,
CAMBRIDGE. *June 12th, 1923.*

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CHAPTER I

THE OCCUPATION OF LAND IN THE PAST

Man's first efforts at cultivation; examples found in this country; questions involved in the origin of the manor; early maps; the manor of Rampton; division of arable and grass land; modern survivals; Castor and Ailsworth; the Isle of Axholme; Laxton; Braunton Great Field; allocation of grazing facilities; the Ings at Brotherton; rights of common; services and duties of manorial tenants; manorial courts.

ANY full description of land tenure calls for a series of digressions into legal and Constitutional history, involving thereby the traversing of much debatable ground and the introduction of political colour. In such a work as this, where agriculture itself is the first consideration, it is incumbent to avoid such excursions and to discuss each phase from the standpoint of the cultivator of the soil; thus, the bulk of the present chapter deals with the facilities for access to land (differentiating between arable and grass), that have existed under certain systems of tenure, followed in the succeeding one by a general discussion of more recent practices found in this and other countries.

The earliest forms of intensive cultivation, as opposed to extensive—which implied a constant moving on of nomadic or other tribes—were, and still are, practised on the alluvial banks of such rivers as the Nile and the Tigris, while in more temperate countries, signs of occupation can still be traced on the lighter soils of hill-sides. That agriculture in such countries as Egypt has changed little in character will be appreciated by anyone who is familiar with the wooden models discovered in tombs depicting granaries and livestock. That widespread and long continued operations were carried out on the slopes of hills elsewhere will meet with general acceptance from a survey of our own Southern and Western counties, whose downs are scarred with terraces formed by generations of unknown ploughmen. Anyone familiar with the illustration of the “Linches” at Clothall in Hertfordshire, given in Seebohm’s *English Village*

2 THE OCCUPATION OF LAND IN THE PAST

Community, will be interested in comparing that woodcut with the photograph forming the frontispiece to this volume, which was taken from a similar angle in 1922. Whilst it is not claimed that these seven well-defined terraces represent a direct survival of prehistoric cultivation, they afford an excellent example of the appearance of hill-sides that have been under the plough for countless centuries. Facing North-West, and of an extreme length of some two hundred and sixty yards, they rise in a series of steps some five to eight feet in height, the largest having a width of thirty yards, the rest of some five to eight yards. Modern farming operations have not permitted of their economic use, so that all save the widest remain overgrown with rank herbage, and the divisions between them harbour thorn bushes.

In practically all countries of the world, as soon as intensive cultivation succeeded to cattle raising and its accompaniment of extensive cropping, there came into existence those communities that were in Western Europe to become the foundation for the manorial system, and that, elsewhere in the world, are still found in a less advanced state. Historians and lawyers have differed over many questions regarding their evolution, the most important point at issue being in regard to the original position occupied by the cultivators of the soil and their relationship to the chief who was eventually to become the lord of the manor. Had all members of village communities at first equal rights which were gradually dominated by the more powerful individuals, or did the manor come down from some former system whereby groups of unfree cultivators had laboured for a master? Despite the brilliant advocacy of followers of the latter theory, it must be confessed that the probabilities are in favour of the former, for in all ages and among all groups of human beings, the power of those endowed with character or even with physical strength is bound to make itself felt, and in communities such as those in question this would tend to the gradual establishment of some form of over-lordship of the soil and of access to it.

In these islands the purest examples of communal husbandry survived Roman and Saxon influences in the Eastern parts of England, whilst in the extreme South-Western peninsula, Wales and generally in Scotland and Ireland, where grazing was the

THE OCCUPATION OF LAND IN THE PAST 3

predominant industry, and where the advances of conquering races were rendered difficult, social conditions were more primitive, and agriculture provided a more individual and scattered occupation. If feudalism came late into England, it was well established before the Norman conquest, and eventually reached, under the influence of the foreign invader versed in its principles, as high a state of development as it attained anywhere on the Continent.

From this point it is proposed to give some account of the system of land cultivation and tenure that existed from Norman times onward, and in this connection it must be borne in mind that whatever modifications took place in the tenure of land, the actual field operations remained for many centuries uninfluenced thereby; nor did economic upheavals such as the Black Death result in changes of practice—they merely caused a contraction or an expansion in the area of land devoted to the plough. It is scarcely an exaggeration to say that, until the tardy introduction of root-crops, followed by the enclosures of the eighteenth century, the methods of arable farmers had remained substantially unchanged from Anglo-Saxon times. The efforts of live-stock breeders have always been more appreciated by the bulk of the farming community than those directed towards securing higher returns from land under the plough. Jethro Tull and Lord Leicester might, each in his own sphere, demonstrate the advantages accruing from the adoption of mechanical principles or from a study of soil conditions coupled with an adequate rotation, but for each convert that they made Bakewell or the Colling brothers, in their time, could secure ten. The reasons are not far to seek. Improved breeds of cattle and sheep were the achievement of "working" farmers, called for no application of fresh capital, and were free to spread throughout the countryside; new arable practices, at first almost the prerogative of "gentlemen" farmers, were accordingly assumed to be intended for landowners with money to waste; they depended upon a visit of inspection to obtain notoriety and even then did not at once bring conviction. The charge of conservatism so often levelled at British farmers should properly be confined to the arable side of their undertakings, and if, soon after the

4 THE OCCUPATION OF LAND IN THE PAST

Restoration, they had adopted the new crops that were to har the face of the country would have been transformed more th a century earlier and the system of its tenure might have follow a different course.

Text-books, relating to agricultural history and also to gene economics, have devoted many pages respectively to descriptio of the manor and of the gradual changes that it underwent, b apart from sketches showing the holdings of an individual tena none has furnished a complete photographic illustration of t whole layout of an actual example, accompanied by an accou of the different fields and their respective tenants.

Maps alone have been occasionally published; a notable a little known undertaking by J. L. G. Mowat, prepared a issued by the Oxford University Press in 1888, affording striking example of the value in this respect of the contents College muniment rooms; but as the work in question was co fined to an edition of fifty copies its rarity is not to be wonder at. The maps themselves number sixteen and illustrate sev different manors, the properties of Corpus Christi, Merte Oriel and Trinity Colleges, Oxford. One of the oldest, th representing Lower Heyford, Oxfordshire, in the year 160 appears facing this page, the remainder illustrate the followi manors in the same county, their dates being recorded brackets—Whitehill, near Tackley (1605), Cowley (1605), De (1743), Chalford (1743), Cuxham (1767) and Wroxton (176 Lower Heyford affords a good example of a typical manor a its surroundings, but as the bulk of the land had by the date question fallen into the hands of two occupants, and the d limitations of furlongs and fields are not precisely recorded, value is more antiquarian than economic.

Between pages 8 and 9 will be found an illustration that ca for detailed description. The subject is the Manor of Rampto Cambridgeshire, in the year 1754, the original map being no in the University Library at Cambridge. Rampton is a sm village lying on the borders of the fen country, some eight mil due North of the University town. The date of its subsequ enclosure is not recorded, but in the middle of the eighteen century it provided the most perfect example of all the featur



THE MANOR OF LOWER HEYFORD, OXFORDSHIRE, IN 1606

associated with the open field system of agriculture. Four arable fields existed, divided up, as the following table shows, into forty-seven furlongs, to be in their turn split up into over nine hundred strips. If comparison is effected between this map and the present day Ordnance Survey it is still possible to trace the limits of these four fields, and the names survive also, Bellses having been corrected into Belsar's, while such designations as "The Snout" persist. Save in some four or five instances, however, enclosure has obliterated the boundaries of furlongs. The latter were disposed exactly in accordance with traditional requirements, and provide some quaint nomenclature, as for example "The Taughts," the derivation of which is obscure. There is even provided a gore, designated Huntington; this will be found occupying an awkwardly shaped site in Brook Field just above Britch Furlong.

The individual strips exhibit that universally met with feature—an "S" or double bend—that tradition associates with the outward movement conveyed to the plough as the leader of a long team of oxen was turned on reaching the end of a furrow. So far as tenancy of the strips was concerned photographic reduction from an original size of some five feet by four feet to that of an octavo page has rendered the key provided almost illegible, so that a few words of explanation are called for. Fifteen tenants occupied the arable land, whose individual holdings (separately coloured on the map itself) ranged from one hundred and twelve strips down to a single strip. In addition, the manor retained certain lands, and also let other manorial strips to tenants, whilst the church was provided for in the plough-land as well as more liberally by facilities for grazing. In connection with these ecclesiastical holdings there is an unusual feature to record, for in Fenn Furlong, in Brook Field, there is a single strip divided vertically into two equal parts, one half bearing the cross emblematic of church-land, the other being clearly labelled "Whore's Broad." The writer has nowhere else come across any subdivision, other than longitudinal, of a single strip in the middle of a furlong, and the juxtaposition of church property with that bearing such a title raises curiosity as to the possible explanation.

6 THE OCCUPATION OF LAND IN THE PAST

The allocation of the grass-land in Rampton also closely followed traditional lines, for numerous "closes" and "pieces" abounded on the one side of the village bordering the furlongs, whilst on the other, larger "meadows" and portions of reclaimed fen-land afforded the equivalent of commons in an upland manor. The majority of the closes and pieces were reserved for the manor farm itself and for the use of its principal tenants, but the six "cottagers," apart from the considerable areas of land round their homes, possessed exclusive rights over several enclosures of grass. Two charities—Luke Norfolk's and Langham's—were also represented; the church claimed nine grazing places,

<i>(a) Bellses Field</i>		<i>(c) Mill Field</i>	
Furlongs	Strips	Furlongs	Strips
The Furlong below Portway	31	Town End Piece	10
The droves	13	Dole Furlong	8
Burney's dole Furlong	30	Redland Furlong	54
The Furlong above Portway	24	Sand Pits	11
Little Burney's dole Furlong	6	Little Handstaff Furlong	33
Rush Furlong lower shot	34	Pages Furlong	15
Little Portway Furlong	11	Hoe Furlong	23
Rush Furlong upper shot	29	Waterland Furlong	12
Millers Close Furlong	10	Moor Furlong	33
Mear Furlong	34	Farther Furlong	18
	<u>222</u>	Blackpitts Furlong	8
			<u>225</u>
<i>(b) Little Field</i>		<i>(d) Brook Field</i>	
Furlongs	Strips	Furlongs	Strips
Portway Furlong	12	Turn Furlong	21
Pages Way Furlong	15	Fenn Furlong	17
The Taughts	22	Clay Furlong	23
Lane Leys	7	Sand Furlong	10
Town End Furlong	23	Black Mill Furlong	44
Upper Portway Furlong	13	Little Moor Furlong	16
Lower Lambcoat Furlong	25	Huntington Gore	16
Upper Lambcoat Furlong	18	Britch Furlong	40
Cooper's Furlong	12	Nether Home Furlong	14
Northland Furlong	31	Middle Home Furlong	23
Great Handstaff Furlong	12	Over Home Furlong	25
Bird Furlong	7		
Long Furlong	17		<u>249</u>
Bush Furlong	21		
	<u>235</u>		

Total furlongs 47. Grand Total of Strips 931.

Meadows and Grass Fields

Brook Closes	Long Furlong Piece
Brook Piece	Millers Close
Paddock Dole Piece	Brickiln Piece
Over Home Piece	Cole's Piece
Pierces Close	Northland Piece
Moor Closes	Hardwell Close
Town Leys	Crab's Close
Moor Furlong Piece	Champion Close
Waterland Piece	The New Meadow
Mill Piece	Great Homehill Close
Hare Park	Little Homehill Close
Page's Close	Hardwell Close
Bush Close	Ware Roods
Great Handstaff Piece	The Pitts
Little Handstaff Piece	Twelve Acre Park
Dacer's Ditch Piece	Twenty Acre Park
The Lockspit	Seven Acre Park
Wildfire Roods	Four Acre Park

Common Lands

The Hemsal	The Old Meadow
The Farther Iram	Rampton North Fen
The Hither Iram	The New Ground
Hollyman's Ground	Cow Common
The Snout (and various detached greens in the village)	

the Glebe one; in addition common rights appear to have extended over some twelve fields and fens. Among the latter will be noticed such unusual appellations as "The Hemsal" and "The Hither" and "Farther Iram." It will be observed that the village itself displays the features that custom demands, for the manor farm and the church are found at one end of the street and a common is evidenced in the centre of gravity, flanked by the dwellings of the cottagers. The majority of the roads were obviously "green," for the lettering on the map apportiones the grazing rights over them, but they are all still traceable at the present time, in most cases having been metalled.

Familiarity with the economy of the farming involved is necessary before any judgment can be formed of the systems under which it was practised. Enclosure had by 1840 swept away, together with Rampton, all save a few of the open-fields in this country, but, before describing the present appearance of the three principal survivals, it may be of interest to quote

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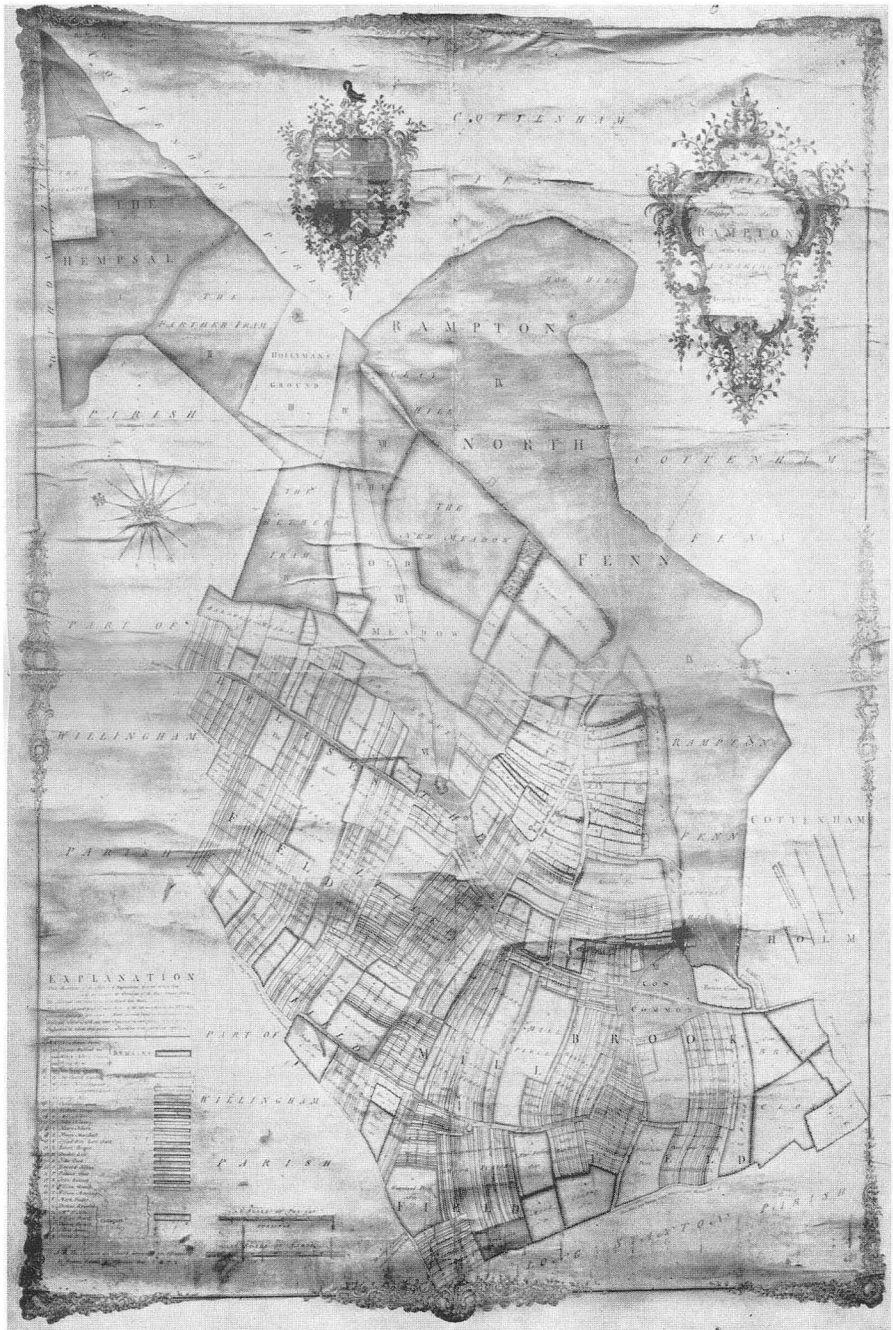
the following description of another that has disappeared in quite recent times.

The open-fields of Castor and Ailsworth lay a few miles West of Peterborough, and were thus referred to by an Assistant Commissioner of the Board of Agriculture in his Report on Northamptonshire to the Royal Commission of 1893.

The 4865 acres arable and pasture are divided into about 5000 different plots, but they are all in the occupation of fourteen farmers. There is a map of the "fields" but no guide to it. The farmers trust entirely to memory, instinct, and the knowledge possessed by the labourers reared on the spot. The labourers recognise the plots by the variety of crop growing, the character and style of the cultivation, occasionally the distance from some untilled spot or landmark. It has happened before now that, on the death of some well-informed labourer, certain plots were completely lost, at any rate they could not be identified by the rightful owner, and no doubt accidentally went to swell up the acreage of a neighbour. At Castor we have fourteen farms occupying an average of 347 acres apiece, each farm broken up into an average of 350 particles.—There are four arable fields: (*a*) for corn after clover; (*b*) for turnips, potatoes, or fallow; (*c*) for corn after roots or fallow; (*d*) for clover after corn. After the harvest the whole of the corn stubbles and young seeds are "open," and the stock roams at large. Every occupier of a cottage having a common right attached has the power to put two cows, one calf, and ten sheep on the "open" land during the autumn and early winter months, free of charge. A common right may be hired for one year, price ten shillings. In consequence of this extraordinary system, the fourteen farmers are forced to farm on the same rotation; should any of them sow a catch crop in autumn on the stubbles, the stock of the commoners have full liberty of access unless the plot is specially fenced off for the time being. During the "open" time there can be no such thing as "trespass" on the corn or seed fields. A badly farmed plot damages those near to it by seeding it with weeds, and one careless or failing farmer may, by his misdeeds, defeat the plans and destroy the prospects of the rest of the fraternity.

After perusing the above account, it will be agreed that Castor open-fields, with their five thousand strips, presented a far larger problem to those entrusted with their enclosure than had such villages as Rampton; the operation was, as a matter of fact, carried out in 1898, when the largest example of "champion" husbandry in these Islands was swept away. Whilst the Com-





THE MANOR OF RAMPTON, CAMBRIDGESHIRE, 1754

missioner was perfectly correct in making the strictures that he did upon the methods of farming involved by such a form of tenure in modern times, yet it is apt to be overlooked that under mediaeval conditions there were present certain counter-vailing influences. For instance, security of tenure was assured, and the very contiguity of the strips facilitated that cooperative labour and use of implements and beasts so essential if seasonal operations were to be carried out expeditiously. Large holdings made up of these intermingled strips held under leases would represent grave anachronisms at the present day but, as will be shown, the same disabilities do not necessarily apply in the case of the peasant proprietors found elsewhere.

The Isle of Axholme in Lincolnshire, bordered on the East by the river Trent and on its remaining sides by the Thorne, Idle and Don, extends to some thousands of acres and includes within its boundaries the villages of Epworth, Haxey, Owston and Belton, in each of which are found hundreds of acres of land, hedgeless, and divided into the accustomed strips. But the analogy with Castor ceases at this point, for these "selions," to give them their old name, are in the ownership, or the occupation of, numerous small farmers, and no fixed course of rotation is called for, since enclosure technically took place many years ago, so that, as a consequence, the appearance of the land is totally different from that which is seen when open-field tenure survives in the hands of large tenants. As the photographs facing pages 10 and 12, taken in September, 1922, clearly show, the diversity of crops conveys the impression of urban allotments or of fields in Northern France seen from an aeroplane rather than of English agriculture. One strip will be growing barley, the next potatoes or oats, then perhaps wheat or roots will appear, flanked by some vegetable crop, followed again by more cereals. They invariably exhibit the "S" bend but, owing to the absence of balks, have in the course of time deviated from what must have been their original width of five and a half yards. Constant sale, and the resultant throwing together of adjacent plots, has also doubtless effected this, for measurements nowadays reveal widths varying from less than five yards to over thirty. •

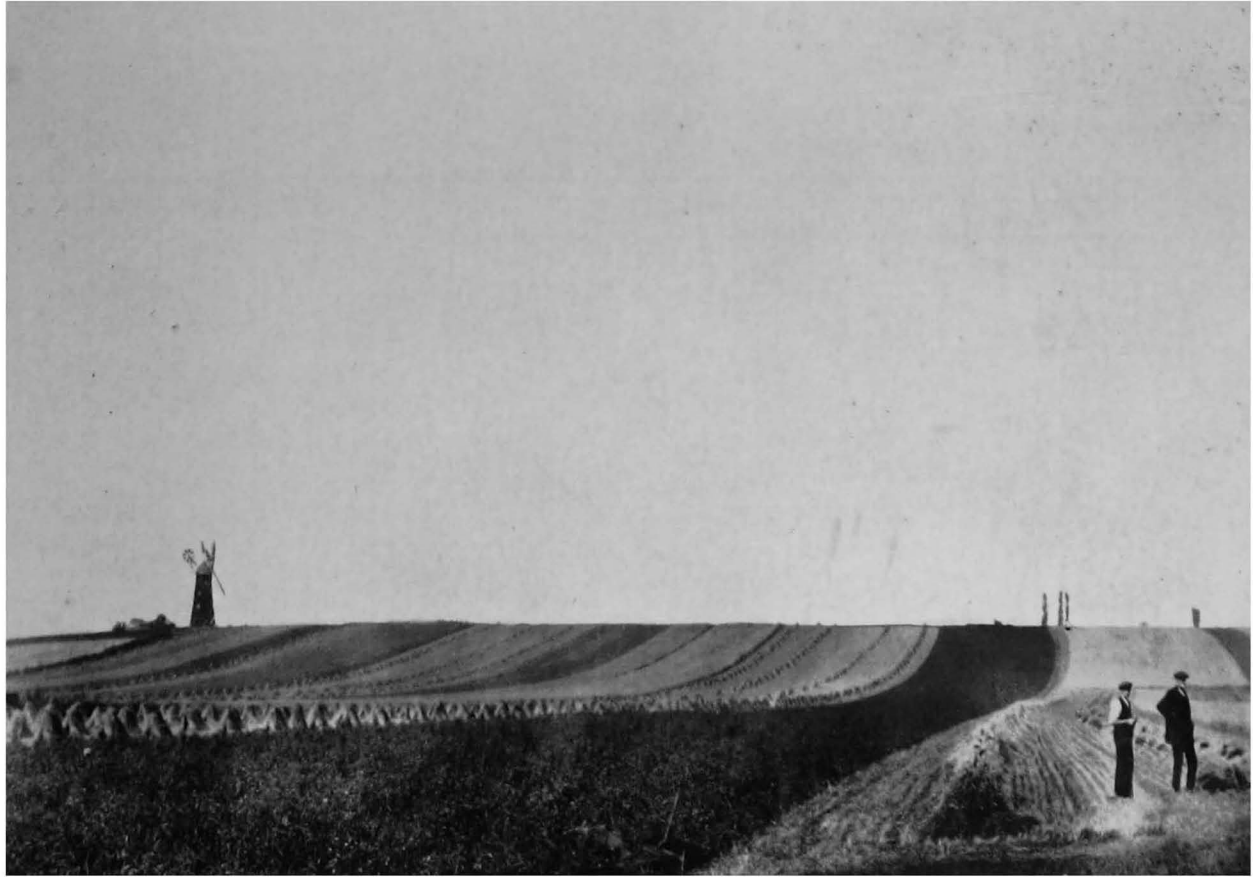
In this connection it may not be widely known that a reasoned

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explanation of the length of the cricket pitch has been put forward by antiquarians, based upon that universal agricultural unit, the acre, measuring two hundred and twenty yards by twenty-two yards—the latter, of course, representing four divisions each a pole (derived from the ox-goad and measuring five and a half yards) in width. It is suggested that the evolution was briefly as follows. Village lads were in the habit of setting up clods of earth on one balk and throwing stones at them from the next; in the course of time sticks took the place of the former and were defended in turn by the use of a larger block of wood. Then on some particular occasion an irate farmer descended on the participants in this game, and ejected them from his land. They, adjourning to the village green, continued their game, naturally setting up their stumps at the distance apart to which they were accustomed. Be this as it may, no book dealing with the history of cricket has attempted to account for the length of the pitch and, until another explanation is forthcoming, agriculture may legitimately claim to have had its influence in moulding the national game.

Many varieties of soil are to be found in the Isle, from the richest warp-land to strong clay, but the small farmers have tended to congregate upon the best and most easily worked examples. Whilst the average size of a holding is very small, certain owners farm up to fifty acres or so, divided up into plots averaging perhaps a fraction of an acre each, thus disguising the fact that numerous scattered strips still present their economic problems.

The exigencies of the last fifty years have left their mark on this community, as on others, and in 1894 it was stated that the position was critical. The natural difficulties that had to be contended with were augmented by the heavy mortgaging that had been effected, and by the rash purchases of property carried through on borrowed capital. On the decease of owners subdivision of their small farms was rife, and although staple crops were being produced at a loss, alternative forms, such as celery, carrots and other market-garden produce had not then been invoked on a large scale. It has indeed been remarked that at certain periods in the history of Axholme the lawyers, constantly



EPWORTH, ISLE OF AXHOLME

engaged in selling and mortgaging these properties, were the only persons who made a living out of its agriculture. The depression, culminating in the 'nineties, was, however, successfully weathered, mainly it has been held through the forbearance of the mortgagees, and in 1910 Mr (now Sir) Daniel Hall, when visiting the Isle, received the impression that matters were "reasonably prosperous."

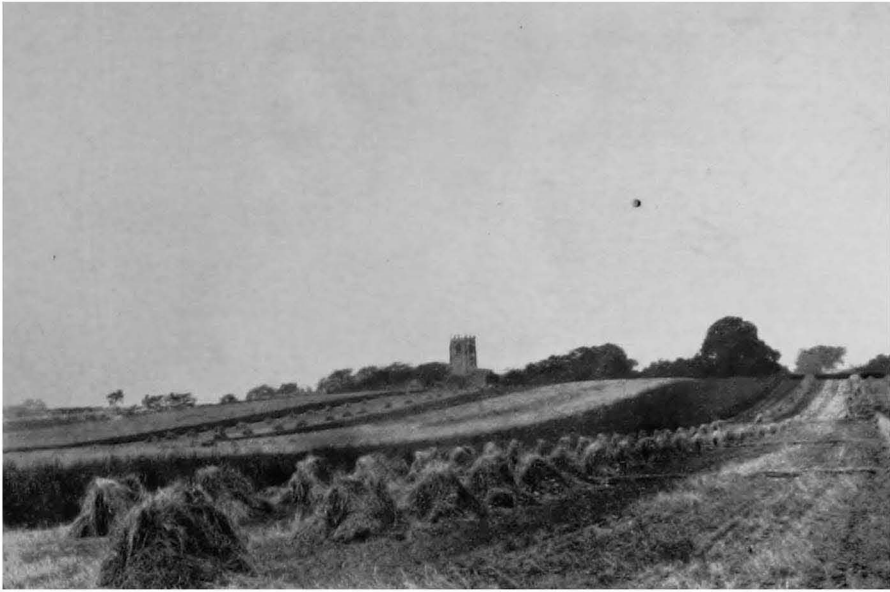
In the autumn of 1922 conversation with individual strip owners tended to corroborate this, and, despite such drawbacks as the total inability to keep sheep and the restrictions placed on cattle, together with the difficulties attendant on cultivating widely separated plots, there was no inclination favourably to consider enclosure and redistribution. The ideal of each individual occupant appeared to be the absorption of adjacent plots, but this process has obvious limits and makes relatively slow progress, as was evidenced by the varying stages that had been reached in harvesting, and the divergent methods employed in field-work on adjoining strips. A certain amount of cooperation was displayed in the use of binders on the narrow plots, but side by side with these machines could be seen holder after holder reaping by hand. The impressions left by a visit to Axholme are, firstly, that it represents a group of Small Holders flushed with the pride of possession, and too suspicious of one another to risk any form of beneficial combination or re-allocation of land; secondly, that they can still make a living from their properties thanks to the character of the soil and to the fact that the labour problem is for most of them mainly a family concern; and finally, that, despite the historic associations illustrated by the actual shape and character of the plots, this is not the place to visit in search of a survival of open-field farming complete in all respects. The owner or occupier of numerous detached strips certainly represents the *liber homo* or the villein of the manor; but the patchwork of crops gives an appearance to the landscape the reverse of that which greeted the eye of the mediaeval traveller.

Laxton, in Nottinghamshire, lying some three miles West of the North Road, provides the only example still existing of the open-field system complete with its attendant rights of grazing

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and common. Here, at any season of the year, a casual glance at the landscape would fail to inform the visitor that anything abnormal surrounded him, for he would see large fields being prepared for, or bearing, cereal crops. Fundamentally, however, one is back in the Middle Ages. There are the three fields, Mill, South and West, under the traditional rotation of winter wheat, spring corn, and bare fallow; these are in the occupation, under the sole owner, Lord Manvers, of some twenty-five tenants, whose holdings vary from two to eighty acres. The soil is a strong marl, pre-eminently suitable for wheat growing, but offering few alternative possibilities when economic conditions are adverse. Here then is one of the practical distinctions to be drawn between Laxton and Axholme, and hence the absence of numerous Small Holders on the former, for there could be no refuge for them in vegetable production or the raising of market-garden crops.

The explanation of the persistence at Laxton of these open-fields can be ascribed to the once dual ownership of the land in question between the Saviles of Rufford and the Pierrepont family, neither party being able to agree to the exchanges essential to enclosure; finally at the beginning of the seventeenth century the Pierreponts secured complete ownership, and for generations have proved model landlords of this unique property, from their generous expenditure upon which they can have received but a very small pecuniary return. Within living memory certain consolidation of strips has at great expense been effected, and limits have been placed upon the access of sheep to individual fields, but substantially the grazing rights over both the stubble and the commons exist in their original form. Juries are still annually appointed at the Court Leet, whose duties, *inter alia*, comprise the imposition of fines upon tenants breaking the rules in regard to stocking, or omitting such duties as the cleaning of dykes. The pindar, by ringing the church bell, still notifies the village when, on the conclusion of harvest, the two fields are open for the admission of livestock. No less than three hundred and twelve "gait rights," or rights of running sheep and cattle, exist, and in addition there are one hundred and four common rights, the bulk of both belonging to the landlord, but the former,



TWO VIEWS OF HAXEY, ISLE OF AXHOLME

THE OCCUPATION OF LAND IN THE PAST 13

of course, originally appertaining to the occupation of land and the latter going with particular cottages.

In addition, certain small pieces of grass exist in the three arable fields, of which the rights of cutting are put up to auction each July, and the sum received divided among the owners. For a fuller account of these, and similar customs in the neighbouring village of Eakring, readers are referred to G. Slater's *English Peasantry and the enclosure of the common fields*.

About the year 1850 the inhabitants of Laxton were described as "very rude and ignorant," the aim of the more thrifty freeholders being to sell their lands and to become tenants, thus obviating the otherwise inevitable subdivision of their properties. At the present time they are of course indistinguishable from any other agricultural community, and there appears to be no valid reason why their peculiar practices should not continue to exist, since they have survived all the vicissitudes which elsewhere have proved fatal to their counterparts.

Laxton, whilst fulfilling most of the requirements of the mediaeval manor, yet lacks the numerous balks that would have obtruded themselves between the furlongs in the arable fields of, say, Rampton, and the very homogeneity of the crops fails to convey the impression of scattered holdings left on the mind by a visit to Axholme. But it is too much to expect to find in one and the same area examples of every bygone feature, and anyone desiring to see balks in abundance need only traverse the Southern parts of Cambridgeshire or the North Eastern quarter of Hertfordshire where, although enclosure has technically and legally covered the country, yet physically it is non-existent, and the place of hedge-rows, as boundaries between individual fields, is still supplied by these earthen ridges. The illustration facing page 32 shows a typical example near Royston, where the whole countryside is devoid of any other form of boundary, and even the pedestrian on the road is only separated from the growing crops by a bank that a single stride will surmount.

Although enclosure had run its much smaller course at an early date in the West of England, yet there is one spot in Devonshire where a remarkable survival of a common-field can still be found. At Braunton, a few miles from Barnstaple, the "Great

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Field" still provides approximately three hundred separate plots, each of which is called a "land." The small area of some of these can be adjudged from the following announcement of a sale recently appearing in a local paper: "Lands in Braunton Great Field: Nos. 530, 987, Lower Croftnor 1 a. 2 r. 34 p., no. 759, Gallowell, 1 r. 14 p., no. 942, Pitland 2 r. 1 p., no. 669 Vennpit, 3 r. 29 p." "The field itself is bordered by certain smaller fields which bear indications of having once formed part of it. This is borne out by a statement recently made by a very old Braunton inhabitant that within his memory adjacent hedges had been pulled down so as to bring once more former enclosures within the confines of the Great Field, thus affording striking evidence of the disadvantages attendant on small tillage fields. It is noteworthy that the "lands" are generally divided by balks, known in Devonshire as "landsherds," and that the sixteen furlongs are delimited by stones sunk in the ground; this might almost be called a reversal of custom, for the balks elsewhere generally divide the furlongs, and the strips are not thus protected. In the illustrations facing page 28 will be seen several "landsherds" running at different angles. Common rights of grazing are now non-existent, and the appearance of livestock in the field is therefore limited to a few hurdled sheep on separate plots; cropping is now not subject to the dictates of any universal rotation, and, as the soil is fertile, satisfactory returns are secured from diverse crops. Tradition, however, correctly refers to a not far distant period when a three-course rotation was practised, the sequence being wheat, barley, potatoes—the latter taking the place of the more normal bare fallow. At the time in question it is said that the field was used as grazing ground for a month or so after that great local event, Barnstaple Fair. Readers interested in this particular survival will find an excellent description of it, accompanied by a plan, in the *Transactions of the Devonshire Association* for July, 1889. Then the area of the field was stated to be three hundred and fifty-four acres, comprising four hundred and ninety-one "lands" in the hands of fifty-six owners.

The above solitary example of a common-field in the South Western peninsula raises the question how far the size of certain



LAXTON IN MARCH, 1923—THE WINTER CORN FIELD

of the existing fields in Devonshire was decided when they were enclosed. Marshall suggests that the enormous dividing hedges were multiplied for the purpose of securing timber; other explanations have been that the land was so valuable that subdivision was carried to great lengths, or that shelter for cattle, combined with barricades against human aggression, was the object in view. Whatever the causes may have been, the average field is some four or five acres in extent, instead of the ten to twenty found elsewhere, and there is no doubt but that such parcels of land form a serious obstacle to efficient arable farming. Calculations have frequently been made to show that the direct loss of space from the excessively wide banks and hedges alone amounts to some six per cent. of the farming area, and if the further loss caused by shade is included, this figure may be increased to anything from ten to twenty per cent. Added to this is the handicap entailed by the use of abnormally small implements in these fields, and the sheer inability to introduce certain types of machinery into them. Whether it will ever prove a paying venture to throw two or three together must depend upon the particular circumstances of each case, but the relatively small amount of enclosure in this part of the country was perhaps carried out too severely, even when every allowance is made for the value of shelter on hill-sides swept by sea breezes.

In Ireland, "Rundale," and in Scotland, "Runrig," were the terms applied to open-field farming, and examples of both survived in certain localities until recent times. Thus, Mackenzie of Gairloch within the last few years terminated the practice whereby grass land was subject to annual division by string measurement, and in Torridon a chauffeur (of all anachronisms!) possessed a holding of thirty-six strips of land, none of which was contiguous. Although since abolished, it was held by competent authorities that, up to its end, Runrig resulted in heavier crops being produced than crofters in separate occupation could accomplish.

Of Rundale the Rev. Caesar Otway, writing in 1841, thus describes its incidence in Achill and Erris: "The farms under the landlord are held in common, as respects both tillage and pas-

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ture. In the land appropriated to tillage, each head of a family casts lots every year for the number of 'ridges' (the local name for the strips) he is entitled to, and he is restrained from tilling those ridges in any other way, or under any other rotation than that of his neighbour. Moreover, the ridges change ownership every third year, a new division taking place. The head of the village, entitled 'the king,' originally the 'Caunfiney,' makes the division as equal as possible, requiring each man to cast lots for his ridge, one in a good field, another in an inferior, and another in a worse." This latter custom represents a survival of practices that in the case of arable land had nowhere else persisted into modern times in this country. Achill, Otway declared, provided an unexampled instance of "that system which, before the English Conquest, prevailed all over Ireland; indeed, I consider that anyone who had the curiosity to become acquainted with the habits, the manners, the superstitions, the vices, the virtues, and the rural economy of the ancient Irish, would find it still the best place for his enquiry; for I am convinced the people five years ago were in the very same state that they were one thousand years ago." It was with the re-organisation of such practice that some of the first efforts of the Congested Districts Board were concerned, for in Achill and elsewhere Rundale persisted until recent years.

Former systems of land tenure, as they now survive in arable cultivation, have been briefly examined, but it must be remembered that, when stripped of their coverings and deprived of their rights and their obligations, survivals can afford no criterion as to the economics or the amenities of their prototypes. The study of land tenure, however, calls for familiarity with the appearance and layout of the latter, and actual examples provide the best object lesson. Something can be gleaned from each; indeed it is necessary mentally to place the Hertfordshire balks between every group of Axholme strips, and then to add the three-course rotation of Laxton, and the latter's rights of grazing and common, in order to complete the picture of the farmer's duties and customs in bygone ages. Even then the all-important question of his former relationship to the owner of the land evades analysis. But before dealing with that side

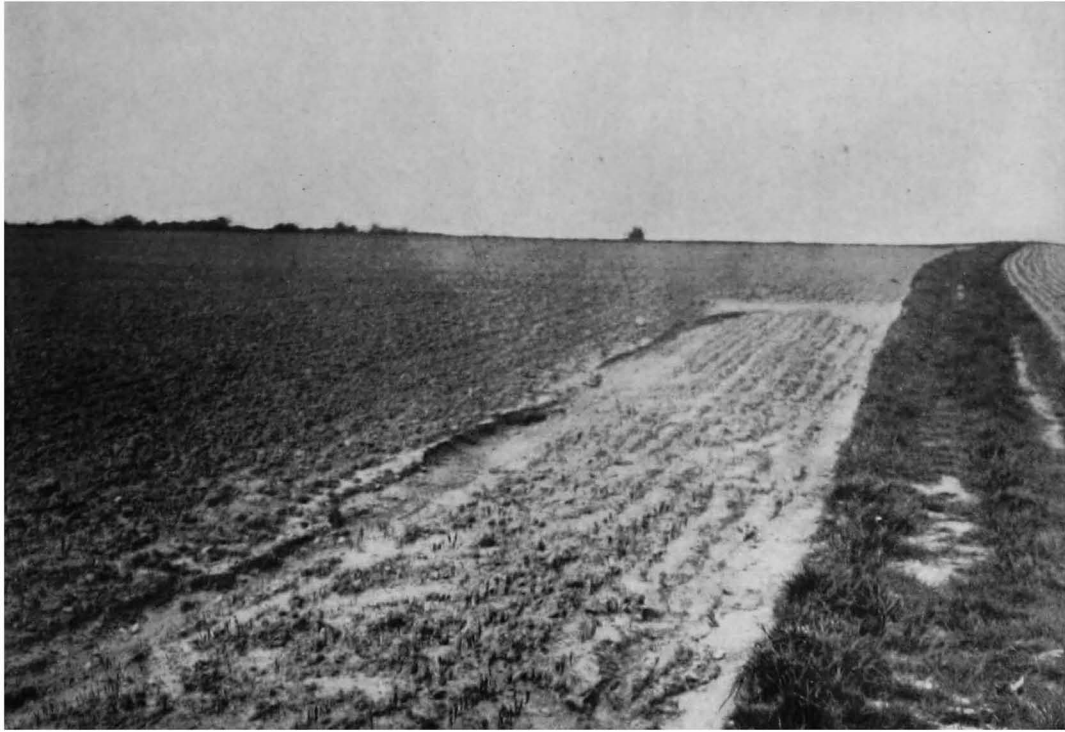


PLATE VII

LAXTON IN MARCH, 1923—THE SPRING CORN FIELD

THE OCCUPATION OF LAND IN THE PAST 17

of the problem there remains for consideration the question of access to non-arable land.

Grass land was divided up into three classes—first, the meadows in the particular occupation of individuals; second, those “Ings,” or fields yearly subject to division from a certain date in February or March until Midsummer, but sometimes going with corresponding arable holdings, and lastly, the commons. The first present no features of particular interest, but the second and third provide grounds for considerable research to the local historian. For the former of these two a hitherto unpublished account of the exact allocation of the annual rights in a Yorkshire parish can throw light on what was frequently a very complicated procedure. The Rev. Charles Daubuz, vicar of Brotherton, in the year 1701, drew up the following exact description of the methods then employed to apportion the Ings in his parish; the original manuscript was copied by a successor in 1773, to which year the names of the holders recorded below refer.

BROTHERTON INGS

I. The By Law men and others are to meet on Vicar's Hill to draw lots after this manner. Three small sticks marked with one, two and three nicks are put into a Bunn. The stick marked with one nick is for the Lord; with two nicks for the Bishop; and with three for Peter Liberty. The Bunn is laid upon a long stick, and the first stranger that passeth by may be stopt to take them up. According to the order they are taken up, so they begin to measure that year, viz. if the stick with three nicks be taken the first, then Peter Liberty begins at the Tythe Piece, and so the rest go on as they be taken up.

II. The shorter rod is just sixteen feet long, and the long rod is two inches more.

III. The placing of the rods in measuring from the Tythe piece is as followeth.

1. The short rod at the upper end, or river side, from the Tythe Piece to Curty's Acre.
2. The long rod at the upper end in measuring long of the upper Lowance and short of the upper Lowance.
3. The short rod at the upper end in Bradmire's, short and long of the Ings' end.

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4. The long rod is next the hedge in the short Lowance, and they begin from Bradmire's backwards.

IV. At the far and long Doles allow on measuring each rod only half a foot breadth.

At the long of the upper Lowance to the end of the Ings allow a foot breadth every rod.

At the short Lowance, at the end of each rod allow a whole foot length.

V. In the end of each Doal allow as followeth. Three foot at the end of Peter Dole, one foot and a half at the end of Bishop Hold, and only the common allowance at the end of the Lord's Dole.

Note, that lest the lower end of the Ings should be overrun by those who might get their hay very forward at the upper end and Tythe Piece, they begin to measure at first from the Long acres to the Ings end, and sometime after they measure out the far Doals and long Doals.

Quantity of Land in Brotherton Ings

	a.	r.	p.
Tithe Piece contains 24 rods	6	0	0
Far Doles " 23½ rods	5	3	20
Long Doles " 47 rods	11	3	0
Great Acres " 20 rods	5	0	0
Long Doles of Upper Lowance contains 23½ rods	5	3	20
Short Doles of Upper Lowance " 23½ rods	5	3	20
Bradmore's contains 47 rods	11	3	0
Long Doles of the Ings end contains 23½ rods	5	3	20
Short Doles of the Ings end " 23½ rods	5	3	20
Nether Lowance or Short Lowance contains 40 rods	10	0	0
Total	<u>73</u>	<u>3</u>	<u>20</u>

Besides these acres there is also the Bull piece and St Marie's Pieces, one of which lies at the end of the Ings and the other at the end of the Nether or Short Lowance belonging to the Bylaw men for their care and trouble.

Each person's quantity of land in the Ings and the number of their pasture gates

		a.	r.	p.	Pasture gates
The Lord	hath	21	0	20	18
Francis Crowder	"	8	1	0	12
John Dickinson	"	6	3	20	11
William Webster	"	2	3	0	2
The Vicar	"	3	3	20	6
Richard Green Esq	"	1	1	20	4
Sherburne School	"	3	1	20	—
Total		<u>47</u>	<u>2</u>	<u>20</u>	<u>53</u>

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	a.	r.	p.	pasture gates
<i>Brought forward</i>	47	2	20	53
John Tricklely hath	1	2	0	2
William Sampson "	1	0	0	—
Mr Thompson "	4	1	20	6
Thomas Wilkes "	4	0	0	7
William Making "	1	1	20	2
Thomas Catton "	0	1	0	—
Dan. Gilson's heirs "	1	1	20	1
Samuel Scot "	0	2	20	1
Mr Haxby "	4	2	0	6
George Wilkes "	1	1	20	1½
John Longstaff "	1	0	0	2
Thomas Gilson "	1	2	20	3½
William Sharpe "	1	0	0	2
Michael Hallilay "	2	0	0	3
Total	73	2	20	90 gates
M. Hallilay, T. Wilkes and } T. Gilson have among them }	0	1	0	6 overgates to repair the pasture dykes
Total	73	3	20	96 in all

Lack of space precludes any reproduction of the complete distribution of these rights, but the arrangement of one Ing (see overleaf) will serve as an example of the rest, being extracted from "A true and perfect copy of the Terrier of the meadow Land within the Townships of Brotherton, called Brotherton Ings, divided by lots and possessed in the year of our Lord, 1773."

A few words of explanation are required in regard to certain terms and expressions in the foregoing transcripts. By Law men, more commonly spelt Byrlaw, were the chosen representatives of the parish, whose duties comprised this annual distribution and measurement of the Ings, their reward, as was shown, consisting of certain special plots of the land in question. A "bunn" was the bag formed by the folding of a cloth or napkin. "Gates" have already been referred to as existing at Laxton. Whilst the purpose served by the three sticks is plain, the exact origin of the nomenclature of two of them is not apparent. Peter Liberty and The Bishop invariably formed the two larger divisions to be split up between the ordinary gate holders, the Lord's

The Far Dotes, 23½ rods	Peter Liberty, 12 rods	1 rod belonging to Forster Thompson
		2 " " " Mr John Haxby
		1 " " " Mr Webster
		1½ " " " the Vicar
		1½ " " " Richard Gilson
		½ " " " Sam Scot
		½ " " " Mr Webster
		1½ " " " Mr Dickinson
		½ " " " Thos Gilson
		½ " " " Rich. Green Esq
		1½ " " " Mr Crowder
		½ " " " Geo Wilkes
	Bishop, 7 rods	1 " " " Mr Dickinson
		4 " " " late Fothergill
		1½ " " " Sherburne School
		The Lord, 4½ rods

THE OCCUPATION OF LAND IN THE PAST 21

reserves never admitting other occupants. Peter Liberty practically always represented twice as much accommodation as did The Bishop. Each year, of course, the relative sequence of the three divisions was maintained in every Ing, the purpose of the annual selection by lot being to ensure that the better portions of the meadows did not remain constantly in the same hands. A contemporaneous note adds the information that "5½ rods of meadow go to an oxgang in the Ings," and also "5½ yards of fencing to an oxgang."

Such an elaborate undertaking, which in its final stages, involved the erection of temporary fences, is in these days of "several" husbandry wholly unnecessary for the purpose of securing an equitable division of hay, but throughout the middle ages access to grass in any shape had been a most cherished right, and one not lightly to be let fall into abeyance, as this record of only a hundred and fifty years ago clearly demonstrates.

Inhabitants of many old towns in this country have only to walk but a short distance to find an example of the third type of grass land—viz. the commons. In Cambridge, for example, there are no less than nine of these, not only surviving as open spaces, but carrying with them their ancient and exclusive rights. Typical entries in an official enumeration are as follows:

Coldham's Common (98 acres). For geldings, mares and cows from Old May Day to Old Candlemas Day.

Sheep's Green (22 acres). For sheep of freemen all the year; for cows of St Botolph and St Mary the Less all the year on Sundays, Wednesdays and Fridays, from sunrise to sunset.

In addition, the same town possesses no less than six separate areas of Lammas or "half-year" land, commonable in two cases from July 6th to April 6th, and, as to the rest, from August 12th to the same date in April. These very dates themselves show the antiquity of the rights they safeguard, and the tenacity of the latter was strikingly demonstrated in 1922 when a special Act of Parliament was required to terminate these rights over a portion of the Lammas land required, not for purposes of private development, but as a public recreation ground.

The more ubiquitous commons and the much rarer traces of open-field cultivation thus afford present day evidence of

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what was once the universal system of combined husbandry and land-tenure. Close observers of the countryside, however, will find signs of the work of other ages confronting them in every village of the land. Ridged strips exist by the hundred thousand in almost all grass districts, in heavy land sometimes rising to a height of three feet between the furrows, whilst ancient oak trees growing athwart them show the period that must have elapsed since the plough ceased to be driven along them. Small and irregular fields often demonstrate the enclosure of a handful of selions or of some odd gore. Rights of grazing cause additional value to attach to certain dwellings. The honorary freedom of some ancient borough conferred upon a distinguished statesman or soldier mainly connotes the right to depasture cattle at certain seasons and on particular lands. The copyhold tenant, now suffered to exist but a short time longer, is a direct descendant of the villein.

The personal, as opposed to the agricultural aspect of past forms of tenure calls for brief consideration. Numerous complete manor-rolls have been published, so that two or three extracts illustrative of the duties imposed on tenants will suffice in these pages. About the year 1375 in the parish of Westbourne, Sussex, a contemporaneous record (published in 1913 by J. H. Mee) ran as follows:

The Earl Marshall holds the manor of Stoghton by homage and rendering one soar hawk or half a mark. Also he holds land called Hurst by rendering one pound of pepper. Thomas Hokat for 4 virgates renders one pair of spurs or 6d. The same for a virgate of land called Aldwyne renders 12s. and 4¹¹ by way of relief [succession dues]. The tenant of the manor of Aldesworth renders one boarspear or 6d. The tenant of Whiteway renders 3s. and two pounds of pepper. The lord of the manor of Notborne renders 12d.

It is impossible to record in full the payments due from inferior tenants, but the following affords a typical example:

Richard Tanner for a messuage and five acres rendered $\frac{3}{6}$, a hen, five eggs and two boonworks; he was bound to harvest oats for half a day, to weed for half a day, to do one day's carrying on foot, to make a hurdle out of withies provided by the Lord, to reap two and a half acres of wheat and barley and to move the hurdles of the lord's sheepfold.



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Blount's *Tenures* will supply another example. Thus the Knights of St John of Jerusalem had at Newbiggin in Yorkshire, thirteen oxgangs of land, held as follows:

Baldwin held an oxgang for 2/0 and a half, and 2 hens, and 20 eggs and 4 days' work in autumn with one man, to plough twice, to harrow twice, to mow once, to make hay once and when there should be occasion, to repair the mill-dam, and draw and carry the mill-stones, and to wash sheep one day and another day to shear them. Bertram and Osbert, for 1 oxgang of land, paid 30d. and the aforesaid services, etc. And it is to be known that all the cottagers ought to spread and cock hay once, and to wash and shear the sheep and repair the mill-dam, as those which held an oxgang of land.

Whilst picturesque payments made by intermediate holders to their superiors are still frequently leviable, kindred services by the humbler tenants of the manor have long been commuted, perhaps the latest survival being provided by a cottage held in part by "service" as late as the middle of the eighteenth century.

Before turning to other forms of tenure, the functions of the Manor Courts deserve a passing word. In the summer of 1922 the following notice could have been seen affixed to the church door of Holywell in Huntingdonshire; it was typical of others still exhibited in different parts of the country.

Manor of Holywell *cum* Needingworth.

NOTICE is hereby given that a General Court Baron and Customary Court of Edmund Linton Watts, Lord of the above manor will be holden and kept at the Rose and Crown Inn in Needingworth on Friday the 26th day of May 1922 from 2 to 3 p.m., when and where the several tenants of the said manor are required to do and perform their several suits and services and pay their quit rents due and in arrear from them respectively. And also persons who are entitled to be admitted to any lands or tenements copyhold of the said manor are then and there required to be admitted thereto.

Dated the 17th day of May 1922

signed, FRED. HARVEY (Steward).

The Court Baron differed from the Court Leet in its jurisdiction and in regard to the business it transacted, but its importance to the tenants of the manor was as great, and a recent

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appreciation by the Earl of Selborne of the dignity and gravity of the proceedings at a meeting of the latter would apply equally to one of the former body. *The Manor and Manorial Records* by J. Hone will illustrate the intimate character of the relationship that existed between the Lord and his tenants, exercised through his representative, the steward. Thus at Winterborne in Berkshire the suitors presented in the year 1493 that

William Barcoll, freeholder, hath closed his last day, who held of the lord certain lands by knight service. And they say that Alice and Sibell are daughters and next heirs of the said William. And that Alice is 5 years of age and not more. And that the aforesaid Sibell is 3 years of age and over. Upon this comes William Webbe and gives to the Lord a fine for the minority of the heirs, 3s 4d.

Also they present that the said William Barcoll held of the Lord, according to the custom of the manor the 3 messuages with their appurtenances, after whose death there falls to the lord by way of heriot a horse of a roan colour value 10s. And upon this comes the aforesaid William Webbe and takes of the lord the aforesaid 3 messuages with all their appurtenances. To have and to hold to him and Thomas and John sons of the said William for the term of their lives or of the one of them longest living, according to the custom of the manor there, by rent and other services therefrom aforesaid due and of right accustomed.

Whilst it is often assumed that the major portion of the duties of these Courts comprised the admission of tenants and the exaction of their dues, it is probable that the agricultural disputes that came within their jurisdiction excited more interest amongst the tenants themselves. Thus a perusal of the findings of a Court in the fourteenth or fifteenth century will expose case after case of complaints that *A* has overburdened the common pasture with his sheep, that *B* has ploughed up a balk, or that *C* has appropriated two or three furrows of his neighbour's land. In later times the presentments assumed a more formal character, and references to individual delinquencies tended to disappear, but right through the eighteenth century such findings as these, culled from the records of the Dorsetshire village of Grimstone and printed in *The Marches of Wessex* (F. J. Harvey Darton), cropped up. "We present that Margaret Slowe hath a right to drive sheep and cattle to and from Grimstone Common to a close

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of meadow called Smithams over the currant (*sic*) called Muckleford Lake...and that Robert Wood and other the inhabitants of Muckleford have deprived the said Margaret Slowe of the way by enlarging the said currant about two foot wider than it antiently was" (1728).

Again, in 1753, the "tenants of this manor shall go out on the 6th day of March next and shall dig and drain the meadows for carrying off the water, under a penalty of 6/8 for everyone neglecting." And lastly, in 1781, "no pigs shall run about the streets or other commonable places of the said Liberty and Manor under penalty of 5/0."

As the manorial courts decayed, these duties gradually devolved upon such bodies as the parish councils, which now-a-days may be considered as responsible for safeguarding those of the villagers' rights and privileges that have come down to them from remote periods of history.

CHAPTER II

MODERN LAND TENURE

Copyhold tenure; examples from the eighteenth and nineteenth centuries; the comparative values of lives; compulsory enfranchisement; the Act of 1922; leasehold in the past; rent; conditions brought about by agricultural depression; suggested alternatives; corn rents and profit sharing; the Congested Districts Board in Ireland, and the Crofters' Commission in Scotland; land courts; *métayage* in France; "share-cropping" and "share-renting" in the United States; Russian open-fields; expropriation in European countries.

EXAMPLES of former systems of tenure, as they affected the practice of agriculture and the amenities of the land, having been adduced in the previous chapter, the more serious task of appraising their economic value and comparing them with alternative methods presents itself, but at the same time it is necessary, within the confines of such a work as this, to omit reference to the laws relating to succession and transfer, thus ignoring the great issues raised by the Constitutional and legal side of the question.

Copyhold and leasehold have in the past represented the two principal alternative forms for the occupation of land in this country. The former, evolved *via* the customary tenant, from the villeinage of the manor has, at its latter end, been declared to form the worst type of tenure that the laziness of man could invent. The latter, in its varying shapes, has, from its inception, presented the never ending problem as to what proportion of the capital required for the conduct of farming operations should be directly or indirectly provided by the landlord, and what time limits should be assigned to the occupation it granted. As copyhold, under the recent Law of Property Act, will cease to exist after 1924, pride of place must be accorded to it, with perhaps a word of explanation of the principles upon which it rests.

In this system of tenure comparatively large sums of money, the original "fines" of the manor, were, and are, paid at uncertain intervals of time, being of course substituted for annual

payments of rent. At first these fines were due, in various forms, from the successive heirs of customary tenants; in the passage of time, however, there occurred a cleavage into two distinct types—copyhold of inheritance and copyhold for lives or for years. The former of course represented the survival of the original conception, whilst the first of the latter implied the granting of tenure for a period covered, most frequently, by the lives of three persons. These might be members of the copyholder's own family or any other named persons; Royalties and other well-known people were often thus selected. On the decease of one of the "lives" a fine is payable for the privilege of inserting a fresh name. The alternative, and rarer, form of "copyhold for years" simply represents a tenancy, granted generally for twenty-one years and renewable by fine every seventh year. "Leaseholds for lives" are almost exactly similar in principle, save that the rights of the tenant against the lord of the manor are better safeguarded in the former.

Whatever may have been the freedom afforded by it for a period of time, normal copyhold brought in its train considerable uncertainty as to the incidence of the prospective fines, and no certainty at all of ultimate renewal. The landlord received sums of money at irregular intervals, which in the aggregate might or might not amount to an economic rent, and concurrently he lost control over the upkeep of his property. The result was too often apparent when, after the failure to renew a life, estates thus held fell into grave disrepair. Even at the present time the condition of the relatively few copyhold properties would compare ill with similar leasehold or freehold estates.

The eighteenth century provided a time when this tenure had resolved itself into a series of calculations into the respective values of potential lives, which crystallised into tables published for the benefit of those concerned. Thus, in 1730, Edward Laurence, describing himself as a land surveyor, wrote "A dissertation on Estates upon lives and years whether in lay or church hands," wherein he emphasised the rather obvious fact that it was best either to keep copyholds full or else to let them run out completely. Further, in advocating the changing of copyholds for lives into leaseholds for lives, he remarked that

such action would destroy the absurd custom of the "Widow's Free bench," existing in the West of England, and would bring tenants under proper covenants for keeping farms in a good state of husbandry. "Free bench," it should be explained, implied the continuation to his widow of the whole or part of the deceased's interest in the property.

Data were at that time available, which showed to a nicety, the cost of adding lives, and the ages that presented the best expectations. A pamphlet entitled "The value of Church and College leases considered," which saw the light in 1729, whilst deprecating any sympathy with the methods that had led to the South Sea bubble, urged that the clergy, in times of general prosperity, should not be looked upon with contempt by other persons, but should be permitted a moderate increase in the fines they levied on tenants. For how many of the ten thousand clergy, the writer asked, had left great estates in the last half century, whilst lawyers, physicians and merchants had risen in wealth and standing, whose sons also "sparkled in their coaches and six"? Academic opinion naturally favoured this view, for the senior fellow of a College, the name of which is not recorded, upon "improvements" for the good of posterity being mentioned, burst out "We are always talking of doing for posterity; I would fain see posterity do something for us." The easier conditions generally enforced by clerical (and therefore by collegiate) landlords can be gauged when the comparative values published in one of the above mentioned tables are investigated. For the privilege of adding one life in a church estate, where two existed, one and a half years' purchase was reckoned a fair demand; similarly, for changing a life a year's purchase should suffice, whilst five years was the figure suggested for adding two to one existing, and sixteen for granting a lease of three lives. The following warning was appended: "Note, age and infirmities of a third life ought greatly to be regarded"! On the other hand, lay owners were advised to demand two and a half years for adding one life to two, six years for augmenting one by another two, but sixteen was again the figure for issuing a lease for three lives. When the latter occasion arose, landlords were urged to include in the agreement stipulations against paring



TWO VIEWS OF BRAUNTON GREAT FIELD

and burning the soil, ploughing up, sub-letting or selling off hay and straw that ought to be consumed on the holding; conclusive evidence of the powers that might be exercised by copyholders.

The openings for bargaining were of course unlimited, and although owners held an overwhelmingly strong position, they were frequently cajoled into depriving themselves of large sums, as an actual example recorded some two hundred years ago shows. A clergyman let certain property on a copyhold tenancy for three lives. Almost immediately one life failed, and the tenant refused an offer to renew at one year's rent (£600). A second life then went equally unexpectedly, and, after much argument, the owner was persuaded to accept £1000 for renewal of the two, and at the same time to suffer a fresh life to be substituted for the third, which was obviously looked upon as of doubtful validity. Even further, permission to change a life at any time on payment of £50, was extracted. It was demonstrated that, in all, the owner thus lost some £2450, reckoning only five years' rent for the two lives renewed and £500 for the value of the change.

Various abuses, more often adversely affecting the tenant, were bound to occur when modern conditions were approaching, and, after a bill to compel enfranchisement had come to nothing in 1835, a Select Committee was appointed to enquire into the whole position of copyhold. Three years later its *Report* was circulated, the contents of which might be said to hold good at the present time, the position being thus summarised: "This tenure is ill adapted to the wants of the present day and is a blot on the judicial system of the country. The peculiarities and incidents of copyholds (which have their origin in the villeinage of the feudal system) are at once highly inconvenient to the owners of the land and prejudicial to the general interests of the State." The Committee added that valuable products of the soil were not freely available, for the lord could not fell timber or secure minerals without the consent of his tenant, nor conversely could the latter do so without licence of the lord; a check was placed both on building and on agricultural improvements, and a tax levied on the capital of tenants. Finally,

in advocating compulsory enfranchisement, it was stated that the Tithe Commissioners would agree to add this duty to their other obligations.

An Act to facilitate the commutation of manorial rights and the enfranchisement of copyhold resulted in 1841 from the recommendations of this body, and minor amending Acts subsequently passed the legislature, but voluntary methods were still trusted to. Some years later greater powers were invoked, for by two Acts, passed in 1852 and 1858 respectively, either landlord or tenant was permitted to apply for compulsory enfranchisement. The financial terms upon which this was to be carried out were subject to the decision of two valuers, except in the case of properties below £20 in annual value, when this duty devolved on the local Justices of the Peace. Although, as a result of this legislation, copyhold tenures were abolished at the rate of several hundred per annum for many years, yet, so great was the number of manors and so numerous their individual properties, that even in recent times copyholders represented a considerable body of persons. In 1894 a fresh Act consolidated the laws relating to copyhold, and placed upon the Board of Agriculture the duty of sanctioning and supervising enfranchisements.

At last, in 1922, under the auspices of Lord Birkenhead, a Bill was framed and passed through both Houses which will give effect to compulsory enfranchisement of all copyhold land in 1925. The delay in its coming into operation was due to a desire to allow time for the legal machinery involved in such a far-reaching change to be overhauled, and to permit of certain complementary adjustments being made in other measures. This Act might almost be described as an omnibus one, for, not only does it grant powers to convert copyhold tenure, but it also deals with such questions as trusteeship, mortgage and settlements as they severally affect landed property. It has indeed been claimed on its behalf that almost every advantage secured by registration of title will in future be conferred on unregistered land. Its main clauses affecting copyhold provide for compensation both to lords of the manor and their stewards—the latter of course for loss of office—payable either by a lump

sum or by annual instalments. Leases for lives will be converted into leases running for ninety years, where the absence of legal expenses at each renewal will alone represent a considerable saving. Whilst it is impossible to anticipate the dual effects of its provisions on landlords and copyholders, it is reasonable to imagine that it will both simplify tenure and lead to improved conditions on the remaining examples of copyhold land, but the passing of the ceremonies and customs associated with the latter for more than a thousand years will be a wrench at least to the antiquarian, and unkind critics have suggested that the new Act will for long prove a gold mine to the legal fraternity.

Leasehold tenure involves consideration of such questions as access to land and the relationship of the State to the individual; questions that in modern times are inextricably entangled with political considerations. But as the legislation dealing with the provision of Small Holdings in this country will be found discussed at length in Chapter IV, the general principles involved in leasehold, and the customs existing in other countries need alone be reviewed here. In general, it is fair to sum up the history of agricultural leases by saying that the more stable social conditions and the more level prices remained, the longer were the periods for which tenants were admitted. Each upheaval, whether economic, constitutional or climatic, can thus be seen reflected throughout the length and breadth of the land.

An example of an early fifteenth century lease, taken from the *History of Hawsted*, by Sir J. Cullum, Bart., illustrates the principal safeguards that landlords in the middle ages thought fit to insert in such documents. Here, in 1410, the owner when reserving to himself the customary rights that went with the property, specifically included the mill-house, stables and gardens contiguous to the manor house, together with all the ponds. The tenant agreed to maintain the houses in "covering and daubing" (in other words he was responsible for outside repairs), not to lop trees, and to receive a certain head of cattle at a valuation, the latter to be returned or their value refunded at the landlord's option when the lease expired. In addition, a proviso was inserted whereby the tenant was compelled to leave "as many acres well ploughed, sown and manured as he received

at first." Finally, and here comes the main distinction between such a lease and one granted in later times, if the rent was a fortnight in arrear the landlord might distrain; and if no payment was forthcoming after a month, he could re-enter and take possession. Each party signified his approval of these arrangements by agreeing to forfeit £100 in case of failure, this sum being actually equivalent to five years' rent. The reference to livestock is indicative of that form of lease known as "Stock and Land," by which the bulk of the capital obligations were assumed by the landlord; this had already become a popular system by the fifteenth century.

Technical improvements registered in the practice of agriculture were apt to be reflected slowly in leases, for the archives of the Manor of Hawsted contain their first reference to rye-grass, clover and turnips in a lease of 1753, and although the landlord allowed two shillings for every load of manure or cinder ashes put on the land, Sir J. Cullum quotes the case of a tenant who in twenty-one years' occupancy had enriched his property by a single load. Another, specifically compelled by his lease to lay thirty loads annually on a large farm, did so "very reluctantly." It has been declared that the devil always makes the landlords, but it looks as if his Satanic Majesty occasionally, in the past at least, experimented in the construction of a tenant.

In this country with its predominant system of private landlord and tenant, the latter started with certain initial disadvantages of an economic nature, which the passage of time has ameliorated. For, just as the first half of the nineteenth century, through the Reform Act, brought social emancipation to the tenant farmer, so did the second half, with its numerous minor Acts of an agricultural nature, bring him nearer to economic freedom. Yet, writing between these two periods, Caird expressed his belief that landlords would in future reap additional benefits, and the lot of tenants would become harder and harder. He based the first of these conclusions upon the strictly limited extent of the land available for agriculture, and the certainly of its future diminution, and the second, he held, necessarily arose from the competition which tenants would

PLATE X



HERTFORDSHIRE FIELDS. SHOWING A DIVIDING BALK

have to meet from all directions, and the demands likely to be made upon them from their labourers. Yet another generation saw, in altered circumstances, these forecasts stultified and farmers, protected and safeguarded in numerous ways, receiving relatively a better return than their landlords.

As had always happened in times of acute depression, so once more the bulk of the landowners assumed a very reasonable attitude towards their farming tenants, and later, in times of comparative prosperity, the very existence of leases of some duration has frustrated any attempts that might possibly have been made by them to share in the extra profits won from the land. For example, the aggregate increases secured by landlords after 1914 were negligible, for only if the conditions prevailing from 1915 to 1917 had been perpetuated on a sound basis would rents slowly, and with delayed action, have moved upwards as leases fell in. As matters were, reductions were the order of the day after 1921, hence landlords as a class received an infinitely small proportion of the additional wealth gained during the few years when agriculture prospered. In general, the larger the owner's commitments have been in the past the smaller have been his net returns; proof of this can be seen by those who will read the evidence brought before any of the numerous Commissions appointed during the past half century. When agricultural land lies derelict by the hundred thousand acres, as has happened on at least two occasions in the last hundred years, the system of leasehold tenure is apt to be unfairly attacked, but the only alternative, that of State expropriation, could not preclude such conditions, and would, when faced with them, merely shift the losses entailed upon the taxpayer. Under all normal conditions, agriculture practised under leasehold has returned to landlord and tenant as much as either had originally been led to expect, and legislation has constantly effected minor easements to the advantage of the latter. Tenant-right is now a very different matter to what was implied by that expression in the middle of the nineteenth century, for some four Agricultural Holdings Acts have been passed since 1875; the damage done by ground game is under the control of the farmer himself; he is no longer called upon to meet the demands of the tith-

collector; and, finally, if absolute security of tenure has not been granted him, freedom of cultivation and liberty of action are both his.

This being the situation of the English tenant-farmer, short of land nationalisation, thereby effecting a change in his landlord, what alterations have been suggested in regard to the only other factor susceptible of modification—his rent? There is no occasion to introduce into these pages a full discussion of the economic theory of rent or to refer to such matters as site-values and unearned increment, for the occupation of agricultural land in this country affords no practical data for a review of the principles involved, nor is the nation ever likely to reframe its whole conception of land-tenure on theoretical principles. It may, however, be premised that rent is defined as that excess which the produce of a given area of land affords over and above the expenses of cultivation, and after a certain profit has accrued to the occupant; normal conditions of soil and skill on the part of the farmer are, however, connoted, together with uniformity in surrounding undertakings. It will be seen that if this definition is pursued sufficiently far back, land which from its inferiority can afford to pay no rent while producing a crop that just allows a profit, sets the standard for the better classes existing in the same neighbourhood, and that an infinity of factors arise as population increases, means of communication are provided, and especially as improvements in technical practices occur. The additional returns secured from better soil, or from such causes as those just enumerated, represent roughly the amount of "rent" that might be paid for the privilege of farming the land affected thereby. But, while the connection between the returns secured by an English landlord for market-garden properties on the outskirts of a town and by the owner of prairie land in Canada are thus fundamentally dependent upon similar factors, the cash expression in each case is widely dissimilar. Even in this country, agricultural, as opposed to urban, land varies widely in value; for instance, in one and the same County two freehold properties, equidistant from rail and town, have recently changed hands at public sales at 15s. the acre and £172 the acre respectively. The first

comprised some hundreds of acres of heavy clay-land that had been allowed to go derelict, the second consisted of a few acres of rich grazing meadows in a district where arable predominated. For the country in general, competent authorities have estimated the unimproved value of land at £8 the acre, and the permanent improvements at another £12 the acre. Lastly, £2 is the figure given as the limit below which the worst land is not cultivatable without loss.

The relations between a tenant-farmer and his landlord were many years ago described as existing in an atmosphere of faith, credulity and chance, which, until the severe depression of the 'eighties and 'nineties came about, could perhaps be defended, but thereafter it was urged something more substantial than short-dated tenancies was called for. This claim was nothing novel, for Caird and others had repeatedly urged some thirty years previously that all tenant-farmers could reasonably ask for was certainty of tenure. Coke's example was still fresh in men's memories, and it was freely said that if he could prosper when according leases for twenty years, smaller landlords, even in abnormal times, could surely follow some way in his footsteps. One particular feature in these Holkham agreements appealed to farmers, and this was that for sixteen years complete freedom of action was accorded both in regard to rotation, management of the land and sale of the produce; only in the last four years had the Norfolk four-course rotation to be restored. Moreover, after this lapse of sixteen years, renewal for another twenty, on fresh terms for the last sixteen, would always be granted. Numerous witnesses before the Commission of 1893 evidently hankered after something of this sort, for, while they gave instance after instance of the observance of good faith by landlords in difficult circumstances, they also naturally urged that sitting tenants in such times should not be placed in the position of either offering an impossible rent or else of quitting their holdings. Others, whilst recognising the evil of short-dated tenancies, suggested steps that aimed further than any tinkering with tenure, by advocating the reorganisation of the terms of partnership; in other words they implied that rent should bear a fixed relationship to farming profits.

Such schemes were generally based upon some modification of the principles contained in the Elizabethan corn-rents, and were designed either to correlate exactly rent and the price of grain, or to defer the assessing of the landlord's return until the tenant's profits had been determined. An Assistant Commissioner of the Board of Agriculture quoted a case of the former method found in the Eastern Counties. Here, it had been agreed between the parties concerned that rent should move proportionally as and when the price of wheat rose above 32s. 6d. per quarter or fell below 28s. 6d. The basic rent was £400, and on a wheat area of 70 acres, a hypothetical example showed that when the Gazette price fell to 25s., an average yield of 250 quarters (after the deduction of seed corn) would result in £43. 15s. being remitted in rent, *i.e.* 250 times 3s. 6d. If the price further declined to 21s. the rent would have been £306. 5s., a reduction of almost 25 per cent. Conversely, in times of really high values the landlord must have benefited very considerably, for his receipts would almost have been doubled had wheat fetched 60s. Such an expedient, initiated in times of extreme depression, and practised in a wheat raising area, when, moreover, prices of grain were not only exceptionally unremunerative but were also practically stationary, may have tided over a difficult situation, but for the country as a whole it would have represented an impossible proposition. To fix rent in relation to one agricultural commodity is nowadays grossly uneconomic, and it is equally out of the question to base it upon the principal crop found on each individual undertaking.

Historically, however, it may perhaps be of passing interest to quote from a pamphlet entitled "Corn-Rents and Money-Rents," published in 1845 by the then Master of Corpus Christi College, Cambridge, in which it was sought to prove that leases granted on this basis had for many years been advantageous to both landlord and tenant. The College in question, after lowering rents in the 'twenties and 'thirties, had agreed with certain tenants, in lieu of further reductions, to accept payment on the current values of a fixed quantity of wheat—in one case 1350 bushels and in another 1100 bushels—these values to be determined by the prices ruling in Cambridge corn-market on

the Saturdays preceding Lady Day and Michaelmas. It was proved to the Master's satisfaction that the College, in the intervening time, had received considerably more money than would have been the case if it had granted a lease based on a cash-rent pure and simple; but this calculation was made on the assumption that in the latter event a very low basis would have been adopted in a time of unique depression, and the fact that one of the tenants sent a most appreciative letter to the College tends to show that perhaps a private landlord would not have accepted conditions that met the requirements of a corporate body. The pamphlet itself thus enumerated the advantages of a corn-rent: "The landlord during a period of years, in which the price of corn fluctuates, receives a fair average rent, the tenant being relieved whenever prices are low, the landlord proportionally benefited when prices are high. If corn continue at a fixed price, the rent remains high. If corn continue at a low price the rent is low, but the landlord receives as much as he would do under a money agreement. A corn-rent removes the chief objection of the landlord to granting a lease on his farm; and checks in the tenant the spirit of speculation." Finally, technical objections that this system could only apply to arable land, or that, precisely on those occasions when the farmer had a deficient harvest, and consequently the smallest output of wheat, he would be called on to pay the highest rent, were brushed aside by the assurances that grazing-land could be rented on the prevailing values of beef and mutton (expressed in stones of meat) and that, quite truly (when home supplies were predominant) increases in the price of wheat were disproportionately greater than the deficiency itself represented. Despite this, and subsequent advocacy, later generations, as has been shown, have not progressed beyond the stage of tentative suggestions for the introduction of some sliding-scale system between landlord and tenant.

Division of profits on the basis of a fixed return on his capital to the tenant, the remainder going to the landlord, forms a scheme that was frequently advocated some thirty years ago, and has been mooted occasionally since. Here the tenant is entitled to, say, 10 per cent. interest on his own capital, whatever

the year's trading may result in, is held liable for the rent of his dwelling-house, and, in extreme cases, foregoes any further share in the business, in others he takes a varying and small percentage on the net profits. In good years such an agreement results in the landlord getting a relatively high return, but in bad seasons, or in times of continued depression, not only does he secure no farming profits but, even after offsetting the rent of the house, may still have to meet, from his own pocket, part of the sum due to the tenant as interest. Strictures passed upon this method have generally taken the form of pointing out that its efficacy depended upon thorough annual valuations of the tenant's live and dead stock being undertaken, and that there was more than a chance that unscrupulous occupiers would neglect their holdings, being certain of receiving a fixed income. Nowadays, however, valuations are a commonplace event, and the mere fact that they take place would deter the lazy tenant from risking an undue reduction in his own capital, and therefore in his income. From the landlord's point of view this kind of profit-sharing makes the least demand upon his capital resources, representing in other respects merely a case of farming by proxy.

But in an alternative plan, referred to by the official of the Board previously quoted, profit-sharing could result in equally heavy losses to a landlord. Attention was drawn to a case in Bedfordshire, where the latter was represented by a Cambridge College which had agreed, after allowing priority to the tenant in respect of a fixed 3 per cent. on his capital, to divide the remaining book-profits in equal parts. Such an agreement greatly favoured the tenant, even when his return was only at the rate of 3 per cent., for in no circumstances could he record an actual loss while his landlord might, when sustaining a heavy one, in addition be called upon to present the tenant with a cheque for the whole of the latter's interest.

The difficulties involved in any attempt to depart from the straightforward system whereby the landowner automatically advances the bulk of the capital and the tenant has complete financial freedom, have been illustrated in the foregoing paragraphs, where suggestions put forward in times of abnormal

distress were purposely selected, for such seasons are the most prolific of revolutionary ideas. If the reward to the owner was at the best of times considerably greater than it is, there might be a possibility of persuading him to risk the definite loss of money at times when he now at worst receives none, but if his return over a series of years is examined little surprise will be expressed that he clings to the existing arrangement. It is probable, too, that the bulk of tenant-farmers prefer something that pertains to a gamble, that is to say that, while a rent fixed in advance can almost always be met, it may enable a really large profit to be realised and if conditions deteriorate, is generally susceptible of adjustment if not of complete remission. Again, if freedom of action is desired by tenants, freedom to select the latter has always represented a considerable asset to landlords. For these reasons any radical change in the prevailing custom of tenancy is a very unlikely event in relation to large and medium-sized holdings in this country.

The provision on lease of Small Holdings, however, presents a different proposition, and one which is discussed in Chapter IV, but because the State itself has felt called upon to intervene in this particular case, for the purpose of creating a fresh class of holding, it does not necessarily follow that the nation is the best landlord of farms in general. Whilst the setting up of Land Courts in this country has frequently been urged in previous decades, the gradual alterations legally effected in favour of tenants have resulted in less being heard of this form of official supervision. Even the advocates of these Courts have held that their main usefulness would be seen, not in the fixing of judicial rents, but rather in guaranteeing continuity of tenure, or the alternative of ample compensation for disturbance. Indeed, the feelings expressed by tenants themselves before the Commission of 1893 were practically unanimous against any interference by the State in this matter, and remained so even in regard to a suggested Court of Arbitration. In both Scotland and Ireland legislation, now of some standing, has resulted in the State usurping the functions that are generally associated with these Courts, but it must be pointed out that in each case jurisdiction extends only to Small Holdings, where also in the

case of England and Wales very similar powers have been created and are exercised by semi-official bodies.

In Ireland, the Congested Districts Board had a unique task to meet, one in fact that comprised not only the re-establishment of other industries besides that of agriculture, but also the amelioration of social conditions over large areas. It will suffice to prove that this Board was not primarily a tribunal for the ordinary landlord and his tenant when it is stated that the total earnings of the families under its protection ranged down to £8 per annum (with an addition of £6 to represent the value of home produce), and that one of its main objects was to increase the size of holdings, almost everywhere blighted by the evil of minute subdivision previously referred to in the case of Achill.

That this trouble was of some standing, and that Irish landlords of the smaller sort had long needed a restraining hand, can be seen by the following extract from a letter written from that country by Lord Palmerston in 1808: "Every farm swarms with its little holders who have each four or five, or, at the utmost, ten or twelve acres. They are too poor to improve their land, and yet it is impossible to turn them out, as they have no other means of subsistence. Their condition, however, will be improved as I gradually get rid of the middlemen and petty landlords. These people take a certain quantity of ground, reserve to themselves a small portion, and let out the rest to undertenants. They make these unfortunate devils pay the rent of the landlords and an excess, which they keep for themselves and call a profit rent; while they live upon the part they reserve without paying any rent for it. In my last ride...the universal cry was 'Give us roads and no petty landlords.'" This appeal the Congested Districts Board, aided by Land Purchase, had a century later gone far to comply with, but its functions were never those associated with the strict definition of a Land Court.

The Crofters' Commission in Scotland had previously been established on analogous lines, its obligations including the fixing of fair rents and the supervision of such matters as compensation and succession; it also possesses the power to enlarge holdings where such action is considered necessary. Here also, the expedient of granting considerable powers to a body pri-

marily working on behalf of the really small tenant-farmer has met with undoubted success, and the eulogy of it contained in the *Report* of the Royal Commission on the Highlands and Islands was thoroughly deserved, but again no evidence has been forthcoming that a Court possessing similar powers over the larger farms of England would exert an all round beneficial influence upon the conditions of their tenure.

The *Report* of such a body as "The Land Enquiry Committee" shows clearly the lines upon which the advocates of this form of State control have anticipated that progress would result. Generally, in the forefront, are placed claims that these Courts would facilitate the acquisition of land for Small Holdings, but nowadays this duty is ably carried out by the County Councils, supervised by a Government Department. Next, it is urged that the obligation upon tenants to pay a "living wage" to their workers would be sympathetically considered, by forcing landlords to meet any additional payments thus given effect to, and the obvious deduction is encouraged that the control of wages would form a corollary to the duties of the Court. Whilst the above examples demonstrate the ultimate aims of such thinkers, their actual arguments in favour of a Land Court are based upon the contention that the ownership of land represents a monopoly, and that in "the so-called free bargaining" between owner and tenant there is everything in favour of the former; "fair" rents by superseding "competitive" rents would therefore adjust satisfactorily this handicap. The difficulties attendant on fixing rents in view of possible economic changes are generally brushed aside by the statement that agreements would be confined to five or seven year periods, and that, to avoid the risk of stereotyping large farms, security of tenure would be conditional upon the non-requirement of the land for public purposes such as, for example, Small Holdings. Where improvements were not carried out by the owner, rent would be reduced accordingly; thus landlords would maintain their properties in a high state of efficiency.

Controversion of such of the above arguments as have not been subsequently met by legislation will be found in the *Report* of the Commissioners of 1893, whose opening words were as

follows: "On the subject of land-tenure we have taken much evidence from the representatives of a section of agriculturists, who advocate drastic changes in the law in connection with that question. Indeed, we have taken from them upon this point more evidence than probably was warranted, either by their influence or numbers in agricultural circles." After summarising the arguments used by the principal exponents referred to, which were similar to those just enumerated, the Commissioners expressed the opinion that Land Courts would be exceedingly unpopular with the overwhelming majority of tenant-farmers, none of whom had called for their introduction. Finally they declared that the tenants themselves "evidently entertain a wholesome dread of the unnecessary litigation which they would create, and are of opinion that they can make better bargains with their landlords for themselves, than lawyers or Land Courts are likely to make for them. They believe that the adoption of the three 'F's' (fair rent, fixity of tenure and free sale) in any shape or form would constitute an altogether uncalled for interference between landlord and tenant, and so far from bettering their position, inevitably make it worse. We have no doubt these opinions are well-founded. So far as the landlords are concerned, the creation of any such tribunal could not fail to diminish the interest which they now take in their properties, and we are strongly of opinion that it would greatly decrease, if it did not entirely arrest, expenditure on permanent improvements. It is manifestly of the greatest importance to agriculture that every reasonable encouragement should be given to this expenditure; and that landowners should in every way be encouraged to take an active and personal interest in their estates, and by judicious expenditure of capital assist their tenants to compete with the producers of agricultural produce in other countries. We have therefore without hesitation arrived at the conclusion that the creation of any court or tribunal for the purpose of establishing, wholly or partially, the policy of the three 'F's' would be a grave and serious injury to the agricultural community and to the industry which has been committed to our enquiry."

These being the views of a representative body in the early

'nineties, it may be asked if the passage of thirty years may not have effected modifications in the situation. To this the answer is that, thanks to creative and protective legislation, the Small Holder has, in his greatly increased numbers, received the three "F's" substantially intact, whilst other tenant-farmers have secured numerous concessions that have benefited them more than would any system of arbitration by the State. The upshot may well be that the position of tenants holding land under County Councils might in times of deep depression be inferior to that occupied by others whose landlords could give practical expression to their personal feelings in the matter of adjustment of rent.

As neither the atmosphere engendered by the war itself, or by the social upheaval that succeeded it, led to any alteration in the prevalent system of land-tenure in this country, it is extremely unlikely that economic depression alone will effect such steps, especially when the object lesson afforded by the way in which that system overcame the difficulties associated with the period from 1879 to 1895 is recalled. One has but to turn, however, to almost any other part of the world to find long established principles flung to the winds, and every conceivable form of land expropriation and of benevolent State ownership introduced. But before taking a survey of what amounts, in some cases, to economic wreckage, it is advisable rapidly to summarise the alternative forms that tenure has assumed abroad.

Pride of place belongs to that most ancient of all, *métayage*, for five or six thousand years ago, Babylonian cultivators were rewarding the proprietors of their land by handing over to them annually a certain proportion of the grain they had won. Modern *métayage* of course implies a reduced capital outlay on the part of the tenant and a correspondingly heavier demand on his landlord, met by the latter receiving an augmented share of the farming profits, generally consisting of half of the output of crops and livestock. Although it is found still existing in other European countries and also further afield, as for instance in Egypt and in parts of India, it is to France or Italy that the enquirer must turn if he wishes to examine examples in their fullest development. He will find to aid him in his researches,

in the case of the former country, a very full account of the whole matter in the shape of the official *Rapport de la Commission d'enquête sur la situation du métayage en France*, instituted by the French Farmers' Society in 1912, and published in the following year. The description of *métayage* there given (and quoted in the *Bulletin* of the International Agricultural Institute) shows that in pre-war France, although but a fraction of the land was thus held, yet the system itself possessed undoubted advantages, its extreme elasticity permitting a very fine gradation in the liabilities of the landowner.

The *Rapport* defined *métayage* as the result of "an agreement or a contract by which the lessor, the land-holder, the usufructuary or tenant-farmer of a farm gives the *métayer* or partial *métayer* (who gives his labour) the temporary enjoyment, under his own direction and supervision, of the land, buildings and all or part of the livestock and farm requisites, and shares with him the eventual produce in kind and money, whether equally or in some other proportion." Although this and other legal definitions and enactments relating to *métayage* exist, its advocates constantly harp on the freedom it confers on both parties, at the same time pointing out that such an intimate partnership rests on community of interests. The *métayer* is subject to supervisory visits from his landlord, who may determine the course of action for the ensuing months and merely leave the direction of field operations to the former, but it is on him that the amenities of the undertaking depend, for the landlord "trusts to the good sense, prudence and experience of his partner who has a more intimate acquaintance with the farm he works and the livestock he tends. He will consult him familiarly without too brusquely enforcing his own will; he will insinuate his ideas little by little; without bargaining he will advance the sums necessary, relying on the honesty and industry of the other, and will attempt to take the steps required and make the necessary changes in advance without waiting to be asked."

Statistics collected prior to the war indicated that, if *métayage* in France as a whole was at best stationary, there were some eighteen Departments in which this form of tenure outnumbered ordinary leases, and French opinion held that where

it was still predominant as in Dordogne, Gironde and the Basses-Pyrénées, it had resulted in improved agricultural practice. More machinery had been introduced, the use of fertilisers had increased, and noticeable improvements had been effected in livestock. The most frequent form of tenancy granted to the *métayer* was for a single year, terminable upon six months' notice being given, but a tendency to lengthen their span up to six or ten years was already noticeable, and in certain arable districts a four-course rotation was the determining factor. Obviously there could be no hard and fast rule as to the size of undertaking best suited to this tenure, but if soil, situation, climate and type of product raised were taken into consideration, it appeared that the large undertakings were not well represented, and there was a reduction taking place in the average size of *métaires*.

The details calling for discussion and agreement between the partners would strike the British farmer as infinitely numerous and often annoyingly petty, but doubtless generations of *métayers* have come to regard their settlement as part of the routine work of the farm. Take the most important aspect first—the apportionment of the annual products. Whilst grain is usually divided equally, in some places the lessor takes a third of the wheat and rye and a quarter of the oats and barley; the *métayer* in the latter event would then be expected to provide seed corn and two-thirds or three-quarters of the manure. Potatoes almost invariably go to the tenant, but in Périgord anything up to a third is the lessor's perquisite. According to the *Rapport* even manure-heaps, old ricks, fodder and standing-grass in temporary meadows, if they escape an annual division, are yet subject to valuation on the termination of a lease, and any increase in their value is divisible. The allocation of the profits from the lesser livestock are reminiscent of the niceties once associated in this country with the apportioning of vicarial tithes, for the *métayer's* wife is entitled to the profits from the fowls, ducks, guinea-fowls and pigeons, those from geese and turkeys are shared equally, but again the feathers of the latter belong to the wife. Whilst fruit is the *métayer's*, nuts and cider apples are apportioned. Generally the profits from the sale of

livestock are equally divided, but in the case of pigs special consideration is shown to the tenant, in the shape of allowances of food and the allocation to him of certain young stock. It is not uncommon to find the tenant paying small "*métairie* taxes" to his landlord, which are looked upon as "an indirect equivalent" of the land tax paid in full by the latter, as well as an acknowledgement for the use of house, garden and wood, or of some special privilege abandoned exclusively to himself. On the other hand it has become a custom in those corn-growing districts of Champagne and Berry, where large *métairie* farms exist, for the landlord to supplement the tenant's customary share by granting him a sum of money based on the area under corn. It is claimed that these particular undertakings, which may range up to four or five hundred acres, have, as a result of this assured increment, achieved progressively improving yields from a naturally poor soil, and that the *métayer* is freed from anxiety as to the effects of weather upon his crops.

The equipment of the *métairie* farm is of course essentially the prerogative of the landlord, but in certain instances modern practice has altered custom, and it is now not unusual to find part or the whole of the livestock being supplied by the tenant. In its original conception therefore *métayage* was exactly akin to the English "stock and land" tenure, as any diminution in the numbers of animals evidenced at the expiry of a lease had to be made up by the tenant, or, alternatively, any excess belonged to him.

The division of responsibility is even extended to the cultivation of the land itself, for in the case of the larger and more expensive types of machinery, such as steam ploughs or threshing plant, the landlord bears the overhead charges and the tenant provides for the attendants' requirements; field drainage, irrigation and other permanent improvements imply the provision of the material by the owner and of the necessary labour by the tenant. Crops, such as sugar-beet, that entail extra work, are encouraged by the landlord making a grant based upon the acreage concerned or the weight of the outturn secured. In general, what we in this country should describe as tenant's improvements are on the *métairie* farm the subject of provision,

in so far as the bulk of the capital is concerned, by the owner, but the labour and attention are provided by the tenant; liming, marling and the application of fertilisers, the influence of all of which is felt over a length of time, if borne equally, become the subject of compensation from a tenant who quits before the expiry of his lease. Although the *métayer* is generally held responsible for repairs, the landlord is frequently the person who pays for them.

Sufficient description of this interesting form of land-tenure has perhaps been given to endorse the words of a French body of agriculturists, which declared that "where *métayage* has always existed and still exists, if it is well organised on the two fundamental bases of division of all the produce, and the chief management in the hands of the proprietor, on land of average fertility where livestock and cereal crops have almost equal importance, it is indisputably the mode of farming which assures the best revenue from the land. It must be added that *métayage* cannot be improvised in regions where it does not exist or never has existed; nor can it be imported. Trials made in this direction have had only an ephemeral success." The qualifications contained in the above statement will undoubtedly reinforce the views of English readers that whatever advantages it has conferred in France, *métayage* could never have flourished in England; it calls for a too domestic partnership between landlord and tenant—a partnership that would be as uncongenial to the type of landowner found in this country as to his more independent tenant. Nor, in fact, are there many recorded instances of its occurrence here. In *Knole and the Sackvilles* (V. Sackville-West), however, the following reference is made to a mid-seventeenth century application of its principles on the Kentish estate of that family. We are told that the fifth Earl of Dorset accorded four farmers "the liberty to plough anywhere in the Park except in the plain set out by my Lord and the ground in front of the house, and to take their crops, and it is agreed that one third of each crop after it is severed from the ground shall be taken and carried away by my Lord for his own use. The third year the farmers to sow the ground with grass seed if my Lord desires it, and they are to be at the charge

of the seed, the tillage and the harvest." Admittedly this was nothing but a temporary leasing of grass-land for tillage purposes, but the basis of payment was essentially that followed in modern Continental *métayage*, and the provision of seed and the supply of labour also correctly devolved upon the tenant.

At the end of the eighteenth, and indeed up to the middle of the nineteenth century, *métayage*, as practised in France, was the subject of severe criticism from all English authorities including Adam Smith and Arthur Young. On the other hand the Italian *métayer* was always favourably reported on and his successful methods were the subject of special commendation by J. S. Mill as well as by more recent writers.

In certain of the individual American States, what in older countries would be referred to as *métayage*, is found extensively practised under such titles as "share-cropping" and "share-renting," or even "bushel-renting." Any reader of such a compilation as E. G. Nourse's *Agricultural Economics* will there find a description of these systems, together with comparative analyses of the returns that may be anticipated from them.

In the case of share-cropping the same elasticity that characterises orthodox *métayage* is in evidence, and the significant fact emerges that this tenure is frequently most represented where the soil is poor and conditions generally unfavourable. Exact division of profits is the usual custom, and, although the bulk of all capital advances comes from the owner, in the case of livestock the tenant is held responsible for providing half. Share-renting is a modification of this method in that, for advancing a larger proportion of the farming capital, the tenant secures for himself a commensurately increased portion of the proceeds. Division takes the form of partial monetary payments—generally in the case of pasture land—and of the handing over to the landlord of from one-fourth to one-half of the crops raised, customs varying in accordance with locality and the predominant crops.

Bushel-renting, when practised as in Iowa, implies an obligation upon the tenant to sell all his "corn" (*i.e.* maize) to his landlord at a pre-arranged price, this sum, apart from ordinary



AN EAST ANGLIAN BALK IN PROCESS OF BEING PLOUGHED UP

market considerations, being again dependent upon the proportion of the total capital advanced by himself; other cereals, when not comprising the main outturn of farms thus rented, are shared in kind on some fixed basis. It should be noted that here the explanation of the landlord's desire to secure considerable quantities of maize at a fixed price is due to the fact that he is generally himself engaged upon large scale cattle raising in the neighbourhood, and is thus in effect sub-letting portions of his own undertaking.

While the first two of the above systems can be found in widespread operation in many States, modifications of them too numerous to mention also exist, being particularly favoured in the South. American opinion inclines to the view that in a given area the return to the landlord is somewhat higher when he enters upon one of these co-partnerships than is the case when he merely leases his farm to a tenant; indeed figures relating to some hundreds of undertakings in a district of the Mississippi delta (quoted by Nourse from an official *Bulletin* of the United States Department of Agriculture) evidenced an average profit of 13.6 per cent. when the land was in the hands of a share-cropper, of 11.8 per cent. when occupied by a share-renter and of 6.6 per cent. when let on normal terms. Share-cropping, whilst obviously holding out the greatest possibilities, could, however, reduce the landlord's returns almost to zero, for on occasions when his tenant lost money it was conceivable that he would find himself in receipt of 1 per cent. dividend, but on the other hand in good seasons the increased prosperity of the latter might be reflected in a return of upwards of 25 per cent. Here there is nothing novel or unexpected, but merely an expression of the inevitable fluctuations in farming profits; the question then arises as to whether the increased return to the owner recorded in these examples can be expected in all circumstances and for long periods of time, also if it is accompanied by any altered standard of farming practice. In the absence of a full and impartial enquiry we are left in the dark in this respect, with possibly a feeling that in the passage of time, and with growth of population, a country such as America may tend to shed practices which elsewhere have clung to essentially

agrarian countries, and incidentally those not remarkable for their rate of production.

Turning to the other extreme, from the New World to the Old, from a country which has always claimed to possess the freest institutions, to one that until recently provided the only example of feudalism still extant, we find in Russia, not the opportunity to examine profit-sharing schemes, but of surveying agricultural practices that we had come to associate with Rampton and Brotherton, and of following the indifferent success that has ensued from a too sudden sweeping away alike of tenure and tradition. The vast bulk of the land in Russia was already in the hands of the peasants before either the war or the revolution occurred, but that it was economically farmed or was producing more than a fraction of what it might have done, cannot be substantiated. Personal emancipation of the serfs, dating from 1861, had been gradually followed by the appropriation to them of land previously subject to irksome service. But by this very process the individual peasant became in the majority of cases dependent upon the "Mir," or communal body; hereditary possession or the freedom to purchase his holding could in neither case, agriculturally speaking, compensate for the grave disadvantages that common-field husbandry forced upon him. Certainly the rate of production, especially of cereals, was the lowest achieved in the world, and for this the open-fields, that more than a century ago were swept away in the rest of Europe, must be held responsible. A *Report* compiled under the auspices of the League of Nations, contains the following remarkable statistics: "The average yield of cereal crops per desyatin from 1861 to 1870 on proprietors' land was 33 poods, on peasants' land 29 poods; forty years later, in 1901 to 1910 the former figure had been advanced to 54 poods and the latter to 43 poods; the percentage of increase was therefore considerably greater on the large owners' farms than on the peasants' holdings.

It may well be that the typical Russian peasant would have been incapable of benefiting from individual occupation, and that interspersed strips of arable and grass-land, lying often at considerable distances from his village, were still best suited to his character and ability. Unfortunately independent reports

have constantly referred to the apathetic attitude of the Mir towards the technical side of agriculture, and it would seem that these bodies were weighed down with their duties of an economic and social character. Certainly accounts of the practices to be observed on the arable land of any Russian village were reminiscent not merely of pre-enclosure periods in England, but of some decadent fourteenth century manor. The scattered strips, numbering sometimes upwards of a hundred, in the possession of one man, and subject to redistribution, the primitive implements in use, the three-course rotation, the absence of manure, the combined labour during harvest and the immense distances involved, placed a premium on inefficiency, and in case of unfavourable conditions reduced the margin of safety to a dangerous extent. On the other hand, those undertakings directed by the large landowners, even if their equipment was not up to the standard of the majority of European countries, were certainly better farmed and were rendering a more normal return in the way of crops. It was plain that, in a country such as Russia, large scale operations were essential for corn raising at least, although this need not, *ipso facto*, have implied the extinction of the peasant proprietor, for if he could have been placed in possession of the technical advantages enjoyed by the large landowner his great open fields, with their strips thrown together, could have provided the opportunity for a large experiment in communal husbandry.

Just before the war the State apparently grasped the dangers of the situation and was attempting to reorganise both tenure and cultivation by handing over Crown and other State lands to the peasants, by enforcing the amalgamation and redistribution of existing holdings and by virtually dissolving the powers of the Mir. Millions of small farmers were thus in process of being established on their own holdings from 1906 to 1914, and the area of the land farmed by large proprietors was steadily diminishing. Leasehold was also on the increase, and the type of small tenant-farmer familiar to other countries was beginning to spring up. The effect of all this is reflected in the statement that in 1914 no less than two-thirds of the crops raised came from peasant-owned properties and only one-third from those

of the former landowning classes. That the recognition of individual ownership by the peasantry did not at once result in the disappearance of open-field farming was due to the fact that where a majority of the Mir preferred to continue this form of cultivation they were permitted to do so. Two potentially adverse factors arose as a result of the redistribution of land into separate detached holdings, namely the economic danger, always present where small occupier-owners exist, that succession might eventually produce minute subdivision, and the practical difficulty caused by the awkward shape (generally a long rectangular plot) given to the new farms, from a desire to include, for each occupant, samples of all types of soil, together with access to water.

It was upon this period of transition that the events of 1914 burst, the ultimate results of which, as they affected wheat production in particular, will be found dealt with in Chapter XV, but a few words of a more general character must be added here. The Revolution that followed the break-down of Russia as a military power led to a complete reversal of the process described above, for the people, not content with the normal routine of revolutionaries—the seizure of land belonging to the nobility and other large owners—actually restored communal cultivation, and even essayed the subdivision of the newly won freeholds of the larger peasants. That the Soviet Government saw the dangers of the situation created by this retrograde movement is certain, for it attempted to counter it by the establishment of Soviet farms, but its efforts in this direction met with little success, and the so-called “rulers” tended to become the passive spectators of the greatest spoliation of land ever recorded.

The landless townsman and the very smallest peasant thus secured what they desired, and the average size of a “Small Holding” was increased, but the most experienced of those formerly connected with the land had been dispossessed, and the newcomers had neither the initiative nor the desire to cultivate it beyond providing for their own immediate needs. The *Report* prepared by the League of Nations, and previously referred to, contained extracts from official Russian sources that clearly showed this tendency. Thus, whilst in 1916

5,644,000 farms in European Russia had a sown area equivalent to an average of 4.97 desyatins per farm, this figure successively declined to 3.0 desyatins per farm in 1917 and 2.46 in 1919—in other words, there was a decline of some 50 per cent. The Soviet Government was ultimately driven to intervene, and, by a series of decrees, sought to make land available to all who would cultivate it, whether on cooperative farms or on separate holdings, but the landless citizen rather than the experienced peasant was, as usual, the object of this solicitude, with the result that the worst possible type of occupier was placed in possession of the bulk of Russian soil.

Soviet farms soon proved useless experiments, so that the work of individual revolutionaries, aided by the subsequent constructive efforts of their Government, had reduced the agriculture of Russia to a thing of nought. The famine followed, and the rest of the world could but stand by and watch events run their predestined course. After its passage, in the spring of 1922—extreme subdivision of holdings having in the meantime been forbidden—certain steps aiming at an improvement in agricultural conditions were at last taken. These comprised the conceding of freedom of cultivation to individuals and to communes, the forbidding of the partitioning of meadow land, and, most striking of all, the acknowledgement of the right of competent individuals again to lease farms. The exact words of the last enactment may well be quoted from the League of Nations' *Report* dealing with this subject—"Farms temporarily fallen into desuetude as a result of famine, fire, loss of labour, cattle or other reason may be let out on lease either in whole or in part, in return for money, produce or other remuneration." Have we then at last signs of returning sanity to the representatives of what should be the greatest agricultural nation in the world, and do the words "money, produce or other remuneration" portend the eventual establishment over that vast country of leasehold tenure or of *métayage*?

Land-tenure in the rest of Europe, and especially in the Central and Near Eastern States, has within the last decade been placed in the melting pot, first by legislative action on the part of responsible, but harassed, Governments and subsequently by

either veiled or open revolutionary methods. Untrammelled access to the soil for the most humble citizen and the establishment for him of State Small Holdings on land taken from private or Church ownership has everywhere, from Denmark to Roumania, been the objective of the land reformers. As the economic limitations affecting such undertakings are discussed separately, a brief review of the steps taken in typical instances to effect this transference of land will for the moment suffice.

Denmark, one of the few non-belligerent agricultural nations, and one already recognising generously the claims of small owners, did not on these grounds escape a post-war extension of her agrarian legislation. Church lands, "entailed feudal estates," and lands acquired in the open market, have all been divided up and made available for occupation. Compulsion has attached to the acquisition of the two former types, limited in some cases to a third of the total acreage involved, but in the case of private owners there is also a contingent liability in regard to one-fifth of the capital resources of the sequestered estate. Church lands "fit for agriculture" can be taken possession of in certain circumstances, as for instance when a vacancy occurs in a benefice; they are then sold publicly in parcels of a size sufficient to support a single family, but the incumbent receives "rent" in the form of a $4\frac{1}{2}$ per cent. dividend on the selling price of the property. The State itself has also assumed a heavy financial burden in regard to the erection of buildings and the provision of credit to impecunious purchasers. That misgivings were already being felt as to the effects of the Acts dealing with the provision of Small Holdings passed long before this latest legislation, will be realised by all who have read in Rider Haggard's *Rural Denmark* the views of the Danish officials concerned in their administration. It was not unusual to find a strong feeling in existence that the creation, on very easy terms, of a large body of small freeholders was going to prove a mistaken policy, and that some form of protective tenancy might have to be substituted; indeed, the old Danish tenure, known as *Faeste*, and akin to a copyhold of lives, had been definitely suggested. Here then was previous evidence that peasant proprietorship does not necessarily succeed when artificially

instituted, and that one or other of the frequently despised systems of tenure may be preferable.

In Poland, Czecho-Slovakia, Roumania, and in fact in all the newly formed or reorganised States of Central Europe, expropriation pure and simple ran its course after 1918. In some instances it formed merely the climax to a gradual process of curtailing the private ownership of large estates, in others it resulted from a sudden and irresistible onslaught. Perhaps the best example of the movement proceeding upon perfectly unobjectionable lines is provided by Portugal, where in 1920 public bodies were authorised to take over all uncultivated lands, to subdivide them, and then either to dispose of them by auction or by contracts of *emphyteusis* (perpetual lease) subject to redemption by purchase.

Poland provides an example of a more drastic method, for in 1920 the Diet ordered the expropriation and subdivision of land, the property, successively, of the following classes of owner—the State, members of former reigning families, the former Prussian Colonisation Committee, bishops, parishes and convents, public institutions. This seems to provide a sufficiently comprehensive list, but to it were added, in order, all private properties “badly managed,” “divided into plots without authorisation,” “acquired between August 1st, 1914, and September 14th, 1919, by persons whose usual occupation was not farming” or by persons “unable to pay the price except by means of profits resulting from speculation,” and properties that within the previous five years had changed hands on more than two occasions. Lastly, “all other private property” came within the ban of this law, for after each of the above classes had yielded up to the State all its resources, any land still remaining must follow, commencing with such as had been devastated by the war but remained unrestored by its owners. Varying upward limits were assigned to the area of holdings permitted to individuals, ranging from 60 hectares in suburban districts to 400 hectares in the Eastern part of the country. Whilst the first five classes of owner enumerated above suffered complete spoliation of their properties, it was proposed that the remaining classes should receive in return for this “com-

pulsory purchase" sums equal to half the average value of land in their district. When, if ever, the final stage is reached and all private land is acquired, history will be able to record the amount of success achieved by these methods, but it is more than likely that a halt will be called in the meantime and the principle of individual ownership retained.

Roumania suffered from a serious peasants' revolt in 1907 that compelled considerable reforms, which in turn were superseded by post-war legislation of a most drastic character. The reforms themselves had included the abolition of customs almost feudal in their character, the standardisation of wages, and adequate provision for grazing facilities (a much needed want) for the smaller peasants. Lastly, the private ownership of land exceeding 4000 hectares in area was forbidden, affording a commentary on the undue size that private estates had attained. But the other extreme was followed, for the ideal aimed at was the universal setting up of Small Holdings of some five to seven hectares in area. Then, after the war, came what can only be described as confiscation, for individual ownership of land above certain limits in area was made illegal; these limits were fixed at 100 hectares in mountain districts and 200 elsewhere. Properties exceeding such dimensions were seized, but compensation in the ordinary acceptance of the word was not given, for all land taken over by the State was valued on a pre-war basis (thus currency depreciation was ignored), and bonds equivalent to these low values, and yielding a very meagre rate of interest, were presented to the former owners.

Examples similar to this abounded in other countries; it was, for instance, reported in 1922 that the Latvian Government had handed bonds of the face value of 267,000 roubles, and bearing only 4 per cent. interest, to the former owner of an expropriated property that had been valued in 1914 at a million roubles. Although this point is not germane to the argument in general, it may be added that, as the owner was an Englishman, he received the equivalent of £236 for property which had represented an investment of some £100,000 to him; moreover, if the land in question had descended through inheritance instead of by purchase the new Latvian laws would have prohibited

any form of compensation whatsoever. In Esthonia again, where all the properties of the great landowners had been seized, in those instances where compensation was granted at all, it was based on the values existing in 1914. Czecho-Slovakia took as the basis the average values recorded in the period 1913 to 1915, but in the case of the larger properties these values were subject to progressive deductions ranging up to 48 per cent. in the case of estates above 50,000 hectares.

Whatever future, economically or socially, may await the new holders of such lands, there is small likelihood of their advance from a purely agricultural standpoint, as the pages dealing with the past output of Small Holdings in Roumania will show, and already minor legislative action has been directed towards that ever present danger—further subdivision. Roumania and her neighbouring countries may be taken as providing examples of extreme measures, but the rest of Europe proceeded on the same lines, individual countries stopping short at different points on the road that led to spoliation. But, generally, preference was given in the first instance to soldiers returned from the war, and next to former agricultural labourers on the expropriated lands; everywhere also steps were taken to provide the new cultivators with sufficient capital. The future is difficult to forecast, but such an immense agrarian reformation, so hastily effected, cannot be expected to be permanently stable. Land-tenure may have been recently superseded by land ownership for millions of small cultivators, and democracy may have congratulated itself on the simplicity of the operation, but economic laws, always certain, are, in relation to the soil, inexorable, and no doubt another generation will see new types of occupiers cultivating fresh divisions of the ever disturbed soil of Europe.

CHAPTER III

THE SIZE OF HOLDINGS

Definition of a Small Holding; distribution of holdings in the United Kingdom at different periods; statistics of size-groups; ownership and tenancy; size and numbers of holdings in France and in Germany; the "average" holding abroad; large and small farms in Roumania; subdivision and "re-striping" in Switzerland and elsewhere; density of population and rates of production.

THERE is never any doubt as to what constitutes a large farm, but what is the correct definition of a Small Holding? Nowadays, most certainly, acreage does not enter into the consideration, for genuine Small Holdings may range in size from a quarter of an acre up to some hundreds of acres. The only definition that will meet these varying conditions is the following: a Small Holding is that area of land which, by their own labour, supports its occupier, his wife and family. *Per contra*, large or medium holdings are those that call for the continuous presence of hired workers. In the following pages, and indeed throughout this volume, the distinction between a Small Holding and a small farm in the general sense, is always made clear by according the former capital initial letters. Again, when discussing the economics of large and small farms it must be understood, unless specifically excepted, that the latter include Small Holdings.

It comes as a surprise to the general public, who look upon a Small Holding as being anything from twenty to fifty acres in extent, to be told that the average size of all farms over one acre in extent in England and Wales is only some sixty-two acres, and that the commonest size is in the neighbourhood of three or four. This country, then, is not a land of large farms in the world sense of that term. Another fallacy, that recalls the jam story of the tea party in *Alice in Wonderland*, crops up when the supply of Small Holdings is mentioned; for one is led to believe that they existed yesterday, and will be provided to-morrow, but are non-existent to-day. This has always been the tenour of writers who urge "freer access" to the land; they refer to almost

all past periods as being times when countless small men lived and thrived on their own land, and talk as if the future alone held such possibilities in store. But is even the first part of this contention accurate? The manorial tenants, if cottars, could not have supported themselves on their few acres without eking out their living by working as labourers on the lord's demesne, and, if villeins, were not small farmers in the accepted sense of the word, for they occupied any arable acreage up to three figures in extent, and could only carry out their own field work by mutual cooperation in the use of man-power, teams and implements. As we advance through the centuries we find each age lamenting the disappearance of the "yeoman"; but the term yeoman did not necessarily imply the ownership of land, it frequently connoted merely a tenant, and not necessarily a small tenant. Economic changes such as enclosures and alterations in systems of farming admittedly caused a reduction in the number of smaller farmers, but on these occasions, if one examines the position a generation or so later, one always finds that as a class they reappeared again. The apparent exception to this rule is found after the French war, when large arable farms were looked upon as the most efficient unit, and when the labourer had lost his rights of common. But claims on the latter had not constituted the worker a Small Holder; they merely gave him considerable collective advantages, and their very abolition brought about the introduction of allotments, and, as many small farmers incidentally took the opportunity offered them at that time for consolidating their scattered strips, this movement can scarcely be held to have benefited exclusively the large owner. Thereafter, Acts of Parliament specifically provided for the artificial creation of Small Holders.

Before discussing the question of large *versus* small farms, it is advisable to enquire into the distribution of each in this country and in others abroad. The most complete analysis made in the past on these lines took the form of a paper read before the Royal Statistical Society by Major P. G. Craigie in 1887, and related to conditions two years earlier. On that occasion the number of holdings from one quarter of an acre to an acre in extent had been enumerated—a procedure that has not

subsequently been repeated. The United Kingdom then contained 1,121,168 holdings above this quarter acre limit, of which 414,950 were in England, 60,190 in Wales, 80,715 in Scotland and 565,313 in Ireland: if we exclude the smallest size-group, these figures become, for the United Kingdom, 1,047,912; for England, 393,881, for Wales 59,107, for Scotland 79,335, and for Ireland 515,569. On this last basis comparison can be carried out with the subsequent annual returns. For that purpose the three divisions of the Kingdom, for which their respective official bodies are responsible, make the best starting point. In England and Wales in 1885 all holdings above an acre in extent numbered 452,988, in 1895 440,467, in 1913 435,677 and in 1921 420,133. In 1917, the last year for which accurate figures relating to the whole of Ireland were secured, there were in that country 572,574 farms—a considerable increase in thirty years; the same year showed 76,440 in Scotland.

The reduction outside Ireland has been progressive, and has at the same time been accompanied by a decline in the acreage of farm land, thus that statistical fiction, the "average farm," has remained almost constant in size. As is pointed out in the chapter on Statistics, the result of dividing the total area of farm land by the number of undertakings merely results in achieving the arithmetical average, what is really wanted in this case being the mode; but the subdivision by size-groups not being sufficiently minute, the latter's position cannot be more accurately determined than by placing it in the region of the three to four acre farm. In 1885, Major Craigie gave the size of the average farm in England as 60·0 acres, in Wales as 46·8 and in Scotland as 60·1; figures which have since tended very slightly to increase. The same authority analysed the distribution of holdings in groups of Counties, and showed that the North-Eastern and the South-Eastern contained the largest (averaging 69·6 and 69·9 acres respectively) whilst the Welsh (46·8) and the Northern and North-Western contained the smallest (48·7 acres). This feature is still to be observed, and the explanation of course is that the corn-growing districts favour larger holdings than are found in milk-producing and livestock raising areas. A County by County examination showed that Essex

had, as an average, 92 acres to a holding, and Downland Counties, such as Wiltshire and Berkshire, 90 to 100 acres, whilst the opposite extreme was found in Lancashire and Cheshire with, in each case, 38 acres. The multiplication of market-gardens outside populous centres and in certain favoured localities, combined with the artificial supply of Small Holdings, has to a certain extent modified the above distribution but, generally speaking, the larger farms are still found in the Eastern half of England.

The comparative movements of the different size-groups after 1885 deserve a few words, which the following table will augment.

Number of holdings in England and Wales

Size group	1885	1895	1913	1921
1- 5 acres	114,273	97,818	92,302	81,217
5- 20 "	126,674	126,714	122,117	116,159
20- 50 "	73,472	74,846	78,027	80,967
50-100 "	54,937	56,791	59,287	61,001
100-300 "	67,024	68,277	69,431	67,842
Above 300 "	16,608	16,021	14,513	12,947
Total	452,988	440,467	435,677	420,133

It will be observed that the decline has been continuous in the two smallest size-groups, and also in that containing the largest holdings; medium-sized farms have been increasing numerically during the whole period. It inevitably causes surprise to persons who are constantly hearing of the creation and growth in numbers of Small Holdings to find that it is precisely that class in which the majority would be looked for (one to twenty acres) that has decreased by no less than 17,000 during the years intervening between 1913 and 1921. These same eight years covered also part of the period when active steps were being taken to place some thousands of ex-service applicants in occupation of this type of farm. As a matter of fact there was a slight increase of some five hundred holdings in the smallest class of all between 1920 and 1921, the former year representing the lowest level, as the figures for 1922 and 1923 should show a steady growth. The official explanation of this decline is as

follows. It is held that the conversion during the war into allotments of fields in the outskirts of towns, previously in separate ownership, resulted in the disappearance of numerous small farms—a movement with which the provision elsewhere of other similar sized holdings did not keep pace. This movement, then, did not cause a reduction in the area under cultivation but merely transferred to spade husbandry land previously less intensively worked. It had been pointed out in 1913 that since the Small Holdings Act of 1908 had come into force over 11,000 small farms had been statutorily established, but that nevertheless there had been in the intervening time a net loss in the number of holdings below fifty acres in extent. In normal times the encroachment of towns and the provision of “lungs” for their inhabitants inevitably tends to the extinction of small farms on their boundaries.

The numbers of holdings have so far been dealt with; there remains the question of the comparative acreage covered by each type. In 1885 Major Craigie wrote on that point as follows, confining his remarks to England, and including holdings above a quarter of an acre in his review: “The area cut up into small holdings under fifty acres, and the area devoted to farms of five hundred acres and upwards, are curiously enough nearly equal, and roughly the surface of England may be thus mapped out. In 294,729 small holdings under fifty acres there are 3,559,000 acres; in 115,525 medium holdings between fifty and five hundred acres there are no less than 17,899,000 acres; in 4,696 large holdings over five hundred acres there are 3,434,000 acres. The smaller, or “20 acres and under” holdings in the first of these divisions would themselves suffice to occupy a County nearly of the size of Devon, and, roughly speaking, we may best realise the proportion of our small farms to the whole by imagining on the map of England that the three South-Western counties of Cornwall, Devon and Somerset had their entire superficies represented by the small “under 50 acres” holdings.” The majority of subsequent enquiries adopting England and Wales as the statistical unit, comparison with Major Craigie’s simile is not possible, but for the latter area the following table can be compiled for a pre-war and a post-war year.

England and Wales

Size-group	Total acreage, 1913	Total acreage, 1921
1- 5 acres	285,000	253,000
5- 20 "	1,373,000	1,310,000
20- 50 "	2,023,000	2,720,000
50-100 "	4,325,000	4,443,000
100-150 "	3,942,000	3,955,000
150-300 "	7,844,000	7,475,000
over 300 "	6,737,000	5,988,000
Total	27,129,000	26,144,000

The same features are observable as in the former table showing numbers of holdings; that is to say, the relative importance of the extreme size-groups is tending to decline. Farms between 150 and 300 acres cover the largest area of agricultural land, almost exactly half of which is still devoted to holdings above 150 acres in extent.

Two types of farmer have always been associated with certain sized farms, for it is generally held that fifty acres forms roughly the dividing line between the holdings farmed by those who use their hands and those who use their brains, and again that the former class represents the reward of the successful farm worker, whilst holdings between fifty and one hundred acres afford a refuge for those farmers who have failed on a larger scale. Statistical tables cannot advance or refute such theories; in this case it can merely be observed that holdings between fifty and one hundred and fifty acres have increased in number (and in acreage), and only in the very largest and the very smallest sizes is there found any serious reduction.

Ownership or tenancy is a matter to which annual enquiries have been for some years directed. "Ownership" is defined in the published statistics relating to this country as comprising land "owned or mainly owned," hence comparison with conditions ruling in other countries is a speculative enterprise; but if enquiry is confined to England and Wales matters are otherwise. Prior to the outbreak of war there was a tendency for the numbers of owners to decline, as figures published by the Board of Agriculture in 1913 showed. For in 1909 there were

THE SIZE OF HOLDINGS

owned in England and Wales 55,920 farms of all sizes, or 12·98 of the total enumerated; in 1913 the number was 48,760 and the percentage 11·19. Again, the greatest decline was in the ownership of the really large and of the smallest holdings. The war itself caused little change in the total number owned, and the medium and large increased, while the smallest owners declined considerably, but after the conclusion of hostilities it soon became apparent that tenants were rapidly purchasing their holdings. At first this movement did not extend to the really small man, but after 1919 he too was enabled (or compelled in many instances) to become his own landlord, as the next table shows.

Holdings owned or mainly owned in England and Wales

Size of holding	1913	1919	1920	1921
1- 5 acres	12,606	10,453	10,952	12,028
5- 20 "	14,814	13,786	15,780	18,635
20- 50 "	8,093	8,346	10,188	13,069
50-100 "	5,399	6,380	8,154	10,769
100-150 "	2,707	3,463	4,485	5,844
150-300 "	3,265	4,216	5,323	7,170
over 300 "	1,816	2,021	2,352	2,954
Total	48,760	48,665	57,234	70,469

In two years there was thus an increase of some 45 per cent. in the number of owner-occupiers; an increase that was, however, unevenly distributed between the different size-groups. It was largest in that comprising farms of one hundred and fifty to three hundred acres and steadily declined as the size-groups themselves diminished, until for that of one to five acres it represented some 15 per cent. In all, 17 per cent. of the farms were owned by their occupiers. Concurrently, whilst in 1913 only some 10·7 of the area of farm land was owned by those residing on it, in 1921 this figure had become 20 per cent. War had, as was the case more than a hundred years before, caused a large transference of land, together with its attendant responsibilities, to new owners. Much of it was undoubtedly purchased at fictitious and transitory values, and it remains to be seen what number of its new owners can weather the economic

difficulties that have subsequently ensued. So far, despite the exaggerated reports current, matters are fortunately a long way removed from the state of affairs prevailing exactly a century ago, when hundreds of thousands of acres of land were lying derelict or being offered for nominal sums. Universal occupying ownership is no doubt a legitimate ideal at which to aim; but unless it is achieved on an economic basis, and in times of stability, it may become an incubus which overwhelms a large proportion of its followers. Landlords have the power, and have invariably exercised it in bad times, to ease the financial position of tenants; occupying owners have no extraneous help to fall back on; they are lucky indeed if it is their own and not borrowed capital that they see depreciating.

Ample evidence has been adduced to show that this country is not associated with one particular size or class of holding, but that numerous examples of all can be found in every part of it. Before examining the economy of the large and Small Holding it is best briefly to review the corresponding conditions in other countries. But here we are at once on extremely treacherous ground, for reasons that will be found explained in the chapter on Statistics. In France, all enquirers from Arthur Young down to Major Craigie have agreed that the number of separate "agricultural organisations" is immense, but none has found a reliable basis on which to make comparison with conditions in this country. Again, all agree that peasant proprietorship is almost universal and that really small undertakings are actually and relatively far more numerous than here; for, whilst the Revolution removed all feudal obligations on land, and virtually exterminated the larger landowner, the small peasant had thereby become firmly established as a proprietor, and the *métayer* at the same time had remained undisturbed.

Taxation rolls gave, a few years prior to Craigie's paper, a total of over fourteen million *côtes foncières*, but French authorities themselves suggested eight million as the total number of owners, of whom three million were exempt from taxation owing to the microscopic size of their *côtes*. Yet, again, subdivision of holdings into minute portions of land resulted in individual tenants farming, as a unit, land belonging to several owners.

Craigie tentatively accepted the results of an official enquiry held in 1873, which gave a total of almost four million as representing the number of owners, tenants and *métayers* engaged in farming, the extent of whose holdings covered 84,000,000 acres, or an "average" of 21 acres per individual cultivator. This latter figure is probably an overestimate, and recent statistics of farm acreage record a smaller "average" size. Later enquiries recorded 5,672,000 as the number of farms in 1882 and 5,703,000 in 1892. A naturally popular French table is often quoted in this country; it was compiled by M. de Lavergne, and conveniently grouped the component parts of the last total into 50,000 large farms, 500,000 medium-sized and 5,000,000 small.

After perusing the above figures it will be agreed that small proprietors were, and still are, infinitely more numerous in France than in this country; it remains therefore to enquire how they are distributed and what they produce. Roughly, the Northern divisions of the country contain the larger farms and the South the smaller, but the nature of the soil and the presence or absence of vineyards affect the question. Corn-growing districts, as is always the case, are associated with the largest holdings and, apart from the influence exercised by special types of cultivation, Small Holders are most frequently met with in the outskirts of towns. It is an undoubted fact that the standard rate of yield of cereal crops in France is little better than half that secured in England and Wales, but the dangers of arguing that this is attributable to the smaller average size of French holdings are too obvious to require attention directed to them. The potent factor here is doubtless that the protection so long afforded the French producer of cereals has induced him to keep under the plough some millions of acres of poor land that would otherwise receive scanty attention; this gives very small outturns, and thus reduces the average yield for the whole country.

It is probable that the same area in France under large farms would produce a better yield per acre owing to the greater use that could be made of capital, of machinery and of scientific achievements or, conversely, that a smaller area could produce

the present output; but a reduction in man-power would result and the policy of France has always been to be self-supporting and at the same time to keep the bulk of her people on the land.

Germany differs from France in regard to the distribution of her holdings and in her policy towards the farming industry. Her holdings consist of very numerous small farms in the West and of relatively few large ones in the East and North. Figures relating to the year 1907 gave 5,736,082 as the grand total—a result closely corresponding to the similar French returns. Space forbids an account of the causes that have led to the distribution of holdings, but the influence of soil and nationality have played important parts, and the once open-fields of the plains and the grazing-land of the valleys can still be clearly traced by the forms of husbandry now practised and by the size of the different undertakings. The land divided between junkers and Small Holders, if we include only land that is comparable to that “under crops and grass” in this country, now affords an “average” of some thirteen or fourteen acres per holding. Craigie gave fifteen acres as the corresponding figure in 1885. As in the case of France, the “average” holding is about one quarter the size of that found here, but German thoroughness, in the space of less than two generations, has altered the whole complexion of her agriculture, and State aid in numerous directions, combined with a tariff on imported farm produce, raised the yields of all her principal crops to the level attained in this country. Germany improved her agriculture thus whilst becoming an industrial nation, but agrarian France remained stationary.

Sir Thomas Middleton in his *Recent Development of German Agriculture* has gone at great length into the economy of the “average” German farm in comparison with the corresponding English one. It is impossible in these pages to follow his calculations into the number of persons each supports, beyond remarking that the essential difference between the two countries consists in the fact that the bulk of the German farm is under the plough, whilst grass preponderates in the British area; it is of interest to notice that he holds that this country contains

four times as many farms "of a doubtful size" (125-250 acres) as does Germany.

With the exception of the Low Countries, where small farms are the rule, it is safe to generalise for the rest of Europe and to say that all other countries contain numbers of small farms intermixed with large estates. As has been shown in the previous chapter, the policy adopted almost universally since the upheaval of 1914 has resulted in the compulsory splitting up of the latter and a resultant large increase in the numbers of the former.

In Roumania, where this policy was carried to an extreme, the effects are seen in the shape of the subsequent negligible exports of wheat; and in all cases it would appear that peasants, when placed in the ownership of land, are content with producing sufficient of the staple crops for their own requirements, and will not exert themselves sufficiently to resume the exportation that their former landlords accomplished. Unfortunately only one country in Europe has ever compiled statistics of the relative yields from large and small farms and, oddly enough, that country is Roumania. There, for many years, a distinction has been drawn between holdings above and below 100 hectares (247 acres) in extent, and separate statistics in regard to each group are published. The outstanding fact recorded is that for all crops, and under all conditions, ranging from bad seasons to exceptionally good, the yield per acre has been consistently higher on the larger farms. Before giving examples of this, it is well to forestall criticism by admitting the obvious statistical openings for error. In the first place, prior to expropriation, the number of smaller farms exceeded a million, whilst the large numbered only some three or four thousand, but the total acreage concerned in each case was large. The average area of the holdings in the lower group was really small, amounting to less than four hectares (under ten acres). Moreover, the area devoted to the principal crops in each of the two groups was, prior to 1915, sufficiently large to form a basis for comparison. The acreage under wheat was almost exactly the same; the small farmer, however, grew more barley, oats, potatoes and especially maize than the large landowners, but the latter devoted more ground to sugar-beet.

A glance at Table VIII in Appendix II will demonstrate the effects of the post-war Roumanian land policy which are evidenced by the great decline in the areas under all these crops on the large farms and by their only partial transference to the land of the smaller men.

A standard objection often legitimately raised against the comparison of yields from large and small farms is that the nature of the soil may be the determining factor in the distribution of the holdings themselves. This, however, is a factor that almost always operates in favour of the Small Holder, and there certainly appears to be no valid reason for suspecting, in the case of pre-war Roumania, that the large landowners had secured an exclusive right to the richest soil. If we accept the statistical samples as sufficiently large, and find no evidence as to irregular distribution of soil conditions, we are forced to the conclusion, after studying the table itself, that in the only European country which is available for full investigation, the yield per acre of all staple crops is potentially greater on farms above two hundred and fifty acres in extent than on those below that limit.

Partial returns exist in the case of Germany which tend inexorably in the same direction. J. H. Clapham (*Economic Development of France and Germany, 1815-1914*) has given figures for the yield of six crops in the province of Mecklenburg-Schwerin and also in Bavaria. No statistics for different sizes of holding of course exist, but Mecklenburg has sixty per cent. of its farm land in holdings above two hundred and fifty acres, and in Bavaria seventy per cent. is devoted to holdings under fifty acres in size. The soil of the former is "not naturally fertile" and that of the latter "is partly high and infertile, but also contains some very favoured districts." The table itself is self-explanatory.

*Average yield in 100 kilogrammes per hectare
for the decade 1902-11*

	Rye	Wheat	Barley	Oats	Potatoes	Meadow hay
Mecklenburg	17.9	23.7	22.4	21.2	141.6	41.2
Bavaria	15.8	16.0	17.1	15.6	116.9	48.6

The author himself comments thus: "The figures, if not exact, are telling. Where agricultural knowledge is least needed, in the hay field, Bavaria leads. Everywhere else it is hopelessly outdistanced, worst of all in the best crop—wheat." This again affords a partial example on a small scale of what there is little doubt is the true state of affairs in all countries; figures for post-war Russia have already been quoted as providing similar material. The peasant *can* produce a few crops that require a minimum of attention on a level with the efforts of the large farmer, but unless he secures special advantages from soil conditions he cannot obtain similar returns from cereal and root crops; his inability may be variously attributed to lack of knowledge and initiative or to actual shortage of the more material aids to higher agricultural practice. Generally, one finds in countries in which he does not predominate numerically that his handicap is lessened by his settling on the richer land; again, this process may be simply economic in its origin, or it may have been stimulated artificially. Instances of both abound in this country. The Isle of Axholme, already referred to, and the Isle of Ely accommodate some thousands of small occupiers and proprietors, who have at their disposal tracts of the richest soil in the United Kingdom; the majority of the former are the lineal descendants of past cultivators of their land, many of those around Ely have been placed on their holdings with State assistance, although for centuries this part of Cambridgeshire had been noted for its productivity. Lysons, for instance, describing the neighbourhood in 1808, wrote "many of the inhabitants are employed in the culture of gardens; great quantities of asparagus and various other vegetables being sent by the gardeners to Cambridge and London. The cherry gardens are extensive—the soil indeed seems to have been from a very early period favourable for the growth of fruit—three acres of vineyard are mentioned in the Survey of Domesday; in 1368 an anonymous writer of a chronicle on the monastery speaks of the vineyard as very productive." The market-gardening industry of Bedfordshire also sprang up in that County because, as a trade, it calls for an easily worked soil.

The relative financial success of Small Holders, especially

abroad, is often coloured by the fact that such undertakings do not form their sole means of livelihood. Craigie included a table in his paper showing that the smaller the holding in a typical German district the larger were its occupier's extraneous and supplementary sources of income. This feature is one to be looked for in those countries or districts in which smaller farms have existed for some time, rather than where they have just been established. It is only by long experience that the peasant learns to keep his eggs in more than one basket; the newcomer too often trusts to his own skill, some luck and an initial grant from a benevolent State.

Intimately bound up with the question of the proportion of small farms is that of density of population. Generally, the less numerous the population per square mile the larger will be found the "average" holding. The corollary of this is that the more recent the development of a country the larger its holdings. The United States and Canada provide cases in point, and, moreover, show in process of evolution, the reduction in size of farms as population, rapidly increasing, moves Westward. The farms in their Eastern and Middle Eastern districts are gradually cut up and subdivided, whilst the newly broken land of the West and North is parcelled out into larger undertakings. Under certain conditions of land-tenure and inheritance this subdivision becomes in older countries a positive drawback.

In Switzerland the process known as "re-striping" of Small Holdings has had to be carried out in several Cantons as a corrective. In that country the bulk of holdings are owned by their occupiers, and the average size of all is really small, for anything over thirty hectares (seventy-four acres) is described as "large." The head of the Department of Land Improvement in Canton Vaud contributed in 1913 an article to the *Bulletin* of the International Agricultural Institute, in which he described the disadvantages attendant on the scattered strips of land held by individual owners, and explained the process of consolidation. He held that the large proportion of Small Holdings in his country was a benefit, but "we must endeavour to attenuate the evil effects of a too minute subdivision in the interest of the Small Holdings themselves, and try to increase their rental

capacity." The arguments he adduced against the tenure of numerous scattered parcels of land were those with which all readers of agricultural history are familiar, but to many it is unexpected to find them adopted in the twentieth century. In Switzerland, in 1913, the average number of separate parcels going with each farm was over fourteen, the smaller holdings suffering the greatest hardship in this respect, although enclosure, in the accepted sense of the word, had been facilitated by process of legislation from the year 1591 onwards. In fairness to the Swiss cultivators one must differentiate between the size of holdings and the multiplicity of pieces of land when commenting upon the economic difficulties that they were encountering, for there is no evidence that large holdings *per se* would have better surmounted the drawbacks of such land-tenure. But the Swiss were in agreement that the advantages that followed on redistribution were felt most by the owners of really Small Holdings. These men had been the great sufferers from inability to make use of machinery and from the relatively greater loss of time and money in supervising distant scraps of land, and it was they who were, as a result of consolidation, now placed more nearly on an equality in this respect with the large farmer. There was no question of the pros or cons of large or Small Holdings here, but merely the admission that the latter had less margin to spare when suffering under physical and economic disabilities.

A similar state of affairs exists in parts of France—not so much due to scattered holdings (which certainly exist) but to the diminutive size of certain complete "farms" which prevents full use being made of the land. Many, indeed, will be familiar with the apocryphal account of husbandry carried on in these conditions when there is not room to wield a full sized spade, and with the reputed impossibility of growing fruit trees owing to the danger of their overspreading one's neighbour's land. Concurrently with the re-settlement of the devastated regions the opportunity has been taken to re-adjust boundaries and to consolidate scattered parcels of land. Thus in certain areas of France this evil of minute subdivision will have been checked, if not eradicated.

In parts of India an approach to such a state of affairs is also found, for under both Hindu and Mohammedan law subdivision of land into equal parts is a recognised course to pursue in cases of family dispute. Where the system of joint cultivation exists the family holding may in a few generations thus become split up into an innumerable quantity of scattered strips and parcels. So widespread is this tendency, that it would appear imperative that those responsible for the direction of the agricultural policy of India should in the near future take steps in the matter, either by modifying the custom of equal inheritance, or by the introduction of some fresh system of land tenure.

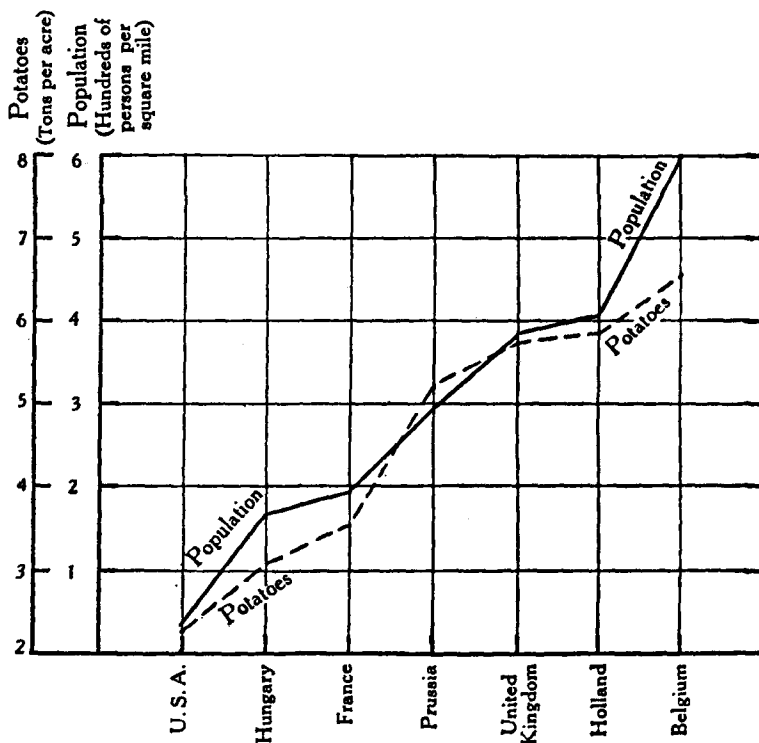
Even in South America the question crops up, for in a recent work by L. Portman on Bolivia, the author states that there the law of succession decrees that a man's land shall descend in equal parts to his sons. The difficulties encountered in Europe and Asia in these circumstances are circumvented in Bolivia by the formation of syndicates which work numerous plots as single undertakings, but it is curious to find such a state of affairs existing in a country where the large farm is admittedly the economic unit.

The question of the relationship between population and the size of holdings was touched on above. There is another relevant matter that deserves a moment's attention here. It has on occasion been shown that a connection exists between the density of population and the rate of production of certain crops. This is a feature distinct from the well-known association between the area under cereals and the rate of production per acre, where, for example, the larger the acreage of wheat the lower is the outturn per acre. For, quite apart from that, there is admittedly evidence that the yield per acre of root crops, in particular of potatoes, increases as population thickens. A diagram illustrating this, by showing the rate of production per acre of potatoes in various countries ranging from the United States to Belgium is reproduced (with considerable reservations) on the next page. In the States the yield averages some two and a quarter tons per acre, and the population numbers a little over thirty persons to the square mile, whilst the Belgian yield is over six and a half tons and the population approximately six hundred

THE SIZE OF HOLDINGS

persons to the mile. Intermediate populations and productions follow more or less naturally, but too close correlation must not be looked for.

At first sight this is apt to be seized on as being a direct result of the recognised preponderance of small farms in more densely inhabited countries, but the evidence for such an assumption



is wanting. These increased yields are mainly confined to root crops, and the probable explanation is that the greater use made of spade husbandry in the neighbourhood of towns is responsible, together with the greatly enhanced opportunities for securing plentiful supplies of urban manure. It would appear that the phenomenon is symptomatic of industrial rather than of agri-

cultural conditions, and that the size of holdings is independent of it, unless the scale is descended sufficiently to include what, in this country, would be described as allotments. In that event a case might possibly be made out for the twofold proposition that, (*a*) the denser the population the smaller the size of the "average" farm, and (*b*) the smaller the farm the higher its rate of production. As matters stand, however, whilst all evidence shows that (*a*) is certainly true, such as we possess is directly adverse to (*b*), provided of course that enquiry is confined to the yield of crops in general on farms of a commercial size and character; if, however, it is extended to include really small plots of land worked in the neighbourhood of centres of population, then perhaps there is justification for accepting the latter as holding good in the case of a few non-cereal crops. In other words, certain of what are field crops in newly developed countries, tend, with growth of population, to become the subject of more intensive cultivation or else to be grown on the best land.

CHAPTER IV

THE SIZE OF HOLDINGS (CONTINUED)

Development of small farms in the past; former discussions over their alleged advantages; provision of Small Holdings and allotments in the nineteenth century; effects of the period of depression; evidence adduced before the Commission; the Acts of 1892 and 1908; powers of local authorities; settlement of ex-service men; numbers of allotments; their distribution; the economics of large and small farms; output per man and output per acre; questions of livestock; summary.

HAVING traced the normal distribution of large and small farms in this country and touched on that abroad, some description must follow of the steps taken here to stimulate the development of the latter in the last hundred years. During the Napoleonic war, and for some decades afterwards, farming on a large scale was looked upon as the only possible method by which the industry could be made to render a sufficient return for the investment of capital. In consequence, the small man and the farm worker lost their direct interest in the land. Allotments of land in lieu of their claims and rights of common were made to them, and these formed the first definite examples of individual occupation of small plots being recognised by Parliamentary intervention. Enclosure otherwise implied nothing but the multiplication of large holdings, and it naturally had the emphatic approval of almost all rural economists, even if a few of them, for reasons that were not always altruistic, regretted the disappearance of the worker. Sir John Sinclair, as president of the Board of Agriculture, was perfectly genuine in his advocacy of the better provision of allotments, and Arthur Young (in his latter days) and Lord Winchelsea also joined in the literary fight that raged over this question. It was then that Young gave vent to his famous, and often quoted, comment that, if one removed all that had made large farms what they were, one was left with the Small Holding. Some of the later appeals issued to the already urban majority of the nation on behalf of the dwindling rural population were pathetic, others

were often abusive. A middle course was steered by such writers as J. H. Kent in his "Public letter" in 1844 to the then Duke of Grafton. This epistle represents one of the first studied attempts to place side by side the respective advantages and drawbacks of the Small Holding and the large farm. If, nowadays, we cannot agree with much that Kent wrote, we can at least respect the sincerity of his arguments and follow with interest his account of "consolidation" as then practised in Suffolk.

During the troubles of the period 1816-32, two Acts of Parliament had been passed which aimed at facilitating access to the land. That of 1819 authorised Overseers of the Poor to acquire blocks of land up to twenty acres in area for the purpose of re-letting them as allotments or small farms; that of 1831 recommended that portions of recently enclosed land should be similarly made available, and the limit was raised to fifty acres, whilst Crown lands, with the consent of the Chancellor of the Exchequer, might be similarly treated. Neither Act led to the establishment of many Small Holdings, and both were probably intended merely as window-dressing by a Government which, on the second occasion, was already occupied in repressing rural outbreaks. In 1832 another Act definitely instructed the Overseers to let land on similar conditions. Farmers were emphatic in their opinion that allotments were unnecessary and represented a potential waste of time and labour which might otherwise be better employed; landlords in the main saw fit to agree with their tenants. Thus the work of such bodies as the Labourers' Friend Society could achieve small results. On the other hand, unbiassed persons agreed that, economically, allotments were sound, both from the standpoint of the labourer and of the owner of the land on which they were situated, but the proviso was generally entered, that half an acre should be the limit of their size. If more was included a Small Holder was created, who had insufficient land from which to make a living, and so much on his hands that he ceased to be available as a farm labourer.

The years prior to the repeal of the Corn Laws were not propitious for the establishment of Small Holdings, and those that followed 1846 were also a time when large farms were con-

sidered to be the only possible safeguard for the industry. But allotments, in their present limited sense of the word, did register a certain amount of progress and, provided they were confined to the limit mentioned above, began to be tolerated by tenant-farmers. Thus we find in 1843 a *Report on Allotments* which gave quite an encouraging account of their numbers and condition. They were to be found mostly in the Southern and Western Counties, and were almost unknown in the North, exhibiting therefore a reversal of the present distribution. Statistics were then given which showed that it was considered that a quarter of an acre could feed an average family for three months in the year, and that the value to its owner was two shillings a week. Rents, which were on an economic basis, were seldom in arrear.

There we must for the moment leave the allotment movement and turn to the question of the provision of Small Holdings in the strictest sense of the word; allotments will be reverted to again and given separate consideration later. The development of large farms was, if anything, aided by the tendency apparent after the middle of the nineteenth century to return to grass. Whilst the production of cereals had always admittedly been the prerogative of the large farmer, from then onwards he had opportunities of practising alternative methods. The production of meat took its place naturally side by side with that of corn and "pasture farming came to be a necessary and lucrative supplement to the corn growing of the large farm." Only a generation later did the smaller farm at a distance from London, or other great centres of population, arise to meet the increasing demands for milk. Such attempts as were made by benevolent landowners to encourage the formation of small farm units met with scanty success. All contemporaneous writers and official *Reports* commented on the tendency to consolidate smaller holdings and to add to already large areas as opportunity arose, for in times of depression fertility could be stolen from the ground by these means and the land worked to destruction.

Such was the state of affairs up to about 1880. Thereafter, in times of acuter depression, the voice of the reformer was better able to make itself heard, and advocates of State inter-

vention, by the compulsory provision of Small Holdings, were numerous. The movement was partly political in its origin, and such men as Joseph Chamberlain and Jesse Collings took a prominent part in the work which resulted in the passing of the Allotments and Small Holdings Act of 1892. The period was a critical one for all sizes and types of farms, and the evidence regarding their comparative passage through it is apt to be conflicting. The *Report* of the 1893 Commissioners does not contain anywhere a considered or unanimous finding that any particular sized holding had suffered less than others, and one is forced to proceed by circuitous methods. There was, for instance, agreement that grazing districts had come through recent events with less difficulty than corn-growing ones, and witnesses had testified to the comparative immunity felt by those farmers who were producers of cheese, milk and vegetables. Now, the majority of these latter were to be found on smaller holdings than were favoured by the producers of cereals and meat, and, again, they were situated in the Western and Northern districts, whilst it was common knowledge that the Eastern half of the country had suffered worst. If, therefore, it is agreed that, as a whole, the smaller men had been less affected by economic conditions it must not be assumed that this was attributable to the scale on which they conducted their operations, but rather credit must be given to the type of farming they mainly affected. Under the fiscal conditions that have existed since 1846 there is always a handicap on the agriculturist who concentrates his energies on the production of cereals—a handicap that perhaps in normal times he may be forgetful of, but one that is brought home to him sharply in times of depression.

In regard to the provision of Small Holdings, or the success attained by the really small men, the Commission of 1893 did not advance contemporary knowledge. The evidence of numerous witnesses was of a strictly non-committal or neutral character, but many individuals showed hostility towards the movement. The following are typical *dicta*. Witness *A* thought Small Holdings "excellent things where they existed or grew naturally"; he "Did not oppose the artificial creation of Small Holdings, but had little faith in their development." Witness *B* "would

give every facility for the extension of Small Holdings but did not believe in bolstering them up with State funds." Witness C held that "the only way the Small Holder in the arable districts could possibly succeed was by doing the work of two agricultural labourers and living at the expense of one." No less an authority than Sir J. B. Lawes gave as his opinion that Small Holdings were of benefit to labourers, but not to the nation to such an extent as "to supersede farming." The most generous attempt recorded to settle more workers on the land was that undertaken by Mr W. H. Hall of Six Mile Bottom, Cambridgeshire, who had started numerous Small Holders on his estate, finding, where necessary, half their capital out of his own pocket. Yet a Reporter of the Board of Agriculture could only say of this experiment that none "could have been undertaken with higher motives, or supported by more generous expenditure. It has largely failed as a practical experiment." Mr Hall himself stated that one quarter of the holders were absolute failures, one quarter were still struggling after a few years, and the remaining half had been moderately successful. The latter were generally village tradesmen who had other irons in the fire. The professional views of representatives of the Board, acquired in their own districts, were even more pessimistic. The events of 1879 were still remembered in Lincolnshire, and their effects felt by the small men. Many had reverted to the position of labourers, others, still struggling, worked "from daylight to dark, and so do their wives. It is a life of slavery, and they see at the same time what they have made slipping away from them. It is melancholy to think that these men have been the best labourers who have lost the savings of a lifetime." In Suffolk, Small Holdings of ten to fifty acres were "a complete failure," and "1893 had beaten men with small capital"; those who still kept their heads above water "worked from 5 a.m. to 9 p.m." These were, of course, exceptional times, but they showed that the small man had less reserves to draw on than the rest of the community.

It was in this same atmosphere that the Act of 1892 had first seen the light, and such witnesses as recognised its existence made it clear that they anticipated no future for it. This, the



AN UNUSUAL CROP (*PAPAVER SOMNIFERUM*) GROWN
IN AN ISLE OF AXHOLME STRIP

first Act of Parliament which aimed at the establishment of Small Holdings, as distinct from allotments, was correctly appraised by its critics, for it did not succeed. Its provisions were essentially permissive rather than obligatory, as the following instances show. County Councils were empowered to purchase land in response to a "demand" for Small Holdings; this land they had to acquire in the open market, but were prevented from paying any but really low prices by the knowledge that its future occupants would in their turn be unable to meet such outgoings. The State provided the capital sums, but required the Councils' purchasers to put one-fifth of the price down, and the bulk of the remainder had to be paid off yearly, only a fraction of the cost being transferable into a rent-charge. Tenancies were also hedged in by restrictions, in that a limit of fifteen acres was decreed to them and their rent was not to exceed £15 per annum. It was the primary object of this Act to encourage peasant proprietorship and not to multiply tenancies, but the inherent disinclination on the part of those concerned to sink their own capital in such ventures was too strong for it, although purchasers of land were permitted to acquire up to fifty acres.

This lack of demand from purchasers may account in part for the non-success of the Act, but other causes were also at work. The County Councils were not enamoured of their new duties, and took no steps to bring them to public knowledge, appreciating that the driving force of a Government department was not behind them. Again, they lacked compulsory powers and had to acquire their small parcels of land in competition with other and larger purchasers. Thus, while there was an acknowledged demand on all sides for the provision of Small Holdings on a tenancy basis, the only measure officially taken comprised the virtual obligation to purchase, or else, if the former course was insisted on, only inferior land could be offered. In these circumstances it is not to be wondered at that only a handful of Counties put into force the main provisions of the Act, and that only a few hundred acres of land were acquired for Small Holdings.

Agitation by those interested, together with reports of public

and private enquiries, led, after fifteen years, to a second attempt being made by the legislature in 1907. In the meantime an extension of the first Act had resulted in Parish Councils being empowered to acquire land for their inhabitants in plots up to four acres in extent. It was held that labourers had then little cause to grumble, as they had secured the three "F's," but, as we have seen, whatever may have theoretically become available was in practice not applied for.

The essential difference between the Act of 1908 and that of 1892 lay in the fact that compulsory powers were now granted to the County Councils, and that the Board of Agriculture was associated in the movement, special Commissioners being appointed, whose sole duty it was to investigate the requirements in each district, and, if necessary, to use their own initiative in persuading the Councils to provide facilities. Compulsion might be applied in the acquisition of land for the purposes of hiring or selling to applicants, and the limits of fifteen acres and £15 under the former Act were now abolished. But compulsion was to be the last resort in the failure of other means of purchase, and was not enforceable save in the case of land that was already deemed agricultural.

Whatever may at first have been their personal feelings on the merits of the policy involved, members of County Councils, in the main, loyally administered the provisions of the new Act. Evidence of this constantly occurs in such accounts as Sir D. Hall's *Pilgrimage of British Farming*, written when the Act was only some two years old. A full and critical appreciation of the situation created will be found in *Levy's Large and Small Holdings*, where the author impartially sums up as follows:

The law of compulsory hiring expresses the fact that the form of landownership...now existing in England does not correspond to the needs of modern agriculture so far as the unit of holding is concerned; that is to say that large properties and Small Holdings cannot go hand-in-hand. The recent legislation endeavours to modify the harmful conflict of interests thus set up. It leaves to the landlord his property in the land, but it obliges him, when the need arises, to let it in accordance with the modern economic pressure for Small Holdings. The English landlord may in future still value his land for the sake of the sport it provides, the social consideration it ensures

him, or the political opportunities it offers him, and may pay as high a price as he pleases for these qualities of land regarded as a luxury. But its value for these purposes can no longer prevent the increase of Small Holdings, for if the landlord refuses to meet an existing demand for them, the State will force him to use his land as is most desirable from the economic and socio-political points of view.

Up to the outbreak of the war, or rather at the end of December, 1914, some 12,600 Small Holdings had been set up, and another 1400 had been handed over to co-operative or similar associations. Here, then, was a totally different state of affairs to that found after the similar life of the 1892 Act. But one must guard against crediting the provisions of the 1908 Act with the bulk of these results. Certainly the provision of Small Holdings had been facilitated, but, equally, the demand had increased from other causes. The small man now had fresh possibilities before him in the shape of fruit, milk and poultry farms, which were proved to be paying ventures. Once it was seen that a living could be made on a Council holding by one of these methods, the supply of prospective tenants was augmented. Almost 200,000 acres of land were acquired in the first seven years, roughly one quarter of which had been leased and the rest purchased. Of this, in turn, only some 20,000 acres had been compulsorily purchased and 15,000 similarly hired. These last figures falsified those prophets who had anticipated that the bulk of the land would not be obtained voluntarily. As might be expected where demand had free play, the distribution of these new holdings was irregular, for the reason that they predominated in just those districts where their chances of success were greatest. Cambridgeshire, Lincolnshire and Norfolk had established far more than Counties situated in parts of the country remote from access to centres of population or than areas of heavy clay-land could have maintained. In other words, it was just in those Counties in which small farms were already automatically appearing and prospering that the Act of 1908 created additional examples. Lastly, there was nothing to cavil at in regard to the finances of the scheme; it was always solvent, and the losses sustained by individual County Councils

were few in number and small in amount. From the standpoint of the Small Holder, the taxpayer, and the agriculturist, then, this Act proved a success, and it was the first that could claim that distinction.

During the course of the war various promises were made (both on behalf of the public and of the State) to serving members of the forces that their efforts would be rewarded by the greater provision of access to the land. When peace was restored there was naturally a demand that these promises should be redeemed, and special legislation was passed in consequence. It is too near the time to essay an unbiassed account of the proceedings that followed—history will be better able to judge a generation hence—but it is already obvious that a far too ambitious and hastily extemporised scheme was embarked on. As early as 1916, warning voices had not been lacking, for in that year an article appeared in the *Edinburgh Review* from the pen of Mr C. S. Orwin entitled "The Small Holdings' Craze," in which the author pointed out all the standard objections to a widespread scheme of Small Holdings, and also specifically advised those responsible for propaganda work not to promise an Arcadian existence on the land to all members of His Majesty's forces. Unfortunately, such warnings went unheeded. Upwards of forty-eight thousand ex-service applicants materialised, and all were promised that their claims would be met. Some twenty million pounds was set aside, and the County Councils were urged to proceed with purchases and hirings on a very large scale indeed. Fortunately, such matters as the provision of buildings, and the preparation of the land as it was acquired, delayed the rate of progress at which complete holdings were provided, and many prospective occupiers grew tired of waiting and withdrew. By this means the applicants were reduced by a half, and those actually settled on the land by the middle of 1922 numbered some seventeen thousand—this figure including a small number of civilians. From the nature of the case the class of men were—agriculturally speaking—extremely mixed, and no rigid tests as to their suitability or experience were applied. In these circumstances the finances of the scheme will not bear close scrutiny; hasty purchases by

harassed Councils effected at inflated prices involved a very large prospective loss, and, by a dangerous piece of procrastination, the financial day of reckoning was postponed until 1926, the Government having decided to transfer the first seven years' cost of the scheme on to the national Exchequer. Then, presumably, values will be written down to the prevailing level and the taxpayer and the ratepayer will see what the project has cost them. In the meantime every possible step has been taken to smooth the path for this class of Small Holder; no longer, for instance, does his rent have to be related to the cost of the land he has been established on, advances of capital on a pound for pound basis are made to him by Councils for the purpose of stocking his Holding, the freehold of which he can also acquire on easy terms.

Under the conditions prevailing in 1918 to 1921, and after the promises made, it is difficult to say what other course could have been pursued, but from the nation's standpoint, and from that of the bulk of the men themselves, it would, in the light of later experience, probably have represented a better bargain to have given each of the twenty thousand eventual applicants a thousand pounds, and to have let him expend it himself in his own way. Failures are bound to be numerous among all classes of farmers in times of agricultural depression, and the inexperienced ex-service Small Holder (often placed on totally unsuitable land) must inevitably provide an undue percentage of these failures. Nor does it appear that the formation of colonies—a most unfortunate word reminiscent of centres for the treatment of those mentally or physically wanting—will guarantee the success of individuals. The Ministry of Agriculture, under powers conferred by war-time legislation, inaugurated several of these corporate farms in different localities, but in no instance could they be looked on as satisfactory from the individual occupier's or the taxpayer's point of view. By the Small Holdings Colonies Acts of 1916 and 1918 the Ministry was authorised to acquire up to 60,000 acres in England and Wales for the two-fold purpose of establishing (*a*) large profit sharing farms, and (*b*) groups of Small Holdings under a resident director. There was a heavy loss on practically all these undertakings.

Once inextricably bound up with the question of Small Holdings, allotments now call for separate treatment. Their development has already been traced up to the middle of the last century. Thereafter, in 1887, an Act of a permissive nature was passed, for on a demand for allotments being manifested in any given area the local authority was empowered, compulsorily if necessary, to lease or buy land and to let it out in blocks up to an acre in extent. But, owing to the enhanced prices that could be demanded by landowners for disturbance and severance, the resulting rents were often prohibitive, and little progress was, in consequence, made. Finally, the Small Holdings Act of 1908 also conferred powers on Councils in regard to the provision of allotments, and, thereafter, the administration of both these types of small cultivations went on side by side.

Prior to 1918 the latest enumeration of allotments in this country was represented by one taken as long ago as 1895. This gave the number in England and Wales as 483,000. Nine years earlier, Major Craigie had published a comprehensive table which included, under separate headings, "allotments detached from cottages" (389,000), allotments of "one-eighth of an acre and upwards attached to cottages" (257,000), "potato plots" (93,000), and "cow runs" (9000), representing a grand total of 748,000 for England and Wales. Here we have ample evidence of the difficulties attaching to the definition of an allotment, for strictly speaking, the first class alone represents the ordinary acceptation of the word, and subsequent enquiries have been confined to those plots of land which were detached from the occupation of cottages. The distribution of allotments has always shown marked features, and these are evidenced in the returns for both 1886 and 1895. Briefly, the East Midland Counties and East Anglia provide an undue proportion, and the Northern areas are least represented. Major Craigie borrowed a table prepared for the Commission of 1881, which placed side by side the density of allotments per thousand acres of farmland and the weekly wages of farm workers, showing that the former tended to increase as the latter fell. But as evidence is lacking to show if cottage gardens and cow-runs are included,

these deductions may be subject to modification, as such Counties as Westmorland and Cumberland, which had only some four to six allotments to the thousand acres, might have favoured the former; at the other end of the scale Bedford is found with a proportion of seventy allotments.

But in any case it is probable that such figures represented mainly urban plots, as despite the popular belief that allotments are the prerogative of the countryman, recent statistical enquiries have shown that the majority of them are located in towns. The East Midland and Eastern Counties enjoy the lowest rainfall in the United Kingdom, and those particular districts in which allotments are densest are also those in which the most easily worked soils exist. In these conditions it is natural to find that the population of such towns as Bedford, Peterborough, Cambridge and Luton make much larger use of suburban fields for the cultivation of vegetables than do urban dwellers in the West and North of England. Town allotments, again, are invariably what their name implies, and average in number some fifteen to the acre, whilst the rural are frequently found to embrace Small Holdings, and to cover plots of land up to some acres in extent. For that reason considerable care has to be exercised when instituting comparisons between town and country. The 1908 Act had provided 133,000 allotments up to 1918, but this figure afforded no criterion as to the immense increase in urban plots caused by the campaign to add to the home production of food-stuffs. Accordingly a census of all allotments in England and Wales was undertaken by the Board of Agriculture on three subsequent occasions.

The first, taken in April, 1918, recorded a total of 1,350,000, covering 195,000 acres, the second in December, 1919, 1,250,000, and the third, a year later, 1,330,000. Comparison is rendered difficult by the fact that the 93,000 plots owned by Railway Companies were not included after the first enquiry, and certain adjustments of a statistical nature were necessitated by the omission to extend the former to centres of population below three hundred persons, but the outstanding feature is that the pre-war total had been increased by more than one hundred per cent. The greatest individual additions had, of course,

taken place in the towns, and especially in those centres which had previously been addicted to the movement. Many urban centres trebled and quadrupled their allotments, whilst the country districts added at most two-thirds to their previous total. The explanation doubtless is that the country suffered severely by the absence of farm labourers overseas, and that those remaining, together with substituted workers, were fully engaged in producing food on a large scale; the townsman, on the other hand, was encouraged by provisions of the Defence of the Realm Act such as Daylight Saving and the compulsory acquisition of land (together with unreasonable demands from the retailers of vegetables), to turn to allotments as a useful hobby. Again, the countryman has a recognised disinclination to spend an undue proportion of his scanty leisure in raising food individually when his whole life is spent doing the same thing commercially.

The number of allotments will inevitably tend to decline again as the emergency regulations affecting them lapse, but their popularity has been added to as a result of the war period, and in urban districts they will in future be afforded special encouragement by recent legislation. In the country, any demand for them can, in common with Small Holdings, always be given expression to under the powers possessed by County Councils. Fantastic claims as sources of food supply were made on their behalf during the war, but when every allowance is made for *ex parte* bias, there remains no doubt that certain essential commodities, particularly potatoes, were raised by allotment holders in very large quantities, and thereby helped to keep down prices.

Some account of the provision and distribution of holdings of all sizes having been given, there remains the more controversial question of the relative advantages or drawbacks that are attached to each type. Unfortunately, there is a tendency on the part of the rival schools of thought categorically to assert that only large, or Small, Holdings can succeed, or fail, in general. The truth is that each possesses certain advantages under different conditions, and that accordingly there is room for both in this and all other countries. It is also true, however, that the

majority of the advantages belong to the larger undertaking, and that even where other conditions are similar the smaller holding is rarely placed on an economic level with the larger.

It is best to subdivide into headings the various questions involved. Take labour first. Here, as we will be shown further on, if the number of workers employed per acre is the one criterion, then the Small Holding is clearly the best from the standpoint of the nation, as it affords work for two or three times as many persons per acre. But, as Orwin has frequently shown, if we view the question from the altered standpoint of the value of the outturn per worker, then the large holding comes to the front. An illustration, culled from a survey of Welsh farms, of the working of this factor records an increase of almost one hundred per cent. in this value (£317) on holdings over two hundred and fifty acres in excess of those below fifty acres (£169). But, again, there is a reservation to make: the sales per acre of land were greater on the small farms, although both types were producing the same commodities. The above writer's own summing up was as follows:

Taking the results as they stand, the fact emerges that employment and production vary inversely with the size of the holding, but that the production per man employed varies directly with the size of the holding. Thus, on the one hand, the advocates of closer settlement and the intensive methods which must necessarily follow if men are to live by the cultivation of small areas of land would seem to be justified, in that the results shown by the survey indicate the highest amount of employment and the greatest product-value in the smaller groups. On the other hand, the advocates of more extensive methods of farming can point to their justification in that it is clear that the efficiency of management is greatest in the larger groups if the standard of measurement be that of product-value per man employed. However, it is clear that either party is drawing conclusions from incomplete data. The efficiency of any farming system can only be judged by an examination of the extent to which all the factors of production are utilised and balanced under it. Each of the assumptions made from the figures above ignores entirely the factor of capital. Land, labour and capital are all required for production, and the *optimum* system of farm management is that which utilises all three together so as to secure the maximum result from each. If

information were available as to the capital utilised in each of the groups in the survey it might be found that in the smaller groups labour was being wastefully employed, and that an equal number of men working on a larger area of land with more capital in the form of machinery equipment, would produce an equal product-value per unit of land with a higher rate of output per man employed. Equally it might be found that in the larger groups the use of more labour, or a reduction in the area of land, might produce the same product-value per man with a higher rate of output per unit of land. Obviously there can be no absolute answer to the question of what constitutes the most economical unit of land for farm production.

Here, then, it is clear that no final decision can be reached—too many factors must be taken into consideration—for the old problem of the comparative value of different methods to the individual farmer or to the nation at large crops up, and is complicated by the intrusion of consideration as to whether production for a given area of land or from the employment of a specified amount of labour is the desideratum—in turn depending on the density of population and the prevailing wage-level.

The next point—that of the rate of production per acre—has already been referred to. Here, the only evidence available comes from abroad and tends to show that the large farmer certainly raises heavier crops than the small man. If comparison could be extended to the different size-groups of holdings in this country it would doubtless be found that cereals and other crops which call for considerable capital outlay give a better yield in the hands of large farmers. On the other hand, it is likely that in certain picked localities the small man would secure a better yield from fruit and vegetables than would his rival, who only treated such crops as side-issues in his system of farming. This would, of course, be attributable to the constant individual attention bestowed on his property by the owner of the small undertaking. It is hardly necessary to point out the distinction that must obviously be drawn between the rate of yield per acre and the value of the produce per acre when comparing class with class. It is, however, often loosely said that the “produce per acre” of the Small Holding exceeds that of the large; this is true, because the former is mainly devoted

to intensive forms of husbandry that result in a greater weight and value per acre than accrues from the raising of standard crops.

Lastly, there is the important aspect of the pecuniary returns to be looked for from each type of farm. And, as before, no hard and fast rule can be laid down. The real Small Holder, who is prepared himself to work full-time on his property, has the assistance of members of his family, is established on suitable land, has a ready market for his produce and, most important of all, is properly capitalised without recourse to loans, can generally make a living. If, however, more than one of these advantages is wanting, then his position is precarious. Let us take each branch of farming and discuss his chances in it.

General arable farming (covering of course the production of cereals) is essentially the large farmer's prerogative, and represents the maximum disadvantage under which the Small Holder can struggle. The latter lacks sufficient capital to farm his land properly or to make use of essential machinery, he must often buy at retail prices feeding-stuffs that the larger farmer himself raises; also his financial position compels him to realise his produce the moment it is secured, regardless of the state of the markets. The small mixed farmer cannot conduct seasonal operations on any considerable scale without recourse to outside help. Finally, his rating burdens tend to be relatively heavier (actually so per acre) than are those attaching to larger undertakings. None of his protagonists has ever suggested that sheep farming is a possibility for the small man, and in regard to meat production the pig is his only possibility, although a few beasts can be reared on Small Holdings as a side-line. Milk forms a stand-by, but is apt to make heavy demands on the labour of other members of his family. When statistically arranged, the different types of livestock found on each class of holding generally conform to a predetermined distribution, that is not unexpected. The following figures have been extracted from the *Report of the Census of Production*, and relate to Great Britain in 1908.

THE SIZE OF HOLDINGS

Numbers of Livestock per 1000 acres of land under crops, grass and mountain and heathland used for grazing

Size of holdings	Horses	Cattle	Sheep	Pigs
1- 5 acres	120	215	331	557
5- 50 "	57	229	473	160
50-300 "	42	191	609	72
over 300 "	32	135	817	42

The *Report* again classified these various groups of farms as arable, grass and mixed, when detailed examination brought to light the following not unexpected tendencies. Horses were more employed on arable holdings, where the main increase was in the larger examples, but the density of cattle was between two and three times as great on the grass farms of all sizes; the increase in the case of sheep on grass land was some fifty per cent. on all holdings, and slightly more marked in the smallest size-group; pigs predominated on arable farms, where their density ranged from 690 per 1000 acres (on those from one to five acres) to 62 (over 300 acres), while on arable farms the corresponding figures were 608 and 44. Over twenty years earlier Craigie had prepared a somewhat similar table, which evidenced the same distribution, but to a more marked degree. All such *data* emphasise the handicap which the smaller undertaking suffers under in the use of horses; the small man has to maintain relatively far more of these animals than does the one in a larger way of business, and at the same time he cannot make full use of them. Alternatively, if he turns to machinery it is again difficult to utilise most implements to their full extent, and co-operation when called in to aid does not seem to meet his requirements in this respect. Figures have often been published showing, distributed on an acreage basis, the relative costs of utilising machines ranging from drills to chaff cutters. In all such examples the man operating on a larger scale has an overwhelming advantage.

Impartial accounts of typical groups of mixed Small Holdings bear out these conclusions, and one relating to those in Oxfordshire has been published by A. W. Ashby, which may be taken as typical of others. Briefly it was found there that too many horses

were kept, scarcely any sheep and many pigs. Market-gardening and poultry keeping appeared to demand a minimum of four acres, milk-production one of twenty-five, and sheep of at least fifty. Mixed operations called for as much machinery and as many horses on twenty-five acres as could have been economically employed on one hundred. The writer held that under the existing conditions three hundred acres of land were necessary to support six families, and he considered the general farm equipment was poor. The conclusions therein reached, augmented by reading similar accounts elsewhere, compels one to agree with his statement that "the position of the Small Holder is better than that of a labourer in housing and food, but not in respect to work or cash receipts."

We are thus left with the typical cases of fruit, vegetable and poultry farming as they affect the Small Holder. Here, when in the vicinity of markets and on easily worked soils, he finds his best chances of success, but even so he is placed in an inferior position to that assumed by any rival who goes in for similar forms of production on a larger scale. The latter at once secures advantages in the matter of purchasing his requirements, and gains concessions from railway and other transport agencies in return for forwarding large consignments. The one asset that the small man has consists in the greater amount of personal supervision he can give to the various operations on his land.

One is accordingly drawn to the inevitable conclusion that in every type of farming the larger undertaking has great initial advantages, and only in two or three branches can the smaller unit compete on anything like equal grounds, and even then is still labouring under disadvantages. But the example afforded by Denmark is always quoted in refutation, and co-operation advocated as a corrective to lessen the handicap of the small undertaking. This latter question is dealt with separately, but it must be pointed out here that the case of a people entirely dependent on an export trade (and raising solely what are acknowledged to be the only economic products for their type of holding) represents the antithesis of what is to be found in these islands.

It is often said that Small Holdings suffer from fictitious

objections raised by private land-owners against their establishment, on the score that additional work is thus thrown on agents, and also that the provision of farm buildings, roads and water supply entails a relatively high outlay. But such arguments are only of limited validity in these days when it is the statutory duty of public bodies rather than of individual persons to meet the demand for these properties. On the other hand, the views of those for whom this type of holding is intended are sometimes strangely perverted, as the reputed comment of a farm-labourer shows. "Small Holders," he said: "Why, first they starves the land, next they starves the cow, and then they goes and starves themselves!"

The fact remains that numerous Small Holdings, as distinct from small farms, were automatically arising under suitable conditions before the second Act was passed, that the latter encouraged and fostered their multiplication, and that until the war and its resultant unsound schemes supervened, the movement as a whole was proving financially successful both to the individuals concerned and to the nation.

Writing of peasant proprietorship in France, Lord Ernle, in a well-known passage, declared that "the small proprietor is worse housed and worse fed than the English labourer. His cottage is a single room with a mud floor in which he and his family and livestock live, eat, sleep and die. From morning to night his toil is excessive and prolonged; female labour is the rule; children are continuously employed, while his little property is often mortgaged. Arthur Young talks of the magic of property, but there is such a thing as the demon of property." If such a picture is not true of the corresponding conditions in England now, it must not be assumed that the Small Holder's lot here is an easy one. He is called upon to work at least as hard as any labourer, and neither he or his family has time to spare from the demands of their holding. For this reason it was a sound custom of the pre-war regulations affecting the choice of applicants for holdings whereby preference was given to those with previous agricultural experience.

Finally, it must be remembered that in creating small units of production in agriculture the nation is proceeding contrary

to the long recognised principle followed in all other branches of industry, and only in a very few specialised forms can such types of farm compete on anything approaching equality with larger lay-outs. Even then the latter have always certain inherent advantages. If the establishment of Small Holdings is allowed to proceed on its own lines, with the aid of permissive rather than of creative State support, then it should not outrun its economic possibilities, but danger lies ahead in the event of widespread and artificial stimulus being applied. That on the other hand the really large farm may have a greater future before it is possible, for in the present time of depression authorities are not lacking who hold that for mixed farming the unit of one or two thousand acres can alone provide employment for numerous workers under the supervision of an individual farmer or manager, and that the future tendency will be to move away from the medium-sized holding to one which can give full scope to machinery, or in other words that the output per man will be the standpoint from which agriculture over the greater part of this country will have to be judged in the future.

CHAPTER V

TITHE

Its origin amongst non-Christian peoples; introduction into this country; what it was payable on; law-suits relating to vicarial tithes; difficulties caused by the introduction of new crops; examples of tithe incidence in certain parishes; on agricultural labourers' wages; in Ireland; Arthur Young's views on tithe abroad; clerical answers; Commutation and the Act of 1836; Extraordinary tithe rent-charge; views of agriculturists on tithe; fluctuations in value; effect of the war, and subsequent legislation; redemption in the past and at the present.

IT is customary nowadays for those living on, or by, the land, to refer to the constitutional charges they are called on to meet as "burdens," but the manufacturer is not generally thus driven to emphasise their incidence, rather treating them as an out-of-pocket expense, the bulk of which should be handed on to the consumer. These two outlooks are symptomatic of the divergence between farming and factory methods. The British farmer must always try to cut down outgoings in order to cope with the competition of countries which know no taxes; the manufacturer can concentrate on output. The burdens, or charges, whichever appellation we give them, affecting the British agriculturist are four in number. The two shared in common with other payers (but now on different bases) are local rates and national taxation. The two peculiar to those who wrestle with nature for a living are tithe and Land Tax, and of these tithe is not only the more important pecuniarily, but is historically the most ancient known impost.

Among early civilisations it was of universal application. In Babylon, Egypt, Greece and China, a portion—not necessarily always a tenth—of movables was exacted by rulers from their subjects, or by victors from the vanquished. What more natural than that the custom should be extended to meet the needs of religion? The Old Testament abounds with references to tithes on corn and on flocks being handed over to Hebrew kings, and the final stage was there reached when these payments became

due to the priests for their own support and the upkeep of the temple.

In Western Europe in general, tithes were paid to the church in the first centuries of the Christian era, paid it was subsequently sought to prove, by divine law. This view was refuted by Selden in his *History of Tithes*, who showed that custom had gradually come to the assistance of the church. It is agreed by all authorities that the payment, theoretically at any rate, was voluntary, but the power of the church over men's souls was a great handicap in her favour. Councils of the church enjoined the amounts and methods of payment, but no trace of any legal authorisation outside that of the Canon law can be found for centuries. It was only at the end of the eighth century that a law of Charlemagne directed this payment towards the maintenance of the clergy, the upkeep of the church itself and the assistance of the poor. It is probable that the decree of a Synod in 786 effected the same ends in Britain; certainly the payment of tithe was ordained by the edicts of later Anglo-Saxon rulers, notably that of Edgar in 960.

The rights of the church to tithes being recognised, there followed a period of time in which the grounds of the age-long dispute between payer and receiver were shifted. It must be remembered that the early church maintained no parochial institutions. Monasteries and itinerant clergy represented her activities, and, accordingly, it was to the monasteries that the tithe-payers were called upon (under pain of excommunication) to give tribute. In 994 the *capitula* of Theodulf directed as follows: "Let no mass priest wheedle to his own church a man that belongs to the district of another's church, nor instruct him to come to his church out of his shire...and to pay him the tithes and rights which belong to the other." It is an arguable point for what length of time the individual payer might select the monastic institution which should receive his contribution, but the Council of Lateran in 1180 settled the question on a local basis—a basis which caused the payer's parish, as we now know it, to be the proper recipient. The establishment of these parish churches by wealthy persons, who endowed them with lands, got rid of the overriding position which "minster"

churches had borne to others (and especially to churches which possessed no burial grounds) in the matter of the division of tithes. We can still see traces of this evolution in the absence of tithe on certain manor properties, or on land that was once monastic and by its payment on land in one parish to a church in another. For instance, the strips in one of the common-fields at Cambridge "tithed indiscriminately to the various churches (in Cambridge) without any regard to parish boundaries" (Goodman, *History of St Botolph's Church, Cambridge*). The rectors of Theberton, Suffolk, have ever since the thirteenth century, received no tithe from certain land in their parish, land that once belonged to the Premonstratensian Abbey of Leiston; for the dissolution of the monasteries did not affect this freedom, as Henry VIII ordained that tithe-free land should remain so for ever.

The above affords a brief review of the growth of this payment from primitive times up to mediaeval. Its exact incidence and development have been a source of contention among historians for centuries; all that concerns the agriculturist nowadays, however, is the fact that custom legalised its payment centuries ago. On the other hand, it is important that he should appreciate the different ways in which he and his predecessors have been assessed, and that he should know something of the events occurring within historic times that have led to the alienation from the church of a portion of the money he provides.

First of all, what were tithes originally payable on? In theory they were due upon (a) all things arising from the ground and subject to annual increase—grain, hay, wood; (b) all things nourished by the ground—the young of cattle, sheep, horses and poultry, and (c) man's labour, or the net profits of his industry, and even of his wages. The first were styled praedial, the second mixed, and the third personal tithes. Praedial tithes generally comprised corn, hay and wood, but came to be extended on occasion to other field crops and even fruit. Although the rector generally received these great, or praedial tithes, while the vicar took the mixed, or small, this custom was by no means universal. It should be noted that, save by custom, examples of which are given further on, tithe was never payable on wild animals, or

minerals. Barren land was free for seven years after conversion to husbandry subject to certain reservations; Royal forests and monastic property were exempt; land in the city of London originally paid by custom, being assessed in proportion to the rent it commanded. This "custom" was confirmed by Act of Parliament in the reign of Henry VIII.

One of the first enumerations of articles that mediaeval minds held to be titheable was issued in 1175 at the Council of Rouen and runs as follows: "All tithes of the earth whether of corn, of fruits of trees or other fruits are the Lord's...; but since many are now found unwilling to give tithes, we declare that, according to the order of the Pope, they be admonished three times to pay the tithe of grain, wine, fruits of trees, young of animals, wool, lamb, butter, cheese, flax, hemp and of whatever is yearly renewed, and be laid under *anathema* if they do not amend." In 1250 the *Constitutions* of the then Archbishop of York aimed at unifying the systems of payment in kind, but reminded the faithful that the following also were liable—"the gains of negotiations, handicrafts and merchants...that is, let tithes be paid of their wages unless they be willing to make some certain (*i.e.* fixed) payment." This is of importance in the light of certain occurrences centuries later. In 1305 the *Constitutions* of Merton claimed, *inter alia*, as titheable fisheries, rivers, ponds, trees, cattle, pigeons, seeds, fruits, warrens, fowling, gardens, turf (where dug), eggs of swans, hedgerows, bees, honey, wax, mills, huntings. As we shall see directly, the titheability of nearly all these was at some time or other disputed in the Law Courts, several with success.

This was the situation up to the time of the dissolution of the monasteries, an event which directly caused the transference of much tithe-ownership to lay hands, and raised opposition which still finds expression to payment in these circumstances. For, when Henry VIII handed over or sold the properties of the monasteries, there naturally accompanied them the rectorial tithes. These became the personal property of the new owners, whilst a vicar attended to the cure of souls and received usually the small tithes. Subsequently there has been no legal obstacle to the sale of this form of property, and at the time of

commutation, in 1836, approximately one quarter of all tithes were in lay hands.

So far as the history of tithing has been traced, it cannot justifiably be held that, irksome as it was, it had inflicted any direct deterrent on agriculture. Matters were to become altered, however, and by the seventeenth century its incidence had become a mill-stone round the neck of those who wished to improve their methods of farming. It was not the cost of the charge itself—whether paid in money or in kind—for that could be, and was, tacitly taken into consideration when rents were fixed or agreements for sales of property signed; it was rather the knowledge that there was always present a sleeping partner to share in the gains of husbandry but never to risk any capital—one who appeared and claimed a tenth of all the results accruing from improved methods and from the growth of new crops. During the last eighty years this direct handicap has not existed, but the antipathy to tithe paying has nevertheless been in evidence—not, as on the Continent during the eighteenth century, from anti-clerical causes, but simply on the grounds that payment represents a “burden” which other industries do not suffer under.

There is one important aspect of the matter which has received scarcely any attention from historians or agricultural writers in the past, and that is the history of the collection of tithes in kind, particularly during the seventeenth and eighteenth centuries. All books on the history of agriculture compress this period into a short paragraph giving an account of the *modus* (a fixed annual payment, usually in money, in lieu of tithes in kind), and all ecclesiastical writers omit reference to any matter lying between the Reformation and 1836. Two points strike the historian who enters this almost virgin field. The first is astonishment that agriculture could be carried on under such incessant friction as took place between the clergy and the farmers, and the second is wonder at the pertinacity of the former in securing their dues, and their litigious energies if frustrated. To one who has consulted all the reports of legal cases concerning tithes from the fourteenth century up to the nineteenth, it is further a matter for wonder from whence the

clergy found the money to embark on these suits. The overwhelming majority of the cases concerned small tithes; there were few instigated by, or against, rectors. On the other hand there were a certain number between vicars and rectors as to the ownership of particular tithes. The earliest cases, those in fact up to about 1500, mostly dealt with the principles of payment, the persons liable, and the courts appropriate for suits; from the sixteenth century up to the middle of the eighteenth century, as we shall see shortly, questions connected with agricultural practice and the complications caused by the introduction of new crops initiated the majority of suits, whilst in the last decades prior to the Commutation Act, the law was generally invoked to decide upon the rights of individuals to tithes.

Let us glance at some reported cases. We find a vicar in 1595 instituting a suit for the payment of tithe on turkeys and tame partridges; he failed, as it was held, naturally, in the case of the latter, but surprisingly in that of the former bird that both were *ferae naturae*. Next year saffron, much grown in East Anglia, was adjudged a small tithe. An attempt to secure payment as early as 1314 on colts born at the King's stud farm at Woodstock was successful, as was another seventeen years later against the King's keeper for underwood sold off a Royal estate. The question of timber was always a controversial one, but the law generally held that the body of the tree and its branches were privileged, and a test case went against the vicar who demanded tithe of the "germins," or shoots, growing from the roots of felled trees. A *confrère*, however, secured his tenth of acorns, as these were clearly yearly renewable, and as early as 1640 a nursery gardener was held liable for payment on all young trees that he sold out of his orchard. One hundred and sixty years later the Rector of Elmsett, Essex, proved his right to payment on wood converted into charcoal. In 1716 the Rector of Hurstpierpoint, Sussex, went to law to secure the grain that fell to the ground from the bottom of the tithe cocks, and the Master of a Cambridge College as late as 1808 actually enforced payment on the stubble of wheat and rye. The Law courts had on another occasion to decree that tithe was not due on the scraps of hay produced on the balks and headlands of common fields.

In the seventeenth century one vicar claimed successfully upon fallen apples; a few years earlier another had won his case for tithing wild cherries. It is almost inconceivable that persons could be found in the position of the clergy who would deign to set such an example to their parishioners as did these two incumbents; one tenth of the value of a few wild cherries or of windfall apples brought both parties up to London for cases that lasted days, and must have cost hundreds of times the value of the things concerned. But worse can be found, for in 1681 a vicar confidently claimed payment on the wild ducks taken in an East Anglian decoy, and, naturally losing, then had the *sangfroid* to enter a plea for his tenth of the eggs laid by the few tame ducks used in the decoy! Some incumbents suspected collusion against them; this was doubtless the cause of the suit which went in favour of the vicar when it was shown that an apple-grower had allowed someone else to pluck his fruit, payment being thus avoided; on the other hand it was held that if the fruit was taken by unknown persons the vicar had no remedy.

Tithe on livestock led to curious actions. Keen incumbents saw great possibilities in sheepfolds and grazing meadows, and did not always rest content with their share at clipping time or with a *modus* on calves. They were, of course, entitled to the "whole of the meal of milk every tenth morning and evening" (Chigwell, Essex, 1678), but must the vicar fetch his pailful himself or must the cowkeeper deliver it? If the latter ruling was given, where should he take it to—the vicarage or the church-porch? A majority of the bench decided that this, being a small tithe, the cowkeeper should deliver the milk at the church-porch. Great tithes, of course, devolved on the owner to fetch and garner. Cattle bred for "pail or plough" were exempted in cases tried early in the seventeenth century, but cattle depastured in a parish in which they did not work at plough were titheable for agistment there, though exempt in their own. Saddle horses escaped the net at Sudbury in 1716, when the vicar failed to secure tithe of agistment from owners who had depastured them on commons. But an innkeeper, half a century before, had had to pay for the herbage travellers' horses had

consumed while their owners put up at his hostelry. Previously a similar decision had gone against a tithe-owner, but in his favour so far as the agistment of working horses was concerned. There was constant friction in the case of sheep as to the exact time at which the vicar could claim his share of the "increase," and whether his claims for wool were met fully at the annual shearing. In 1752 it was decided that tithe of wool was due at shearing-time and formed satisfaction for the past year's pasturage; but flocks fed upon the stubble for the sake of the manure were not titheable; lambs paid when they "could live without their dam."

If these cases seem to have involved difficult matters of principle at law, put money in the pockets of the lawyers, and caused endless annoyance in half the villages of the country, yet matters were even more complicated by the introduction of crops from abroad. Turnips afforded the most litigation, closely followed by hops. By 1630 "all those new things, tobacco, hops, saffron," were reckoned as small tithes, and in 1670 cole-seed had been adjudged to the vicar. In 1691 hemp and flax, being "exceedingly difficult to tithe, it is ordered that a sum not exceeding 4/- per acre be paid for all." Potatoes although "grown in great quantities in common fields" were yet small tithes, and turnips in similar circumstances in Suffolk in 1718 had to be set out in heaps for the vicar to tithe, but if grown on a small scale he was entitled to each tenth individual root.

There was worse to come, however, for when turnips were fed to sheep the position became hopelessly involved. In 1777 the Rev. F. Paddey, vicar of Kellington, Yorkshire, gained a decree in the Court of Exchequer by which he was adjudged entitled to full tithe on all turnips "drawn and eaten by unprofitable stock—that is, the tenth they were let or sold for," and, further, "all sheep fed on turnips and sold to the butcher before clipping-time to pay the full value of the tithe of turnips eaten by them." The defendant parishioners had, as defence, urged that a *modus* of 1*d.* per head of the flocks met both these demands. This case cost in all £700 for law expenses, and the value of the living was some £200 per annum! An early instance of turnips grown on a considerable scale occurs in *The Manor*

of *Theberton*, where we read of a rector in 1674 making arrangements with his parishioners for two eventualities—namely, turnips sold to feed fat stock, which were to be tithed, and those fed to milch cows, which were to be exempt. Cases from Kent went to show that the accepted method of tithing hops was by measure in the bins when they were picked, and not by the pole or hill on which they were grown.

If an interpolation may be pardoned at this point, it seems worthy of note that Coke's *Institutes* of 1628 contained rulings on nearly all the questions involved, and yet actions were even more frequently entered on in later years. The following (*Inst.* II. 652) appears to cover most of the ground. "Tithes shall not be paid of anything that is of the substance of the earth and not annual, as coals, turf, etc. nor of beasts that be *ferae naturae*, nor of agistment of such beasts as pay tithe, nor of cattle that manure the ground, but of barren beasts the parson shall have tithe on agistment of herbage, unless they be nourished for the plough and so employed. No tithe shall be paid for after-pasture, nor for rakings, nor for *sylva caedua* employed for hedging and repairing of plough, and two tithes shall not be paid of one land in one year."

Whilst fish were only titheable by custom, this did not prevent many sea-board clergy from instituting suits which they must have felt, from the lack of historical support, were hopeless. An interesting example is the case of the vicar of Yarmouth, who sought to secure one twentieth of the fish landed in his parish that had been caught off Iceland; Cornwall also provided many instances, e.g. the vicar of Mevagissey obtained his tenth of pilchards, but fish taken for bait were held to be tithe-free. Oysters and oyster-spawn were not allowed to the tithe-owner at Brightlingsea in 1713.

Market-gardening raised fresh difficulties; generally a composition called a "garden penny" was accepted by the tithe-owner, but one case led to a considered judgment from the Courts in the following terms: "peas and beans sown in rows and banks and managed in a garden-like fashion which had usually been paid to the vicar when hoed and managed by hand shall be paid to him [and not the rector] when the ground has

been turned with a plough which does the work of a plough and a spade." Upon such small points did the disposal of tithe so often depend.

Tithe on minerals, except in rare cases where custom allowed, was not recognised, but this did not prevent an ingenious Derbyshire cleric from seeking to prove that veins of lead ore were subject to annual growth, and therefore came within the well-known definition of titheable objects.

Mills were titheable as representing personal profits, and accordingly paid on that basis, and not, fortunately for the miller, on their output of flour. There was generally a distinction drawn between newly created and "ancient" mills, in favour of the former.

Having seen the efforts of the clergy to secure their rights, and often far more than their rights, some account of the small tithes actually paid in a particular parish may be of interest. Take Brotherton again, where the Rev. John Law, who was vicar in 1770 (at the time when the Ings were still annually divided) has left the following exact description of his dues.

According to an old *modus* with the parishioners of Brotherton a Pidgeon Chamber pays one shilling and threepence, a Dove Coat half a crown, a new milch cow two pence halfpenny, a strip't cow three-halfpence, a foal four pence, every house ninepence halfpenny, a swarm of bees two pence, the old stock a penny. Everyone above the age of sixteen pays two pence as a communicant. Turnips are paid for according to their value, or as they are let. Potatoes are paid in kind if not compounded for. The tythe of Orchards, Pigs and Geese are also paid in kind, if not compounded for. Rape and all new species of vicarial tythes are to be paid in kind unless compounded for, but Hemp and Flax must be paid according to Statute. The Marsh Mill pays an old *modus* of 2. 6 yearly, and tho' I have agreed to take the same for the Windmill, yet my successor is not obliged to do the same, but may demand the tenth part of the Moultre after all reasonable expenses are deducted. The new Shelling Mill built last year in the quarry Holes is also titheable, after it has been so long employed as may be fairly supposed to reimburse the proprietor the expense of the building.

N.B. If Clover and Saint Foin stand for seed the Tythe thereof belongs to the Vicar, but if it is cut or made use of for Hay, the Tythe belongs to the Appropriators, or Lessee of the Dean and Chapter.

It should be observed that one or two of the above payments are strictly speaking not tithes, but represent Easter offerings. In the year in question, Mr Law collected 347 separate sums (the vast majority being a few pence only) from 132 different persons, amounting to £28. These payments, it must be remembered, were additional to the great tithes, with which, being a vicar, he had no concern. He appears to have carried out his invidious job with patience, tact and kindness, as the following extracts from his tithe account-book show. He let a widow off ("poor and deserving"), a male parishioner ("lost a leg") another also ("very poor"); but he could be firm when necessary ("by warrant of distress," and "distrained on"). He had occasional bad debts—"died insolvent," "ran away," "left the town," "worked in the garden"). He allowed J. Robinson on payment of 2s. 6d. to keep his tithe pig "as they sold dear," and gave half of his tithe of potatoes (nine sacks) to his curate. But another farmer paid after "much threatening and many altercations," whilst in 1772 he secured process against fifty-seven persons, but failed to get anything from a pigeon loft ("rats"). He was often dependent on the farmers' employees for important information relating to operations about which he was otherwise ignorant—"R. Kitchen sold certain turnips to Mr Simpson and eat others with his own sheep, for he was seen to bring some home in a cart." He could not always believe what he was told as to the prices that produce had fetched, and once noted that "Mr Furnish was either a bad farmer or a dishonest man." On one occasion his tithe geese flew away, and he observed that "their wings must be clipped in future."

The above is, no doubt, typical of conditions in thousands of parishes scattered all over the country. Is it therefore to be wondered at that the position often became unbearable? Should we not rather express surprise that the system worked at all?

There remains one important feature to be illustrated; that is the incidence of tithe on wages. We have seen that theoretically it was leviable on all clear profits and salaries, but the writer only knows of two instances where the wages of agricultural labourers were held liable. From a quotation in *Coke's Institutes*

from an Act of Edward VI it would appear doubtful if these payments were strictly speaking enforceable in the case of farm labourers. The section in question reads as follows: "That every person exercising merchandise, bargaining and selling... (other than such as be common day labourers) shall yearly... pay for his personal tithes."

The first case occurs in that interesting work, the *Rector's Book of Clayworth, Notts*. Here, after giving instances of the usual trouble with recalcitrant payers and others who professed their ignorance of the existence of tithe, the rector in the year 1683 wrote as follows: "When I was about to enter on this living I heard Dr Mapletoft, my predecessour, say that there was one thing in ye Parish which he would not lose of all things that belonged to it, and that was a farthing in the shilling of all Servants' Wages." After securing details of this payment in his predecessor's time the rector then sought to collect it himself, but met with violent opposition, and was finally informed that "it would much gratify ye neighbourhood if I would foregoe it. But I answered, that if it was so long since it was paid, there was the more need to look speedily after it, least it be lost for ever. I presently took out a citation in the Spiritual court against Ralph Mears, Thomas Searcey and Richard Hallifax, who thereupon submitted and paid, and others paid by their example. Thus was I now in peaceable possession and ye servants willingly paid for some years, till some of their masters, loath to pay their own tithes...thought it plausible to take their servants part and not to pay me as of late they had done. They told them that all I could do at them was to excommunicate them, which was only their not going to church." After threatened law-suits and an abortive arbitration, the rector reluctantly let the matter drop, and no more is heard of this interesting survival, but if the practice had ever been universal one hesitates to conjure up a vision of village life in the circumstances. What, for example, would the National Union of Agricultural Labourers have had to say to this levy on their members' cash earnings?

The second example of this exaction—for it can be described in no milder terms—occurred as late as 1832, and resulted in the imprisonment of the defendant, an agricultural labourer named

Jeremiah Dodsworth, at the instigation of the Rev. Francis Lundy, Rector of Lockington in the East Riding of Yorkshire. Thirteen "servants in husbandry" owed arrears of payments of 4*d.* in the pound on their wages, "being tithes, offerings, oblations or obventions" as the writ described them. Twelve owed £2. 18*s.*, of which Dodsworth's share, being for two years, amounted to the princely sum of 9*s.* 4*d.* Distraint upon his goods yielding nothing to the rector's pocket, the constable was ordered by a brother clergyman on the bench to take the said "Jeremiah Dodsworth into your custody and keep him safe (at the House of correction at Beverley) for the space of three calendar months." Comment is impossible. One can only note that the basis of demand was slightly lower than at Clayworth, where it was equivalent to 5*d.* in the pound.

The above examples have all related to the incidence and collection of small tithes. Great tithes, from their nature, were less liable to lead to disputes in principle, but cases in the Courts were frequent affecting the method of their collection. All are familiar with the standard objections to the collection of cereals in kind—the acrimonious disputes as to the exact time at which it was least inconvenient to set out the tithe, the expense of the provision of tithe barns and the conversion of the impropietor into a dealer in grain. The procedure involved could account for anything up to a quarter of the gross value of the tithe. The law-courts furnish additional objections. The same rector of Clayworth on one occasion records that a farmer had led corn from a certain field before his servants had "viewed" it. As a result the rector had to take his share from the stacks themselves. A few years earlier he had secured a cash payment under similar circumstances—no doubt in the nature of a fine. The rector of Reigate secured his great tithe on peas and beans gathered green, but he had to institute proceedings in 1715 in order to do so. An action proved the right of the rector's waggon, already loaded with sheaves from the land of one farmer, to enter the land of another tithe-payer. What possible objection there could be on the part of the second person to this procedure one cannot conjecture, but it was sufficiently powerful to involve him in a law suit. The clergy almost necessarily won when the

Law Courts were avoided, as witness the thirteenth century story quoted by Coulton (*Social Life in Britain*) when the husbandman found the bad coin he had tendered the priest for tithe placed in his own mouth at the Communion table.

Let us now turn to Ireland, where, if we expect to find the business of tithe collection carried on with fervour and opposed by violence, we shall not be disappointed, for was not this the country in which even the fish had religious susceptibilities, as witness the case of the Protestant clergyman who it was alleged had caused the shoals to leave their usual grounds off a Catholic coast by attempting to levy tithe on them when caught? William Cobbett, in his pamphlet entitled *The Doom of Tithes*, especially singled out conditions in Ireland as calling for remedial measures. He strongly upheld the tithe-payers, and declared that it was iniquitous to mulct the peasantry in order to secure contributions for a non-representative church. But when he attacked the principle of commutation on the ground that it would convert tithe-owners into landlords and lead to their becoming active partners in agriculture, he overstepped the bounds of wisdom, and his comments on the *Report* issued by a committee of the House of Lords were exaggerated in the extreme, as when he declared that "this document, will, a hundred years hence, be considered of as much importance as the declaration of the Dutch King when he first landed in England."

In 1833 Lord Westmeath's representative called for military aid in collecting tithes on the former's estates, and declared that violent language was being used in chapel by a certain priest—language "declaratory of his determination not to pay"; he added to his appeal the assurance that "had he not been armed on a former occasion he would have considered himself in imminent danger." This, and similar, incidents led to a ruling by Dublin Castle that the military would only be available for the collection of *arrears* of tithe. That there were then, as now, always two sides to any question concerning Ireland, we can deduce from another communication from the Castle to a certain incumbent in 1833. This gentleman was told that his parishioners had reported that, "in enforcing payment of your

tithe in that parish their houses were broken into and some of their inmates beaten, and that the clothes of others were taken away, although they had actually paid your dues." In these circumstances, it was added, further assistance could not be accorded him. Small wonder was it that posters appeared couched thus—"Citizens of Waterford! Those enemies of the people, of peace, of Christianity, and even of their own church, the collectors of incumbent money, are abroad. They have positive orders from their pampered and unfeeling employers to enforce payment of this hateful impost with an unsparing hand. Numbers of your poor fellow citizens have been already distrained. Citizens of Waterford! Refuse to become participators in the evil acts of these harpies and do not afford to them a market for the fruits of their speculation. Refuse, to a man, to purchase any article distrained for a tax so odious and unjust; and let not your houses be polluted by the reception of goods dragged from your neighbours." No wonder, again, that we read complaints from prisoners condemned to nine months' imprisonment in Cork gaol for opposition—active no doubt—to tithes, or that, in 1832, a Select Committee commented on the "organized and systematic opposition to payment," payment which could only be secured by the "protection of military and police given the clergy of the Established Church in their endeavour to secure their legal rights." But in many cases the clergy "unwilling to risk the effusion of blood...have abstained from taking active steps." Whilst certain witnesses gave utterance to exactly the same complaints that we have again heard just now, namely that it was impossible under the existing difficulties for farmers to pay tithe, the majority held that it was unfair to tax Roman Catholics for the benefit of the Protestant minority. That argument, of course, was almost peculiar to Ireland.

The time was obviously fast approaching when something drastic would have to be done both in England and in Ireland. Arthur Young felt strongly on the subject, and, as usual with him in such circumstances, did not hesitate to give forcible expression to his feelings. He wrote on one of his foreign tours as follows—"In regard to the oppressions of the clergy as to

tithes, I must do that body a justice to which a claim cannot be laid in England. Tho' the ecclesiastical tenth is levied more severely than usual in Italy, yet it never was exacted with *that horrid greediness* as is at present the disgrace of England. When taken in kind no such thing was ever known in any part of France where I made enquiries as a $\frac{1}{10}$; it was always $\frac{1}{12}$ th, $\frac{1}{13}$ th or even a $\frac{1}{20}$ th. No new article of culture paid anything. Thus turnips, cabbages, clover, potatoes paid nothing. In many parts meadows were exempt. Cows nothing, wool nothing. Lambs from $\frac{1}{12}$ th to $\frac{1}{21}$ st. Such mildness in the levying this odious tax is absolutely unknown in England." He made much of the fact that in France the Revolution had swept both tithes and the Established Church aside, and warned England of the imminence of a like fate. France, America and certain Italian states, he said, had set us a noble example, and we alone in company with retrograde Spain adhered to this imposition; Holland and Switzerland in common with France had seized church property.

Young soon found an opponent in the form of the Rev. John Howlett, vicar of Great Dunmow, who, in a small book published in 1801, attacked him vigorously. Had, he said, the previous mildness of the French clergy saved them from sequestration? Was not English agriculture more flourishing than it had been for generations, despite the much abused tithes? He admitted inequalities in its incidence, quoting an example from Kent where the tithe on an acre of hops, amounting to £3 or £4, was accompanied by a rent of only 40s. or 50s. He agreed that fresh outlay which was unlikely to return more than ten per cent. was not generally undertaken by farmers in consequence of the existence of the invisible partner. But he pointed out that the clergy paid many charges on this form of property, *e.g.* land-tax, rates and the expenses of collection, and carried the war into his opponent's camp by suggesting that as farmers had not raised wages sufficiently, the poor-rates were unduly high and the value of the tithe thereby reduced to the recipient. He gave an alleged instance in which an incumbent by threatening to revert to tithing in kind, in lieu of a moderate *modus*, had secured a rise of 1s. 6d. in the wages paid to labourers on a particular

farm. This was an involved piece of agricultural economics, the possible value of which to the incumbent depended on the relative importance of the various ratepayers concerned. Howlett also referred to the case of a clergyman paying £900 in rates on £600 worth of tithe—a perfectly possible case at the time in question. He pointed out that in his own County of Essex hundreds of acres of woods, which paid no tithes, were being felled, and wheat, which was subject to the highest form of the tax, planted. Where then was the cause for complaint by farmers who were never so opulent before? He had the wisdom to urge the claims of commutation, but he feared that confiscation would be encouraged by its operation, and that “a set of atheistical, conceited, profligate men” might take possession, not only of church lands, but of tithes also, and thus “strip thirty or forty thousand men of their property.” Finally, he referred to the case of the vicar of Battersea which had caused Young much mirth. This good man had taken to drawing his tithes of vegetables in kind and hawking them, by proxy, through the London streets. Howlett held that so long as the vicar did not himself cry “Come buy my asparagus! O rare cauliflowers!” there was nothing *infra dignitatem* in the proceeding.

Charles Vancouver at the same period, drew attention to the handicap under which fen farmers suffered. Tithe became due on the reclamation of their land, and the owners of rectorial tithes drew great sums from the produce of this rich soil—produce which they had in no way assisted to secure. This argument was, however, some hundred years out of date, as the bulk of the fens had been drained before the Restoration, and subsequent rents would have taken this factor into consideration. But the principle was correct, and the Law Courts had rendered it more stringent by ruling that fen land so improved was liable at once to tithe, the only exception (seven years' relief) being made in the case of barren lands which required extraordinary efforts to render them fertile.

Impartial readers will agree that the evidence from the Law Courts, from Ireland and from the writings of controversialists all pointed but one way—and that way lay commutation of tithe. Whilst it is true that the bulk of payments were already made

by *modus* or other such composition in 1836, it must be remembered that the primary object of commutation was not so much the legalisation of this form of payment, but rather its stabilisation in relation to the cost of commodities, or as we should now style it, the cost of living.

From 1833 until 1836 four attempts were made by ministers to effect legislation on these lines. The final success was accorded to Lord John Russell's bill, introduced in February, 1836. The main difficulty encountered by all who had attempted to frame commutation Acts was in differentiating between tithe and rent; it was obviously highly desirable to make these two quite independent of one another, otherwise tithe became a tax on the capital invested in land, and not a charge depending on the value of the output of the land. Adam Smith had pointed out that "taxes upon the produce of land are in reality taxes upon the rent, and though they may be originally advanced by the farmer, are finally paid by the landlord," for prospective tenants had always mentally deducted tithe and other charges when coming to terms with landlords.

The machinery set up to give effect to the Bill provided for the appointment of Commissioners and Assistant Commissioners armed with considerable authority. Compulsory powers were accorded them as from October 1838, prior to that date opportunity was given for voluntary agreement. Their principal task was to assess the existing value of all tithes, on the basis of the average receipts by owners during the previous seven years. In view of a recent controversy it is perhaps well to record the exact instructions delivered to the Commissioners in regard to the treatment of charges on tithe. They were as follows: "Provided also, that in estimating the value of the said tithes, the Commissioners or Assistant Commissioner shall estimate the same without making any deduction therefrom on account of any Parliamentary, Parochial, County and other Rates, Charges and Assessments to which the said tithes are liable; and whenever the said tithes shall have been demised or compounded for on the principle of the rent or composition being paid free from all such Rates, Charges and Assessments, or any part thereof the said Commissioners or Assistant Commissioner shall have

regard to that circumstance and shall make such an addition on account thereof as shall be an equivalent."

We may note here that as early as 1718 a vicar had been adjudged liable to poor-rate on his small tithes. It has unsuccessfully been held that the "Poor Rate Exemption Act" of 1840 was intended to afford relief to clerical tithe-owners in respect to their assessment on tithe *qua* salary. The Act in question abrogated rates on the profits of "stock-in-trade or other property," and specifically excluded from within its scope "tithes inappropriate and propriations of tithes." The grounds for the unsuccessful appeal were that the above definition did not correctly apply to the tithe rent-charge attached to a benefice. This question of rates on tithe always crops up when rates themselves are rising, and the latest discussion has centred round whether the 1836 Commissioners did, or did not, take into consideration the previous incidence of local rates. It has even been suggested that a sum of about a quarter of a million pounds was "given" the owners at the time of commutation. Anyone who reads through the instructions handed to the Commissioners cannot, however, fail to agree that this sum—if it be a correct figure—represents the amount previously paid direct by the tithe-payer to the rate-collector on behalf of the tithe-owner, in cases where this procedure had been agreed upon between the parties. It must be remembered that, prior to 1836, thousands of individual bargains had been struck and rate-free compositions accepted by the clergy: in fact, the Commissioners discovered that in numerous such cases the clergy had secured considerably less money than if they had paid rates themselves on the gross sums concerned. The Commissioners' duty was perfectly plain; it was to discover the gross value of the annual payments, and in cases where deductions had been made, to effect the necessary addition when fixing the commuted value. Henceforward the tithe-owner was legally responsible for paying his own rates on this form of property. The evidence of witnesses from the Board of Agriculture before the Commission of 1893 is unequivocal on this point. Nor was it agreed at the time that there were the germs of a grievance, in that by averaging the value of the rates paid prior to 1836 over seven years, a period

was included which covered abnormal demands from the rate-collector, demands swollen by excessive distress and unemployment. As one witness said, the object of commutation was not to anticipate the future but to give expression to the past, and the reduction in rates that followed commutation benefited all payers and not exclusively those who were rated on the possession of tithe. In specific cases quoted in which payers had, on composition, agreed to pay rates up to 19s. in the pound, the answer was they had either made bad bargains, or else that the bare composition did not represent the value of the tithe; it had been open to them to pay a composition only and to leave the owner to settle with the rate-collector. The object of the Act itself was "to stereotype the condition of affairs existing in the seven years prior to 1836." By the Tithe Act of 1899 clerical tithe-owners were placed on an equality with agriculturists in regard to rates, being henceforward liable for only half the usual payment, the other portion being met by the Inland Revenue Authorities.

Having digressed upon the subject of the rateability of tithes, one must revert to the question of commutation. The Commissioners' labours resulted in a rent-charge of slightly over £4,000,000 being leviable in England and Wales, of which almost one quarter was found to be in lay hands. This amount has been subsequently reduced by redemption and other means to about £3,500,000 at the end of 1921, and it is probably only a matter of a few more generations before it has disappeared altogether.

There was one class of land which presented difficulties to the Commissioners; this was that given over to market-gardens, hop-fields and fruit-farms. It was agreed that it would not be equitable to fix a high and permanent rent-charge on property of this description which might at any time revert to ordinary agricultural uses. Hence the creation of what is known as Extraordinary tithe rent-charge—a separate and additional payment to the ordinary charge, calculated on an acreage basis. A subsequent Act (1886) limited its operation to existing cases, and encouraged its capitalisation. Interest at four per cent. was to be paid on the ascertained capital value, and henceforward

its incidence was fixed at that charge with power of redemption. Criticism was not lacking in the early 'nineties that hardships existed in the case of land once under hops but since grubbed and still liable to the charge.

The average value of tithe having been secured it remained to make its purchasing power correspond in the future to the price of commodities and to the economic conditions of agriculture. This was achieved by correlating its value to that of the three principal cereals averaged over a period of seven years. In the basic year the sum of £100 of tithe was split up into three equal parts, and the number of bushels of wheat, barley and oats purchasable by each was evolved. The septennial average price of each cereal was then (and subsequently has been until 1918) multiplied by these figures as "weights," and the total sum thus obtained represented the tithe rent-charge for the current year. Strictly speaking, these were "corn-rents." Corn-rents were nothing new; as they had existed in numerous cases for many years, and represented commutations in particular parishes under the provisions of local Acts of Parliament made on the basis of the value of cereals—generally of wheat alone. They were subject to revision at stated intervals of years in order that they might keep in contact with current prices. Examples are still to be found side by side with the ordinary charge and are convertible into tithe rent-charge on special terms.

Two minor objections have at times been raised to the principle involved; firstly that the "weights" (in round figures, 95 for wheat, 168 for barley and 242 for oats) give undue scope for fluctuations in the price of oats to affect the charge, and secondly that the "Gazette" average represents the enhanced price of the cereals when they reach the dealer's hands and not their value when they leave the farm. The answer to the first point is that in normal times the prices of the cereals move so closely together that the cost of oats never gets out of harmony with that of the other two (moreover, it represents generally only half the price of wheat).

The second contention was borne out by evidence contained in the *Report* of the Royal Commission on Agriculture in 1893. It was urged that the official price took no cognisance of inferior

grain retained on the farm, but did include several commissions and railway charges, resulting in an increase of fifteen to thirty per cent. Instances were given of four sales being registered of the same barley, the first at 24*s.* and the last at 32*s.*; the official average price in this case being recorded as 27*s.* Farmers further held that only one quarter of the sales of corn in the country came within the purview of the corn inspectors. The only answer that can be given is that the Act had always been administered as it was originally interpreted, and that the average prices quoted annually (to form the basis of the septennial figure) were collected in numerous corn markets throughout the country. There is no evidence that the 1836 Commissioners intended any other method of collection to be used.

A more general ground of complaint against the commuted charges made its appearance half a century later. It was then urged on behalf of Essex and other once prosperous East Anglian corn-growing Counties that, whatever the position might have been in 1836, it was no longer right in the 'nineties that these tithes should be equivalent to over 5*s.* an acre, whilst in the grass Counties of the North it should vary from 3*d.* to 1*s.* 2*d.* It was shown also in a period of depression that tithe was frequently larger than rent. It was certainly true that such Counties were unduly hit by the conditions then prevailing—bad seasons and intense foreign competition—and that in them those parishes with the heaviest soils, and therefore at that time with the largest derelict areas, were often called on to pay the highest tithes; one has, however, to take long views in studying the economic history of agriculture, and the other side to the argument was that these were precisely the areas which in pre-commutation days could best afford to pay, that commutation had been carried out at a time when cereals had fallen heavily in price, and that in such abnormal times as then prevailed, even the complete remission of the charge would not have ameliorated the position to any considerable extent. Essex claimed both re-valuation and nationalisation of tithe, but received neither, and yet within little more than a decade again produced wheat at a profit, and was able at the same time to meet the tithe-owner's demands.

On the same lines, but forty years earlier, we find Sir James

Caird pointing out that Wiltshire tenant farmers, after the events of 1836 had freed them from fear of the tithe-owners' increased demands, actually broke up large areas of downland for tillage purposes. The freedom thus secured them was checked again at the time Caird wrote, but it was undeniable that farming had benefited in the long run. In times of depression, whilst rents were still lowered by landlords, however, tithe was subject to no sudden downward fluctuations—its weight could be foreseen with certainty for lengthy periods. In such times it was usual to find the suggestion put forward that corn lands should no longer be tithed in relation to the price of cereals, but, if total remission was not agreed to, some other basis should be chosen.

Commutation having thus been effected and the value of tithe rent-charge in 1836 fixed as parity, it remains to trace its subsequent movements in value. Briefly, we may state that up to 1883 it maintained its level with fluctuations not greatly exceeding ten per cent. above or below parity; the highest point attained was in 1875 when the charge stood at £112. 15s. 6½d. and the lowest in 1854 when £89. 15s. 8½d. was indicated. The greater part of this half century it stood above £100. The effect of the repeal of the Corn Laws in 1846 was not felt by British agriculturists until the late 'seventies, owing to reasons which are dealt with elsewhere, but the policy embodied in that action has been held to afford special grounds of complaint on the part of tithe-owners. What exactly happened? From 1883 (the septennial average having exerted a delaying action) the value of tithe rent-charge declined annually until in 1901 it was worth £66. 10s. 9¼d.; for thirty-four years it remained below parity, and despite participating in the admitted recovery that was taking place prior to the outbreak of the Great War, it was only the rapidly rising prices caused by the latter upheaval that pulled it above £100 in 1918.

The official reply to the complaints of owners during this long period was that the whole conception of the sliding scale was to bring the value of tithe into relationship with the cost of living, and that £66 in 1901 was the equivalent of £100 in 1836, commodity prices in general having fallen correspondingly.

This was a perfectly legitimate answer, but one to be pondered over seriously when the policy involved in the official action taken in 1918 is considered. The value of the charge to the nearest pound was, in 1915, £77; in 1916, £83; in 1917, £92, and in 1918 exactly £109. 3s. 11d. Payers of tithe, accustomed for a generation to a below-parity value, became vociferous at what they considered the unfair share of the increased profits of farming being taken by the tithe-owner. Their outcry led to immediate legislative action, and the value of tithe was, by Act of Parliament in 1918, fixed at the then level until January 1st, 1926. Thus £109. 3s. 11d. will have been the fictitious value of this charge for some eight years.

The arguments used on both sides are familiar to all. The tithe-owner, especially the clerical owner, hit in common with the rest of the community by the increased cost of living was denied the right successfully asserted by the vast majority of that community to a commensurate increase in income; it was immaterial that he might have received payment on a sliding scale when prices were low, there must be a limit fixed to the movement when they rose. The farmer declared that payment at the rate of nine per cent. above parity was far more than the owner of tithe had ever expected to attain to, that the industry could not afford to pay any further share of its larger profits—if they were in all cases larger, which was disputed—to those who suffered none of the troubles connected with farming under war conditions.

What exactly did the owners lose by the Act of 1918? On a septennial basis the rent-charge value would have been £124 in 1919, £141 in 1920, £162 in 1921 and £172 in 1922. High sums admittedly, but within the power of occupying owners to pay who had entered the industry on a pre-war capital valuation and had not invested all their profits of 1915-17 in land at current prices; certainly not within the power to pay of many of those who purchased land and farming stock in 1918 to 1920, or probably of landlords who lived on agricultural rents. The disadvantages attaching to the septennial average in such economic upheavals were thus illustrated, for it is certain that, whatever might have been the protests, it would have been easier to

secure much higher payments on the basis of the actual values of corn annually recorded in these years than to have obtained the septennial average whose delayed action would have drawn moderately high tithe-charges into a period of low commodity prices. The actual yearly prices would have been as follows: 1919, £189; 1920, £202; 1921, £228; 1922, £149: this last figure bears comparison with £172 on the septennial basis, and for 1923 their divergence would be even greater.

There would have been another safeguard for the payer in the event of the annual price being substituted, for there is a clause in the Tithe Act of 1891 which provided that the tithe-owner should not be entitled to recover more than two-thirds of the gross value of the land (or the net annual value to the landlord). In the past there has not been general occasion to make use of this provision, and individual farmers had often been chary of claiming such relief, as it entailed making public their financial condition, but when the whole body of payers would have been similarly circumstanced (rents not having been raised seriously during the war) its application would have become universal. It is probable, however, that the course adopted in 1918 was the best for both sides, but generosity towards the tithe-owner might have been carried a step further than it was.

He was indeed, if a cleric, afforded further relief by clauses contained in the supplementary Act passed in 1920, whereby rates on tithe belonging to an ecclesiastical corporation, as well as those attached to a benefice, received considerable remission. Such bodies, or persons, were relieved entirely of rates on this form of property if their total income from the property did not exceed £300 per annum, and only became liable for half what they would otherwise have paid if the income lay between £300 and £500. The Inland Revenue authority still pays half the current rates under the Act of 1899, but any excess demand resulting from the clauses of the new Act have to be met by the general body of rate-payers. This concession, coming on the top of the 1899 Act, has been declared in certain cases to have resulted in an excessive charge being placed on the shoulders of non-clerical rate-payers. Instances must, however, be rare of

areas where the lion's share of rates is represented by the incumbent's tithe. On the other hand it has been advocated that all tithe should be freed from assessment to local rates.

The price level of tithe rent-charge after 1925 is to be based on a fifteen years' average, reversion to the septennial having been ruled out, and the longer period selected, in order to smooth over more effectively the aftermath of war conditions. That it will remain above parity for the first few years seems certain, but, as always since 1846, the price of our cereals depends not on our own production but on that attained in other Continents. Therefore the pecuniary value of tithe to its owners will in the long run be as problematical as it ever was after the repeal of the Corn Laws.

There remain two features to mention. One is the Tithe Act of 1891, which, apart from offering limited relief to payers of tithes which would otherwise have been excessive in amount, altered the legal position as between landlord and tenant. Prior to 1891 it had been permissible for tenants to deduct from their rents the payments they had made direct to the tithe-owner, but most leases did not encourage this custom, and a large proportion of all the payments were made wholly by tenants, although the Act of 1836 had evidently intended that the landlords should be responsible. The new Act enforced the payment by the land-owner; it also effected alterations in the law relating to recovery and distraint.

Lastly comes the question of redemption. The advantages attaching to this procedure have for long been recognised, the *Reports* of most Royal Commissions and other Committees containing recommendations to this effect. Sir James Caird himself had formulated a scheme in 1881 by which the Government would have taken over the charge, paid £75 for each £100 of value and allowed the remaining £25 to accumulate for forty-seven years at three per cent.; the capital sum thus raised would have guaranteed the perpetual payment of £75 to the owners. Redemption was effected in Ireland at the time of the disestablishment of the Irish Church, when the Government assumed its ownership. Redemption in England was always possible after 1836, but it was so hedged in by restrictions and

formalities that little recourse was had to it; indeed up to 1918 only some £73,000 worth of tithe had been thus extinguished. Payment had to be at the rate of twenty-five times the *parity* value, whatever might be the existing level of the charge, and redemption in the majority of cases called for the lay tithe-owner's consent, or, of those spiritually concerned, in the case of clerical ownership. For the long periods of time during which the charge had been far below £100 it was manifestly absurd to pay twenty-five times the latter value; it is probable that if at any time parity had been reached redemption would have automatically commenced.

With certain minor exceptions the recent Act has allowed redemption to proceed either on agreement between the tithe-owner and the landlord concerned, or on terms fixed by the Ministry of Agriculture as legal arbitrator. The principal involved is that by redemption the annual income of the owner, if invested in Government securities, shall be equal to the net amount previously secured from the tithe itself. In assessing the net value of the tithe deductions are made for the cost of collection, rates and land-tax; these deductions are from a sum representing the fixed (*i.e.* unvarying) annual payment which the Ministry estimates to be equivalent in value to the varying tithe rent-charge. It will again be observed that the incubus of high rates disadvantageously affects the valuation, and in varying degrees in different localities, and that the terms are dependent on the class of owner—whether spiritual or lay—and the corresponding incidence of rates.

The result of this encouragement to redemption, in combination with the higher level of the charge, can be seen in the number of transactions carried through since the Act was passed, a single year effecting more than the whole period between 1836 and 1918 had done. It was suggested in evidence before the Commission of 1893 that at the then rate of progress 6000 years must elapse before all tithe was redeemed; under present circumstances sixty looks a more likely figure. Apart from the encouragement now afforded by simplified legislation and the more advantageous financial terms secured, there is considerable inducement to both parties concerned to effect the change, for

the landlord is saved the annoyance of making frequent small payments, and the tithe-owner is assured of a steady income from a source that is not open to criticism from any party or church. The time is approaching when payment of tithe on the basis of the average value of three commodities will seem as crude as the incumbents' efforts two hundred years ago at Brotherton and Clayworth to safeguard their claims on bees, pigeons or labourers' wages appears to the present generation.

This is not the place in which to discuss the ethics of tithe payment; it is simply the duty of the historian or the economist to give an unbiassed account of its development and of its incidence. One is bound to record however, that exception has, during the last century, been taken to it on the grounds that it often causes the payment of money by members of one religious body to the support of the personnel of another denomination. On these grounds, it is urged, that neither commutation in the past nor redemption at the present meets the case; that only its forcible secularisation by the State to such purposes as education can assuage the claims of conscience. Surely the answer to this is that for upwards of fifteen hundred years custom has ordained its payment, not idly to any sectarian party, but to the partial support of the established and national church—that church which the vast majority of even its non-members call to their assistance on all the most important occasions in their passage through life?

CHAPTER VI

LAND TAX, RATES AND INCOME TAX

Origin of Land tax; its uneven incidence; Reports of Commissions; history of Poor rates; rates in times of agricultural depression; suggestions for alleviation; "grants in aid"; who pays the rates?; railway property in rural areas; burdens of rates in French War and in the Great War; Income tax as a burden on agriculture; Adam Smith and taxation; comparative weight of the existing rates and taxes; suggestions for "melioration."

As the only other charge peculiar to land, this tax naturally follows tithe, although it has nothing in common with it; for it is comparatively modern in origin, relatively unimportant in amount, and wholly arbitrary in its incidence. While some authorities have held that it was directly traceable in origin to the feudal dues such as tallage and scutage, the bulk of modern opinion inclines to the view that it must be treated as a separate charge. If continuity be claimed for it, it must be based on the grounds that it took the place of the Tudor "subsidy," which was also a property tax, and a tax apportioned on a County basis.

Its own history commences in 1692, when an Act of Parliament was passed to raise money for national purposes. This was, in effect, nothing but a property tax, and a widely-flung one, for it contained provisions for taxing all three possible sources of income, viz. profits and salaries, interest on the value of goods, merchandise and other personal property, and lastly the annual value of all forms of real estate. In the light of subsequent controversy it is important that a right conception of the origin of this tax, and of the intentions of its framers, should be achieved. It has been repeatedly suggested during the last half century that it was always what its name implies, solely a tax on the value of land, and that it sets a precedent to modern legislators that they are urged to follow.

What then was the exact phraseology of the clause in the original Act dealing with personal property? It was as follows: "That every person, body politic and corporate, having any estate in ready monies, or in any debts owing to them, or having

any estate in goods, wares, merchandise, or other chattels or personal estate whatsoever within this realm or without, shall yield and pay unto their Majesties four shillings in the pound according to the true yearly value thereof, that is to say for every hundred pounds of such ready money and debts and for every hundred pounds worth of such goods, wares, etc., or other personal estate, the sum of four and twenty shillings." In other words, the rate of interest assumed from this form of property was six per cent., and the tax was imposed at the rate of four shillings in the pound. Salaries paid on the same scale as did real estate, the basis in the latter case being the full yearly value.

The total amount raised by the Act in its first year of operation was £1,922,000. The next stage in its development comprised a slight modification in 1697 by the reduction of the rate on personal estate to three shillings in the pound: and at the same time the amounts to be raised in each County or borough were fixed proportionally to what they had produced in previous years.

The Land Tax was continued by aid of annual Bills for exactly one hundred years, always on the same lines and always covering the same forms of wealth; but the amount received under the headings of personal property steadily dwindled. This has been attributed to the lack of adequate machinery for its collection and to its unpopularity with both the payers and the officials concerned. In its incidence the tax as a whole was originally extremely unequal, and that inequality has, by law, persisted up to the present time. The home Counties and East Anglia were, generally speaking, those areas which were most highly assessed, and the Northern and Western Counties escaped most lightly. The explanation given by Walpole for this was that, in 1692, those persons who had favoured the Revolution were more inclined to help the government by furnishing complete details concerning their estates than were those who had opposed the invitation to William and Mary. Again, Davenant held that the Welsh and Scotch border Counties had always been liable to disturbance, and had in consequence for centuries escaped their share of taxation.

In 1797 an Act was passed making the tax perpetual at a

maximum rate of four shillings in the pound, but allowing the option of redemption; at the same time the quotas to be raised from each parish and County were irrevocably fixed on the existing basis. Examples abound to illustrate the anomalous incidence thereby perpetuated. Lancashire paid half what Hertfordshire did, Cornwall raised £31,000 and Durham £10,000, Essex £89,000, and the whole of Yorkshire £91,000. The assessments of individual parishes contained even greater inconsistencies, contiguous areas being rated from the maximum of four shillings down to fractions of a penny in the pound. Despite the subsequent alterations in the relative wealth of different Counties, brought about by the industrial revolution, the decay of rural prosperity and the transference of population, this tax, originated in 1692, and perpetuated in 1797, is still based on these inequitable foundations. Its collection has always been in the hands of specially appointed Land Tax Commissioners, now acting under the general supervision of the Inland Revenue Department.

At the time of the Royal Commission of 1836 many questions were put to such witnesses as the Chairman of the Board of Stamps and Taxes (then the body responsible for administering the Land Tax) with a view to discovering how it was that other forms of property had slipped out of assessment. It was admitted that the pension of the then Duke of Marlborough had paid up to the year 1835, that of the great Duke having been levied on from 1704; the Duke of Schomberg's personal annuity was also covered. In the case of personal property this witness thought that "difficulties arose, and the easier method of (taxing) land was taken." In reply to the specific question "Do you think that land then not only paid its own contributions, but also for the default of those who had personal property?" he replied that it was "very possible." Two generations later, before the Royal Commission of 1893, corresponding evidence was given. It was then elicited that in its last year before repeal, 1832, that portion of the tax leviable on personalty actually brought in only £5200, and this was theoretically collected from the whole personalty of Great Britain, Ireland always having been outside the scope of the Land Tax. That other

portion, due from salaries and pensions, was retained until the year 1876, but its efficacy as a machine for collecting money had become ludicrous long before the latter date.

The explanation of the official apathy towards this side of the Land Tax during the first half of the nineteenth century probably lies in the fact that Pitt, after 1798, had a fresh weapon to hand in the shape of the Income Tax—a weapon far more potent than any clauses of the old Land Tax. The latter, however, was still a successful means of collecting money from those connected with the soil, so it was suffered to remain, henceforward being in reality only what its name implied, even if in theory its provisions still applied to certain other forms of property.

Before discussing the incidence of Land Tax on agriculture, there are one or two features of it which deserve attention. Exemptions are allowed to property owned by the Crown, by the Colleges of Oxford and Cambridge, certain charities, and two or three of the older public schools; further, it is not due from estates whose owner's income is below £160 per annum, and half of it is remitted where the income is below £400 but above £160. Redemption has always been possible since 1798, and has indeed been carried out on a much larger scale than has that of tithe. Various rates of purchase were in vogue at different times, but generally speaking, some thirty years' purchase was required—this was, in fact, the exact number of years provided for in the Finance Act of 1896; prior to that date a method dependent on the price of Consols resulted in thirty-three years being the average. Despite the apparently high cost of effecting redemption, it has eliminated some two-thirds of the tax, which in recent years has brought in under £700,000 per annum. It has been the general practice of those about to improve the annual value of their land by the erection of buildings to redeem before commencing operations; thus the majority of urban properties are now free from this tax, and the bulk of what remains is due from purely agricultural property.

Complaints are heard in times of agricultural depression from those occupied in farming land in such Counties as Essex that Land Tax constitutes an uneven burden upon their undertakings.

A table drawn up to show the cost of the tax per acre of farm land for different Counties was handed in by an Assistant Commissioner of the Board of Agriculture to the Royal Commission in 1894. This showed that Essex paid 11*d.* per acre, Northumberland 2½*d.* and Cumberland ½*d.* Whilst the answer to this, in general terms, was that normally the agriculture of Essex was far better able to pay a higher rate than that practised in the North, yet in the circumstances then existing the charge was a high one. Essex was in an exceptional position; in the first place it was one of the Counties above mentioned which had suffered for its adhesion to a political cause, and secondly, being on the fringe of London the redemption of a large amount of tax on land as it became ready for building purposes shifted an additional burden on to the rural payers. It was urged on these grounds by interested persons that the power of redemption should be terminated in order to check its operation in such instances as the following: certain fields in Kensington had been assessed at £62 per annum; this charge was redeemed and the land, worth £400,000, was entirely free in future. Essex farmers pointed to this as typical of what was happening on a smaller scale in their own County; they claimed reassessment, and the re-apportioning of the tax on a wider basis—a basis preferably covering all rated property. Again, the rate in the pound at which the Land Tax was levied in Norfolk, Suffolk, Lincoln, and similar Counties especially dependent on their agricultural prosperity, became unduly high through the fall in the value of land at times of depression.

Remedies put forward then, and subsequently, have comprised suggestions that the tax should be amalgamated with local rates, entirely abrogated, or re-assessed on a universal basis. Objection to its abolition has been raised on the ground that so much land having been already freed, it would be unfair towards those persons who have paid for redemption in the past to relieve the present day payers of their still existing charges. This argument can scarcely be considered sound from the point of view of agriculture as a whole. The amalgamation theory has been little heard of during the present generation, and any addition, however slight, to the burden of local rates would prove unpopular.

In very recent times less complaint has been heard of its weight, as other forms of taxation have greatly increased, and efforts have, in the main, been directed to the arrest of these latter. Nevertheless, the findings of the Commission of 1893 on the subject are as true to-day as they were at the time they were published: "It seems to us obvious that there is the greatest possible difference between a rent-charge voluntarily created by an owner for his own private purposes, and a compulsory tax originally imposed by Parliament for public purposes on all classes of property and incomes, and subsequently exacted for these purposes, solely from one class of property. The Chairman of the Inland Revenue Commissioners has informed us that in his opinion the Land Tax is not only a tax, but a tax which has of late years weighed very much more heavily on the land in agricultural districts than it ever did before....In these opinions we entirely concur."

Presumably it will continue to be collected from a dwindling number of properties, frequently in its severest form, until the whole system of local and national taxation is overhauled. Meanwhile, from its name, but by an absolute misconception of its origin, it is made the framework of schemes by which "single taxers" seek to recast all financial charges on to the soil.

In the case of the two remaining forms of taxation, agriculture has been accorded a preferential position as compared with other payers. It is not proposed, as in the case of tithe and the Land Tax, to trace in detail the development of charges which closely concern, not alone agriculturists, but all persons in the kingdom, and the history of which has, times out of number, been published. Rather will the past connection of agriculture with these taxes be traced, and the attitude of the rest of the community towards this question, as it affects the farmer, be discussed.

It is incontestable that local rates—and by that term is implied the Poor-rate—were at first levied on all forms of wealth. After centuries of charitable support of the poor, first by the monasteries, and after their suppression, by the aid of the parish church and the parish officials, compulsion was gradually

invoked by the State, and Parliament forced those possessed of any form of wealth to part with a portion of it for the benefit of their poorer brethren. In the sixteenth and seventeenth centuries numerous Acts came into force which ordained the bases of payment and left to local bodies the responsibility of their interpretation and the duty of raising the necessary funds thus legalised. The Act of 1601 is often spoken of as if it originated the Poor-rate, but it merely codified the provisions of previous enactments. As was the case with the Land Tax, all forms of property were covered at first, and gradually all save land and buildings tacitly dropped out of assessment. Again the explanation is the simple one that other forms of property were elusive, and also that the area of lands and the size of buildings formed an easier criterion by which to assess the wealth of individuals. Whatever aspect they may wear to-day, historically the rates levied on real property are merely a personal charge on the value of land.

Several cases were tried in the latter half of the eighteenth century in order to test the validity of assessing personalty to Poor-rate, in one of which the then Lord Chief Justice said "this is a question of great difficulty and of vast importance to the public." The legal upshot was that stock-in-trade was held liable by the courts, and other forms of personal property were acquitted. As late as 1840, Boards of Guardians were circularised to the effect that, by a recent legal decision, they were to assess the profits of stock-in-trade. This raised such a storm of protest that a Bill was at once introduced, which finally excluded this form of property from assessment. Once more the burdens of others were transferred to agriculturists—this time, however, not to them exclusively.

That Poor-rate has on occasion in the past proved an excessive burden on agriculture anyone acquainted with the history of the period 1815 to 1834 will appreciate. The point to observe here is that the bulk of these inflated charges, raised during a time of acute depression, were extracted from that one industry which was peculiarly affected by the economic situation. Agriculturists represented the bulk of the rate-paying community, and the very farmers who were often paying more than

their rents to the rate-collectors were at the same time struggling with an unprecedented fall in the value of their products. At that time two remedies were put into force. Rents could be, and were, reduced; but such actions are always slow in effect. Wages ought not to have been, but were, reduced, with the result that the Poor-law officials paid the residue of the labourers' earnings from the rates, and farmed out the men to their own masters. Hence those terrible years from 1817 until the Poor Law Act of 1834, with merciful strength, placed the status of the agricultural labourer and his master once more on a business footing. Agriculture had come through a crisis without relief from any constitutional changes, but the process embittered the relationship between master and man for a generation.

Subsequent periods of depression have been surmounted by direct action on the part of the State, for in 1896 agricultural land was relieved of a large share of its burden. By the Act of that year the rate of payment on this class of property was reduced to half what it would otherwise have been; but unfortunately by the wording of the Bill the amount of relief thus accorded, in the shape of a direct grant from the Exchequer, was in future to be confined to a sum equal to one half of the amount raised from agricultural land in 1895. Thus local authorities receive a fixed grant in lieu of the portion previously borne by agriculture, and not a sum annually increasing in order to keep pace with the constant fresh charges they are called on to meet. This has, of course, the indirect effect of raising the amount of money to be collected from farmers themselves as well as from other rate-payers. Agriculture practised on the outskirts of towns has received another small concession in the shape of assessment for the upkeep of purely urban amenities at one quarter that of other property.

These are the reliefs accorded the farmer on the rate-books. Are they sufficient, or what further help should he be given? His advocates differ in their advice. One party urges him to join those who call for a drastic re-valuation of all property on a national basis, the other suggests the wisdom of claiming further consideration for his particular occupation. The first stage in the programme of the former party involves the unification of

all rating-areas, that not only Poplar and Kensington shall be within the same sphere, but that the smallest village remote from either shall also be joined with them. The next stage in the path of such thinkers leads to the shifting of all taxes on to the land—and there the farmer parts company. The land-taxer may construct a plausible edifice for the taxation of land-values in large and growing towns, but when he comes to explain his proposals to the countryman he is forced to admit that his system would penalise the large land-owner for the benefit of the Small Holder. Outhwaite gives examples in *Land Values Taxation* of the incidence of his suggested tax on agricultural land; here we are assured that rents will fall, because the large land-owner will be forced to get rid of the bulk of his undeveloped property, that derelict holdings will be forced into cultivation, that the medium sized farmer will be no worse off, whilst paying greatly enhanced wages, and that the really small man will pay next to nothing, as the value of his land (given up by the aforesaid large owner) would be so low. There is occasionally a small amount of truth in one contention put forward with such schemes as this, and that is that the Small Holder is now relatively more heavily rated than the large farmer. The explanation is that in the majority of cases the land occupied by the small man is above the average in quality, and, moreover, buildings on a small farm add disproportionately to the total value. The comparatively innocuous proposals of the Finance Act of 1910 were found in practice to bring in nothing and to be expensive to operate; it is unlikely therefore that more drastic schemes would meet with better success, or that the British farmer would ever be persuaded to throw in his lot with the single taxers.

On the other hand, suggestions towards a further alleviation of agricultural land from the burden of local rates merit serious consideration. Firstly, the handicap of the rating of tenants' improvements is pointed out. This is of universal occurrence and is admittedly a check on enterprise, but its financial weight is not, from the nature of the case, especially serious in times of distress. It must be remembered that appeal exists both against existing assessments and against reassessments for improvements. If the same advantage is not taken of these facilities

in rural, as compared with urban, districts the reason may possibly be that adduced by a witness before the Commission of 1893. He explained this hesitation as due to the fact that a successful appeal in a rural area resulted in one's neighbours being called on to make up the deficit; if they in turn appealed, and were equally fortunate, the adjacent areas were mulcted. It is hardly conceivable that this altruistic explanation can hold good in many cases, and it is probable that the vast majority of assessments are both opportunely made on the present basis, and equitable in their incidence as between one property and another. In normal times it is doubtful if the majority of tenants are deterred from making improvements because of the existence of the rate-collector, and the statement that any considerable body of them deliberately farms badly in order to keep down its assessments is scarcely credible. Such a proposition entails on the part of those who make it a belief that rates in the twentieth century bear as fixed a relationship to the value of output as did the incidence of tithe prior to 1836. Moreover, in the long run, as we shall see in a moment, it is debateable whether the whole body of tenants does not obtain relief in the payment of rates, by transferring at least a part of them to their landlords' shoulders.

The only radical concession possible, when rates are double what they were in pre-war years, must necessarily take the form of a revision of the basis upon which agriculture contributes. This could be reduced to say one quarter instead of one half of the rate to which other properties are liable or, as is sometimes suggested, agriculture could be relieved entirely from those forms of payment for which it receives little or no benefit. The remedy sometimes put forward that land producing food should be freed from rating opens up a vista of endless trouble and discussion. A simpler procedure would be to confine the assessment of agricultural properties to buildings. Rates increased during the post-war period more in rural than in urban areas; this was admittedly due to the enhanced cost of roads, education and unemployment. Many hold that roads should be entirely, and not as now, partly, a national charge; again it has been urged that the country is over-educated, and that in rural

districts village life was more harmonious and simpler before so many subjects were taught by so many highly paid persons; and, lastly, unemployment is stated to represent a purely urban phenomenon and to be practically non-existent in the country.

Despite the appointment of a Royal Commission, which sat in 1901, and reported many anomalies in our system of taxation, nothing has since been done, and prior to the war the amount of money annually collected by local bodies tended to increase. The Great War, as was the case with the French war of more than a hundred years ago, must be looked upon as transitory in its influence on local rates (if not on national taxes) and the attention of the agriculturist should be concentrated on a revision of the permanent basis of his contribution. His efforts should be directed towards making public the difference between an assessment based on the rent of his land and that of the manufacturer based on the size of his buildings, without regard to the turnover in his trade or the volume of his transactions. The vast bulk of the rate-payers' money goes in salaries, and there is scope for a vigorous campaign to correlate payments with a sliding scale based on the cost of living. Here, farmers will act in unison with the other rate-payers; but their one chance of getting any really large concession is surely to claim special treatment for their occupation. Any concession granted to the whole body of rate-payers simply implies the shifting of part of the burden to the National Exchequer, and not a reduction in expenditure. If the rural community desires definitely to be freed from any obligation to contribute towards certain services, which it considers give little or no return to other than town-dwellers, then it can combine the two policies, claim preferential treatment as a payer of rates, and, at the same time, agitate for the transference of certain local charges to the tax-payer.

One hears it stated repeatedly by County Councillors that "grants in aid" of rates received from the different government departments, relieve the rate-payer. These are not gifts of manna falling from heaven, but come from the pockets of the tax-payer, and are frequently distributed on a pernicious pound for pound basis. Any comprehensive re-organisation of our taxation system would inevitably result in the overhauling of

this method of granting doles to local authorities—doles which are either dependent upon a certain outlay by these authorities, or are else used to bridge gaps between expenditure and the money raised locally. Their whole conception encourages the squandering of public funds, and their complications are such that not even Government officials themselves can explain their origin or account for their exact applicability.

The question of the incidence of local rates as between tenant-farmer and landlord has been purposely left over. Text-books agree that in theory the landlord normally pays all such charges as local rates, although his tenant may sign the half-yearly cheques drawn in favour of the rate-collector. In so far as rates are concerned, it has become an accepted axiom that the tenant, when first leasing the property, mentally deducts such outgoings, and that for example, if he thought it was just possible for him to make his living and get a minimum return on his farming capital by the annual expenditure of £300, the average demands of the rate-collector having been £50, he would offer the landlord £250 as rent. The remaining £50 would, if rates were non-existent, have doubtless been added to the rent offered. This conception holds good so long as rates are stationary, but the tenant who has embarked on a seven-years' lease, and finds that his £50 creeps up to £60, and then to £70, is certainly paying the balance himself for the remainder of his lease. On its expiry a fresh bargain will be made between him, or his successor, and the landlord, based on the existing demands from the rating authorities.

As quite apart from the exceptional conditions ruling from 1914 to 1921, rates were going steadily upwards for the decade prior to the war, it is fair to assume that the body of tenant-farmers were, and are, intimately concerned in this matter. Some fifty years ago it was urged that Parliament should devise an equitable division of rates between the owner and the occupier; no such steps, in what would have proved an extremely difficult operation, have ever been taken. But the Royal Commission on Local Taxation referred to "the baffling problems of the incidence of rates and taxes," and a well-known authority has said "there is no problem in the science of political economy

which is more intricate, subtle or obscure, than the incidence of taxation. It is difficult enough to establish the primary incidence, or first blow, it is far more difficult, if indeed it is at all possible, to determine the ultimate incidence."

There is one considerable difference between the present depression and its immediate predecessor. In the 'nineties, local rates were not complained of by farmers; they were accepted as a "burden," but as they had not increased, and were by present-day standards absurdly low, their incidence was not made the foundation for a claim to revision. In 1894 it was shown that the produce of local rates in rural Unions had fallen by some twenty-six per cent. in the previous thirty years. This was due to several causes, but mainly to reductions effected in farm rents. The unequal incidence as between one County and another, and between one union or parish and another was, however, a cause of complaint. The grounds for such complaint were frequently dependent on the quantity or extent of railway or mining property found in purely rural Unions. Evidence offered the Royal Commissioners showed that frequently such Unions contained railway property which represented up to fifty per cent. of their total assessable value. The passage of a trunk line through such a district as that comprised by Welwyn in Hertfordshire, Biggleswade in Bedfordshire, or Chippenham in Wiltshire, altered the whole incidence of local rates to the advantage of rural undertakings. On the other hand some districts of Wales, the Cornish peninsula and parts of the South and East Coast benefited little. From 1870 up to 1894 this form of relief was particularly apparent, as railway assessments were rapidly rising, whilst the value of other rural properties was shrinking. Between these two dates, for instance, the railway property in Newbury Union increased in rateable value from under £800 to over £6000, that situated in Newmarket Union from £1200 to £14,000, and that in Wolstanton, in Staffordshire, from £1600 to £23,000. Thirty years ago it was agreed that the majority of non-urban Unions had very appreciably benefited from the construction of new railways and the improvement of old properties. This, in the areas in question, was a clear gain to the farming industry apart from any com-

mercial or economic advantages that might have followed the advent of improved means of communication. As a commentary on the situation at the present juncture it is not without interest to record that the reduced assessments of railway properties recently effected have placed an additional burden upon the shoulders of other rate-payers. This has been particularly noticeable in rural districts where it is apparent that the benefits secured many years ago from the creation of new and wealthy rate-payers are being drastically curtailed by re-assessments confined exclusively to this form of property.

The only period at which rates were really crushing was exactly one hundred years ago, the causes for which are indicated elsewhere. These same causes are at work again now. In 1817 a Shropshire parish paid 33s. in the pound, and at Hindon, Wiltshire, the demand was for 50s. (*Report of Royal Commission, 1894*). Then, in many instances, Poor-rate collection had perforce to cease altogether owing to the "landlords having given up their rents, the farmers their tenancies and the clergyman his glebe and tithes." Anyone who takes the trouble to read contemporary reports from the different Counties, will find therein lists of properties lying vacant, the rates on which amounted to more than the rents. Then rates and rent could change places, for in some Sussex parishes pre-war rents were eight shillings the acre and the Poor-rate was equivalent to four shillings the acre; in 1833 the rates were eight shillings and rent had been reduced to four.

At the summit of the hundred years' later inflation, reached in 1921, few comparable instances were recorded in purely agricultural districts, but the heavy clay-lands of Essex and similar areas, always the first to suffer when the price of wheat falls, have been especially hard hit, yet remission of the Poor-rate, or even of all local rates, would not ease the situation to an extent comparable to that which would have been effected a hundred years before by a similar process. An imaginary instance will show the degree of relief afforded even by total remission of rates. Assume the rent of a farm to be £300 per annum, the assessment £250 and rates levied at 10s. in the pound on the agricultural basis; then £62. 10s. is demanded

from the tenant. The remission of this, it would be agreed by all schools of thought, will benefit the tenant during the remainder of his lease, whatever the situation on its eventual renewal. But £62. 10s. on a farm rented at £300 per annum is not a great concession, or one to make the difference between bankruptcy or solvency for the individual concerned.

Nowadays, in truth, it is impossible to pick out one charge on land, and to say, "Here is the principal impost, remove it and agriculture will recover." The whole costs of production, not alone attributable to legal outgoings, but to materials and labour as well, have remained on a high plane, whilst the value of what the farmer produces has more nearly approached the 1914 level. The explanation is that the war, and its resultant experiments in social legislation, have to be paid for, and both national and local charges to meet these debts are falling on agriculture in common with the rest of the community. But agricultural interests call for special consideration owing to the nature of the foreign competition to which they are exposed, and as there appears to be no chance of the State ever again affording them special protection, their only policy is to claim further relief in the matter of liability to payments for all save directly beneficial purposes. The principle has been conceded on at least three separate occasions, relating to both rates and taxes, and it should be possible to get it more widely extended, as no political creeds are outraged by it and no political party is definitely opposed to it.

Income-tax, the bane of the private citizen, has never had terrors for the commercial farmer, whatever the feelings of the large landowner towards it may have been. In the first place he has in the past always held a preferential position, in that he could claim to be assessed within certain limits—rigidly fixed in relation to his rent. There is little doubt that, prior to the war, farming in its widest application, benefited greatly by this concession—a concession granted because of the theoretical inability of the bulk of farmers to keep their own accounts. Once conceded, even war-time prosperity did not result in the removal from agriculture of this relief, but merely led to its reduction for the space of two or three years. If the farmer is

now not satisfied at being assessed on his rent, he has always the option of producing his books to show his lack of commensurate profits. The comparative lightness of the income-tax on reversion to the annual rent basis can best be seen if we take the case of the £300 per annum farmer again, who, provided he is a married man, practically escapes payment altogether. It is thus obvious that income-tax, on its present agricultural scale, does not press hardly on the working farmer who occupies land up to some three or four hundred acres in extent. If, however, we include in the rural comity all owners of rents, then as we ascend the scale we find this tax becoming more and more a real "burden."

Income-tax figures naturally reflect the economic history of the landed interest during the last century—the steady increase from 1850 up to 1880, and the subsequent decline, which left the total sum assessed upon the ownership of lands in 1918-9 almost exactly where it stood one hundred years before; in the meantime the contribution of other forms of property had increased many times over.

Rates being in the long run dependent on rent, the rateable value of farm property is shown to have followed the fluctuations of the latter; but there the only criterion is the amount in the pound contributed by rural areas, which was rising even before the war in response to the demand for more social services. Again, as neither rent (nor rates) bears any hard and fast connection with the profits made by various types of farming in different localities, it is not possible, except by dangerous generalisation, to say that either the one or the other represents a certain proportion of the gross, or the net, income of the industry. Individual examples abound, however, in the case of large estates where income-tax and super-tax absorb the whole of what their owners describe as "profits"; unfortunately such properties cannot legitimately be considered agricultural in the strictest sense of the word, as they frequently include amenities that are not essential to the practice of farming. Columns of *The Times* are often devoted to an analysis of the outgoings on properties ranging in extent from five to thirty thousand acres. Represented as percentages of the gross income typical figures are then as

follows: tithe ten per cent., income-tax (together with super-tax) thirty per cent., Land Tax one or two per cent. These figures are, of course, valueless to the rural economist who wishes to secure statistics of the expenses of that illusive thing—the “average” farm; they merely show, which is admitted on all sides, that large estates do not “pay,” and afford an opportunity at the same time for their owners to complain of the assessment to income-tax of their gross incomes and not of their net profits. But the repayments that follow on this procedure are sometimes overlooked, and fail to appear in the submitted tables.

These comments in no way detract from the truth of the statement so often heard that numerous large estates have to be broken up from the inability of their possessors to make both ends meet; they are merely intended as a reminder that whilst agriculture embraces areas of land from less than one acre in extent up to many thousands, yet if we intend dissecting it as a business concern, we must exclude from our scrutiny those undertakings in which the making of a profit is not the one and only end in view. Any increase in the practice of keeping analyses of costs among farmers is greatly to be encouraged, as it is by such means that knowledge of the respective weights of the various charges on commercial undertakings is acquired. Figures, collected from some hundreds of holdings of all sizes, to show the relationship borne by rates, tithe, Land Tax and income-tax to gross or net profits would at the present juncture be invaluable.

Before analysing the comparative incidence of these four charges on land that have been discussed in the foregoing pages it may be well to repeat the postulates that Adam Smith laid down as axiomatic in regard to taxation in any form.

(a) The Subjects of every State ought to contribute towards the support of the Government as nearly as possible in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state.

(b) The tax which each individual is bound to pay ought to be certain and not arbitrary.

(c) Every tax ought to be levied at the time or in the manner

in which it is most likely to be convenient for the contributor to pay.

(*d*) Every tax ought to be so contrived as both to take out and keep out of the pockets of the people as little as possible over and above what it brings in to the public Treasury.

These maxims are as sound to-day as when they were first written, although the principle of equal payment has, in the case of income-tax long been abandoned and progressively preferential treatment accorded those with small "revenues." Let us see to what extent the four charges on agriculture conform to them. Whilst justified historically and doubtless ethically as a charge on land, tithe does not come within the definition of a tax; it is now not of universal application, and its incidence bears no necessary relationship to present day farming operations. As a charge on agriculture in general it is not of the first magnitude, but, in certain individual cases it can still prove a handicap to occupying owners. On the other hand it is always possible to terminate its incidence by compounding for future payments.

Land Tax comes in the same category. It is even less universal in its incidence; on the other hand it is a national charge, and should therefore be above suspicion historically. It could not, however, claim an enquiry into its past with equanimity, and if it is now relatively unimportant as a means of taxing agricultural land, it nevertheless stands in need of thorough revision. It should be redistributed on a wider basis, or else abolished before private persons have had to complete the process by redemption. Although in a few cases it may represent a relatively heavy charge, yet complaints are not rife against the methods employed in its collection.

The remaining universal charges are generally placed by economists in two divisions—onerous and beneficial. Take rates first. These are local in their application and doubtless beneficial originally, but agriculture now claims that the majority of the objects for the support of which it is rated are essentially urban, if not national, in their character. Rates admittedly represent the heaviest extraneous charge on the land, and justice demands that a full enquiry should be carried out into their incidence on

purely agricultural property, so that the latter under present conditions may "contribute in proportion to its ability." The modern development of powerful County Councils, armed with powers denied in the past even to Borough Councils, and supporting large personnels, raises the question as to whether the last of the four maxims is complied with. Even if the administration of local funds is carried out without undue waste, it is questionable if it is financially sound to employ local officials in the work of collecting national taxes. Of this there are now numerous examples.

Income-tax is a national charge, but to what extent it is onerous, or rather non-beneficial, is nowadays a complicated question. Millions of money raised by income-tax are returned to the districts from which they were taken in the shape of grants to local authorities, and to a certain extent thus represent avoidance of further rating burdens. But again from the agricultural standpoint these grants are generally non-beneficial. Whilst agriculture enjoys in common with the rest of the country the protection afforded by the Navy and the Army, and receives the support of the Civil administration, yet the only benefits received in its corporate capacity take the form of the partial provision of Small Holdings (upon the wisdom of which even there is room for grave doubt) and a relatively small sum advanced annually towards research. A fraction of a penny in the pound of the income-tax would represent at most the direct value of national taxes to agriculture. But, on the other hand, the commercial agriculturist is excused from his full share of income-tax, although he contributes to the national Exchequer by indirect taxation.

It might be fair to suggest that the practical side of agriculture, as opposed to the mere rent-receiving, is still sufficiently self-contained to claim that the majority of charges on land are onerous, and that it receives very small benefits from a fraction of the money expended locally by County organisations—money that has come partly from local, and partly from national, funds. There is small room for argument that, viewed as a commercial undertaking, agriculture does derive the least benefit from the activities of those bodies charged with the administration of

public services. The question remains whether this will be acknowledged by the rest of the nation, and the principle long ago conceded, carried further. It is unfortunately impossible to show the public at large the total contribution of the farmer to local and national funds. Abstracts of the comparative sums raised as income-tax from the ownership of land are available, as are corresponding data relating to local rates, but no statistics exist of the money taken from tenant farmers, and occupying owners of farms, for all onerous and beneficial services.

The following words used in the report of the Select Committee on Agriculture in 1833, a time of even heavier burdens for the farmer than the present, are singularly apposite now: "Your committee have endeavoured to trace the injurious effects of past legislation and to prove the caution necessary in future measures; it may be urged that they have stated many evils but have failed to suggest remedies; it should, however, be remembered that legislative measures once taken and long established can rarely be abandoned without danger, and that to retreat is occasionally more dangerous than to advance. In conclusion your Committee avow their opinion, that hope of melioration of the Landed Interest rests rather on the cautious forbearance than on the active interposition of Parliament."

The injurious effects of the past have been emphasised in the present chapter, and it is hoped that any tentative suggestions herein put forward for the "melioration" of agriculture have not been too tempered with "cautious forbearance." Advocacy of the abolition of the Land Tax, on grounds of equity, and of the concession of a further preference in the matter of local rates, as a constructive policy, cannot be held drastic in the light of present rural conditions.

CHAPTER VII

BRITISH AGRICULTURE IN PEACE AND WAR

Agriculture prior to the war; rates of production of cereal crops in different decades; productivity of our agriculture as a whole; the extent to which this country was self-supporting in food-stuffs; their value; Government policy on the outbreak of war; steps taken to meet the situation; methods employed to secure additional land under the plough; yield from new and old arable land compared.

IN 1914 such an event as a war that would directly affect him seemed a very remote possibility to the British farmer. The events of 1793 to 1815 were forgotten by the present generation, however vividly they may have been remembered by its grandparents. The intervening period had been occupied by the fight over the Corn Laws, the ineffectual attempt to combine high farming with low prices, which in the end led to submission to the law of diminishing returns; and finally had come the definite relegation of the industry by the nation to a position of secondary importance. The State had considered its obligations fulfilled by the appointment of Commissions of enquiry, and by the subsequent passage of minor Bills dealing with such questions as Tithe, Tenant-Right, Rating, and Small Holdings. Industries of a commercial character had become predominant, and the townsmen had increased in numbers and influence each decade.

Yet a few years before 1914 agriculture had turned the corner economically. By any test that we care to apply this amelioration can be seen. The prices of almost everything the farmer produced had tended upwards from about 1910, the acreage under cereal crops reached its minimum in 1908, cash wages were already a shilling up in 1914, and land itself was fetching higher prices. It may reasonably be objected that the majority of these phenomena were only attributable to the then general upward trend in values, but in the case of cereals the increased world price had enabled the British farmer, in certain districts, again to produce at a fair profit, and unless he had been able to meet it by an increase in wages the slight rise in the cost of living

would otherwise have compelled him to reduce the numbers of his employees. Instead, we find wages up, and simultaneously, for the first time in sixty years, more hands employed on the land. Not only was the industry as a whole better organised, but its activities were also more diverse. All it required was a continuance of peace at home and abroad and the minimum of interference; on these lines it is tolerably certain that it would have continued to enjoy fair prosperity. Technical progress was being registered; the yield of the staple crops, when examined over a period of some decades, exhibited unmistakable evidence of improvement, as the diagrams contained in the Appendix show. The weight of carcasses and the yield of milk were both moving upwards. Education was widening the outlook of all three partners in the industry, and research was adding weapons for the defence against nature's onslaughts. Lastly, the antagonism between town and country was almost forgotten.

It will be observed that the real improvements in the yields of cereals had been secured in the case of wheat and barley; this tends to show that the work of Professor Biffen, Mr Beaven and their fellow investigators was bearing fruit commercially, for their efforts had mainly been confined to these two, and oats had not received such full attention. A higher potential yield, without the loss of other desirable qualities obviously appeals to the farmer's pocket, and if new varieties of wheat can be proved capable of returning an extra two or three bushels per acre, whilst retaining sufficient strength of stem to obviate the tendency to "lodge," and having the additional asset of meeting the millers' requirements, then it is only a question of time before such types are predominant. In the long run it is certain that improved weight of yields will be secured in this country, not from the practice of high farming, but by the aid of science and the plant breeder. For high farming is a luxury rarely to be indulged in while the use of improved seed is a permanent standby. Again, the selection of individual types of cereals in conformity with local soil conditions opens up considerable possibilities. Sir John Russell, in an article on increased crop production, after giving a summary of the soil and climatic requirements of different named varieties of wheat, barley and

oats, concluded thus: "Much information of this sort is current among farmers, but it needs collecting and sifting. One of the great problems for the present is to make a careful study of the environmental requirements of the well-defined types of varieties, and one of the great hopes for the future is that new varieties may be found better suited to the various local conditions than those at present in common cultivation." The National Institute of Agricultural Botany should, therefore, have a particularly promising sphere of activity open to it, as it is to such bodies that the agriculturist must look for his guidance.

The three maps recording the decennial yields of each cereal demonstrate that wheat was a progressively improving crop in the North and East of England. Whereas in 1885 to 1894 the majority of Counties were below the twenty-eight bushel level, by the next decade only Wales recorded yields of that weight. In 1895 to 1904 appeared a great advance in certain East Anglian Counties, coupled with fine yields in Lancashire and Northumberland, but it must be borne in mind that there are special reasons for this rate of production in the latter Counties, and that the acreage concerned is small, but as showing what can be achieved the figures are of interest. From the nation's standpoint the increase in the yield of the Eastern Counties was the satisfactory feature, as an extra bushel or so on many hundreds of thousands of acres was worth infinitely more than a rise of fifty per cent. in the rate attained in the West of England. Barley affords almost a similar record of improvement distributed over much the same areas. Oats, with the exception of certain County fluctuations, were, in 1905 to 1914, in almost the same position they had occupied in the two previous periods.

If the yield of each crop in each County is plotted separately, some interesting anomalies are revealed, for cases occur in which two crops have improved in the thirty years out of all semblance, and yet the third has actually declined, and others in which all three first advanced, then one remained stationary and the others continued the movement. Such areas as the geographical County of Cambridge produced gross yields by the thousand tons in excess of the normal, simply from yields per acre varying

from six per cent. to thirty-three per cent. above the average. This was, in part, the reason why cereal growing there was still a profitable business even in times of depression. It is also a factor to be reckoned with when accounting for the improved yield of wheat and barley over the whole country, as when the acreage under these crops shrinks the poorer land is always the first to be put under alternative crops, and in each individual district the best land is reserved for the most important cereals. The only reservation that should be made, is this; that the heavy clay-lands of Essex and parts of the East Midlands, which in times of high farming produce above average crops, are among the first to be discarded when prices fall, and therefore to a slight extent cancel out the gain in yield resulting from the above factors. But the acreage of the clay-lands in question does not approach that of the other districts, and the net result is that a certain progress is recorded.

The figures on which the maps have been based, together with a table showing the yields of all three cereals in Great Britain during the last thirty-eight years, have been printed for purpose of reference in Appendix No. II. Great Britain has been chosen in place of the United Kingdom for two reasons. In the first place, the United Kingdom no longer exists as a statistical unit (even if it does constitutionally), for Ireland has now two bodies charged with the collection of agricultural data, and there is reason to doubt if the returns for Southern Ireland will in future be collected on lines suitable for inclusion in a composite table. Again, Scotland produces some of the highest yields of cereals, and the acreage under these crops is extensive enough to warrant combination with the return for England and Wales.

The average yield of the country as a whole had naturally not increased compatibly with the averages of the best Counties, for, generally speaking, those of the latter that had made the most progress retained the smallest acreage under cereals. The potentialities of the situation were, however, modified, and if an extension of corn growing had been possible, the yield per acre would have shown more decided improvement, for by the system of basing the country's yield on the acreage involved

in each County, the increased rates obtained in the Western districts have little scope to make their presence felt. If the improvement in this country was slow, and was mainly confined to a levelling up of the poorer districts, it must not be forgotten that, when the statistics of yield were first collected, we were far ahead of the rest of Europe in this respect, and that it has taken more than a generation for our rivals even to approach our accomplishments of thirty years ago. It is certain that had a period of high farming synchronised with the efforts of plant breeders a notable advance would have been recorded; as matters were, there is no doubt that the improvement was made in the face of economic difficulties that would, if unresisted, have caused an actual reduction in the rates of yield after 1880. It may be objected that, if English yields only are investigated the results are not so satisfactory, but the mere fact that the greatest improvements were recorded in those districts that had been the most retrograde is surely sufficient reason for commendation, irrespective of whether they were situated in England, Wales or Scotland. Competent authorities hold that the greatest effects of improved breeds are felt under adverse climatic conditions, and that nowadays yields are not reduced by excessive rain and cold to the extent that was the case in the 'seventies and the 'nineties. The weather factor cannot, of course, be eliminated, but by averaging over periods of ten years it is possible to minimise its effects, and it is unlikely that its influence has had any considerable bearing on the shading of the nine maps. The main distinction to be drawn between the climatic conditions of each decade was the persistent lack of rain in the second period. Drought, however, is not always the precursor of low yields in the case of cereals, and autumn sown wheat is rather favoured by hot, dry summers.

The yields of all root crops, if similarly investigated, also exhibited a moderate rate of increase during the thirty years in question. Thus the rate of production per acre was undoubtedly rising during a time when the gross output of the land was declining as a result of the contraction of the arable area. If, however, we take as our basis the gross value of the soil products, and therefore include the output of fruit and vegetable farms,

of hop gardens, of the acreage of crops under glass, and of pedigree livestock there is, in the absence of full statistics, room to question whether the total value of all the soil products did not increase between 1885 and 1914—neglecting, of course, any variations in money values. Nothing but a series of enquiries on the lines of the 1908 Census of Production could, however, answer this question satisfactorily. Nor do there exist any reliable statistics dealing with the production of meat in this country. That same Census gave the weight of dressed carcasses, but in the absence of anything save individual estimates for former occasions—the earliest dating from the seventeenth and eighteenth centuries—we cannot record in number of pounds' weight the increased outturn of butcher's meat per animal slaughtered. Even the supplies of home killed meat, with the exception of the war period, have to be calculated (taking into review numerous factors) from the numbers of livestock annually registered on June 4th. Admittedly, the trend has been to produce heavier animals, but this increased weight cannot be exactly computed.

The yield of milk per cow presents exactly the same problem. The Census of Production gave 550 gallons as the average yield per cow in milk, recorded the districts in which the highest rates were attained, and the percentage sold by farmers, but it provided no data for comparison with former periods. Estimates below 400 gallons had been made by separate investigators in the latter half of the nineteenth century, and met with corroboration from farmers themselves; the statistician must therefore fall back on the unsupported evidence of agriculturists in regard to the rate of progress achieved, always remembering that abnormal yields from a few herds of Friesian or other particular breeds are as nothing when balanced against the output of numerous ill-bred or neglected stock.

Apart from the valuable trade that had grown up in the exportation of pedigree livestock, the influence of the latter had begun to permeate throughout all branches of the industry, but expressed as percentages of the total of each class of animal the numbers of pedigree examples were shown, by a special enquiry held by the Ministry of Agriculture in 1919, to be relatively

small. The *Report* that accompanied the published returns contained the following exhortation. "An examination of the returns shows that there is ample room for an expansion in the pedigree stock of the country, both for the home and export trade, and there can be no doubt that the use of a greater number of pedigree sires in non-pedigree herds will tend to grade up our stock and raise their productive capabilities, to increase the amount of meat and milk that can be produced per acre, and to increase the profits of the producer. The development of the pedigree industry, and the grading up of the stock of the country should prove not merely of advantage to stock breeders but of benefit to the nation, by the provision of larger supplies of meat and milk."

Whatever branch of farming we have surveyed has shown progress made in the generation or so before the war—progress that was not always capable of statistical expression, but which was nevertheless real, if it was not of the marked character that the latter half of the eighteenth century had recorded. In that period additional land had been secured for agriculture, and the output of crops and livestock was also responsive to the slightest attention received from the most rudimentary "scientists" or experimental breeders. In the thirty years prior to the Great War agriculture was not only practised on an intensive, as opposed to an extensive, basis but its supply of raw material, in the shape of land, was actually decreasing, and the application of capital was only possible in directions other than those to which older farmers had been accustomed. Economic influences were at work, which rendered the industry a far more complex business upon which to embark, but one from which it was still possible for its followers to secure favourable returns.

The only steps taken to investigate our probable situation in the event of war breaking out had consisted in the appointment, in 1901, of a Royal Commission to enquire into the food supply of the country. As we shall see in the chapters on "Wheat," its findings led to no active steps being taken to prepare for such an eventuality, but certain fresh *data*, relating to the consumption of cereals were collected. It is so often erroneously asserted that

we produce only "one-fifth of our food requirements" that it may be well briefly to enumerate the quantities that we were actually raising prior to the war. On the average, we produced the following proportions of our total needs: of wheat and flour 21 per cent., of barley 58 per cent., of oats 79 per cent., of beans 72 per cent., of peas 56 per cent., of beef and veal 61 per cent., of mutton and lamb 54 per cent., of pigmeat 56 per cent., of butter (and margarine) 40 per cent., of cheese 20 per cent., of milk 95 per cent., of eggs 65 per cent. Whilst the consumption *per capita* of cereals was very uniform in normal times, that of meat was increasing—figures have been published that showed it to have been some 103 lbs. in 1877, and approximately 120 lbs. in 1914. Concurrently, the quantity produced in the United Kingdom fell from 90 per cent. in 1870 to the figures recorded above. Our increased demands were being met from the ranches of the Southern hemisphere.

It will be observed that the origin of the belief that we only met one-fifth of our food requirements lies in the fact that this was the proportion of wheat raised in the United Kingdom. Of all the cereals together, we were producing almost exactly half—viz. 49.3 in 1913-4. In addition, of course, we annually imported some two million tons of maize. The sources of origin of these commodities were roughly as follows. Half the imported wheat came from within the Empire, the other cereals principally from foreign countries, as also did the bulk of fruit and vegetables, while less than one quarter of the imported meat was produced in our own Colonies. In addition, we required large quantities of imported feeding stuffs to raise our home grown supplies of meat. The gross weight of foodstuffs imported or produced at home is, however, only one side of the question; another point that calls for consideration is their comparative value as nutriment. In regard to this a Committee, appointed by the Royal Society at the beginning of the war, calculated that in calorific value we produced forty-two per cent. of our total needs, but this figure was subsequently slightly reduced as a result of fuller investigation. The pre-war monetary value of our imported foodstuffs was in the neighbourhood of £200,000,000, of which two-thirds went to foreign countries;

our home products were valued at slightly over £170,000,000. The proportionate values of imported and home produced commodities had changed greatly even in the decades before the war, as can be seen from a table published by Caird in 1878. Then the value of all foreign cereals imported was about £52,000,000; in 1913 this figure had become £85,000,000, and those of other important articles were as follows, the 1913 values being placed in brackets: wool £22,000,000 (£34,000,000), butchers' meat £22,000,000 (£56,000,000), cheese and butter £14,000,000 (£31,000,000).

This, then, was the statistical position in a typical year before 1914. Whilst, however, our requirements were approximately known in advance and the sources of our supplies familiar to all, knowledge of the stocks of food in the country at any given time was generally lacking, this side of our economic statistics being eventually improved by State investigation during the war.

One is inevitably drawn into making comparisons between the Napoleonic war and the Great War in their effects upon agriculture. On both occasions we were technically blockaded, both times agriculture prospered during the period of hostilities, and both wars were succeeded by a period of extreme depression. There the simile ceases, for one hundred and twenty years ago we could, if necessary, have been entirely self-supporting in bread stuffs (despite the campaign to reduce consumption of wheat and the simultaneous purchases abroad by Government agents), the population was mainly rural, and the State made no attempt directly to control cultivation or to fix prices and regulate supplies. On the other hand, after 1914 agriculture became a matter of great interest to the nation and a source of anxiety to the Government.

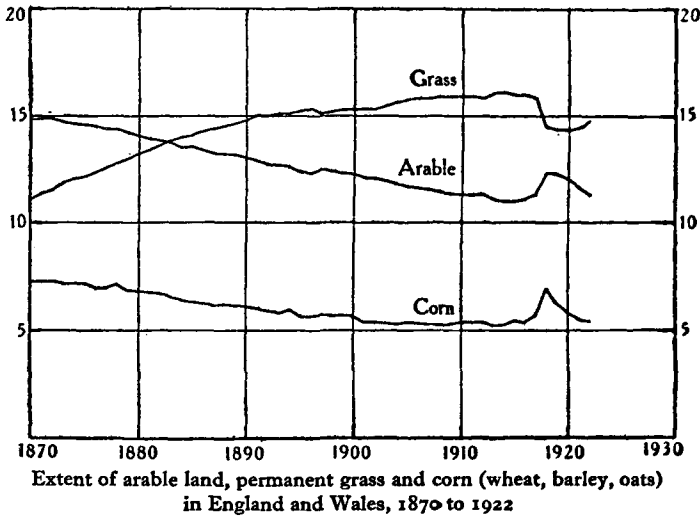
As the effect of the war on farm wages is dealt with in the second chapter on "Labour," the supply of wheat during the same period included in Chapter XV, and the war-time allotments and Small Holdings policy has already been reviewed, it is proposed to confine the following pages to some account of the influence exercised by the Government on the actual cultivation and management of the land and its control of farm products.

For this reason it is necessary to omit any account of the effects of the war on our own overseas Dependencies and on hostile and neutral countries. It must, however, be pointed out that, except in the case of sugar, there was never any lack of potential supplies of essential foodstuffs, but that distance and the time factor alone prevented adequately protected convoys from importing normal quantities. The friendly and neutral nations in both hemispheres of the New World added largely, but not always altruistically, to their acreage under cereals, as did our own Colonies. Even in November 1918 the ports and warehouses of this country contained larger supplies of wheat than they had ever held before. The whole policy of the Government in connection with the increased home production of food was to use the latter as an insurance premium against the submarine blockade; for this purpose it was necessary to adopt every means, if necessary by frightening it, to persuade the nation at large to utilise each scrap of ground. This policy of State control falls naturally under three separate heads—viz. the actual steps taken to increase production, its effects upon farming practice, and the methods of price fixing. The first feature, as representing a purely constructive effort, will be considered first.

To find a previous instance of the State directly legislating in favour of a ploughing policy it is necessary to revert to the reign of Henry VIII, when similar steps were taken to redress the balance previously upset by the widespread introduction of sheep-farming. The free play of prices in the emergencies of subsequent centuries had always brought additional land under crops; this, of course, was the case in the previous European war. For over forty years prior to 1910 the area under the plough had been steadily declining, the total loss in England and Wales amounting to upwards of 3,000,000 acres (see the accompanying figure). The resultant diminution in staple crops had mainly fallen on wheat, as the larger diagram facing page 154, shows. From an area of about 3,500,000 acres in England and Wales it had declined to a pre-war average of little more than half that figure. The transference from arable to grass land had, of course, not been evenly distributed, and parts of East Anglia and the East Midlands still retained anything up to eighty per cent. of their

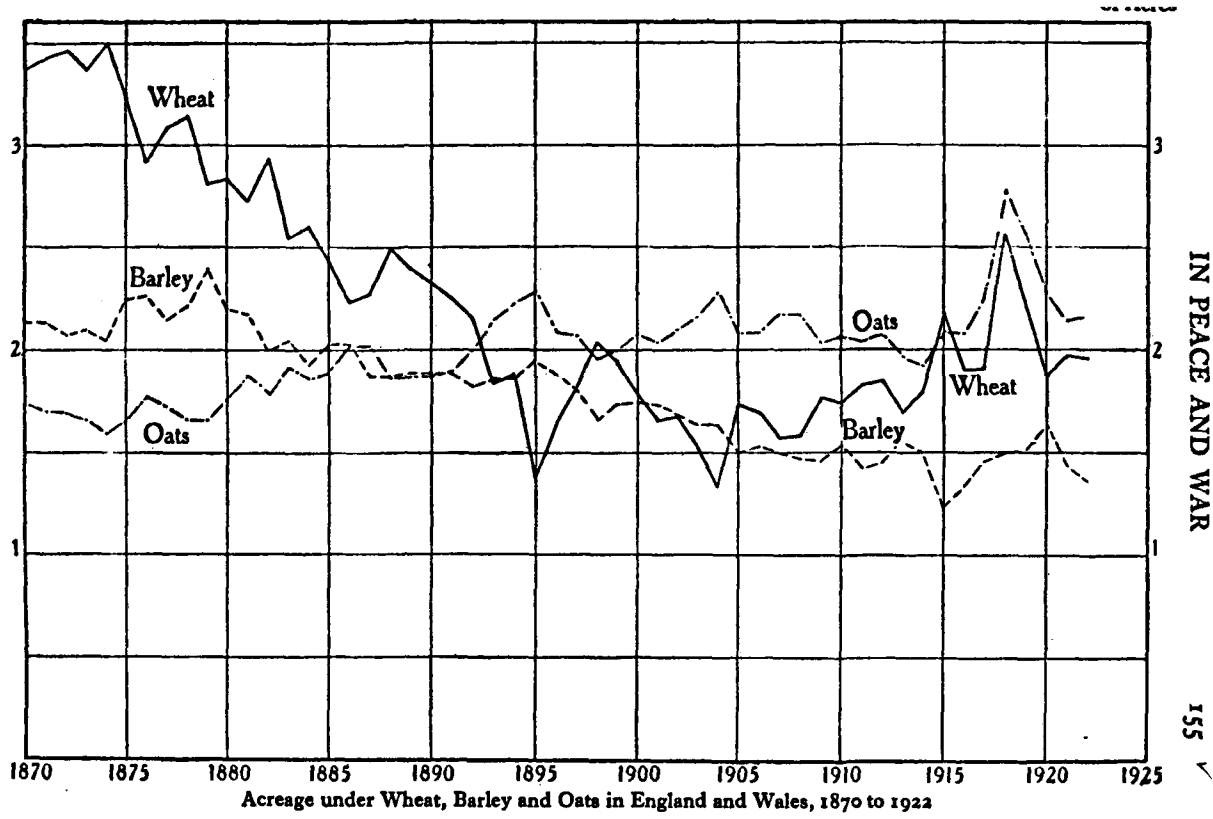
cultivated area under the plough. In other words, cereal farming was mainly confined to that part of the British Isles in which climatic conditions afforded the best opportunity of competing with the foreign producer. Diagrams illustrative of the annual rainfall, the acreage under the plough, and under wheat, respectively, at once afford evidence that our land was being divergently farmed from economic necessity and not from free choice. Two generations which produced successively legislative, economic and climatic handicaps to be circumvented had

Millions
of Acres



left their indelible impression on the face of the country. Thousands of grazing fields in the Western and Midland counties of England alone remained to show what had once been—fields that still retained the ridges and furrows caused by centuries of ploughing.

The war commenced, as had always been anticipated, when the bulk of harvest operations in Europe were completed, and when accordingly we, in common with friend and foe, had our largest supplies of grain in hand. In our case this represented



breadstuffs for at most some five months' requirements, consisting of ten weeks' supply from our own resources and a similar quantity of foreign wheat in warehouses and in millers' hands. In response to advice from the Board of Agriculture and also, doubtless, from an intelligent anticipation of the course that prices would run, a much larger breadth of autumn wheat was sown in 1914—obviously at the expense of barley, as the diagram previously referred to shows. The acreage harvested in 1915 was, indeed, the largest since 1892, and this was accomplished voluntarily. But next year the difficulties of the British farmer really commenced, and the area under wheat declined. He had begun to feel the loss of labour recruited from the land, supplies of farm necessaries were beginning to decline in quantity and rise in price, and, lastly, Government had assumed control of prices. These causes combined led to his abandoning any concentration on the production of wheat, as he foresaw greater freedom from fixed prices in the case of the other two cereals. That his anticipations were correct is shown by the course prices under Government control pursued in the next few years. In 1917 he again added to the area under oats and barley, but the official policy of encouraging the greater production of wheat was delayed until little more than the retention of the 1916 acreage could be secured. Arrangements were, however, put in train for a very complete undertaking in the following year.

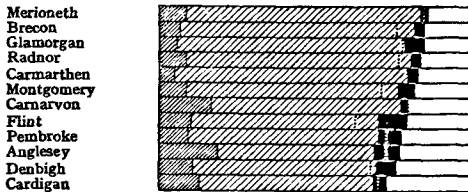
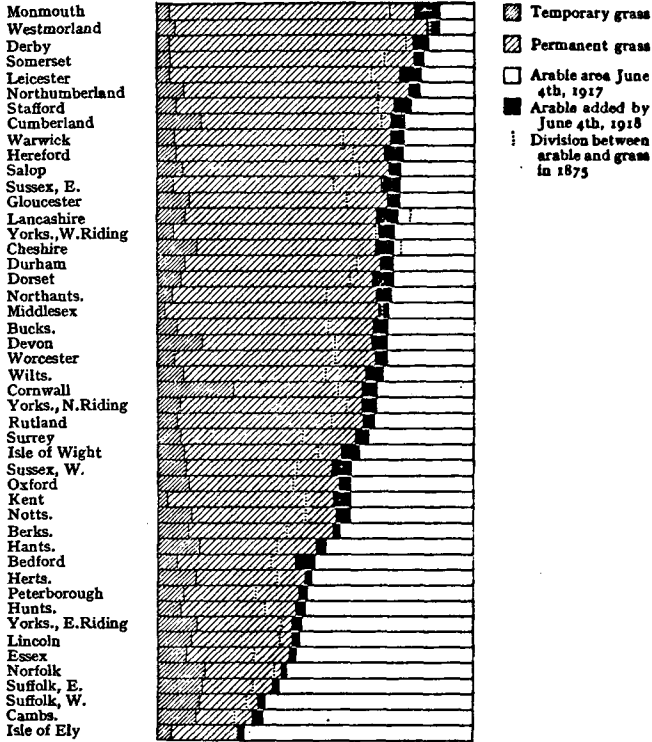
The submarine campaign reached its climax in the spring of 1917, and it was obvious that every additional acre under wheat would be of assistance, and that some hundreds of thousands might quite definitely turn the scale in our favour; accordingly a free hand was given the Departments concerned, and they were instructed to secure the greatest possible outturn of all cereals for the succeeding harvest.

Centrally, a special branch of the Board of Agriculture, entitled the Food Production Department, was set up. Locally, Agricultural Executive Committees carried out its enactments in each County, and the Irish and Scotch Boards of Agriculture were responsible for supervising a similar policy in their appropriate areas. The newly created Department was charged with the duty of advancing, by every means in its power (aided by

the provisions of the Defence of the Realm Act), the increased production of all forms of home produced food. This object might be achieved, in one direction, by the provision of fresh allotments, in another by the advocacy of the consumption of alternative forms of food, and yet again by the conversion of grass land to tillage. The exact results of the latter scheme were only known at the time to comparatively few persons, although the public at large appreciated that much additional land had been placed under the plough. As this is the first occasion upon which more than a cursory report relating to the results obtained from the new arable land has been published, no excuse is needed for treating its economic features at some length. The bulk of what follows was prepared at the time in question, and relates solely to conditions in England and Wales, as the Scotch and Irish Departments did not apparently call for reports relating to the smaller areas of new land in their particular spheres of activity.

The original aim of those responsible for directing the scheme was to break up the bulk of the three and a half million acres lost after 1860, but this, from lack of personnel and materials, was soon modified, and a figure nearer two and a half million was substituted, as representing a more feasible task. Quotas were then fixed, based in most instances on the proportions borne by arable and grass in each County in the year 1875, and Executive Committees were instructed to lay their plans accordingly. These quotas necessarily varied greatly; generally speaking, the predominantly arable Counties had relatively much smaller tasks set them than had those in the West of England. The dotted line in the diagram on the next page represents the division between arable and grass in 1875, and therefore affords an indication of what was aimed at. It will be noticed that Lancashire and Cheshire had, in 1917, already under the plough larger areas than in the earlier year; these two Counties thus afforded the only exceptions to the statement that the plough-land had decreased in the preceding forty years. In their case the presence of dense population had led to the formation of numerous market-gardens, and they had also become great producers of potatoes.

The Ploughing up campaign of 1917-8



Proportion of Arable and Grassland in the different Counties, June 4th, 1918

It soon became apparent that labour and machinery were both insufficient to compass the ends in view, and despite the driving force exerted from headquarters, County Committees could not always be made to see eye to eye with the officials whose business it was to carry through the policy involved. In these circumstances it was no mean achievement to secure the breaking up of some 1,240,000 acres of grass in England and Wales, between June 4th, 1917, and the corresponding date in 1918. The new arable land thus secured is marked in black on the accompanying diagram, and shows that a few Counties, notably certain of the Welsh, did succeed in attaining the position they had occupied in 1875, others, especially those situated on heavy land in the South and Midlands, only secured a fraction of the new arable land it was intended they should have had under the plough. The means employed to attain even this limited accomplishment necessitated much improvisation. Neither ploughs, tractors, horses or men were at first available in anything like sufficient quantities. The first two were imported by the thousand from the United States, horses and harness were bought by the Department (frequently in competition with the Army), and low category recruits, civilian substitutes, soldiers on lengthy furlough, prisoners of war, and, finally, women were engaged as workers. Nor could the organisation rest when it had secured the means of breaking up grass-land; it was essential that manures, reapers and binders, and even binder twine, should be available in quantities corresponding to the large acreage broken.

Executive Committees had to select land in their districts which they considered suitable for conversion, and in the event of a refusal by any occupier to break a proportion of this grass they then had the power themselves to enter the land, and with their own implements, to carry out the operation. They could also terminate tenancies, or order landlords to do so. It was inevitable, in the circumstances attending the whole campaign, that many thousands of acres of totally unsuitable grass were converted, and that good fields were often rendered unfit for further cultivation owing to lack of skill on the part of the workers. But it must also be remembered that an aggregate of at least a

million acres of excellent arable land was obtained, and that mistakes were always commented on, while successes were ignored by interested parties. All are familiar with instances of inexperienced persons being sent to break up fields of miserable grass with inefficient ploughs, of the advice of those with local knowledge being ignored, or of the operations being delayed until the late Spring. But it is certain that in the light of the economic situation then existing everything done was justified. The expenses were enormous—both the horse-ploughing and the motor-ploughing schemes were run at a heavy loss—and after November 1918 the horses and machinery were perforce sold for prices that compared ill with those they had been purchased at. All this is now admitted, but he would have been a fool-hardy person who, in the winter of 1917-8, had advised against the policy of State intervention with the cultivation of the land. The grass once broken, comparative freedom of cropping was permitted to individual farmers and no attempt was made to assign any exact proportions between the different cereal and root crops—all were vitally wanted. So long as the new land was sown and adequately attended to, the regulations of the Department were adjudged complied with. Surprise was often expressed at the time by travellers that little in the way of new plough-land was visible. Apart from the obvious fact that this new arable only represented an addition of some ten per cent. to the old, there was another reason; the bulk of the former was situated, not in the valleys, where the majority of railway lines run, but on the lighter uplands away from the eyes of passengers by train. This was frequently attributable to the action of farmers who preferred voluntarily to sacrifice poorer land, as well as to inability on the part of Committees to tackle the work often involved by the heavier soils.

We have seen the quantity of land that was transferred to the plough; what, it may be asked, was produced from it? On this point very full information is now available in the shape of a report compiled at the time in question and based on complete data received from the Counties themselves. The sixty-one Agricultural Executive Committees were requested in August of 1918 to furnish the Board of Agriculture with particulars of

the croppings and yields from the permanent grass-land broken up for the harvest of that year, based on a complete parish record for every five thousand acres converted. Reports were received from all but three geographical Counties—these being the areas selected for purposes of comparison. Some 78,000 acres out of a total of the 1,246,000 broken up came under review, of which 73,000 were in England and 5000 in Wales, whilst the yields from some 8795 fields situated in more than 600 parishes were analysed. This gives an average of thirteen selected parishes in every County and of fourteen fields to each parish throughout England and Wales. As in the majority of cases persons making the report were responsible for one, or at the most two parishes, the completed summaries represented the combined judgment of a large body of men—a number sufficiently large in fact to nullify the effects of a few extravagant or pessimistic estimates. In the following pages the term “old arable,” strictly speaking, represents “all” arable and should, statistically, be assumed to include the new in addition, but even if the reporters of the Board in their ordinary annual investigations allowed for the presence of the new land, this would have little bearing on the figures they produced.

Emphasis must be laid on the fact that these estimates of yields were made before harvest and were based on what might reasonably be looked for on threshing out under normal weather conditions. The incessant rains and gales of September and October, however, played havoc with standing crops, and delayed harvesting to such an extent as to reduce the yields in certain Counties by as much as twenty per cent. when threshing eventually took place. This was the subject of emphatic interpolations by nearly every Committee. On the other hand, the yields of practically all crops in England and Wales in 1918 were well above the average, and due allowance must be made for this factor when appraising the value of that portion grown exclusively on one particular class of land.

Briefly to summarise the main results, it would appear that the yields of wheat and oats in England and Wales on new arable land, whilst equal to the ten-year average, were slightly below those obtained on old arable land, and that of barley was

only mediocre. Potatoes and roots yielded returns above the average, and the other cereals showed tendencies to no wide divergence from it. It was evidenced that the total area of wheat grown on new land was about 200,000 acres, of oats 850,000 acres and of barley 75,000 acres. The remaining area was probably divided up approximately as follows: Potatoes 32,000 acres, turnips and mangolds 5000 acres, beans 14,000 acres, peas 15,000 acres, rye 14,000 acres, dredge corn 8000 acres. Other crops, such as mustard, market-garden produce and a small, but unavoidable, area of bare fallow would account for the balance of the 1,246,000 acres.

Only in the case of the three cereals were the "samples" reported on sufficiently large to justify raising the figures by County areas in order to obtain a weighted average for England and Wales as a whole; the yields from all other crops were confined to a simple average relating to the acreage actually reported on.

The normal proportions borne by the three principal cereal crops in England and Wales are as follows: wheat 32 per cent., oats 40 per cent., barley 28 per cent., and under stress of war conditions 37, 41, and 22 per cent. respectively, but on the newly broken land only, they became: wheat 19 per cent., oats 74 per cent., barley 7 per cent. With a few notable exceptions this order held good throughout the Counties, but in Cornwall, Gloucester, Huntingdon, Monmouth, Somerset and Worcester, the predominant position was accorded to wheat, oats occupying less than half the total area under cereals.

It is at once obvious, by a glance at the accompanying maps, that the yield of cereals was mainly determined by their position with reference to a line drawn from the Humber to the Bristol Channel. In other words, it follows that the arable areas did less well than those having a higher percentage of grass. Two possible causes suggest themselves, (a) that the area of grass available for breaking up was much larger, and therefore the selection of good land was facilitated, in such Counties as Warwick, Monmouth and Cornwall, as compared with Norfolk, Essex and Kent, or (b) that the rainfall during some critical period of the Spring was deficient over the East Midlands and

the South-East coast. There was little evidence for the latter suggestion, however, as precipitation was almost normal, and the bulk of the wheat, at any rate, was autumn sown. It is, of course, a possible factor to be reckoned with in the case of Spring sown oats, but in the majority of cases the first explanation is probably the true one, for tens of thousands of acres of rich grass were broken in the West of England, while smaller quantities of poor land, previously considered unfit for the plough, were so treated in the East. For all the cereals taken together, the South-Eastern group (Surrey, Kent and Sussex) afforded a striking example of paucity of yield, and there was also another well-defined area comprising the Counties of Leicester, Northampton, Bedford and Buckingham where a return much below the average was attained. Wales stands in a class by itself, many of the recorded yields being actually higher than those of the best English Counties. A perusal of the successive numbers of "Agricultural Statistics" shows that a far larger proportion of grass land had been ploughed up in Wales prior to 1917 than had been the case in England, *e.g.*, out of 64,000 acres broken for the season 1915-1916 in England and Wales no less than 42,000 had to be credited to the latter country, and an additional 41,000 acres for the subsequent year. It is therefore possible that the experience gained in cropping such land previously had borne fruit by the season of 1918. In England, new arable land in the following Counties gave yields above those obtained from old arable for all three cereals—Lancashire, Monmouthshire, Worcestershire and the North and West Ridings of Yorkshire.

Over 14,000 acres of wheat were reported on as grown on converted grass-land in every County except Cumberland, Westmorland and Radnor. Whilst the tendencies above commented on are at once apparent on consulting Map 1, yet it is impossible to draw a fixed line of demarcation as in the case of oats and barley, on either side of which success or comparative failure could be counted on. There were only two districts in which the yield from several adjacent Counties was consistently good. The first comprised Lancashire and the two larger Ridings of Yorkshire, together with Derbyshire, and the second

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Map. 1. Yield of wheat on new and old arable in 1918.

Counties shaded and unshaded represent respectively those which produced yields on new arable below or above those on the old land. Vertical lines indicate areas from which no reports were received.

Hampshire, Dorset and Wiltshire. Suffolk and Essex provided the only instance of a yield of one of the three main cereals from new arable in the Eastern half of the country exceeding that obtained from the old land, and the South-Eastern group the most important example of failure to obtain even a moderate rate of yield. On the old land the highest yields in England were found in Kent (36.2 bushels), Durham (39.1 bushels), Stafford (36.4 bushels), Dorset (36.5 bushels); the lowest in Huntingdon (28.3 bushels), Warwick (29.6 bushels), Bedford (30.1 bushels) and Monmouth (30.2 bushels), whilst on the newly broken land the four best yields were attained in Cornwall (38.5 bushels), Dorset (43.2 bushels), Monmouth (37.9 bushels), and North Riding of Yorkshire (39.5 bushels); the lowest in Sussex (18.3 bushels), Buckingham (19.3 bushels), Surrey (22.5 bushels) and Huntingdon (23.8 bushels). Although the individual County areas reported on in Wales were small, yet in the aggregate it is obvious that the general conditions favoured a high yield there, as most Counties exceeded 32 bushels to the acre. The highest yield recorded in any one County was at the rate of 80 bushels on eight acres of land in Gloucestershire, the second highest instance being found in Northamptonshire, where sixteen acres were referred to as having produced at the rate of 70 bushels. The instances of complete failure were not numerous. Somerset and Cornwall would appear to have grown wheat on new arable land to the greatest extent.

Oats, easily the predominant crop on newly broken grass land, were grown in every County in England and Wales, of which the yields from some forty-five thousand acres were reported on. As a crop they were, generally speaking, either very good or very bad, the ultimate yield appearing to depend too often upon the area of the fields which had produced no crops, or at the most 5-10 bushels per acre. Certain Counties attained yields on some hundreds of acres at the rate of 50 and 60 bushels, only to have their averages reduced to a little over 30 by the inclusion of a similar area giving 10 or 12 bushels. In all, it would appear that at least 12,000 acres of oats produced no return from the seed put into the ground. This is not a large figure compared with the total acreage sown on new land, but



Map 2. Yield of oats on new and old arable in 1918.

Counties shaded and unshaded represent respectively those which produced yields on new arable below or above those on the old land. Vertical lines indicate areas from which no reports were received.

in conjunction with a larger area of partial failures it assumes considerable importance. Where causes were assigned by crop reporters for complete or partial failures the blame was most frequently attached to "wireworms," or "leather-jackets," occasional reference being made to "lack of cultivation," "bad farming," or "unsuitable soil." In this connection attention should be drawn to the case of Hertfordshire, where 226 acres, out of a total of 1222 acres reported on, failed completely and were resown with barley. That the return for England as a whole was over 40 bushels per acre is explained by the fact that the heaviest yields were found in those Western Counties which grew the largest acreages, the lighter yields being obtained from the smaller areas of oats produced in the Eastern half of the country. On the old arable the highest yields were found in Pembroke (50.5 bushels), Lincoln (50.5 bushels), Norfolk (48.4 bushels), Cambridgeshire (48.8 bushels); the lowest in Yorkshire, West Riding (34.8 bushels), Gloucester (36.9 bushels), Oxfordshire (35.7 bushels), Warwick (36.0 bushels). On the new land the highest occurred in Pembroke (57.9 bushels), Cumberland (50.1 bushels), Dorset (49.7 bushels), and Stafford (48.5 bushels); the lowest in Surrey (27.4 bushels), Leicester (29.3 bushels), Huntingdon (29.6 bushels) and Hertford (30.0 bushels). Yields at the rate of 100 bushels per acre were referred to in the Holland Division of Lincolnshire (20 acres), of 96 bushels in the North Riding of Yorkshire (13 acres), 92 bushels in Suffolk, 90 bushels in Worcester and Cumberland, whilst individual instances of 70 bushels appeared in the reports of nearly every County.

Barley was a uniform crop, but with the exception of the small area in Wales and another in the North of England, a disappointing one with regard to weight of yield. The three Ridings of Yorkshire, Lancashire and Nottingham produced crops well above the average, but the areas reported on were small. Norfolk, Wiltshire and Gloucester grew barley largely, but nowhere was the yield up to the average. Although the yields in Wales were high, yet again the areas reported on were very small and will not justify close comparison. The cumulative evidence, however, certainly points to the favourable conditions

obtaining there. The uniformity of this crop is demonstrated when it is stated that no yield over a rate of 45 bushels was found, and no important case of failure was commented on by any reporter.

Yields of other crops were as follows, the figures in brackets referring to those obtained from the old arable land: beans 27·5 bushels (29·4 bushels), peas 26·9 bushels (27·5 bushels), dredge corn 36·5 bushels (35·7 bushels), rye 17·7 bushels (*not recorded*), linseed 18·5 bushels (*not recorded*), buckwheat 20·0 bushels (*not recorded*), potatoes 7·1 tons (6·6 tons), mangolds 28·3 tons (20·6 tons), turnips and swedes 19·0 tons (13·2 tons). The beans, peas and mustard were grown almost exclusively in Lincolnshire and Cambridgeshire, whilst the dredge corn was practically confined to the South West of the country. More than half the area of rye was grown on light soil in Norfolk, where the yield was naturally very low—only a little over 11 bushels to the acre.

CHAPTER VIII

BRITISH AGRICULTURE IN PEACE AND WAR

(CONTINUED)

Broad results of the ploughing-up policy; technical reports on new land; increased supplies of home produced food; the war and livestock numbers; further schemes for securing more food from our own resources; prices of agricultural products during the war; consumers *versus* producers; price-fixing; comparison with conditions a hundred years ago; profits during the Great War; modifications in agricultural practice in times of depression; the cattle embargo; forms of State assistance.

THESE, then, were the broad results of the State policy, viewed from the farmer's standpoint. From the nation's standpoint it has been calculated that some two to three million tons of cargo space were, by these means, made available for the transport of troops and munitions of war; but the potential value of this relief was not actually utilised in the case of wheat, as imports were maintained at a very high level throughout the whole period. The particular branch of the Board of Trade charged with allocating space for imports in the order of their importance, and with reference to their cubic contents, must, however, have been grateful for the increased home production of oats and barley. From the agriculturist's point of view the whole policy involved an unnecessary disturbance, but neither the nation at large nor the farmer was in a position to judge of the dangers of the situation in the winter of 1917-8, and those to whom the duty of safeguarding the food supply of the kingdom was delegated were justified in all the steps they took. It was subsequently claimed that, if even half crops had been secured from the new arable land, this return would have been advantageous to the morale of the people; as it was, the new land as a whole produced an average outturn. Even involved calculations to arrive at the net results of the food production campaign gave evidence that, on balance, a gain was registered. For, as Mr G. Udny Yule has shown, if the loss of meat and milk entailed by the conversion of plough land be set against the gain in wheat and potatoes (confining the enquiry to the

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four commodities principally affected), on a common food-value basis, the operation can be seen to have added materially to the gross quantity of nutriment available for the country.

In the Spring of 1918 a diagram illustrating what had been accomplished by the food production campaign was issued, and led to considerable misunderstanding. It showed that in the year 1916-7 we had been self-supporting in breadstuffs for a period equivalent to eleven weeks, that the following year this figure had been raised to thirteen weeks and that for the cereal year 1918-9 we should be able to meet our requirements for no less than forty weeks. The last figure was cavilled at, for, as was shown in the event, we succeeded in raising our normal figure of ten weeks' supply to barely eighteen. The explanation lay in the fact that the *per capita* consumption of bread in the last mentioned year was assumed to have been reduced to its lowest possible limit, and that both considerable dilution of the loaf with barley, maize, rice and other substitutes was carried to an extreme point, and the rate of extraction of flour to have been extended still further; the whole of the tail corn was also to be included as human food. Under such conditions we might have existed for four-fifths of the year on our own cereal supplies, but we could not have continued to wage the war almost indefinitely on these conditions, as the Germans were enabled to by their policy of concentration on potatoes and pigs.

Percentage of home production of cereals to total supply in the United Kingdom from 1913-4 to 1918-9

	Wheat	Barley	Oats	Beans	Peas	All cereals
1913-4	21.2	58.1	78.9	72.0	55.7	49.3
1914-5	23.7	70.5	78.9	74.4	66.6	52.4
1915-6	26.2	54.1	82.4	77.0	59.6	51.6
1916-7	20.6	70.7	84.5	77.2	42.8	50.4
1917-8	30.5	75.4	87.5	83.7	39.6	62.8
1918-9	34.1	74.4	92.2	92.0	63.9	64.8

Although a proposed further continuation of the ploughing-up scheme was stopped the moment hostilities ceased, and arrangements were at once made to permit of the reconversion

to grass (where necessary compensation being paid for the loss entailed by the original operation), it was decided that it would be well, from the technical point of view, to secure a further report upon the yields of the new plough-land in 1919. Committees, therefore, furnished the Board with information relative to the second year's cropping on this land, for which period County summaries will be found in the Appendix side by side with those relating to the previous year. Although, owing to weather conditions, the yield of all crops was abnormally low in 1919, yet those on the new arable gave relatively better results than in 1918, as the following figures for England and Wales prove. Expressed as percentages of the yields on the old arable those on the new had been in 1918, for wheat 95.1, for barley 88.8 and for oats 98.5; but in 1919 the corresponding values were 98.9, 96.5 and 102.8. The yields per acre were, of course, slightly lower in the second year, but all yields were brought up practically to the standard level, and oats on new land actually produced heavier crops than on the old. The distribution of heavy and light returns was in 1919 subject to no such strict definition as was witnessed in 1918, but the West Midlands continued to secure the best results, and the South-Eastern Counties had the lowest yields. But of wheat, better yields were obtained in the extreme South-West and in Norfolk, Lincolnshire and Cambridgeshire, whilst oats tended to transfer their worst outturns from East Anglia to the Cornish peninsula. Exact comparisons between the various Counties should be embarked on with great care, as the acreages reported on were sometimes small, but the results as a whole afford an interesting sidelight on the improvements effected in unfavourable circumstances. The balance between the different crops on the new land had been considerably modified in 1919, the area under wheat being greatly added to, and that under oats reduced, until both stood at some half million acres. In 1919, root crops again proved very successful on the new arable.

In 1918 questions had been directed to the Executive Committees asking for their views upon the different methods of ploughing and cultivating employed, the incidence of pests, and in general to what causes they attributed their successes

or failures. The replies received were very conflicting, but it must be remembered that at least four factors were involved—the date at which the work was undertaken, the nature of the soil, the subsequent climatic conditions, and lastly the actual processes employed. Obviously no hard and fast rule for securing uniform results from heavy clay or light sandy soils could be evolved. It was very apparent that the former type of land benefited greatly from a previous summer fallow, and numerous instances of failure were recorded from districts which had been compelled to delay ploughing until seed-time, the turf not being thoroughly destroyed in consequence. On light land, also, the yield of Spring corn was generally heavier when autumn ploughing and harrowing had been carried out, but much depended on the thorough consolidation of the soil—especially when wireworm or leather-jackets were present. The importance of the land-presser and the roller in this connection was very great, and striking instances of their effects were collected from all parts of the country. Steam ploughs again showed to great advantage on the heavy land, and, in fact, whenever circumstances permitted of their use, proved superior to tractors. This is doubtless mainly attributable to the fact that they were manned by experienced workers and, unlike the tractors, were not frequently set merely to skim the surface of the land. On the other hand it must be borne in mind that the latter were always grossly overworked and frequently maltreated. The application of lime and of artificial manures, although not essential, was invariably shown to have been advantageous on both light and heavy land. The Committees themselves admitted that a large proportion of the complete failures emanated from land that, either from altitude or lack of drainage, ought never to have been tackled. The majority of the successes came from rich grass in heavy soil districts that had been broken up in really good time, thoroughly worked, and that consequently tended to be immune from pests. The many failures on the light lands of the Eastern half of the country were most frequently due to failure to secure a proper tilth for Spring sown corn. In 1919 the new arable tended to coalesce with the old, and the essential differences observable in its treatment were not so

apparent. Thereafter, a general reversion to grass set in, and the only large attempt at a re-establishment of arable farming became a thing of the past. The actual increase of produce achieved by the ploughing policy (combined with the substitution of essential crops for certain ones of less importance) can be seen below. This table, of course, applies to England and Wales, and takes no account of the yields of war-time allotments or of any plots of land below one acre in extent.

	Wheat	Barley	Oats	Potatoes
	qrs.	qrs.	qrs.	tons
1914	7,307,000	6,174,000	9,554,000	2,953,000
1915	8,465,000	4,528,000	10,387,000	2,858,000
1916	6,835,000	5,181,000	10,411,000	2,505,000
1917	7,165,000	5,535,000	10,865,000	3,341,000
1918	10,530,000	6,080,000	14,339,000	4,209,000
1919	7,976,000	5,474,000	11,417,000	2,733,000
1920	6,669,000	6,335,000	10,746,000	3,151,000
1921	8,722,000	5,309,000	10,033,000	2,958,000

	Turnips and Swedes	Mangolds	Hay (from permanent and temporary grass)
	tons	tons	tons
1914	13,451,000	7,919,000	7,265,000
1915	11,807,000	7,834,000	6,587,000
1916	12,985,000	7,338,000	8,838,000
1917	12,164,000	8,482,000	7,560,000
1918	12,018,000	8,231,000	6,786,000
1919	11,159,000	6,294,000	5,186,000
1920	14,193,000	7,307,000	8,211,000
1921	6,608,000	6,251,000	5,339,000

It will be observed that the outturn of root crops was not affected to the extent that might reasonably have been anticipated; the explanation being that in several of the years when the acreage was reduced, the yield per acre was fortunately raised. Again, in the case of that important crop—the potato—only in one war year was the yield below the average, but that occurred when the area was also the smallest for ten years; hence the shortage of 1916. The comparative effects of the work of man and of nature are exemplified in the quantity of hay annually available; the efforts of the former reduced the area of permanent grass reserved for this purpose by about a

million acres, but the drought of 1921, by reducing the rate of yield on the same class of land from an average of nearly 22 cwt. to the acre to one of less than 16 cwt., affected the supply of hay far more than the reduction in area had done. The same results were also noticeable in the case of turnips and swedes. The work of man is, however, susceptible to influence from nature, as witness the tendency to sow additional areas of any given crop following a shortage, or to reduce the acreage after an abundant harvest. A process akin to what is known in engineering parlance as "hunting" is thus produced, and markets are unfavourably affected thereby. These movements have been accentuated since the war, and a slight surplus of any crop results in a too drastic cutting down of its area in the following year, to be succeeded in turn by an increase in the third season.

For many years before the war this country had found it necessary to devote the bulk of its area either directly or indirectly to feeding livestock—a practice which from a strictly economic standpoint had much to commend it, but one that called for the minimum expenditure of capital and labour. Indeed the gross weight of food raised exclusively for livestock in the United Kingdom exceeded many times over that devoted to human sustenance. How then did this branch of the industry come through the war? In the United Kingdom the numbers of livestock varied thus:

	Cattle	Sheep	Pigs
1914	12,145,000	27,886,000	3,940,000
1915	12,132,000	28,198,000	3,784,000
1916	12,413,000	28,771,000	3,605,000
1917	12,346,000	27,788,000	2,999,000
1918	12,274,000	26,981,000	2,799,000
1919	12,454,000	25,048,000	2,914,000
1920	11,732,000	23,332,000	3,103,000
1921	11,857,000	24,198,000	3,628,000

It will be seen that the numbers of cattle were well maintained, despite the reports current as to undue slaughtering of calves, and despite also the activities of the Army purchasing agents. But after 1919, when control was abandoned, prices of veal rose rapidly, and large numbers of calves were killed, farmers being unwilling to rear them as steers under such con-

ditions. Dairy cows were more numerous after the war than before it, and as larger supplies of feeding stuffs again became available, the yield of milk was restored to its former level. The reduction in the flocks of sheep was nothing new, as it had become a recognised feature of the annual returns before the war, when various explanations were being assigned to it, such as the increase in the numbers of Small Holdings, and the abnormal prices ruling for wool and mutton. This movement was at first checked during the war period, but was then accelerated and, ultimately, the total loss compared with the ten years before 1914 amounted to almost thirty per cent. At all times the reduction had been more marked in the Midlands and the Eastern Counties, and had least affected the mountain flocks of Wales and the North. It was therefore apparent that sheep on arable land were especially susceptible to the prevailing economic conditions. The high prices ruling for wool in 1920 caused a check in the fall, but the unique position occupied by this country in sheep-rearing, as compared with Continental nations, was tending to become modified.

Pigs decreased during the war by nearly thirty per cent., but freedom from controlled prices, combined with the acknowledged rapidity with which this form of livestock can be replaced, soon caused the losses to be made good. In general, the great decline in the quantities of imported feeding stuffs, especially of maize and cake, was of far greater moment to owners of livestock than was the insignificant reduction in the outturn of hay and roots or the loss of access to a million and a quarter acres of grass. Of maize, the imports declined from about two and a half million tons a year to less than three-quarters of a million tons in 1918-9, oil cake suffered a similar reduction, and the altered rate of extraction adversely affected the supplies of millers' offals. The manufacture of cake was, after 1918, to a large extent transferred to this country from Germany and Holland as a by-product of the margarine trade, so that the quantities of cake imported before and after the war are likely to form a misleading basis for comparison unless the supplies of raw materials such as copra, palm kernels, and seed are also included. The world produced abundant yields of all feeding

stuffs during the war years; it was once again lack of transport that forced a reduction in home consumption.

What the agricultural industry of this country did during the war has been briefly related. In part, voluntarily, and in part acting under dictation, it augmented the home-grown supply of wheat by putting an extra million acres under that crop, as well as greatly increasing the area under other cereals. With a reduced personnel it maintained a larger area under the plough and kept up its herds and flocks, although compelled to forego the bulk of its former supplies of imported feeding stuffs. Additionally, a large percentage of the urban population became self-supporting in the matter of vegetables. This was, in comparison with other belligerent countries, an accomplishment to be proud of, but there are certain features resulting from it that call for further examination.

The success of the State's agricultural policy in wartime led to the appearance of numerous schemes, by the aid of which it was held that the United Kingdom might in future be made in whole, or in part, self-supporting in respect of its more vital foodstuffs. These suggestions ranged from level-headed appeals for the compulsory retention of a part of the newly won arable-land, to those uttered by enthusiasts aiming at some eight or nine million acres under wheat alone. The latter class of person was, in theory, justified when he claimed that that area of wheat would (at existing rates of yield) feed the present population, but he generally failed to appreciate some of the insuperable difficulties that stood in the way of his purpose. For example, the maintenance of an adequate system of rotation would involve the conversion of practically all the grass land in the country into arable. Even if we omit Scotland and Ireland, much of the land in the North and West of England, from reasons of altitude and rainfall, is unsuitable for the purposes in question, and the policy would result in the formation of large farms, which is the very negation of present day official ideas. It would also compel the British farmer to adopt a revolutionary system of rearing livestock. Lastly, it would involve the permanent retention of State control, for nothing else would force the continuance of a policy repugnant to the industry.

Reasons adduced by the advocates of these schemes were diverse, but the danger of another war was generally put in the forefront. Such outbreaks as that witnessed from 1914 to 1918, however, occur at wide intervals (generally some hundred years apart), and, as an insurance against starvation at a remote period in the future, the annual premium demanded was excessive, especially when the possible developments that science may evolve in the meantime—either by obtaining for us greater yields of cereals or by bringing nearer in point of time our sources of supply—are taken into consideration. A second advantage claimed for increased production at home was that more persons would find employment on the land. Here the answer is that the bald statement is admitted, but the possible addition of some few hundred thousand workers to our rural population does not necessarily represent true progress from the point of view of a nation of forty-five million persons, the vast bulk of whom are urban in propensities. Better prospects as agriculturists would await these same men in our own Dependencies, where their presence would be far more desirable. Lastly, it was urged that our balance of trade was upset by the high values of our imported agricultural products. This argument, however, only carried weight in the closing years of the war and those that immediately succeeded it. Before 1914 our trade as a whole, with the aid of its invisible exports, approximately balanced, and with the rapid decline in the values of wheat, wool and meat that occurred after 1920 (combined with the steady recovery in our exports of coal, steel and other commodities) it should only be a question of time before our food supplies are again free from the stigma of being a heavy contributory cause. This point was also entirely lost sight of by those writers in the press and elsewhere who pointed to our staggering bill for overseas wheat and other soil products in 1918 and the two following years; they failed to consult the pre-war Board of Trade returns, and assumed that values, inflated to the extent of two and three hundred per cent., represented normal conditions. The question of *Protection versus* a subsidy is discussed later, but it must be pointed out here that the policy of artificially maintaining a large area under cereals

would have involved the application of one or other of these methods, and that the ultimate cost to the nation would have depended on the intensity of foreign competition or, in other words, that the price of our loaf would still have been dictated by the producers in distant lands.

Some of the schemes propounded were highly ingenious and had obviously been the subject of much thought. All seized on the recognised fact that both the weight and value of the produce from a given area under the plough greatly exceed those from a corresponding grass acreage, and that it is a wasteful process to rear livestock for meat producing purposes on food that might be directly beneficial to human beings. But all perforce ignored the predilection of British farmers (forced on them by the events of the past three generations) for an essentially "safe" system of agriculture, and also assumed that the economic conditions ruling in 1918 to 1920 would continue indefinitely, and that high farming would therefore be a permanent source of profit. The most popular suggestion was that we should be made absolutely free from the necessity of importing a single quarter of foreign wheat; but in this case the fallacious arguments advanced have already been exposed. Others recommended the example of Germany to the British farmer, by pointing out that the doubling of our arable area would place us on a level with the German people, provided that, at the same time, we copied that nation in technical practice. We must accordingly increase our application of artificial manures, adopt rural co-operation, organise widespread facilities for the provision of credit, and add greatly to our scientific and educational equipment. These steps, it was held, would, in conjunction with a measure of direct State assistance, greatly increase our outturn of soil products, but would not, of course, free us from the obligation to import a large percentage of our wheat requirements. This plan was a perfectly feasible one, but in practice it would have called for the frequent presence of Government officials on every farm to ensure that the area under the plough was maintained (for a State assisted policy would not alone have guaranteed this), and that some pre-determined standard of good husbandry was being observed.

When comparisons are effected between German and British farms it is too often forgotten that the soil and climatic conditions already favour this country, and that the weight of manure applied per acre of land is not necessarily a criterion as to the standard of farming, but rather of the requirements of the different soils; the same argument applies to comparisons between expenditure on rural education. To set side by side on a comparative output basis the whole farmed area of Germany and that of Great Britain is apt to prove misleading, for one is comparing an arable with a grass system. If, however, the Eastern Counties of England alone are compared with Germany on any basis—such as of output or labour employed, it will be found that this country has nothing to fear. Temperamentally, the German farmer is well prepared to submit to the dictates of his rulers in return for forms of assistance which his more independent British colleague would prefer to go without, whilst at the same time pursuing his own course—a course less laborious and one involving less risk to follow.

Still other plans involved the cropping of certain areas according to rule. The progenitors of these, arguing from the acknowledged fact that a group of some half dozen East Anglian Counties was producing its share (on an acreage basis) of the total food requirements of the United Kingdom, suggested a wide extension of arable farming on fixed lines. The determining factors were “the quantities of starch-equivalent derived from wheat, potatoes, milk and meat.” Certain North-Western districts, when analysed on these lines, could be shown to be producing almost their *quota* in the shape of milk and meat, and would therefore be spared from a drastic ploughing programme, but the greater part of the Midlands would be asked to turn to this form of cultivation again, and to produce beef and mutton from animals fed mainly on roots. That a greater supply of foodstuffs in general would result is not questioned, but the previous objections hold good equally here.

Finally, the nation itself was asked to co-operate with the farmer, by adopting a fresh dietary, for by concentrating on the raising of pigs and potatoes the consumption of breadstuffs could be drastically reduced. The creation, it was urged, of a

permanently enlarged acreage under potatoes and their partial substitution in a prepared form for the wheaten loaf, together with the doubling or trebling of the numbers of pigs, would at one and the same time reduce our foreign indebtedness and lay the foundations for a reserve in case of war. Both pigs and potatoes are susceptible to extremely rapid increase in emergency, and their rate of production per acre is high, but apart, once more, from the element of compulsion, this last suggestion contained the fatal claim that the State can dictate to the populace what it shall eat in times of peace. Even if the prescribed diet were palatable to the bulk of the nation—which is extremely questionable—the mere fact that freedom of choice was absent would preclude such a scheme from being attempted in normal times. In times of emergency a strong Government can do what it likes, both with the cultivation of the land and the dietary of the people, but the possibility of war at some distant time will never persuade the nation to alter its habits in times of peace.

The plea on behalf of State granaries sometimes put forward before the war, was, of course, not reiterated whilst hostilities lasted, but in 1922 it was again mooted. The practical difficulties and expense involved in the purchase and storage of even a few months' supply of wheat have been convincingly shown times out of number to outweigh any possible advantages such a scheme might confer. It would take several years to effect the purchase of one year's supply, and the process might seriously affect prices; the cost of erecting granaries would be very great—nearly thirty years ago it was estimated that seven and a half million pounds would be required—and their maintenance and staffing would be an additional expense. Technical objections of a similar nature are present in the suggestion made more than once that a bounty of a half-a-crown a sack should be paid to millers for storing flour up to a certain minimum quantity.

After 1920 direct appeals to the individual cultivator, coupled with explanatory tables of new cropping systems, ceased, and the Government itself took steps to perpetuate war practices in our system of agriculture. As the safeguarding of our wheat supply was avowedly the principal object of State intervention, consideration of the policy involved in the Corn Production

Acts is deferred to Chapter XV, but the view that the continuation of State aid and State control in times of peace was a mistake must be firmly expressed. Burke's words on this subject should not be forgotten. He declared that "it is a perilous thing to try experiments on the farmer—on the farmer whose capital is far more feeble than commonly is imagined, whose trade is a very poor one, for it is subject to great risks and losses; the capital such as it is, is turned but once in a year, in some branches it requires even three years before the money is repaid." After 1918 experiments *were* tried, and not only met with no success but caused disaffection and rancour.

Peculiar in being the only European belligerent to increase her supplies of home produced food, the United Kingdom, unlike other countries, also came through the war with moderate recourse to the rationing of foodstuffs; bread in particular, if its quality was slightly lowered, was unlimited in quantity. But if quantities were subject to no restraint, prices were, and agriculture suffered from this form of supervision at least to the same extent as other industries. Being responsible for the supply of foodstuffs, the Government adopted a threefold scheme. In the first place, as has been related, it used every possible means to add to the home output, secondly, it assumed control of imports, admitting only those articles that it held to be essential, and then only in just sufficient quantities, and, lastly, it made the purchase of both home and foreign produce possible for the public by fixing wholesale and retail prices.

Agriculture occupied a peculiar position in respect to this last feature. The Ministry of Food was charged with safeguarding the interests of the consumer, and was a more powerful body than the Board of Agriculture (not until 1919 to become a Ministry also), which was essentially the representative of farming interests. As a result, there was a certain amount of truth in the statement, so often heard, that the old rivalry between town and country was resulting in a distinctly favourable bias being manifested towards the former by the edicts of the Food Controller. Not only was the price of what the agriculturist sold determined by the Ministry of Food, but also of much that he bought, so that after 1916 little opportunity

occurred of making profits on the scale that was still in evidence in many other industries. Again, not being thoroughly organised, and being also far more numerous than other producers, the farmers were unable to combine effectively for the purpose of securing a hearing. Representatives of less important trades often succeeded in their dealings with Government departments where agriculturists failed. The value of this co-operation is still to be seen in certain trades—a co-operation between manufacturers, merchants and retailers that led to their mutual advantage and protection. The steps essential for negotiation with the Ministry of Food may in fact still be seen in the maintenance of prices which present circumstances do not warrant.

As is pointed out in the chapter on Statistics, it is not feasible to compare the profits or losses of the industry as a whole, or even of any particular branch of it, by compiling two index numbers, one to show the fluctuations in the price of the articles purchased, and the other corresponding movements in those sold. Speaking in very wide terms it is, however, probable that the cereal raiser made considerable profits in 1915 and 1916 while wages, rates and outgoings on materials were still relatively low, and that in the latter years of the war there was greater scope for the milk and meat producer, with occasional openings to secure good returns from such crops as potatoes. The accompanying table (prepared from publications of the Ministry of Agriculture) shows the fluctuations in the prices of all the principal commodities sold by British farmers from 1914 to 1922.

It must be remembered that all the following commodities were subject to the price regulations of the Ministry of Food or of its dependent bodies, that a free market did not exist for the majority of them after the autumn of 1916, and that decontrol was only gradually carried out from 1919. It is useless attempting arbitrarily to account for the variations in the increases sanctioned—as so many factors existed to influence the decisions of those concerned. There was, for instance, the question of the possibility of obtaining alternative supplies from near at hand neutral countries, the comparative amount of the labour bills in raising different forms of foodstuffs, and the uncertain expenses of

Changes in the prices of agricultural produce in the years 1914-22 as compared with the average of the years 1911-13 (= 100)

	1914	1915	1916	1917	1918	1919	1920	1921	1922
Wheat ...	107	162	179	232	223	223	247	219	146
Barley ...	96	131	188	228	208	267	315	184	141
Oats ...	105	152	168	251	249	264	287	172	147
Cattle ...	106	136	158	205	211	232	263	227	163
Sheep ...	113	130	157	197	210	230	287	217	200
Pigs ...	106	129	167	226	266	276	330	228	187
Milk ...	103	117	157	191	251	300	393	263	179
Wool ...	109	159	146	162	174	308	353	84	114
Butter ...	101	117	136	177	209	215	299	215	161
Cheese ...	104	124	149	203	233	269	240	171	143
Poultry and eggs	98	117	144	183	284	259	265	219	192
Beans and peas	108	141	170	270	477	319	288	196	180
Hay ...	77	106	152	157	187	257	292	151	140
Potatoes ...	85	109	188	237	179	235	306	232	179
Fruit ...	84	95	138	154	411	318	379	283	188
Hops ...	46	68	81	91	193	213	205	211	123
Vegetables ...	108	124	154	238	257	257	219	246	196

feeding livestock. No one had previous experience of the difficulties attendant on the process of price-fixing, and no figures were available for estimating costs of production. In the words of Lord Ernle, "In normal times, varying rates, determined by the play of local markets, make the necessary adjustment between district and district. Now flat rates had to be fixed, and what was one man's meat was another man's poison. One man might get too much, another too little. Everyone knows, for example, that the cost of producing a quarter of wheat differs not only in each County, but on nearly every farm and on nearly every field. The outstanding question which persistently recurred was, how far prices should be regulated to stimulate production or in the interests of consumption." We have seen that, in the long run the consumers' interests were looked upon as paramount—when poised against those of the rural producer—as in fact they have always been in this country. The diagrammatic representation facing page 333 of the prices of wheat, barley and oats for the last hundred and fifty years, exhibits strikingly the varying effects of controlled prices and a free market, when the periods covering the two European wars are compared. In 1801 wheat reached an average of 119s.

the quarter, and in 1812 actually 126s. (sales, of course, being effected at prices well above these levels), but the corresponding figure during recent years never exceeded 81s. The fact that the Government, from 1917 to 1920, was paying for foreign wheat landed in our ports sums above the prices current in the French war was one of the sources of irritation to the modern British farmer. The diagram demonstrates, however, that he received relatively higher sums for barley and oats than his ancestors had done. The demand in 1812 was mainly for wheat, and other cereals not being in such great demand, did not appreciate to the same extent. From 1915, by when all three were controlled, barley and oats were permitted a much higher increase than wheat.

If, in theory, farmers could obtain certain statutory prices, it does not always follow that in practice they did so, or that they made commensurate profits, for the failure of seasonal crops, or a decline in output from causes beyond their control, frequently caused reductions in their outturn during the war years. Again, if the increased prices of home-grown agricultural products are placed side by side with those of other commodities, it will be seen that, as a rule, they did not rise to the same extent. W. T. Layton (*Introduction to the Study of Prices*) places in three groups the percentage increases of the more frequently used commodities. The first group contains those articles which rose less than the general average—here are found four agricultural products—the second group contains articles which rose to about the average, which again includes four foodstuffs (three almost entirely British in origin); the third group, those commodities that rose above the average, only contains pork as a representative of agricultural produce. Consequently the index number of foodstuffs remained well below those relating to manufactured articles and raw materials; this was the penalty attaching to a trade of such vital importance. It also never attained the height correspondingly reached in other countries, allied or hostile.

When the war ceased, agriculture at home was subject to immediate competition from the more distant centres of supply which had been unable to transport their wares to this country

from 1914 to 1919. Here again agriculture was at a material disadvantage for, in the case of manufactured articles, a certain respite was afforded the home producer in the shape of the time occupied by his foreign rivals in collecting supplies of raw materials and carrying through the essential trade processes. The British farmer almost at once found his market flooded with Australian wool, wheat and frozen mutton that had accumulated overseas; the inevitably declining values of home products being thereby accelerated.

There was one peculiar feature in connection with fixed prices that deserves mention. It was soon found that maximum prices always became fixed prices below which no seller would reduce his wares. The term "Government price" became synonymous with a fixed minimum price, and no appeals based on falling costs of production could persuade retailers to sell below what they held to be a statutory limit. This phenomenon was especially rife in the fruit and vegetable trade during the last few months of control, when it appeared that individual shop-keepers really believed that they were forbidden, for example, to sell their apples below the excessive price of 9d. the lb. The immediate result of decontrol was in almost every instance a sudden rise in price of the commodity involved, followed by an equally rapid fall, which brought it well below the former fixed level, and launched it on the steady slope that appears likely to terminate—at any rate for the next few years—at a point some forty to sixty per cent. above the pre-war average.

If we turn to the purchase side of the farmer's balance sheet during the war, we find that here the question was not merely one of prices, but frequently of the sheer absence of supplies. The Board of Trade had the power, and freely exercised it, to exclude altogether, or in part, such commodities as were in its judgment non-essential to the nation, or those that from their nature made undue demands on cargo space. Maize came in the first category, and agricultural machinery in the second. Not only were imported commodities, such as the above, reduced in available supply, but the production of millers' offals and brewers' grains was greatly cut down by the regulations affecting the supply and character of human food and drink. Therefore,

although individual index-numbers relating to commodities that are normally purchasable by agriculturists were issued, their value as criteria of the actual out-goings on farms during the war years is insufficient to warrant reproduction. The actual percentages of increase were not out of harmony with the general price level on the sales side, but basic slag and super-phosphates (when procurable) had by 1920 both risen above two hundred per cent., and certain varieties of seeds were prohibitive in price. The difficulties of farming in the years 1920 and 1921 were added to by the fact that frequently crops planted or sown at the peak of prices, were harvested when their value had fallen by some fifty per cent. The similarity existing between the economic state of agriculture in 1821 and 1921 did not extend to this matter of the purchase price of farm requirements. A hundred years ago farmers were sufficiently self-supporting to be almost independent of extraneous purchases; machinery, fertilisers, cake and maize did not figure in their annual expenditure. Wages, rent and rates formed their burden, none of which was dependent for its alleviation on the good-will or business instincts of foreign peoples.

Yet, conditions in the six or eight years that succeeded Waterloo and those that supervened on 1920, are remarkably similar in certain directions. Any one who has read an account of the social condition of the nation and the state of agriculture in 1822, will agree that in the main it might have been written of 1922. The *Times* of June 6th, 1822, took up the question of the fall in prices of farm products, and with less tolerance towards the countryman's point of view than it habitually exhibited a century later, attacked the land-owners thus:

The cry at present among the country gentry is "remunerating prices! remunerating prices!" We shall therefore in a few words explain what is meant by the expression. Remunerating prices simply mean such prices as shall enable the land-owners, at the expense of the country, to support all the extravagant grants which they themselves have made out of their estates to Ministers during the last thirty years.... There is also another cry, equally unjust and equally deserving notice and reproof. It is now said "Everything falls ultimately upon the land; the rates, taxes, tithe all fall at last upon the land." Why, gentlemen, we reply, you should have thought of

this when year after year, you were burdening the land. It is too late to talk thus now, when the land simply stands, or staggers, under that load of taxes which you yourselves have put upon it. It is but three years ago, and long after the peace was concluded, that some of you voted an addition of ten thousand men to the regular army. Pauperism has regularly increased with taxation. You went on taxing; you even added three millions in one year after the peace was concluded. We pray, and firmly trust, that a benevolent Providence will frustrate your intentions, and that an abundant and well-gotten harvest will retain all the fruits of the earth at their present prices, beyond which they would never have risen but through your criminal subserviency.

It is symptomatic of the outlook of the nation at that time that prices were the nation's first consideration, and that the economic position of the agriculturist (whether landlord or tenant) was of secondary importance. Alternative and supplementary sources of food supply were few, and the skirmishing that preceded the great fight between town and country was clearly commencing. A hundred years later the *Times* supported agriculturists in their efforts to maintain prices.

If a statistical expression to cover the financial standing of the industry during recent years is lacking, evidence culled from typical farms, is available both for isolated examples and for groups of holdings. A *Report*, made to the Agricultural Wages Board in 1919, contained balance sheets extending over five years, secured from undertakings of all types and sizes. In the case of twenty-six farms covering upwards of eight thousand acres (the percentage of which under the plough rose from forty-six to forty-nine during the period under review) the profit per acre in the years in question was as follows: 1913-4, 5s. 10d.; 1914-5, 4s. 7d.; 1915-6, £1. 13s. 8d.; 1916-7, £1. 11s. 10d.; 1917-8, £1. 11s. 9d. On these farms there were no very material changes in the style of farming; for, apart from the slight turn-over to arable, cattle remained stationary, sheep declined ten per cent. and pigs rose twenty-two per cent. The balance of profits after the second year of the war tended, as was pointed out above, slightly to decline, and if similar figures had been available for the same undertakings in the following years a greater contraction would certainly have been revealed. In

corroboration that profits per acre from corn-growing were high in the first years of the war, it is significant that the majority of individual farmers who have made public their accounts during the last decade, have selected a pre-war year and compared it with those after 1917. Other groups of farms selected in various districts showed very similar returns to those above, but, of course, in all these cases the pre-war capital invested is not recorded, and the return on it in the basic year is therefore an unknown factor. Home farms exhibited those features which are naturally looked for in their case, and an annual "loss" was turned into a small "profit" in 1916-7 and 1917-8 in the examples given in the *Report*. At the other end of the scale, co-operative farms showed the uncertainty always attaching to this form of business venture, for the figures relating to different societies, even after 1913-4, generally exhibited losses alternating with profits. To what extent all the above additional profits (or avoidance of losses) was due to a compulsory reduction in the use of fertilisers and labour, leading to a consequential decline in the capital value of the holdings is not discoverable, but it was generally acknowledged that the standard of farming was progressively lowered as the war continued.

Rents were certainly raised on the renewal of leases for perhaps three years after 1916, but again evidence is lacking as to the extent that landlords availed themselves of their powers in this direction; figures provided by the Surveyors' Institution and the Farmers' Union showed widely divergent results, dependent, of course, on the character of the holdings concerned and their locality, but a figure of twenty per cent. might perhaps represent at most the "average" increase by 1919. Purchases, however, were increasingly frequent from that year onwards, and were generally effected at prices that represented higher rents than had formerly been paid.

If the period of a little over eight years, between August 1914 and the winter of 1922, could be financially reviewed as a whole, it would probably be found that the gains of the industry in the first six years had been almost entirely cancelled by the losses of the last two and a half. The position of individual agriculturists

now depends upon the time at which they assumed their responsibilities and, if they were in business in the earlier years of the war, what course they pursued in the allocation of their profits. Farmers already established in 1914, who invested their gains in safe securities unconnected with their own enterprises, should be in a position comparable with that which they occupied in the former year. Those persons who took up farming as a means of making a livelihood after the autumn of 1918 are now, as a class, involved in the greatest difficulties; they are indeed fortunate if they only risked their capital in purchasing farming stock at the inflated prices then current, and did not also purchase their land under similar conditions. Tenants adding to their holdings by purchase have also seen a large part of their savings capitalised in vain. Such things always happen in times of high prices (and apparent large profits), as the bulk of mankind assumes that stability will be maintained at the existing price level. A little knowledge of history would thus have been advantageous, but it is doubtful if its warning notes would have been heeded. A hundred years ago farmers are reported to have said "What we want is another war." At the present time, their descendants would not be inclined to re-echo this cry.

Only at these long intervals do human occupations receive a crucial test—a test that tries at one and the same time their own economic strength and their value to the nation at large. Agriculture enhanced its reputation by the way it added to the resources of the country from 1914 onwards, revealing thereby a latent power of expansion that was as unexpected by the present-day population as it was valuable in the emergency. That, in the process, it was not permanently injured is certain; but undoubtedly the revival that was just beginning to be evidenced before the war has received a set-back which it will be a matter of years to recover from. But is it a rash prophecy to make that within a matter of six to ten years the industry as a whole will be where it was in 1910? That postulates the possibility of a fair living for commercial farmers, a return from three to five per cent. on landlords' capital, and a sufficient cash wage available to retain an increasing number of workers on the land. What modifications in the actual practice of agriculture

this may involve is not at the moment certain, but any extension of the arable land is unthinkable. An increase in the production of meat and milk to keep pace with the growth of population is on the other hand a certainty. Intermediate forms of husbandry that suggest obvious openings can be found in the production of "luxury" crops, such as fruit, vegetables and the hundred and one commodities that the growth of urban population always calls for.

These were the views of Caird in 1851, when he urged farmers to concentrate their attention on those productions that showed signs of improving in value. The produce of grass-land, he said, was increasingly taking its place in the household expenditure. As the national wealth was growing, so was the nation's consumption of meat, milk and wool—only barley among the products of arable land had increased in price, and that, again, was attributable to the greater demand for a "luxury" beverage. Caird quoted the instance of farms yielding, eighty years before the date at which he wrote, a £100 worth of meat, wool and butter, which in 1851 was worth £200, although neither the breed of stock nor the capabilities of the land had been improved. But corn raising farms were still producing only an equivalent value of cereals at the end of the eighty years, and he held that the quantity each acre yielded had diminished. He advocated a reversion to grass, combined with the intensive cultivation of vegetables—in fact the pursuit of a policy calculated to secure to the home producer the maximum possible share of the urban population's growing expenditure. He held that no anxiety need be felt for the people's bread, for, "if an emergency should ever arise, by which in consequence of war we should be driven back on our own resources, we would find that we had been laying up in our rich grass fields, and well-manured green-crop lands, a store of fertility which might be called into action in a single season, and which would yield ample crops of corn for consecutive years with little labour or expense." Sixty-three years later the emergency did arise, and Caird's prophecy was in fact borne out, but the labour and expense involved were not little.

Any further reversion to grass in the future will be due to the

inexorable action of that economic law that agriculture must always bow to, and the nation will be the principal loser from a reduction in the quantity of its foodstuffs produced at home. But it has terminated its agreement with the industry and must allow the latter to follow the dictates of its own needs. It is too often assumed that a *laissez faire* policy involves a lower standard of farming practice (as opposed to output), whereas it merely implies the adoption of altered methods that are in themselves not necessarily inferior in their demands on the activity and intelligence of the farmer. There is, for instance, no reason why a reversion to grass need result in the "tumbling down" of poor land by the hundred thousand acres. Good grass-land farming makes large demands on both the scientist and the practical husbandman, and even the State can do good work by aiding investigation and inculcating the resultant discoveries.

The war itself caused the extension of State control into every branch and detail of farming, and the four years that succeeded it saw the relaxation of control, accompanied by the efforts of those affected to expedite the process. The policy involved in the repeal of the Corn Production Act is discussed at length elsewhere, but certain other features remain to be glanced at. With the removal of the embargo on the importation of Canadian cattle the British farmer lost his last relic of Protection. The principles at stake were little understood by the nation at large, and were also complicated for the townsman by the inability of the industry to present a united front on this occasion. In previous discussions on the question of affording or removing fiscal aids the farmers formed a homogeneous party, but now they gave vent to widely divergent views. The townsman was at first puzzled, and then apathetic. As soon as he was brought to see that there was little chance of his potential supply of meat being considerably augmented, or therefore of his pocket being affected, he decided that it was a domestic concern of the farmer. The main arguments round which the controversy centred were, firstly the risk of the introduction of disease, and, secondly, the effects on the existing home supply of store cattle. The precautions to be adopted in Canada and *en route*

were finally held to meet the first point. But in the other case agreement was not reached, the advocates of free admission pointing out that store cattle had been declining in numbers and increasing in value prior to the war, while breeders avowed their perfect ability to meet any future demands made upon them. In the end the breeders of cattle, as represented by the rest of England and Wales, lost their case, and the minority, consisting of the Norfolk and Southern Scotch fatteners had their way. The findings of the Commission, appointed to enquire into the whole question, were, briefly, that the introduction of store cattle might unfavourably affect certain classes of farmers, as, for instance, the Highland crofters and the Irish exporters, but that the industry as a whole, and the country itself, would benefit. This body expressed the opinion that the numbers of animals introduced would not exceed 200,000 annually, and that such a figure would be insufficient materially to affect the supply of meat, representing as it did, only some eight per cent. increase relative to the home supply. For similar reasons the milk supply would not be prejudiced. A reduction in the price of meat to a somewhat lower level was, however, looked for as a result of the measures to be taken; although with the growing demands it appeared unlikely that an additional supply on the scale anticipated by the Committee could have much influence on prices in future years. It was pointed out that, should matters turn out otherwise, revision of the policy could always be effected.

If agriculture was relieved from the incubus of fixed prices, freed from paying a minimum wage (losing simultaneously its guaranteed profits in one branch), and left to compete in the open market with distant rivals, yet it was, in the winter of 1922-3, still subject to the direct as well as the indirect effects of what had gone before. Quite apart from the increased weight of the constitutional charges on the land, agriculturists were constantly reminded of their changed position by the retarded action of legislation effected during the war. The relationship of landlord and tenant was altered, the rent and occupation of cottages were subject to outside intervention, cherished units of measure were abolished, and the only possible standard of

wages no longer bore a close relationship to those of other industries. All save the last of these disadvantages can be surmounted, but this presents a problem of some magnitude. Railway companies, and other employers of labour in rural districts, have voluntarily, or under compulsion, standardised the wages of certain workers at a level some hundred per cent. in excess of the cash wages that the farmer can now afford to pay. The results of this policy are not apparent yet, but in times of normal employment it is probable that considerable difficulty will be experienced in retaining the best workers on the land. This disparity is also militating against the farmers' interests in the case of the distributing trades, for such classes of employees as milkmen's and bakers' roundsmen and shopkeepers' assistants are still being remunerated on scales that are unnecessarily high. This, in the majority of cases, is attributable to the formation of Trade Boards during the war, and it has had the effect of enhancing the middleman's share of the total profits from the production and sale of agricultural commodities.

State assistance on the grand scale having been terminated, it is frequently suggested that help should be forthcoming in other directions. Certain beneficial steps that could be taken at present have already been indicated in Chapter VI, but further extension of minor grants in aid would not be refused. The latest Government enquiry into such matters as the allocation of the relative profits accruing to producer and retailer, the incidence of outside charges on farm produce, the provision of credit and the possibility of an extension of co-operative principles to marketing, will certainly do good by showing the public the situation in which the farmer finds himself, even if drastic legislation is not introduced as a result. The allocation of a million pounds towards agricultural education, in its widest sense, is likely to lead in the long run to a far better return than a similar amount handed over to individual farmers as a bonus on the production of some particular crop. State encouragement is welcomed in the establishment of centres for the pursuit of knowledge relating to such diverse subjects as the chemistry of the soil, the improvement of plants and livestock, rural

conomics and farm machinery. The dissemination of knowledge among landlords, farmers and workers is all to the good, for, apart from the direct benefits likely to accrue from a truer understanding of their work and their responsibilities, a more equable frame of mind should result from the discovery that other generations have overcome similar difficulties. For this reason, the value of accounts of past agricultural conditions, such as those prepared successively by Marshall, Young, Cobbett, Caird, Rider Haggard and Sir Daniel Hall is immense. Reports made by competent observers carry to many persons more weight than do bare statistics of acreage, yield and prices, besides giving to future generations a more human picture of the times. The study of agricultural history is an important subject for all connected with the land, and it is to be hoped that, in future, others will be found to follow in the footsteps of those illustrious "Reporters" who have given us such precise knowledge of the rural economics of their own times.

CHAPTER IX

AGRICULTURAL LABOUR

Labour in mediaeval times; the Napoleonic war and its influence on master and man; outbreaks and their suppression; origin of Trades Unionism; Joseph Arch and his work; the first strikes; progress of the National Union; disabilities under which Unions suffer; position of the employer of labour; agricultural "wages"; distribution of high and low rates; alleged superiority of North countrymen; numbers of persons engaged in agriculture; the Agricultural Wages Board.

THE above title is given to this and the following chapter because they attempt to deal with the whole question of the application of man-power to the land, rather than to reproduce in detail once again the familiar story of the evolution of the agricultural labourer himself. Elsewhere can be read at length the history of this humbler member of the rural trinity—of his slavery under the Britons, his comparative freedom on the manor, his revolt and repression at the end of the fourteenth century, his "Golden Age" (if it really existed), and finally his loss of immemorial rights a hundred and twenty years ago. There is but one comment to make here in regard to his history prior to 1800; it is too often assumed, or even asserted, that, throughout the centuries, the agricultural labourer was little better than a beast of burden, that his environment was horrible, his social condition degraded, and his prospects hopeless. But any impartial historian is bound to observe that, whilst his efforts to improve his lot, whether in 1381 or at any intervening period up to 1830, were always justifiable, yet there has been a tendency to exaggerate the severity of the conditions he sought to alter, rather than to emphasise the ideals at which he aimed.

On the mediaeval manor we are, for example, led to believe that the lowest grades of employees or tenants existed under conditions of inconceivable squalor and wretchedness; we are told of their hovels, their lack of clothes, of warmth and light, of utensils, and the tacit assumption is encouraged that the lord meanwhile battened in luxurious surroundings. Surely it is more reasonable to hold that there was an almost total lack

of what we now know as domestic furniture or conveniences in the dwellings of both the lord and the labourer. It is questionable whether the latter's standard of living did not more nearly approximate to that of his master than does the corresponding manner of living of his successor to-day to that of his employer. Even as late as the sixteenth and seventeenth centuries inventories of the domestic property of the well-to-do classes—clergy, squires and tradesmen—show an astonishing deficiency in those articles of domestic use which we have become accustomed to look upon as common-place essentials in every cottage. Many of the peasants' risings were not really agrarian in their origin, and the objects of their leaders went far beyond correcting any abuses or disabilities under which manorial tenants may have suffered. The Georgian enclosure movement, again, was not deliberately aimed at the small farmer or the labourer. No one will deny that great injustice was done to a class, and individual hardships were frequent in the period 1790-1820, but the victims suffered from an economic upheaval in which the interests of the weakest were not safeguarded adequately or in time, rather than from deliberate class legislation.

Lastly, many writers hold that only at a few clearly defined periods in the history of this country was a ladder available, by whose rungs the agricultural labourer might possibly ascend to the proprietorship of a small farm, and thence indefinitely onwards. The truth surely is that, at all times up to the beginning of the nineteenth century, the agricultural labourer started with an initial, and often hereditary, advantage in that he had a direct claim to certain privileges attached to the land; that after the second enclosure movement he lost this advantage and was placed in equality with those at the bottom of other industries? The majority of slaves were free by 1086, and subsequent manor records contain evidence of a constant upward social movement; whence, for example, came the dispossessed small farmers of the fifteenth and sixteenth centuries if not from the ranks of those who had once been partly cottars and partly day labourers? Anyone who has searched the College admission registers at Cambridge and Oxford will recollect that the sons of "yeomen" formed one of the most common types of student in the

seventeenth and eighteenth centuries. Men who could afford such an education for their sons, and could, moreover, in days before education was compulsory, afford to lose their services on the land for some years, certainly came of a stock that was strong enough and independent enough to have attained its position by its own efforts; the sequel was generally apparent in the succeeding generations, which produced beneficed clergy, barristers and knights. Jesse Collings has enumerated a list of men, famous in every rank of life, whose parents were humble agriculturists. In agriculture, as in all other walks of life, there is room at the top, and at all periods of the last thousand years there has been in this and other countries a steady stream upwards of the best class of man. Character has always asserted itself, and in agriculture nothing is, or has been, easier than to rest quietly in a particular grade, but there have never been artificial restraints that prevented the advancement of the competent and the hardworking. The true reading of history here is, surely, that for centuries the labourer in husbandry started with both feet on the lower rungs of the ladder, and that, during the last hundred years, the ladder has remained, but he now stands on the ground facing it? On the other hand there is no doubt that a stream of incompetent farmers was, and is, descending the social scale, and reverting within a generation or so into labourers.

The history of the present day hereditarily landless labourer dates from the war with France, when, in order that a large acreage of grass might be converted to wheat-raising, enclosure took away from him his privileges as a commoner and therewith, as we have just seen, his original advantage of being two or three rungs up the rural ladder. All are familiar with the exact benefits that these privileges conferred, and will observe that, as usual in economic history, the effects of their loss were not immediately brought to notice, being disguised to a certain extent by other factors that the years succeeding 1792 brought in their train. The sequel came when the peace of 1815 led to the usual deflation of money, unemployment, and a tardy reduction in the cost of food.

In the meantime palliatives had been tried in the shape of the

Settlement Acts and the Speenhamland policy. Agriculture suffered from an attempt to combine husbandry and out-relief, and in consequence the twenty years lying between Waterloo and the Poor Law Act of 1834 represent the worst time in the history of the relationship between master and man on the land. The following extract from the *Times* of 1822 will show that the system referred to was apt to be hardly administered. "A paper of a strange description, regulating the allowance to the Southampton poor, makes its appearance in our columns. A certain number of magistrates met together at Winchester, and came to resolutions which we almost blush to transcribe. There are amongst them the names of rich men, who, never having felt what it is to be hungry, ought to decide with caution about the cravings of their destitute fellow-creatures. There are on the list five amply beneficed clergymen who ought to be liberal and humane. Yet we lament to say, a bench so constituted was capable of resolving that a labourer, with a wife and child to support, who refused to accept wages throughout the year, amounting in the average to 4s. 6d. per week, should forfeit all claim to relief from his parish. Gracious Heaven! are these unthinking or hard-hearted men aware to what torture they condemn a human being in this country, when they grant him for his individual maintenance but the sum of two shillings and threepence for seven days, of which six are to be consumed in labour? Less than 4d. for twenty-four hours, to find house and clothes, and food, and fire. Let these magistrates reconsider their resolutions, unless they mean to drive the wretched paupers within their district to utter despair, and to the infliction of all its tremendous consequences on themselves and on society." The burning of stacks and destruction of machinery (undoubtedly the "tremendous consequences") went on for the greater part of the period, and in the end the burden of rates, rather than a sense of compulsion, caused the introduction of a new system and the disappearance of the Roundsmen. One reads accounts of the assizes held in the Southern Counties in 1830 and 1831, notes the severity of the judges, the transportations and the death sentences, but one often fails to recollect that the majority of the cases in question were the result of brutal attacks on

unarmed individuals, of the terrorisation and robbery of defenceless persons by organised gangs, and that this was the culmination of a campaign that had lasted for years. Ninety years ago the criminal law was administered on a widely different conception from present day standards.

Exactly one hundred years ago in moving in the House of Commons for a revision of the Criminal Law, Sir James Macintosh had drawn attention to the fact that no less than "two hundred and twenty felonies polluted the Statute-Book," and that executions were taking place at the rate of over twelve hundred per annum. He held that, "when mankind beheld the life of a fellow creature sacrificed for a paltry theft, a trifling injury or fraud, their feelings at once revolted; they sympathised with the sufferer in his dying moments, and, ascribing his punishment to the effect of superior power alone, they often inwardly loaded both laws and judges with execrations." Death sentences being thus passed in normal times for petty larceny, the events of 1830 appeared to demand the maximum punishment that the law could administer. Equally hard cases are to be found in the years immediately succeeding the advent of peace when agriculture too was relatively prosperous. At the Lincoln Assizes in March 1818, for instance, several agricultural labourers were sentenced to death for alleged agrarian offences, among them being "William Kehos, aged 22, a private soldier in the 95th Regt. of Foot, charged with feloniously slaughtering and stealing from the close of Matthew White of Lincoln one wether hog." The 95th was one of Moore's famous regiments, afterwards to be known as the Rifle Brigade, and doubtless Private Kehos had been with it at Waterloo less than three years before. Here was no case of organised destruction, but merely theft by doubtless an unemployed, and possibly hungry, "ex-service" man. Whilst such sentences as this were absolutely indefensible, it must be remembered, in visualising the events of the following twelve years, that any slackening of the severity of the law was clearly impossible in dealing with the outrages of armed mobs. If thieves were hung, determined rioters and gangs of fire-raisers must suffer similar penalties. The risings of 1381 and 1831 both failed, but in neither case can it be

held that, as a direct result of their failure, the lot of the class responsible for them was made worse; economic happenings had at both times caused the outbreaks, and must bear the blame for the conditions existing after the suppression of the latter. No one will deny that the legislation passed to force the peasant back to work in the fourteenth century, and that extemporised to meet the demands for enhanced production in 1801, which removed from him his immediate access to the land, were utterly harsh and one-sided; but that admission must not cause us unreasonably to blame the executive that had, on each occasion, to restore order to the country in the light of the then existing moral and legal codes.

After 1834 emerged the labourer as we now know him; landless, and not for a generation to be united or corporately represented. That same generation was to see the recovery of agriculture, the principle of Free trade apparently harmlessly established, and the labourer obtaining at least a bare living. As these features are referred to elsewhere, it is proposed at once to trace the development of Trades Unionism as applied to agriculture.

All other methods having failed him throughout his history, the farm labourer was at length able to turn to a fresh tool—a tool, however, that has not been as useful in his hands as in those of other tradesmen. It may be legitimate to date, as is frequently done, the formation of the first Union to those six Dorset labourers who, for banding together to assert their claims, were sentenced to seven years' transportation at the County assizes in 1832. Their claims had apparently been that wages should be advanced to ten shillings a week; instead, they suffered reductions until the sum of seven shillings was reached. Other methods of redress having failed them, a "Friendly Society" was thereupon formed. If this was Trades Unionism, then all those unfortunate men who appeared before the visiting Justices during these ten troubled years were also members in spirit, for "Combination" for any purpose was prohibited under the existing laws. Trades Unionism in general was first recognised by that British panacea for all economic difficulties—a Royal Commission—and as a result of its findings two Acts of

Parliament were passed to regularise the position—the first in 1869, the second in 1871. Prior to that time occupations other than agriculture had possessed Unions, but their activities had necessarily to be carried on unobtrusively. Spasmodic efforts to draw attention to their position by means of local strikes in Buckinghamshire and Hertfordshire were the first evidences of a corporate spirit manifesting itself on strictly legal lines among agriculturists. Two or three years later Canon Girdlestone took up the cudgels on behalf of the farm labourer, directly by persuading numbers of them in the South-West of England to migrate to the better paid districts of the North, and indirectly by championing their cause in public.

Although East Anglia was, in future, destined to be the centre of the activities of the Unions, the original parent society was formed by the late Joseph Arch at Leamington in the Spring of 1872. Arch was himself an agricultural labourer, but was also a talented Methodist preacher, and was thus afforded opportunities of reaching his members at times and in places where he was sure of an audience. The National Agricultural Labourers' Union quickly secured the adhesion of numerous small bodies of membership in the Southern and Eastern counties, but it equally aroused the opposition of the farmers, and led to the formation of Farmers' Unions. It must be understood that, despite what followed, the objects of the Labourers' Union did not merely comprise an agitation for an advance in money wages, combined with shorter hours of labour; rather, was the work of these early societies directed towards a general improvement of their members' economic position. The provision of allotments and cottage gardens, the abolition of child-labour, the better education of the young, the maintenance of the sick and the aged, the reform of local government—all these objects were to be found in their programme. Arch himself always emphasised this side of his work, and incidentally made considerable efforts to foment antagonism between Nonconformity and the Established Church and between the squire and the rest of the village. Jesse Collings was one of his earliest supporters, and brought with him his scheme for a new system of land tenure; this led to the patronage of J. S. Mill and other

similar thinkers. The Union was well launched, and its membership rapidly increased, but when it attempted to secure concrete benefits for its members by direct action it was not successful.

Small strikes had been organised in the first few months, and Arch claimed that the rise (which varied between a few pence and some four shillings) in the cash earnings of labourers noticeable in 1872 was entirely due to the work of the Union. But as Hasbach has pointed out, even if the figures given are themselves reliable, these increases were proportionately much greater in the North (some twenty per cent.) than in the South (eight to ten per cent.), and it was precisely in the North that the Union was not represented. It would appear, therefore, that any increases in cash earnings were due to causes other than the influence of Trades Unionism. A whole work (*The Agricultural Lock-out, 1874*, by Frederick Clifford) has been devoted to an account of the unsuccessful strikes in East Anglia that the Union in its prime attempted. Here one can only draw attention, in the briefest manner, to this interesting piece of rural history. Suffolk and Essex were the Counties affected, and the parish of Exning, within a few miles of Newmarket, was the scene of the principal struggle. In September, 1872, the local Union had demanded a rise of wages and a certain curtailment of hours of labour; the reply of the employers had taken the shape of actively forming a counter organisation. During 1873 a lock-out was conducted against the labourers, who were forced to retreat from their position. On February 28th, 1874, however, a fresh demand for a rise in wages from thirteen to fourteen shillings, together with a week of fifty-four hours, was put forward. This was a comparatively moderate request, for Arch's original manifesto had placed sixteen shillings as the minimum requirement. The masters again replied with a refusal, coupled with a lock-out. This time, although Newmarket and Exning formed the focus of the strife, subsidiary engagements took place throughout Cambridgeshire, Essex and Norfolk, the Unions claiming that some ten thousand of their members were locked out. The dispute lasted for no less a period than eighteen weeks; at the end of that time the men returned to work on their employers' terms. As a means of advertising their cause,

and at the same time of raising funds, a pilgrimage had been organised by the Union officials which, consisting of some scores of their adherents, made its way to the Midlands on foot. Sheffield, Wolverhampton and other large towns were visited, and speeches were made; some £700 was cleared as a result. The strike cost the Union upwards of £24,000, and although in some districts it lasted throughout the harvest, yet by defections from membership, and the help of casual labour, no difficulty was experienced on that score, as the following extract from *The Agricultural Lock-out, 1874* shows:

Harvest began in some parts of the Eastern Counties in the third week of July, and the farmers at once found that they had as many hands as they required without employing Unionists, who therefore remained idle. The time had come when they were led to believe that their old masters would be forced to take them back; and they saw the harvest ripe and being gathered in by strangers. Only those who know the reliance placed by agricultural labourers upon the harvest-money can know how severe a blow this was to the Union hands. High wages seemed to bring plenty of people ready to earn them. Several hundreds of sturdy coprolite diggers were set free from the pits...a hundred or so of men were ready to come from Wiltshire, but were told they were not wanted. One farmer wrote that the labourers were leaving the neighbourhood wholesale "and if the Union leaders could hear the language used about them by the men they would learn for the first time how evanescent a thing popularity is." The struggle came to an end in July, as soon as it was found that the farmers could get the corn harvested without aid from their locked-out labourers.

Thus the first and the largest strike (or lock-out) of agricultural labourers in this country ended disastrously for the Unions, and dealt Arch's movement a blow from which it took many years to recover. It was conducted by both parties concerned on perfectly correct lines, and was entirely free from outbreaks of personal violence or intimidation on the part of either side. Although other strikes were organised in later years this effort was the most ambitious undertaking of its kind, both in respect of the area covered, and its duration.

At this time the membership of the National Union was over seventy thousand, but within six years it fell to barely a quarter of that figure. This was attributable to two causes. In the first

place a rival body had been formed in 1873, styled the Federal Union of Agricultural and General Labourers, which, as its name implies, embraced urban labourers within its membership; this and similar smaller organisations detracted from the numerical and moral force of Arch's adherents. Again, odd as it may seem, hundreds of members of the original society withdrew their membership, believing that the purposes for which they had enrolled were accomplished, or that the obligation no longer existed; incidentally many members were in arrears with subscriptions. Then commenced the period of agricultural depression which lasted from the late 'seventies for more than twenty years, the agricultural labourer suffering in common with the landlord and the tenant farmer. Wage reductions were perforce effected, Arch himself counselling his members to acquiesce in this unfortunate necessity, and the Unions declined still more in membership. By 1890, so far as concerned the labourers' organisation, a partial revival had set in and fresh societies were formed—notably in Norfolk and other of the Eastern Counties; but again the climatic conditions of 1894 dealt a blow to the combination of labour. The explanation of the persistent vitality of the movement in East Anglia is partly due to the fact that labour per acre was "denser" in this arable area (and therefore more easily organised) and also because these Counties were always Liberal in their political tendencies and Nonconformist in their religious leanings.

For some twelve or fourteen years after 1894 the position of the National Union was most insecure; other smaller bodies succumbed to the economic position, and by 1906 only a very few independent societies remained, but soon the position of the labourer exhibited signs of improvement by participating in that slight amelioration of the industry that set in just prior to the outbreak of the Great War. The National Union joined in this revival, and was thus placed in a more advantageous position to represent its members in the claims which were soon to be entered on their behalf before the Agricultural Wages Board. The necessity for adequate representation in the presence of this important tribunal also caused a rapid extension in the membership of the National Farmers' Union, and at the termination

of the war both bodies were left in a condition, as to funds and membership, widely removed from their pre-war status. If the strike weapon has not been called into use during the last decade to the extent that early agitators anticipated, it does not follow that other methods have been neglected. On the contrary, political and press propaganda have been effectively used. Arch himself lived to become the acknowledged representative of rural labour and to sit in Parliament for North-West Norfolk—a particularly appropriate seat, as it comprised one of the oldest of his strongholds.

The development of Trades Unionism in agriculture having been briefly traced, it remains to examine the reasons for its comparative inefficiency. In all other occupations one has become accustomed to regard it as an all-powerful machine, capable of paralysing, at any rate temporarily, any industry, and inconveniencing millions of neutral observers, if not at the same time being always successful in securing the bulk of its demands. In agriculture, however, we have seen nothing but spasmodic or local attempts result in failure, the Unions themselves never enrolling more than a fraction of their potential members and defections rife. What is the explanation?

In the first place agriculture is, from its nature, a scattered occupation; to secure a hearing from some thousands of labourers, distributed over perhaps a hundred villages in every County, demands the multiplication of officials and a great outlay of time and money. The hours of labour are long, and there is no factory door at which to meet crowds of prospective members at an ascertained hour. Nor can members, once secured, be frequently collected to hear advice or to receive instructions from their local officials, and those in arrears with subscriptions cannot be constantly reminded of the penalties attaching to their position. Then, non-membership does not carry with it the disadvantages that exist in similar circumstances in other occupations. Non-members are not ostracised on the farm as they are in the factory, partly because only a minority of the whole body of agricultural labour adheres to the Unions, and partly because field-work, in addition to being of an isolated character, is not exclusively confined to those of

one sex or of any particular age group. Again, subscriptions to their Union represent a relatively greater demand on the pockets of the agricultural workers than do the corresponding payments by factory hands. In Scotland and the North of England, where "living-in" is the general custom, the normal attractions of a society, or its orders in emergency, are not likely to prevail with servants, who are to all intents and purposes members of their employers' households for a definite number of months. Lastly, the total membership of the Unions has never exceeded ten per cent. of the whole body of rural workers, and no official could expect to carry all before him on such a foundation.

The above represent the inherent difficulties which the rural organiser of labour always finds himself ranged against. The farmer at the same time is armed with equally potent advantages. His trade does not immediately suffer from a cessation of work to the same extent as does a mine, a machine shop or a transport organisation. At most seasons of the year an arable farmer can watch his land remain unattended with comparative equanimity for at least as long a period as his men can exist on little or no strike pay; livestock in normal times demands the minimum of man-power, and, on withdrawal of hired labour, the farmer, his family or some old employee can minister to its wants. If harvest or the time of some seasonal operation is selected for a strike, that is just the time when additional extraneous labour is most abundant. The prevention of non-unionist labour from participating at such times is singularly difficult in the case of agriculture—quite apart from the innate conservatism of the rural worker to methods of active opposition—spaces are great and workers are scattered. At times of pressure there are normally bodies of workers ready to go at once to any centre; Irish harvesters prior to 1915 always formed a nucleus of strike-breakers, and an appeal from farmers to townsfolk, in circumstances of stress, always results in numbers of unskilled labourers, school boys and well-meaning, but comparatively useless individuals, hurrying to assist. During fifty of the last sixty years the number of regular farm labourers was declining, and a reserve of older men had formed in the villages—men who were

thoroughly familiar with every phase of work on the farm and who could, for a short time, resume their places thereon. Shortage of labour is seldom a difficulty that farmers have to contend with, in fact there has been for two generations a superabundant supply, always acting as a check on extremists in times of strike. Only during the last two years of the war was the farmer short of assistance, and then he was officially supplied with numerous substitutes. By 1920 matters had so far resumed their pre-war complexion that a labourer was heard to remark "farmers are getting independent again." This word is symptomatic of the position of the employer of rural labour; he is independent to a degree that is unknown in other industries. The National Farmers' Union and similar bodies have always been in a stronger position than the corresponding formations of other employers of labour; for such a thing as a complete national strike is an impossibility in the country owing to the widely different character of farming operations and to the divergent hiring systems in vogue in each area, which would preclude employees from united action and enable employers to make full use of substituted labour. Socially and economically Trades Unionism on the land should have a future before it, but as a weapon for the sudden application of constraint to organised employers it is of little avail.

What are apt to be lightly described as "agricultural labourers' wages" afford one of the most difficult economic problems connected with the land. In all trades one is accustomed to the distinction drawn between money-wages and real wages, but in the case of agriculture the position is complicated by the introduction of a third factor, and that is the value to be attached to payments in kind and other benefits that are not immediately patent. Agriculture is peculiar in that the provisions of the Truck Acts have been held inapplicable to it, and partial payment in goods is not illegal. Generally speaking, the further North one goes the more emoluments will be found to consist of payment in kind. In Scotland the system reaches its climax, and a labourer may receive annually anything up to forty per cent. of his earnings thus. Over the border the same feature is noticeable, and the further North one travels the more one

finds goods taking the place of cash, until in Orkney and Shetland in 1907 cash was represented by some 7*s.* and the value of allowances was 6*s.* 9*d.* A Scotch ploughman may receive 70 lbs. of oatmeal monthly, half a gallon of milk daily and one and a half tons of potatoes each year, and often a similar quantity of coal. The vexed question of the advantages attached to the bothy system in Scotland cannot be discussed here, but it should be observed that the Scotch labourer differs from the Southern in that he lives on the farm whereon he works (if married, in a cottage, if single, in a bothy), he is engaged by the half year or year, gets a larger proportion of his remuneration in kind, does scarcely any piece-work and receives no extra payment at times of harvest.

Allowances in England and Wales may take many forms. Houses supplied rent-free, or for a nominal payment, represent the largest addition to cash earnings; the supply of such products as potatoes, bacon, milk or vegetables is a weekly supplement in numerous cases; added to these are the smaller advantages frequently accruing from the possession of strips of potato land, the provision of beer or cider and other gifts; lastly, in certain Counties, harvest money comes in once a year as a lump sum. As such allowances vary widely from County to County, it will be appreciated that it is a task of extreme difficulty to assess the average value of all benefits, but one of the most recent pre-war estimates—that of the Board of Trade in 1907—gave 1*s.* 1*d.* per week as their value in England and Wales. Here again a complication is introduced, for the different grades of employees receive varying quantities of goods, and have varying claims on free quarters. The Board of Trade figure represented the average of all grades, the average receipts of individuals being valued at 9*d.* in the case of ordinary labourers and 1*s.* 6*d.* in that of stockmen. The corresponding figure in 1918 showed a rise to 1*s.* 5*d.* for labourers and 2*s.* 9½*d.* for stockmen. Specialists, wherever they are employed throughout the British Isles, always receive a larger proportion of their emoluments in kind than do ordinary labourers. The earnings of the latter class are more dependent on piece-work, however, and in this instance allowance must be made for possible loss of time; again, local custom

crops up, and the problem is complicated by the different systems that varying types of farm operations necessitate. In these circumstances, a statement issued by a Committee of the Agricultural Wages Board in 1919 is apposite as showing the ramifications in the systems extant in England for rewarding agricultural labour:

Farm workers are paid by many systems. Amongst ordinary labourers, some are paid almost entirely by time-rates, wholly or mainly in cash. Others, particularly in vegetable growing districts, are paid mainly by piece-rates, in cash. Between these extremes are men who are paid time-rates during the greater part of the year, with piece-rates, or bonuses, at special periods, such as hay-making and harvest. Generally speaking, the value of allowances in kind made to ordinary labourers is quite small. The skilled man, or, more properly, men who have responsibility with regard to stock, as shepherds, cattlemen and horsemen, are generally paid by time-rates. These rates may be paid wholly in cash, but more generally are paid partly in kind. These classes also sometimes work for piece-rates, or receive special rates for overtime, or bonuses for work in special periods. Further, some men amongst these classes are boarded and lodged, others are partly fed, by the employer. A few ordinary labourers are boarded and lodged, or partly fed by the employer, but the custom of boarding and lodging, or providing meals, is more or less confined to certain districts, and the number of men boarded and lodged, or fed, is comparatively small, especially amongst ordinary labourers.

Enough has been said to demonstrate the difficulties attaching to the compilation of any figure showing the "average" earnings of agriculturists. Official figures are available which give the cash receipts for the different grades of worker, but these have necessarily to be subdivided into summer and winter rates, and accuracy requires that they be confined to County areas or weighted in proportion to the numbers of men employed in each class. Proceeding on these lines, we find that in 1907 the winter rates of labourers' cash earnings varied from 12s. 1d. in Dorset to 19s. 4d. in Lancashire, those for stockmen, horse-keepers and shepherds from 14s. in Wiltshire to 20s. 4d. in Durham. Summer rates were sometimes a penny or twopence higher, and sometimes a corresponding amount lower. To these sums must be added the value of allowances in kind, amounting

as we have just seen to an *average* of 9*d.* for labourers and 1*s.* 6*d.* for those engaged in the care of livestock. County rates again varied from 3*d.* per week in Middlesex to 2*s.* 2*d.* in Hereford, and stockmen in Bedfordshire received value to the extent of 11*d.*, whilst the benefits of those in Lincolnshire were assessed at 3*s.* 4*d.* the week. In the four East Anglian Counties harvest-money varied between £5 and £10, but it superseded ordinary weekly rates of pay so long as this work lasted. In the Kesteven division of Lincolnshire pre-war extras and allowances to waggoners might total over £17 per annum. In 1902 Wilson Fox's *Report* to the Board of Trade contained the following figures for the value of the total emoluments (weekly cash, allowances in kind and extra payments), for ordinary labourers, in England 17*s.* 5*d.*, in Wales 17*s.* 7*d.*, in Scotland 19*s.* 5*d.*, and in Ireland 10*s.* 9*d.*, for all forms of male labour 18*s.* 3*d.*, 17*s.* 3*d.*, 19*s.* 3*d.* and 10*s.* 11*d.* respectively. Actually, the lowest total earnings in the United Kingdom were found in County Mayo, where 8*s.* 9*d.* weekly represented the wages and value received by an adult labourer—his cash receipts being given as only 7*s.* By 1914 all investigators agree that a rise of at least a shilling had taken place in cash wages, and Bowley (*Prices and Wages in the United Kingdom, 1914-1920*) gives 17*s.* 10*d.* as their level in April 1915, or say 19*s.* as total receipts; these figures being for England and Wales alone. Stockmen and shepherds were of course earning at least two or three shillings beyond what the ordinary labourer commanded.

Cash wages, plus the value of allowances in kind and extra payments, represent the "total wages" earned by those employed on the land, but the figure thus secured is useless unless we correlate it with the cost of living, or in other words, assess its purchasing power in commodities, thus obtaining a clue to "real" wages. Tables of cash earnings, and also of total wages, have been compiled at frequent intervals by contemporary investigators such as Young, Marshall and Caird, and we have evidence about corresponding payments centuries earlier in the researches of historians, but all of these findings require extreme care in handling on a comparative basis. It is for instance useless to know that in Essex in 1746 labourers' cash wages were 5*s.*

a week, and thirty years later 6s. a week, nor can we appreciate their economic position when Young tells us that, fifty miles North of London, he found labourers earning 7s. 1d. in 1771. For the purpose of passing judgment on the position of those employed in agriculture in all these instances it would be essential to know the cost of the staple articles of food that went to meet a typical labourer's household requirements. On many former occasions it has been sought to relate cash wages to the number of pecks of wheat that they would secure, and tables have been prepared on these lines. They carried, however, no conviction, for they ignored the fact that in times of high wheat prices alternative forms of food would be increasingly relied on, and that in former periods the labourer's loaf contained other ingredients. They did, however, afford a slightly more accurate survey of the situation than would mere tables of cash wages.

For these reasons it is not proposed to enumerate the fluctuations in the cash payments of labour in previous centuries, but rather to attempt some analysis of his economic situation during the last twenty years, to compare it with that prevailing during the former great war, and to comment on certain features affecting agricultural labour in general as opposed to the labourer. Any comparison made between even total earnings nowadays and apparently comparable figures prior to the enclosure movement of 1790-1830 requires exceedingly careful treatment, for it must be borne in mind that not only were the unenclosed commons a source of additional income to the labourers, but that what we now attempt to resurrect under the title of "village industries" were then widespread actualities. Every household had the opportunity of creating some additional source of income beyond that earned by its head, whether it was glove-making, knitting, weaving, or a dozen other trades that the women and children were engaged upon. Family earnings ought then to have been the criterion for comparison, and there is still room to argue that this should be the basis even at the present time. For in no other trade has it been customary—or perhaps necessary—for women and children to add their labour to that of their men-folk. Even after the concentration of industry in urban areas, one finds that the farm labourers' earnings were still augmented by

the shillings and pence of his wife and children, not then gained by home-work but by field-work. The mechanic, the coal-miner and the railway employee with young families are the only "bread-winners"; on the land, the larger the family the more it has always been capable of earning—despite the activities of the education authorities. Even at the present time the labour of children over the legal school-age, and the assistance of those of all ages in times of holiday, considerably augments the total weekly earnings of a rural household. This is one of the unseen factors to be borne in mind when making comparison between agriculture and other trades, for in official *Reports*, examples are recorded of North country families earning, in 1902, over £200 per annum on the land. It is also doubtless the explanation of the seemingly insoluble problem presented by the agricultural labourer of the mid-nineteenth century—the man whose cash earnings for sixty years never exceeded twelve shillings a week, and who nevertheless brought up a large family of children in health and decency. Medical officers and welfare supervisors of the present day declare that such things were impossible, but instances abound in which the generations raised under such conditions have subsequently advanced themselves in the world. Twelve shillings a week, plus a free cottage, plus allowances of food in kind, with, in addition, the shilling or two brought in each week by three or four children, makes a very different proposition to a bare twelve shillings. This is no defence of what were, even in Great Britain, inadequate cash wages, but is merely intended to show that statements confined to the money handed over weekly to the farm labourer himself should not be seized on as representing the total amount of his incomings. The Irish labourers whose emoluments in recent years averaged 10s. 9d. and ranged down to 8s. 9d. per week fortunately represent conditions unknown in the rest of the kingdom; they are only explicable in the light of the popular belief that potatoes formed the staple food of these men.

The distribution of comparatively high or low wages affords an interesting side-light on economic history. Apart from the consideration of living-in arrangements, or the payments made to half-yearly farm servants, cash wages in the North of England

have for centuries been higher than in the South. The competition from mining and manufacturing centres must be held primarily responsible for this feature, which is also to be observed elsewhere within a short radius of large towns. The demand for unskilled and semi-skilled labour in the outskirts of the latter in connection with horses, roads and railways is felt in addition to the direct call of the factory. As a frontispiece to Caird's *English Agriculture in 1850-1* will be found a map showing the distribution of farm wages in England. The line dividing high rates from low runs rather South of West from the Wash as far as Staffordshire and then turns North-West, reaching the coast on the borders of Cheshire and Flint. Thus, parts of Leicestershire and Shropshire were included in the high wages portion, and the whole of Northamptonshire, Warwickshire and Worcestershire were in the low. The *Report of Wilson Fox* relating to wages in 1902 contained a map of the United Kingdom on similar lines; here the same features were observed, save that additionally Norfolk, Suffolk, Gloucester, Oxford, Berkshire, Wiltshire and Dorset were below the average for Southern England, and Surrey and Glamorgan above. All subsequent investigations have recorded the same broad results, with, of course, isolated exceptions such as that afforded by Middlesex. In general it will be observed that the higher paid workers were to be found in the grazing districts, but the South-Western Counties have always paid notoriously low wages, as witness J. S. Mill's strictures on those prevailing in Dorset. The standard of labour in the Northern Counties is admittedly higher; every class of work is better performed and more quickly carried out. Whilst on the one hand it has been held that this is naturally attributable to higher wages, most authorities agree that labour North of the Humber is itself more painstaking and less inclined to cavil at hard work. Climatic conditions affect the question also, as less time is available in which to carry out certain operations, and work in the open is a more strenuous occupation, so that in both respects the character of labour is tested. Evidence, tantamount to proof, of the superiority of North country labour is found in the shape of labour-bills per acre on arable land in Northern and Southern Counties; the

total expenses for labour are there shown to be practically identical, although the same number of men may be engaged on similar operations—those in the former area receiving cash wages amounting to from forty to fifty per cent. in excess of the Southern workers. A ploughman in Northumberland moves appreciably faster than one in Cambridgeshire, and it is probable that piece-work rates could be shown to be based on larger anticipated results in the North. Some thirty years ago the Scotch farmers domiciled in Southern England were complaining of the inefficiency of local labour compared with what they had been accustomed to employ beyond the border. Official reports have also contained evidence on this point, as the following example shows: "In reference to the slowness of the Southern labourer generally, a large Scotch farmer, of some forty years' experience in Surrey, used at one time regularly to import ploughmen from the South of Scotland. He paid them more than the average wage, and they usually stayed two years, when the many opportunities of better employment became too much for them. They used to plough an acre, sometimes a Scotch one (6000 yards) to the Surrey man's three-quarters of an acre in a day." Soil conditions must, however, be taken into consideration; thus, it was agreed by Scotch farmers in evidence before the Commission of 1893 that in Essex their best fellow countrymen could do little more work in a given time on the heavy clay than the natives could accomplish.

There are two outstanding periods in which it is well to examine the position of the agricultural labourer; both are covered by a European war and both brought about an increase in the prosperity of the farmer, but the French war of a hundred and twenty years ago saw agriculture uncontrolled by the State, whilst the Great War supplied the first opportunity for a large experiment in Government control—a control that was extended to the determination of a minimum wage for farm workers. The first quarter of the nineteenth century represents one of the saddest periods in the history of agricultural labour. Commodity prices rose steadily for the first dozen years, at the same time the hereditary benefits of the villager were swept from him, his subsidiary sources of income disappeared, and he became

the *corpus vile* for experiments conducted in Poor-law administration. Enough has previously been said to demonstrate the dangers attaching to any attempt at showing the past relationship of earnings to expenses, but certain figures compiled by Arthur Young may be accepted as crude evidence of the seriousness of the position. That authority estimated the rise in bread prices by 1812 as 100 per cent., of meat 146 per cent., and of all provisions as approximately 135 per cent., cash wages on the other hand he found had only risen 100 per cent. Whilst these are obviously round figures, yet, making every allowance for possible inaccuracy and exaggeration, it must be admitted that the incomings of a labourer's household were, by that date, quite incapable of meeting his barely essential outgoings. Space does not permit of any account of the slow fall in prices after 1815, or of the reduction in cash earnings effected by employers in an attempt to weather the inevitable after-war depression. It is only possible to summarise the history of the twenty years that succeeded Waterloo by throwing out the suggestion that if war had inflicted hardships on the labourer, peace conditions joined the landlord and the tenant with him in common despair.

Between the two wars there intervened a recovery and another long period of depression—the latter, as has been shown, only beginning to pass away some few years prior to 1914. It had been accompanied by a great decline in the numbers of those employed on the land, as the following table, extracted from the *Census Returns* of 1911 shows:

England and Wales

	(1) Numbers of male farm workers in England and Wales	(2) Numbers of males of ten years of age and upwards engaged in agriculture	(3) Percentage of (2) to all males ten years of age and upwards
1851	1,232,576	1,544,087	23·5
1861	1,206,280	1,539,965	21·2
1871	1,014,428	1,371,304	16·8
1881	924,871	1,288,173	13·8
1891	841,884	1,233,936	11·6
1901	715,138	1,153,185	9·5
1911	757,552	1,253,859	9·2

The above figures, in the case of workers, exclude men employed in trades ancillary to agriculture. They accordingly differ

slightly from others given in similar tables elsewhere. It will be deduced that the numbers of those engaged in farming as a business did not decline very seriously, but if we confine our examination to workers the results are very striking. Ten years later evidence of the recovery of agriculture could be seen reflected in the numbers of workers employed—757,552, representing the first increase in sixty years. Despite a decrease of 38 per cent. from the year 1851, agriculture, in 1911, still gave employment to a larger body of male workers than any other industry save that of coal-mining and building. Moreover, if corresponding figures were taken for the United Kingdom, it would have headed the list, as it still does for England and Wales if employers are included. The relative decline in importance of agriculture as a trade, however, is vividly shown by the percentage of males it found employment for at the decennial intervals; in 1851 almost one in four made his living on the land, in 1901 less than one in ten did so. Nevertheless it was an exceedingly important and peculiarly diverse and intricate occupation, the labour conditions in which an *ad hoc* body successfully attempted to regulate from 1917. Precedents for this action were not lacking, for even if we exclude the efforts of the Justices of the Peace to correlate wages and food prices in the early nineteenth century, the Statute of Labourers of 1349 represents a direct, but mistaken, attempt at the fixing of cash wages.

When the Government claimed the right to compel agriculturists to farm their land in a particular way, and in consequence guaranteed them a certain cash return, it was obviously bound to insist that they paid their employees a wage roughly commensurate with their enhanced profits, for, failing this, the experience of the French war would have been repeated, and wages would have been outstripped by prices. Part II of the Corn Production Act of 1917 accordingly contained provision for giving expression to this form of war-time control. The difficulties, in the first place of ascertaining the existing rates of pay and allowances in each County in Great Britain and Ireland, and secondly, of assessing, for any given period of time, the purchasing power of constantly depreciating cash payments and

the improving value of allowances in kind, will be understood by anyone who has glanced at the difficulties attendant on these operations even in times of economic stability.

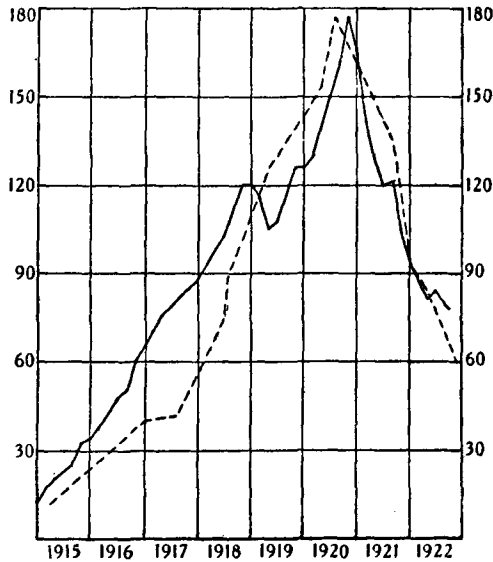
The Agricultural Wages Board when fixing remuneration was directed by the Corn Production Act "so far as possible to secure for able-bodied men wages, which in the opinion of the Board are adequate to promote efficiency and to enable a man in an ordinary case to maintain himself and his family with such standards of comfort as may be reasonable, in relation to the nature of his occupation." The statutory fixing of wages had been a subject for academic discussion for many years prior to 1917. In 1796, when wheat was already fetching over 74s. the quarter, a definite request for the granting of a minimum wage to farm labourers was made to Pitt, who replied: "I will not do that; but I will do a better thing—I will take care that no one shall suffer from want: the poor people who cannot live on their wages shall be relieved out of the Parish Rates." The results of his methods afford a striking contrast to the success achieved by the alternative plan which was adopted one hundred and twenty years later. Such bodies as the Land Enquiry Committee had, a few years before 1914, strongly advocated a minimum wage, and their arguments had been replied to by the Land Agents' Society. The objections generally put forward had been that casual labour would to a great extent take the place of permanent, that the old and relatively feeble labourer would be swept aside, and that arable land would revert to grass. Under war conditions there was of course no risk of the last disadvantage crystallising, and the first was negated by the deliberate substitution of women, German prisoners and soldiers of a low category; that the services of the less physically fit were apt to be dispensed with there was slight evidence after the labour shortage was made good in 1919. As affording a demonstration of the practicability of enforcing a minimum wage in agriculture under war conditions, the four years' life of the Wages Board was completely successful; whether in the absence of a *quid pro quo* in the shape of guaranteed prices, or in times of peace, it could have wielded sufficient authority to compel compliance with its regulations is quite another question.

The Corn Production Act set up a Central Wages Board for England and Wales, which in turn established District Boards; similar machinery was extemporised in Scotland and Ireland. The Central Board was composed of sixteen representatives of farmers and sixteen of labour, with seven neutral representatives directly appointed by the Board of Agriculture. District Committees were similarly representative of all parties. Recommendations for alterations in the rate of wages were put forward by the District Committees, and were then adjudicated upon by the Central Board, whose published findings had the force of law. The Board was empowered to deal with the rates of remuneration for all forms of agricultural labour, that of women and boys included, and of persons employed in subsidiary rural occupations; it could fix scales both for piece-work, time-rates and overtime, as well as grant permission for payment at rates below the minimum; it had considerable powers of a quasi-judicial character and, as its deputy chairman, Sir Henry Rew, has said, its work affected the lives of some five million persons. When it commenced its operations a minimum cash wage of 25s. a week was already enforceable under the provisions of the Corn Production Act—representing, by August 1917, a rise of almost fifty per cent. beyond the 1914 level. The successive minimum rates for ordinary labourers established by the Board were as follows: early in 1918 30s., a year later, 36s. 6d., in April 1920, 42s. and in August of that year, 46s. These of course were the rates applicable to those Counties or districts in which cash wages had always been low—those fixed for the Northern districts were several shillings higher. Difficulties soon arose in the matter of payments to skilled men and those in charge of livestock, whose remuneration had always been higher than that of the ordinary labourer. Certain Counties paid them the ordinary minimum wage *plus* such overtime as their special duties necessitated, others agreed to the raising of weekly cash wages to a level above that applicable to other employees. Even at the end no uniform system was in vogue, for the Central Board itself did not attempt to enforce one system for the whole country, but left the local Boards a free hand.

In 1920, fifty shillings, as a universal minimum, was the final

aim of the men's representatives on the Board, who claimed that this was only in harmony with the cost of living index number. If however the latter is plotted graphically side by side with the successive increases granted to agricultural labourers it will be seen (as below) that, prior to the advent of the Wages Board, the cost of living had outstripped the increase in cash wages,

Percent. of increase over 1914



Cash wages of agricultural labourers compared with the official cost of living index number from 1915 to 1922

----- Cash wages
 _____ Cost of living index number

but from the Spring of 1919 until the peak was reached in the Autumn of 1920 the latter were ahead of the index number. Both subsequently declined, but the lead was taken by the cost of living index, and, until the middle of 1922 cash wages were well above it. This is not the place in which to criticise at length the official index number, but the nature of its composition must be borne in mind when comparing it with the cash earnings

of an agricultural labourer. It is weighted by the inclusion of such items as railway fares, rent, rates, and general household expenses; several of which are not strictly applicable to the case of the farm labourer, and some only in part. Again, he has the advantage of the free provision in kind of certain commodities that are of considerable importance in building up the index number. If his economic position were therefore to be regulated by the movements of the general cost of living (which represents the average budget of town and country together) he would be thereby directly benefited, apart from participating in certain minor, but recognised, advantages which this method confers, *e.g.* the quality and type of commodities are assumed to be constant, and purchases to be maintained at the pre-war level. Economists are agreed that the lowest paid workers received relatively the greatest increases in wages during the period of rising prices; agriculturists certainly obtained increases in real wages. When the minimum level of 46s. was reached, the increases in total wages ranged from a rise in Oxfordshire of 245 per cent. down to one of 116 per cent. in Northumberland; in August 1920 the cash remuneration of ordinary farm workers in England and Wales represented a rise of 177 per cent. over July 1914; the cost of living index number then stood at 155. Bowley shows that, in twelve principal trades, only bricklayers' and engineers' labourers and railwaymen had secured increases greater than this. Hours of labour had also been reduced, and, not only was overtime recognised, but enhanced hourly rates fixed for it, so that the opportunity of securing additional money was thus afforded; unemployment again was absent, so that altogether labour was assured of a full week's work for remuneration at a higher level than the cost of living index number stood at.

It is not essential in this chapter to follow the course of events that led up to the repeal of the Corn Production Act; the majority of the nation was satisfied that the right course was pursued, and that the time had come when agriculture should again stand alone without financial support and be free to fix its own rates of remuneration. It is equally idle to enquire what would have been the movements in agricultural wages if the Board had not

been formed. It is sufficient to suggest that during its lifetime it accomplished a vast amount of difficult, and often thankless, work with the minimum recourse to the Law courts. Its last corporate action was to reduce the statutory wage from 46*s.* to 42*s.*, leaving as a legacy to its successors the work of tiding over the even more difficult period of falling prices.

CHAPTER X

AGRICULTURAL LABOUR (CONTINUED)

Conciliation Committees; migrant and casual labour; labour-gangs; emigration and movement to the towns; food and health of rural workers; amenities of country life; farm work a skilled trade; artificial steps for amelioration of rural conditions; statistics of labour employed on different types and sizes of holdings; cost of labour per acre; labour's share of the profits of farming.

THE Wages Board having ceased to exist as from October 1st, 1921, voluntary methods were given an opportunity of carrying on its work. Conciliation Committees, as they were designated, were therefore established on much the same lines as those of the former District Wages Committees; that is to say they were composed of representatives of both masters and men, and comprised the same or smaller areas within their spheres of activity. Upon agreement as to hours and wages having been reached, two courses were open to these Committees; they could merely record this agreement and leave it to farmers within their district to pay, and labourers to agree to receive, these rates, or, if they so elected, they could formally submit their findings to the Ministry of Agriculture. In the latter event, the rates and conditions so fixed were, after confirmation by the Ministry and advertisement locally, considered as legally binding and enforceable in the Courts within a period of three months. As was to be expected, the majority of the new Committees preferred to look upon their proceedings as forming a voluntary basis for agreement rather than to feel that they were again committing themselves into the hands of the legislature; thus in the first year only five reported their agreed rates. Naturally, also, under the prevailing conditions, Committees did not fix wages for any but very short periods. We have seen that the Wages Board itself had left a cash wage of 42s. enforceable for the month of September 1921; this the Committees proceeded steadily to reduce until the following Spring, on the following lines: October, 40s., November, 38s., December, 37s., January, 33s. 6d., February, 33s., March, 32s. 6d., April,

32s.; from May until after the harvest of 1922, 32s. was the prevailing level. Thereafter it became obvious that still further reductions were necessitated, and agreements for payments in the region of 30s. became frequent. It will be observed that the above movements corresponded approximately to the cost of living index number, only the later reductions for the autumn of 1922 failing to harmonise with it. In the light of what was said in regard to this question when the Wages Board rates were under discussion, it is tolerably certain that in spending power labourers' cash earnings were worth rather more in the summer of 1922 than they had been in that of 1914. Further downward adjustments seem inevitable in the next few months, for his labour bills afford the farmer the only serious opening for a reduction in outgoings. Unfortunately, however, the position is in one respect widely different from that of 1914; when wheat was 34s. the quarter, bread was 4½d. or 5d. the quarter loaf, and labourers' wages of 17s. a week could meet such outgoings, but in 1922 wheat is 40s. and the loaf still remains at 9d. Wages of 30s. can perhaps meet this expense, but further reductions will involve hardship unless the loaf is purchasable cheaper. This is not within the province of the farmer to effect, and affords an example of the extent to which he is in the hands of other traders and of middlemen.

The drawbacks to a hard and fast system of payment which ignored individual ability and left mere age as the determining factor were frequently tackled by the Committees. In some cases their regulations did not apply to workers over 65 years of age or under 21; only in a very few areas were the rates for female labour settled, and generally speaking their findings were only applicable to the "able-bodied." Hours of work were in many cases extended, and overtime was frequently left to individual arrangement, for the reduction in the number of hours worked each week as a result of the orders of the Wages Board had been to increase the labour bills on farms, actual instances showing that where six men had been sufficient in 1912 seven were required in 1921. In the Northern Counties attempts were made to fix a value to allowances in kind and to other benefits (such as standardising the value of a free cottage), but elsewhere this

side of the question was tacitly ignored. It is too early to judge whether Conciliation Committees have been really successful, but they probably eased the labour situation during a very difficult period of transition, by bringing together, for mutual discussion of their problems, those most intimately connected with the land. That they will in future occupy a permanent position of authority is unlikely, as they seem disinclined to compel the submission of all non-union employers to their findings, by themselves refusing to have legal force attached thereto. It would therefore not be surprising to find, within the next few years, a reversion to the system of individual bargaining—a system which, whatever its drawbacks, permits of intimate relations between master and man.

Agriculture, as an occupation, is peculiar in that it affords seasonal work for casual helpers; most trades are susceptible to recognised fluctuations caused by climatic and other conditions, but few others at times of increasing output can absorb unskilled workers. Farmers, however, the world over, are in the habit of accepting any type of assistance for some two months in the summer and for shorter periods at certain other times. Abroad, much of this help comes from the immigration of workers from neighbouring States; in France the Spaniard comes North in the summer months and the Swiss and Italian cross the Alps, in Germany Poles and Russians flock over the Eastern frontier, in Canada and the United States elements of the town population move Westward for the harvest season. In the British Isles, however, our operations are on a comparatively small scale and our distances much less, so that regular migrations have been the exception. True, before 1915 gangs of Irish labourers visited parts of England, and to a lesser extent, Scotland for harvest work, but their services have since been mainly dispensed with. They earned considerable sums of money, working under their own foremen on piece-work, and were generally well-conducted. Present times afford no such example of male labour migrating on any considerable scale, but fruit and hop picking cause annual movements of women from London and other centres to Kent, Cambridgeshire and certain West of England Counties. The definition of casual or temporary workers in agriculture is

difficult, and results in ambiguities in the statistical tables of labour employed in different parts of the country or at different seasons. For, although not subject to wide movement, labour within quite short distances is often migratory. Potato setting or raising, and fruit or vegetable production may alter the relative density and type of labour employed in two neighbouring villages within a short period of time. A farmer may be recorded as having work for ten men one week, six of whom he has taken on by a weekly engagement, and the following week he appears as an employer of four only—the others having moved to a holding the nature of whose soil caused a delay in commencing some similar operation.

If the present affords no example of migration on a large scale, we have only to look at East Anglia from 1840 to see the movement of labour artificially encouraged under the worst possible conditions. In the fen district of North Cambridgeshire, Lincolnshire and West Norfolk a system of supplying seasonal labour to the large farms peculiar to that region had grown up. These "labour-gangs," as they were termed, mainly consisted of women and children (although men worked indiscriminately in them also) whose labour was directed and farmed out by an overseer or gang-master. The latter lived on the profits he could make by entering into contracts for piece-work, or, occasionally by reserving for himself a halfpenny per head for each of those under him. The system obviously lay open to abuses of every sort, and complaints were always rife of the brutality of gang-masters and of the physical and moral condition of their employees. From the farmer's point of view the existence of these gangs had certain advantages. He knew exactly what a given operation would cost him, he had no responsibility for feeding or housing the members of the gang (who returned to their homes daily), and in case of bad weather he was not paying for labour that was unremunerative. From the nature of the case the work was well supervised and quickly got through. Because this system was found to be paying its promoters well, farmers themselves turned to it, and organised what came to be known as "private" gangs. Hence by 1867 several thousands of persons of both sexes, and of all ages, were

found to be thus employed under conditions which called for public attention. A Gangs Act was passed, which drastically altered this form of labour-contracting, provided for the licensing of gang-masters, the exclusion of children below eight years of age, and the division of the sexes into separate parties. These gangs had for some thirty years provided seasonal labour in a part of the country where special conditions applied; elsewhere they were not called into existence. They flourished best where distances were great, villages under-built and large farms the rule. After the passing of the Gangs Act attention was paid to the better provision of cottages and this, combined with the subsequent Education Acts, effectively put a stop to the organised and mobile labour of women and children.

Acting as a reservoir to give employment in winter, forests are an asset that is lacking in the greater part of the United Kingdom. Compared with farm-land, a given acreage of woods or forest of course affords little regular occupation, but it often provides the means of earning money at seasons when work on the land is otherwise out of the question. In most Continental countries sugar-beet factories, again, provide a shelter for women workers at seasons when outdoor occupation would be difficult to secure and unpleasant to perform.

Migration within the country, in the shape of permanent transference, was a weapon which other leaders of labour besides Canon Girdlestone attempted to use, but it was two-edged, for Farmers' Unions could retaliate by invoking the help of other classes of workers from a distance. Actual emigration was utilised by Arch as a factor in his fight for higher wages, and he claimed that several hundred thousand agricultural labourers had gone overseas at the instigation of their Unions. The number of British emigrants after 1870 was upwards of 100,000 per annum, and a large percentage of the men concerned consisted of land workers, but it is highly probable that these would have emigrated in any case, and equally certain that Union funds did not provide the bulk of their expenses. For the next thirty years agriculture in these Islands could only support a diminishing number of labourers, as was shown by the table on page 216. Those who did not leave the country are popularly

supposed to have migrated to the towns. This statement always requires a certain amount of modification, for it is often erroneously assumed to connote deserted villages and labour bereft farmers. The census returns, however, show that whilst all urban areas were rapidly growing, most rural districts were not actually declining in numbers, but were at least maintaining a stationary population. This was virtually true during the last thirty years; for in 1891 the rural population of England and Wales was 8,107,000, in 1901, 7,470,000, in 1911, 7,907,000 and in 1921, 7,851,000. The phenomenon is widespread, as the following extract from a *Bulletin* of the International Institute of Agriculture shows: "In every country which has available statistics it is found that the rural population increases less rapidly than that of the towns. The percentage of the rural population to the total number of inhabitants has perceptibly diminished, and almost everywhere the *relative* smallness of the rural population is apparent. It is only in some countries long cultivated that a depopulation of the country districts in the *absolute* significance of the word has been noted."

In Great Britain there was admittedly a transference of many rural workers to the towns after 1870, but if one could visualise the whole scene one would see the older folk staying on in the villages and the younger men, who were surplus to the lessening demands of the land, dividing into two parties—one setting forth abroad to continue an agricultural career, the other moving to the towns to adopt some other profession. This incidentally gives rise to the criticism so often heard that the younger generation, when it does elect to remain on the land, is not as painstaking or conscientious as its forbears. Certain manual operations, for instance, are nowadays distasteful to the younger men who naturally prefer to take charge of machinery; thatching and mowing are given as instances of this. But exactly the same complaints have been made by farmer witnesses before all the Commissions that have sat since 1833, and if in every instance they were true, the standard of labour to-day would be farcically low.

There is one factor that must always be kept in mind when discussing the question of the alleged attraction exercised by

the towns on rural labourers. Whilst in many cases town life does genuinely appeal to those reared in the country, yet on the other hand there are countless townfolk who leave highly paid employment to seek a healthier and quieter life on the land—incidentally often diminishing the supply of cottages in the villages or raising their rents; there are also countrymen who thankfully return to their villages after experiencing the nature of urban employment. Large sounding cash-wages do not necessarily imply greater purchasing power, and factory life may well be more monotonous than field labour, and not as healthy. The census figures for 1921 do not bear out the “deserted village” theory, and it would seem as if modern improvements in the means of locomotion, combined with the securing of the townsman’s half-holiday, have brought the amenities of town life sufficiently near the villages to make the majority of young farm hands think twice before removing themselves and their families into the heart of large cities.

There is a curious feature of the acrimonious discussions that have broken out at frequent intervals during the last century concerning the pros and cons of country life; one is told of the horrible conditions of existence there, and almost in the same breath that the country produces the strongest and healthiest citizens. In 1842 the Poor Law Commissioners had issued a *Report* on the condition of the labouring population which evidenced a very serious state of affairs throughout rural England. Overcrowding was rife, sanitation was practically non-existent, and morality often unknown. During the next three decades similar investigations had led to similar verdicts. But when comparison was extended to the quantity and type of food obtained by urban and rural workers, the other side of the question was opened up, for medical enquiries elicited that the subsistence minimum for an able-bodied man, both in regard to carbonaceous and nitrogenous food, was exceeded for agricultural labourers by a considerably larger margin than existed in the case of the majority of industrial workers. Individual Counties varied greatly in this matter, but, as would be expected, conditions were generally best in the North and worst in the South-West. The reservations made at the time were that

whilst the men folk were thus sufficiently nourished, in the case of those with large families the pinch was felt by the children. Matters have greatly improved in the last two generations, and housing conditions in the country are now generally good as a result of the powers conferred on County Councils. Life in the open air must cancel any disadvantages that accrue from a lower rate of remuneration, for the records of all countries in time of war show that a higher proportion of what were, in England, designated A 1 men comes from rural than from urban districts; the same is true in time of peace, for the majority of the recruits for the police force, where physique is the main requirement, are secured in the country. Again, when National Health insurance was introduced, it soon became apparent that the country was contributing unduly towards the benefits derived by the townsman. The Registrar-General's returns show that the annual death-rate in rural districts is well below that found in urban; this is also true of the individual rates applicable to children under one year of age, of infantile mortality in general, and of deaths from infectious diseases, as well as from tuberculosis.

Any present day discussion of the value of the labour of women on the land is apt to be complicated by the introduction of reference to their services in this capacity during the war. But the women who helped the farmer from 1915 to 1919 can no more be classified as trained agricultural workers than could those of their sisters claim to be tradesmen who temporarily took men's posts in numerous other occupations. In all such cases theirs was emergency work, and it would be unfair critically to assay its value in after years, but it may be noticed that when the labour-gangs were at the height of their power fifty years earlier it was claimed that young and active women were equally as efficient as men and equally capable of carrying out a full day's work. The labour of village women in agriculture has always been of a seasonal character, save in the North, where greater advantage is taken of their regular services. The employment of children on the land was gradually and progressively discouraged as the School Board gained strength. Complaints were frequently heard from farmers in the 'seventies of the last century, when restrictions were placed on the work

of children below certain ages (unless a minimum number of attendances at school could be proved), that the former tidiness of their land was lacking. Child labour had been used to a great extent for weeding and stone-picking—operations that tended subsequently to be neglected; it was also objected that education caused boys with ambition to leave their homes and take up work in the towns.

The amenities of the labourer's life are often spoken of as if they lacked much that is to be found at the disposal of the town artisan. But if one examines his present day position one is bound to modify such views. It is probable that in 1922 the ratio of population to houses was lower in the country than in the towns; certainly the majority of villages had been supplied with officially erected dwellings, and the census of 1911 had already shown that overcrowding mainly existed in urban centres. One of the minor advantages accruing from war conditions was represented by the Rents Restriction Act and the consequent certainty of tenure for agricultural workers, which made it no longer possible for cases of eviction to be carried out on flimsy excuses; on the other hand employers occasionally found themselves saddled with individuals as tenants, whom, as employees, they had discharged.

Allotments are really the countryman's overflow gardens (despite the circumstances attendant on their inception), and the supply has seldom fallen short of the demand; in fact the great increase in their numbers from 1915 to 1920 was entirely due to the townsman's demand to be supplied with the countryman's facilities for growing his own vegetables. If the size of rural allotments is unduly increased they cannot be tended by their owners efficiently, who must accordingly choose between neglecting their plots or losing wages. This is a factor that is frequently overlooked when the provision of more numerous or larger allotments for farm labourers is urged. The benefits of State unemployment assurance certainly do not apply to the agricultural labourer; but both his own representatives and his employers have agreed that the extension to him of the existing scheme would be unpopular and perhaps unworkable. Unemployment in agriculture is not one of the ever present fears

that haunt its regular and able-bodied workers. Provision for sickness and old age was made first privately, and afterwards, publicly. The village clubs and Friendly Societies deserved much credit for carrying on the business of insurance against sickness and for providing other minor benefits under financial and actuarial conditions that were often the reverse of sound. The National Health Insurance Act of 1910 made their continued existence unnecessary, and the provision of old age pensions transferred to the national exchequer the duty of providing for the labourer in old age.

The "ladder" is always available for the keen and industrious worker to ascend, County Councils normally giving preference to men of this type when selecting applicants for State-provided Small Holdings. Scholarships to secondary schools are available for his sons and daughters. The evidence adduced before recent Commissions, and that contained in official reports, all points to the frequency with which labourers become tenant-farmers or occupying owners.

Finally, his is a skilled trade. It seems absurd that this should have to be emphasised, but it is necessary to do so, for it has become the custom during the last century or so to speak of the agricultural labourer as synonymous with the lowest type of worker—this is doubtless attributable partly to ignorance of the nature of his duties and partly to subconscious association with his small cash-wages. In reality he is master of several trades; for the same "general" labourer is expected to undertake such diverse operations as ploughing, hedging and ditching, rick and stack building; he must be familiar with many different types of moving and stationary machinery, and must be capable of caring for and managing horses and other live-stock. That well-known authority, Mr K. J. J. Mackenzie, has expressed the situation vividly, by citing four typical farm operations. Thus he says (of ploughing a ten-acre field)—"You give him two or more horses and a somewhat complicated implement. You ask him to cut off from the surface of mother earth 880 strips of soil. These 880 strips have to be of equal depth and width. He has to cut them off in a way that he can turn them one on to the other to form parallel lines across the field; he puts

all that is found on the surface under ground, and he cuts off all weed roots springing from the earth beneath his work. Further, he has to lay these 880 strips together in such a way that the greatest possible area of surface is exposed to the action of the weather. Again—take a stack in which is stored the corn from the ten-acre field.—Do the scoffers realise there are over 40,000 bundles of corn—straw and grain—from six to eighteen pounds in weight, that have to be built up and fitted in to one another in such a way that the stack does not fall down, and the rain is not only shot off the roof, but is kept out from the sides for months after the stack is set up? On one acre of land you plant a strip about three and two-thirds of a mile long. In due course this strip becomes covered with a braid of small plants numbering some two hundred thousand, mixed with innumerable weeds. You give the labourer a hoe, and ask him to single out and leave standing, at equal distances from one another, some twenty thousand small turnip plants, and at the same time to kill all the weeds." Lastly, in the case of the self-binder he sits "all day on a complicated machine actuating three levers, watching five distinct pieces of machinery in motion, and guiding two or three horses."

Each of the above pieces of work requires years of practice and expert knowledge. Yet his "skilled" rival in workshop or factory, in most cases performs year in and year out the same repetition work. The mechanic in charge of a lathe is a mere attendant, the bricklayer always performs similar operations with the same tools, the shoemaker sticks to his last—only the looked down on farm labourer is capable of turning his hand, at a moment's notice, to a dozen different branches of his profession. Moreover his Union, if he belongs to one, does not forbid him freedom of action in this respect, whilst the urban Unionist is compelled to confine himself to one particular section of his trade.

On the part of certain sections of the public there is a growing tendency to intervene in village life. It is declared that a "brighter village" will transform and elevate the farm labourer, and that this essential object can be achieved by the lavish provision of village institutes, libraries, clubs and so on. On

similar lines are found references to some mysterious period in the history of the country when England was "merric," and apparently all the villagers incessantly performed Morris dances on the green. Whilst the reasonable provision of such facilities is desirable, it is also possible to lay too much stress on this side of rural life. The countryman appreciates certain elements of town life, but he generally prefers to have the opportunity of visiting them himself and seeing new faces and fresh sights. The urbanisation of the country, for it is nothing more, is undesirable from every point of view and is not always appreciated by those whom it is intended to benefit. Far better than bringing the town into the country is the provision of quick means of transit between the two, so that the country can enjoy, on occasion, the change to town life. Artificial encouragement of a closer *rapprochement* between labourer and farmer will not hasten the agricultural millennium, and history is distorted when it is sought to prove that mediaeval villagers had more time on hand to spend in social enjoyment than their present-day successors.

The history of the remuneration and social life of the land worker has been briefly reviewed. It remains to examine what use is made of his labour by employers, and to discuss its relative value in different places and in different branches of the trade. Take first what is always described as the "density of labour." The following table appeared in the *Report on the Agricultural Output of Great Britain*, in connection with the census of production, and related to conditions in 1908.

Workers per hundred acres of cultivated land (i.e. land under crops and grass) in Great Britain

Size-group of holdings	Permanent			Temporary		
	Males	Females	Total	Males	Females	Total
1- 5 acres	8.0	5.4	13.4	2.0	0.6	2.6
5- 50 "	4.3	2.2	6.5	0.8	0.3	1.1
50-300 "	2.5	0.8	3.3	0.3	0.1	0.4
over 300 "	2.3	0.3	2.6	0.2	0.1	0.3

It should be noted that these figures relate to Great Britain, and not merely to England and Wales, and that farmers' families are included among the permanent workers, as this has an important bearing on the results given for the two smaller size-groups. The fact at once emerges that the larger the holding the smaller are its requirements per acre in the way of labour, but it is also apparent that the labour of the occupier and his wife and family is responsible, to a large extent, for the preponderance of workers on holdings of the smallest class. The personal factor is introduced in the case of those holdings in which the labour is confined to one or two employees, for in such cases it is held that the constant pressure and power of supervision exercised by the master makes for more efficient work. Employment on small farms is certainly not popular with labourers, but the output of work secured from individuals on different sizes of holdings is not expressible in statistical form. For a general review of the data concerned above one cannot do better than quote from the *Report* itself:

On the smallest holdings—1 to 5 acres—the number of persons permanently engaged (including members of the occupier's family, but excluding temporary labour) is 13·4 per 100 acres, the average size of a holding of this group being 3·2 acres. There are about 31 occupiers to every 100 acres. Including the occupier, therefore, it appears that 100 acres divided into holdings of this size would permanently employ 45 persons, and provide partial employment for between two and three more. Or, put in another way, it seems that holdings of this size will, on an average, provide continuous employment for one person to slightly more than two acres of "cultivated land" or, if the rough grazings attached to the holdings are taken into account, one person to about six acres. It is necessary to remember that, of the total land occupied in these small parcels (including the rough grazings), only about one-ninth is under arable cultivation. In the next size group—5 to 50 acres—the "density" of labour is considerably less, being in fact about half. About five of these small holdings would occupy 100 acres of cultivated land so that the total number of persons engaged, including the occupiers themselves, would be 11·1 (including temporary labourers, 12·2) per 100 acres, being about one person for every nine acres. If the rough grazings attached to these holdings are reckoned, the ratio is about one person to 18 acres. The proportion of arable land in this class of small holding is about 17 per cent. of the total area, including the rough

grazings. For all holdings classed as exceeding 50 acres the "density" of labour appears on the average to be much the same, being slightly less on farms above 300 acres than on those between 50 and 300 acres. Taking into account the rough grazings attached to holdings above 50 acres, it appears that they employ on an average one person to about 35 acres, the proportion of arable land being about 38 per cent. Incidentally, attention may be directed to the distribution of arable land as between the different size-groups. As a rough generalisation it may be said that the larger the holding the greater the proportion of arable, or, in other words, that small holdings are preponderatingly pasture. This fact tends to accentuate the greater density of labour on the small farms. If the proportion of arable were as great on the small as on the large farms, it is evident that the number of persons engaged upon them would be very largely increased.

The last postulate is not of universal application, however, if certain large areas are considered apart, for the arable County of Norfolk, as a whole, employs less labour per hundred acres than do certain grass Counties of the North-West.

The following is an adaptation from two tables contained in the Board of Agriculture's *Report on Wages and Conditions of Employment in Agriculture* (Cd. 24, 1919).

Area	Persons engaged per 100 acres of cultivated land	Persons employed per 100 acres of cultivated land	Persons engaged per holding
I A Bedford, Huntingdon, Cambridge, Isle of Ely, Suffolk, Essex, Hertford, Middlesex, London	6·2	4·6	4·7
I B Norfolk, Lincoln, Yorkshire East Riding	4·2	3·3	3·2
II A Kent, Surrey, Sussex, Berkshire, Hampshire, Isle of Wight	5·9	4·2	4·1
II B Nottingham, Leicester, Rutland, Northampton, Peterborough, Buckingham, Oxford, Warwick	3·9	2·8	2·9
III A Salop, Worcester, Gloucester, Wiltshire, Monmouth, Hereford	4·0	2·6	2·6
III B Somerset, Dorset, Devon, Cornwall ...	4·1	2·3	2·6
IV A Northumberland, Durham, Yorkshire North and West Ridings	3·5	1·9	2·1
IV B Cumberland, Westmorland, Lancashire, Cheshire, Derby, Stafford	4·9	2·7	2·4
England	4·5	3·2	2·9

"Persons engaged" includes of course farmers themselves and the members of their families, "persons employed" covers

workers of both sexes. Here again it is obvious that the density of labour is mainly determined by the preponderance of arable land, and to a lesser extent by the nature of the soil. Such Counties as Bedfordshire and Kent for instance maintain additional labour on their market-gardens and hopfields respectively, and Middlesex supports 7·5 persons per holding where Westmorland has 2·2. Where milk production is extensively carried on it results in giving work to more persons per acre than does the business of sheep and cattle raising, as witness the comparison between divisions III B or IV B and IV A. In such districts, again, holdings are apt to be small, and therefore the labour per farm unit is further affected.

It will be observed that England, as a whole, provides employment for 4·5 persons of all types per hundred acres of cultivated land. Comparative figures were issued by the "Land Enquiry Committee" for foreign countries, but, as is pointed out in the chapter on "Statistics," there are many pitfalls encountered in such a proceeding—*e.g.* what exactly comprises "agriculture," "cultivated land" and "persons employed" in other countries? The densities in question, however, are confidently recorded as varying from eighteen persons per hundred acres in Austria down to seven in Denmark. They should be received with caution. One must also guard against generalisations on these grounds in favour of Small Holdings, for labour density is but one of many factors affecting the economy of large and small farms, all of which have been dealt with in Chapters III and IV.

Next to the number of hands employed, the most important factor for their master is the question of the cost of their labour to him. We have already examined the movements in the rates of weekly remuneration of farm workers, but there is another aspect of the question, and that is the labour bill per acre of farm land. Various elaborate calculations have been made on these lines at different periods, and for separate types of farm—*e.g.* Caird in 1886 estimated wages at £1 per acre for arable land and 5s. for grass, Craigie in 1878 had given 30s. and 9s. 6d. respectively. Curtler in 1916 published, through the medium of the International Agricultural Institute, a most comprehensive

enquiry of this nature, but the Wages Board in 1919 held that such findings were "not entirely reliable," owing to the impossibility of excluding from their scope certain non-relevant factors. With this proviso borne in mind, we may briefly glance at Curtler's figures, and perhaps accept them as providing an approximate indication of average conditions. "Wages" here implies total emoluments, and includes payments made both to women and children and to temporary and casual workers. The average wages per acre for 308 farms of a typical character were £1. 5s. 7d. in 1913-4, the lowest (found on stock-raising farms) being exactly £1 and the highest (on corn-producing farms) £1. 7s. 10d. The enquiry also extended to holdings specialising in potatoes, where the wages bill was £2. 15s. 6d.; in fruit growing it was £11. 4s., and in hopfields no less than £24. 14s. 10d. In comparing his results with those secured by the earlier enquirers, Curtler came to the conclusion that the labour bill per acre had varied little in the course of thirty years; yet he calculated that machinery had saved manual labour in that space of time to the extent of some fifty per cent.; but "the land is not so carefully tilled" and "is often labour starved," therefore "the labourer does less work for more money than he did a generation ago." It is impossible to agree or to disagree with this dictum: more evidence is wanted before we have sufficient data on which to go, but the *laudator temporis acti* has always been recruited from the ranks of agriculturists.

Again, it was suggested by the same writer that higher wages were in the long run more economical than low; for on twenty-one farms in Lincolnshire, where wages were £1. 0s. 11d., the labour bill per acre was £1. 6s. 3d. and on thirty-one Norfolk holdings, with wages at 17s. 7d., the bill per acre was £1. 13s. 8d. These samples are really too small to afford safe grounds for such deductions, and also for the corollary statement that because of their higher wages Lincolnshire labourers produce better and heavier crops. The outturn per acre in Norfolk is admittedly inferior in the case of almost all standard crops to that achieved in the three divisions of the former County, but should not the credit rather be given to the soil? Curtler boldly says "of wheat and barley the highly paid labourers produce

more than the low paid, although the latter are more favoured by climate. In the case of oats there is little to choose. In the production of potatoes the superiority clearly lies with the high wages, as it does in that of swedes and turnips...in the growing of hay, especially from rotation grasses, the well paid labourers easily beat their less fortunate rivals." Surely a possible alternative explanation may be that the comparative inferiority of the Norfolk land necessitates more continuous or prolonged operations than are required on the fen soil that predominates in Lincolnshire? Or perhaps the whole question has been misjudged by the transposition of cause and effect; for if Lincolnshire labourers were intrinsically better workers than those of Norfolk, this would result in their receiving higher wages, and might reduce the cost of labour per acre proportionally, as we have already seen is the case in the North of England. This would partially, but not of course entirely, explain the phenomenon. Enough has probably been said to indicate the difficulties attendant on any examination into the comparative labour expenses attendant on different types of holding, in the absence of a really complete series of costings-accounts for the whole country. Subsequent investigations have tended to show that of the three factors involved—the size of the farm, the percentage of the land under the plough and the type of farming practised—the last has most influence on the expenses per acre for labour.

What is known as labour's share in the business of agriculture remains to be glanced at. The Census of Production gave the pre-war figure of £129 as the gross value of the output per person permanently employed in agriculture. This figure was arrived at by dividing the value of everything produced on the farms of Great Britain (whether sold off or consumed thereon) by the number of employees who had assisted in its raising. If farmers themselves were included the corresponding figure was £90. Both these sums are meaningless except as an indication of the comparatively low values of agricultural products. But Orwin (*Farming Costs*) and others have shown the approximate division between landlord, tenant and labourer of what is known as the net returns of the industry. Net output and net returns must be distinguished; the former represents the annual trading

profit of the farm as a whole before it is divided up into its three constituent money shares, the latter represent the actual proportions received by the three shareholders after the necessary deductions have been made for certain charges borne by the landlord and tenant—labour alone receiving its share without deductions. On this basis Orwin showed that in pre-war years forty per cent. went to the farmer, twenty per cent. to the landlord, and, again, forty per cent. to the worker. In a later memorandum the same author traced the movements in the relative distribution of these percentages during the war and post-war period. In this case, assuming 1913-4 to be represented by 100, the landlord's share progressively declined, until in 1918-9 it stood at 87, the farmer's rose to a maximum of 115 in 1916-7 (and in 1918-9), whilst that of labour first dropped to 94 in 1916-7 and then, thanks to the action of the Wages Board, rose in 1919-20 to 102. The above writer's own summing-up affords the best commentary on these movements:

Briefly, the situation is that, thanks to the Agricultural Wages Board (and its appointed members may take heart from the fact), the workers have been maintained in the same position as regards their share in the net returns as that in which they were before the war, whilst the farmer has received his share in the increase realised during the past few years, together with that which would have gone to the landlord had the pre-war scale of distribution been maintained. Rents and wages under normal conditions are slow to adjust themselves to changes in farming fortune, and, except in a time of violent economic upheaval, it is right that this should be so, for if the landlord may be regarded as a debenture holder, and labour as a preference shareholder, then the farmer, as the ordinary or deferred shareholder, has to bear the brunt, and if he must take the kicks, so also is he entitled to the halfpence.

In 1922 the Labour party's election programme contained the promise that if that body was returned to power the landlord would "be required to sacrifice rents rather than to ask the farm workers to accept starvation wages." The whole history of agriculture in this and other countries negatives the feasibility of an economic burden being thus shirked by one partner in the industry, and has also demonstrated the impossibility of agriculture paying a relatively high cash wage. The return to

those who advance the bulk of the capital employed has always been smaller than from other investments, and its complete cessation would make the final plight of the other two partners still worse. A steady reduction in all forms of outgoings, including unfortunately wages, with, if possible, State help in the form of statutory relief from fiscal burdens (combined with the knowledge that on at least two previous occasions similar depressions have been weathered) is more likely to prove efficacious than is any remedy that causes rupture between the partners. After all, agriculture has in the past attracted landowners despite the pecuniary return it offered, tenants despite constant anxiety, and labour despite low cash wages and heavy toil. It should still be possible for it to be rehabilitated and regain its attractions within, say a decade, if all its members pull together and accept each his own share of sacrifice.

CHAPTER XI

MARKETS AND MARKETING

Origin of fairs and markets; Defoe's account of Sturbridge fair; the Royal Commission on markets; Irish conditions; weights and measures; methods of selling grain in this country and in the United States.

AMONG early civilisations, when religious or other gatherings were held, opportunity was frequently taken to indulge in barter and trade, for scattered populations thus found their sole means of exchanging commodities. On the introduction of Christianity into Western Europe the practice was introduced of combining church festivals with what are now known as fairs. Thus in mediaeval times in this, and other countries, fairs and markets were already of long standing; indeed, it has been asserted that certain French fairs were directly traceable to Roman origin. Gatherings of traders on recurrent days evolved into markets, whilst concourses at annual or other lengthy periods—generally on the day set aside to the memory of a particular saint—have come down to us in the shape of fairs. A famous definition of Coke's that a fair represented "a greater species of market recurring at more distant intervals" is therefore self-explanatory; a mart he considered was "a greater species of fair." As population grew and means of communication improved, both institutions increased in number and in prestige. Markets lay within the power of the Crown to set up by grant of franchise, and none was recognised without this authorisation; the early feudal lords could grant permission for the holding of fairs. As centres for trade, fairs and markets expanded when agriculture passed beyond the self-supporting basis and provided a surplus of goods for extraneous consumption; they reached their prime when, in addition, foreign trade developed in the fifteenth and sixteenth centuries. Thereafter, as successively roads, canals and railways detracted from their value, they declined in numbers and in popularity. Fairs have come down to us in the least reputable form, whilst markets

survive practically unchanged. In the middle ages the former were of far greater importance, and, with certain exceptions, catered for all trades, whilst markets were generally confined to transactions in particular commodities. The social influence exerted by fairs must have been great, as they afforded the only opportunity for numbers of persons from different parts of the country to meet together. After the eighteenth century they had outlived their usefulness, and those that survived except in name became the excuse for annual outbreaks of horseplay and disorder. Markets, as will be shown later, had a different history.

Certain fairs have attained a fame that extended all over the civilised world. Such at one time or another have been Sturbridge, Leipzig, Nijni Novgorod and Hurdwar. The latter, situated on the Ganges, still attracts natives by the hundred thousand from all India, Persia and even from Tibet; during the nineteenth century Nijni Novgorod was annually credited with trade to the extent of many millions sterling. Sturbridge, as the only English representative among those of world repute, deserves a short account to itself, even if this entails a diversion from purely agricultural history. It was held in the outskirts of Cambridge, and the earliest reference to it consists of a Royal grant made *circa* 1211 to the lepers of Sturbridge Hospital to hold a fair in their close on the feast of the Holy Cross. From this sprang up that annual concourse of buyers and sellers which, in the middle ages, became so famous throughout not only this country but Europe itself. The fact that Sturbridge was contiguous to the river Cam, whence small ships could navigate to the sea at Lynn, or by devious channels to the Midlands, must be held responsible for its popularity, for without access by water heavy goods would have been debarred from entry. Owing to the presence of the University, jurisdiction over the fair was not absolutely vested in the town, but was shared between the two bodies; hence frequent disputes. The University authorities proclaimed the fair, and its officials provided on the opening day an oyster lunch and a stupendous dinner, but the town was generally the recipient of the Royal charters and licenses. As showing the ramifications of the trade carried on, it may be mentioned that at various times the corporation was engaged in

litigation with such towns as Lynn and Northampton in regard to the exaction of tolls, and in 1676 we find it opposing a fair as far distant as Maidstone on the ground that the latter was prejudicial to Sturbridge.

The following affords an interesting account of the conditions still ruling some two hundred years ago, being extracted from Defoe's *Tour Through Britain*.

Having been at Sturbridge-fair when it was in its Height, in the month of September, I must say, that I think it equals that kept at Leipsick in Saxony, or the Mart at Frankfort on the Main.

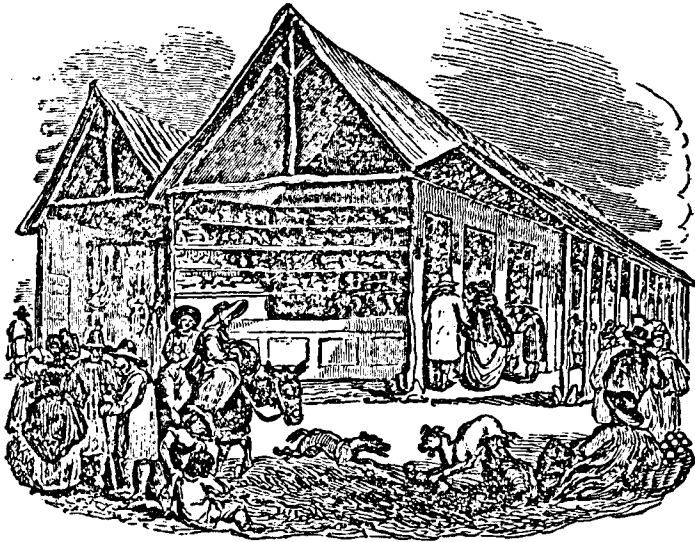
It is kept in a large Corn-field, near Chesterton, extending from the Side of the River Cam, towards the Road, for about half a Mile square.

If the Field be not cleared of the Corn before a certain day in August, the Fairkeepers may trample it underfoot, to build their Booths or Tents. On the other hand, to balance that Severity, if the Fairkeepers have not cleared the Field by another certain Day in September, the Ploughmen may re-enter with Plough and Cart, and overthrow all into the Dirt; and as for the Filth and Dung, Straw, etc., left behind by the Fairkeepers, which is very considerable, these become the Farmers Fees, and make them full Amends for the trampling, riding, carting upon, and hardening the Ground.

It is impossible to describe all the Parts and Circumstances of this Fair exactly; the Shops are placed in Rows like Streets, whereof one is called Cheapside; and here, as in several other Streets, are all Sorts of Traders, who sell by Retale, and come chiefly from London. Here may be seen Goldsmiths, Toymen, Brasiers, Turners, Milleners, Haberdashers, Hatters, Mercers, Drapers, Pewterers, China-ware-houses, and, in a Word, all Trades, that can be found in London; with Coffee-houses, Taverns, and Eating-houses, in great Numbers; and all kept in Tents and Booths.

This great Street reaches from the Road, which goes from Cambridge to Newmarket, turning short out of it to the Left towards the River, and holds in a Line near half a Mile quite down to the River-side. In another Street parallel with the Road are the like Rows of Booths, but somewhat larger, and more intermingled with Wholesale Dealers; and one Side, passing out of this last Street to the Right-hand, is a great Square, formed of the largest Booth, called the Duddery; but whence so called I could not learn. The Area of this Square is from 80 to 100 yards, where the Dealers have room before every Booth to take down and open their Packs, and to bring in Waggons to load and unload.

This Place being peculiar to the Wholesale Dealers in the Woollen Manufacture, the Booths or Tents are of a vast Extent, have different Apartments, and the Quantities of Goods they bring are so great that the Insides of them look like so many Blackwell-halls, and are vast Warehouses piled up with Goods to the Top. In this Duddery, as I have been informed, have been sold 100,000 Pounds-worth of Woollen Manufactures in less than a Week's time; besides the prodigious Trade carried on here by Wholesalers from London, and



A booth at Sturbridge Fair (from an old print).

all Parts of England, who transact their Business wholly in their Pocket-books; and, meeting their Chapmen from all Parts, make up their Accounts, receive Money chiefly in Bills, and take Orders. These, they say, exceed by far the Sale of Goods actually brought to the Fair, and delivered in Kind; it being frequent for the London Wholesalers to carry back Orders from the Dealers, to 10,000 Pounds-worth of Goods a Man, and some much more. This especially respects those People who deal in heavy Goods, as Wholesale Grocers, Salters, Brasiers, Iron-merchants, Wine-merchants, and the like; but does not exclude the Dealers in Woollen Manufactures, and especially in Mercery-goods of all sorts, who generally manage their Business in this manner.

Here are Clothiers from Halifax, Leeds, Wakefield, and Huddersfield, in Yorkshire, and from Rochdale, Bury, etc., in Lancashire, with vast Quantities of Yorkshire Cloths, Kerseys, Pennystones, Cottons, etc., with all sorts of Manchester ware, Fustians, and Things made of Cotton Wool; of which the Quantity is so great, that they told me there were near 1000 Horse-packs of such Goods from that Side of the Country, and these took up a Side and Half of the Duddery at least; also a Part of a Street of Booths was taken up with Upholsters Ware; such as Tickens, Sackens, Kidderminster Stuffs, Blankets, Rugs, Quilts, etc.

In the Duddery I saw one Warehouse, or Booth, consisting of six Apartments, all belonging to a Dealer in Norwich Stuffs only, who, they said, had there above 20,000*l.* Value in those Goods.

Western Goods had their Share here also, and several Booths were filled with Serges, Duroys, Druggets, Shalloons, Cantalloons, Devonshire Kersies, etc., from Exeter, Taunton, Bristol, and other Parts West, and some from London also.

But all this is still outdone, at least in Appearance, by two Articles, which are the Peculiarities of this Fair, and are not exhibited till the other Part of the Fair, for the Woollen Manufacture begins to close up; these are the Wool, and the Hops. There is scarce any Price fixed for Hops in England, till they know how they sell at Sturbridge-fair. The Quantity that appears in the Fair, is indeed prodigious, and they take up a large Part of the Field, on which the Fair is kept, to themselves: They are brought directly from Chelmsford in Essex, from Canterbury and Maidstone in Kent, and from Farnham in Surrey; besides what are brought from London, of the Growth of those and other Places.

The Article of Wool is of several Sorts; but principally Fleece Wool, out of Lincolnshire, where the longest Staple is found, the Sheep of those Parts being of the largest Breed.

The Buyers are chiefly the Manufacturers of Norfolk, Suffolk, and Essex; and it is a prodigious Quantity they buy.

Here I saw what I have not observed in any other County of England, a Pocket of Wool; which seems to have been at first called so in Mockery, this Pocket being so big, that it loads a whole Waggon, and reaches beyond the most extreme Parts of it, hanging over both before and behind; and these ordinarily weigh a Ton, or 2500 Pound Weight of Wool, all in one Bag.

The Quantity of Wool only, which has been sold at this Place, at one Fair, has been said to amount to 50 or 60,000*l.* in Value; some say, a great deal more.

By these Articles, a Stranger may make some Guess at the immense Trade which is carried on at this Place; what prodigious Quantities

of Goods are bought and sold, and what a vast Concourse of People are seen here from all Parts of England.

I might proceed to speak of several other Sorts of English Manufactures, which are brought hither to be sold; as all Sorts of wrought Iron, and Brass-ware from Birmingham; edged Tools, Knives, etc., from Sheffield; Glass Wares, and Stockings, from Nottingham and Leicester; and unaccountable Quantities of other Things, of smaller Value, every Morning.

To attend this Fair, and the prodigious Crouds of People which resort to it, there are Hackney Coaches, which come from London, and ply all Day long, to carry the People to and from Cambridge; for there the major Part of them lodge.

It is not to be wondered at, if the Town of Cambridge cannot receive or entertain the Numbers of People that come to this Fair; for not Cambridge only, but all the Towns round are full; nay, the very Barns and Stables are turned into Inns, to lodge the meaner Sort of People: As for the Fair-people, they all eat, drink, and sleep, in their Booths, which are so intermingled with Taverns, Coffee-houses, Drinking-houses, Eating-houses, Cooks' Shops, etc., and so many Butchers and Higglers from all the neighbouring Counties come in every Morning with Beef, Mutton, Fowls, Butter, Bread, Cheese, Eggs, and such Things, and go with them from Tent to Tent, from Door to Door, that there is no Want of Provisions of any Kind, either dressed, or undressed.

In a Word, the Fair is like a well-governed City, and there is the least Disorder and Confusion (I believe) that can be seen anywhere, with so great a Concourse of People.

Towards the Middle of the Fair, and when the great Hurry of Wholesale Business begins to be over, the Gentry come in, from all Parts of the Country round; and though they come for their Diversion, yet it is not a little Money they lay out, which generally falls to the Share of the Retailers; such as the Toy-shops, Goldsmiths, Brasiers, Ironmongers, Turners, Milleners, Mercers, etc., and some loose coins they reserve for the Puppet-shews, Drolls, Rope-dancers, and such-like; of which there is no want. The middle Day of the Fair is the Horse-fair, which is concluded both with Horse and Foot-races. In less than a Week after the End of the Fair, scarce any Sign of it remains, except by the Heaps of Dung, Straw, and other Rubbish, which is left behind, trod into the Earth, and is as good as a Summer's Fallow for the Land; and, as I have said above, pays the Husbandman well by the Use of it.

I should have mentioned, that here is a Court of Justice always open, and held every Day in a Shed built on Purpose in the Fair: This is for keeping the Peace, and deciding Controversies in Matters

arising from the Business of the Fair. The Magistrates of the University of Cambridge are Judges in this Court, as being in their Jurisdiction, by special Privilege. Here they determine Matters in a summary Way, as is practised in those we call Pye-powder Courts in other Places, or as a Court of Conscience; and they have a final Authority without Appeal.

Henry Gunning, an eighteenth century Esquire Bedell of the University, has also left an amusing description of the lighter side of the fair, including its theatrical performances, and of the inaugural dinner given by the University, at which the Vice-Chancellor took the head of the table in front of a large dish of herrings, and the Senior Proctor the bottom. By the early nineteenth century Sturbridge had ceased to attract attention outside the precincts of the town, and its subsequent history comprises a degeneration into an annual pleasure fair; finally a street called "Garlic Row," where mediaeval coins are still dug up, and an ephemeral collection of "merry-go-rounds" alone record the existence of that famous institution.

As fairs declined in importance, and were reduced in number by the action of local authorities under the Fairs Act of 1871, so markets tended to increase and to become specialised. At first consisting of gatherings held at the cross roads in a town or village, they gradually developed into authorised centres for trading, and in course of time there was scarcely a town of any importance that did not possess at least one weekly market. The ultimate trend of events can be seen at Smithfield, Billingsgate and other great centres for the sale of special products, but on certain days in the week provincial towns afford the best example of the general market as it has existed for centuries, which provides at one and the same time an outlet for the agricultural produce of the neighbourhood and facilities for the purchase of farm requisites. Markets conferred an undeniable prestige upon towns, not the least because the right to hold them was conferred by the Crown itself; incidentally in early times it is very probable that only well-protected places and those with adequate facilities for approach were so favoured.

A Royal Commission, whose terms of reference extended to an enquiry into markets and tolls, investigated the state of

affairs existing in the latter part of the nineteenth century; its findings were issued in 1890, and contain a full account of the history of this form of trading. Matters at the period in question courted investigation, and the Commission's labours were not in vain, as the bulk of its recommendations were adopted and introduced into subsequent legislation. The laxity of control, together with the abuses and irregularities then existing in English markets, have been quoted by several writers, so the comments relating to Ireland, as affording a sidelight on perhaps the worst conditions in the whole United Kingdom, will be pursued here. Markets were held in 349 Irish towns and villages, for 125 of which no patents were found, and in 103 cases where patents existed the market days were other than those specified. Fairs were found to exist to the number of 1297, but again authority was in most cases lacking, for 485 had no patents and 324 occurred on unauthorised dates. The Commission expressed itself in the following general terms: "When we consider the present state of most of our Irish markets, the filth, the confusion, nay, the actual danger, women and children thrown down, the passengers obstructed by horses and cows, sheep and pigs, all indiscriminately mixed up together, or by the stall of an apple-woman or the covered standing of some little vendor of calico and ribbands who has erected his temporary shelter in the thoroughfare, whilst at every outlet, toll-collectors armed with bludgeons are claiming and enforcing their obnoxious claims; compare this with the condition of Continental markets; the secure pens for cattle, the secluded abattoirs etc." Conditions of course were not as bad as this in other parts of the United Kingdom, but the necessity for the overhauling of a system that had remained untouched from mediaeval times was obvious.

Apart from the actual inconveniences and discomforts that awaited persons visiting such markets, there existed still greater abuses which insistently called for remedial measures. The first was connected with the system of tolls and dues extracted from those who sold goods, and the second was represented by the anomalous system of weights and measures currently in use. To a much smaller extent both disabilities were also found to exist on this side of St George's Channel, but as the historic

instances of the tolls found at Newcastle-on-Tyne and certain other towns have been frequently described, and as the question of weights and measures will be dealt with as a whole, Ireland may again furnish exclusive evidence. Tolls, in one or many forms, had been extorted from sellers, or prospective sellers, at practically all Irish markets from time immemorial, but some twenty-five years before the Commission's enquiry extensive rioting had caused their abolition in many towns of Leinster, Ulster and parts of Munster. Those that were met with were of many types. One known as "toll thorough," and described as "the worst in Ireland," was collected at the entrances to towns, upon all merchantable stuffs whether sold or not, the proceeds being theoretically devoted to the repair of walls, streets and bridges. The "gateage toll," found in Cork, was exceedingly unpopular, being "in fact a tax levied upon agricultural produce of the surrounding country for the purpose of defraying expenses which should in justice be borne by local taxation; and no part of it is applied in affording any accommodation or equivalent to those who contribute almost exclusively to its production." The system by which such tolls were leased out was condemned, and instances quoted in which the collectors ranged from the above-mentioned individuals armed with bludgeons to illiterate old women. All vendors, including of course women, were liable to be closely searched by these custodians, who were respecters of nobody, and extended their demands to cover payment on small quantities of provisions, such as eggs, fish, apples and so forth, introduced by women and children. *À propos* of this, the *Report* contains the following passage: "For instance the stockings that girls carry to market are subject to tollage. At Gort a woman carrying a bundle of straw on her back, which she sold for fourpence, was charged a penny toll. In Skibbereen a woman bringing in three fish on a Sunday morning was stopped and one of the fish seized because she was unable to pay a penny, the toll demanded." In consequence of this obnoxious system the Commission found that evasion was very rife and that counter measures were taken leading to yet further irregularities. For instance, an Act of the time of Queen Anne, had ordained that cattle remaining unsold at a

market might be removed free from payment of toll, but "we found the persons employed as collectors in many places endeavouring to meet the constant evasion of tolls by obliging all persons leaving the fair with cattle, and claiming to be exempt as unsold, to go through some form, such as touching a piece of paper posted on a board or a book fastened to a pole, and to pledge themselves thereby to the truth of their statements. This is called 'clearing the cattle' and, we regret, is very extensively practised." It will be agreed that perhaps the Englishman's ideas of Donnybrook Fair are, after all, not so exaggerated as the natives would have him believe.

The Commission recommended—and its recommendations were applicable to the whole Kingdom as well as to Ireland—that proper sites should be provided for markets, that responsible persons should be placed in authority over them, that facilities for the erection of stalls and the provision of weighing scales should be available, and, lastly, that all deductions and allowances for "tret, beamage, portorage, brokerage" should be illegal. It is doubtful if tolls had exercised any direct influence upon the sale of agricultural produce and its cost to the public; rather were their drawbacks reflected in the general sense of interference with individual liberty and the inquisitory powers they conferred. The charges made for the use of stalls or for the rights of selling at present-day markets, in some cases represent tolls once levied, but they are sums that can be ascertained in advance and the incidence of which does not generally bear any fixed proportion to the value of the goods disposed of or the volume of business transacted. Whilst a few markets are still conducted on the principle of charging *pro rata* for the produce entering them, tolls in the nature of octroi at the entrance to towns are now non-existent in this country.

British weights and measures have always been a source of wonder to other nations, and again Ireland furnishes the most striking examples of confusion. A report made to the Lord Lieutenant by the Registrar-General in the year 1856, contained the following extraordinary catalogue of units then in use. In different Counties wheat was sold by the barrel of 22 stones,

the cwt. of 112 lbs. or the stone of 14 lbs.; oats, by the barrel, which might contain 12, 14, 24 or 33 stones; barley, by the barrel of 16 and 24 stones. Potatoes were dealt in by the barrel, but the number of stones contained was variously found to be 15, 20, 21, 24, 32, 40, 48, 64, 72, 80, 95 and 96; they were also sold by the stone of 14, 15, 16, 21 and 23 lbs., as well as by the hundredweight. Even in towns in the same County different weights were in use; naturally, comparison between the crops in various localities was thereby made impossible, as for instance a yield of eight barrels of potatoes per acre in Roscommon would be equivalent to one of thirty-two per acre in Dublin.

A Select Committee appointed to enquire into the question of the weights and measures used for the sale of grain in the United Kingdom issued its *Report* in 1893. This document afforded an extraordinary commentary on the existing situation, for it contained a summary showing the various measures in use in those markets that came within the province of the Corn Returns Act. From these 189 towns came reports of no less than forty-six different weighed measures for wheat, which ranged from 52 lbs. to 90 lbs. a bushel; there were also twenty-six measures varying from 42 lbs. to 70 lbs. for barley and thirty-six for oats, ranging from 35 lbs. to 63 lbs. Each part of the United Kingdom advocated, through expert witnesses, the standardising of its own selected unit. Thus the Scotch corn traders urged that sale by the hundredweight was the only proper method for all cereals; the Liverpool Corn Association naturally wished to see their cental of 100 lbs. adopted elsewhere, and groups of Counties such as Gloucestershire and Wiltshire maintained that a departure from the quarter of 496 lbs. would cause complaint; the East Anglian coomb was declared unheard of in the West of England. Complications caused by the indiscriminate use of such terms as "sale by weight," "sale by measure" and "sale by weighed measure" led the Committee to recommend that in sales by the latter method, for purposes of conversion, standard weights should be adopted. "Natural" weight was of course the root trouble in all such operations, but unexpected difficulties cropped up when it was suggested that it might be ignored; for instance sellers of barley grown for malting purposes declared

that here values did not depend on the weight of the grain, which was merely a secondary consideration. The Committee concluded its labours by issuing, with two very minor recommendations, the far-reaching one that the hundredweight should become the universal basis for sales of all cereals in Great Britain, as by the time in question it already was in Ireland. Exactly thirty years passed before legislation to this effect was carried through. In the meantime the complexities revealed in the methods in vogue a generation ago were not abated, and the "natural" weight of corn was annually the subject of official appraisal and explanation.

Even during quite recent years the existence of local measures was a constant source of trouble, for in an official enquiry by a Government Department during the war local agricultural Reporters referred to "loads" of wheat and "Carlisle" bushels of oats, whilst coombs, bags, sacks, quarters and bushels were used indiscriminately in the same districts. Our national custom of having two different quarters in the case of home-produced and imported cereals caused endless confusion, and did not simplify the difficulties attendant on the negotiations between the farmers and the government when the question of relating the price of British wheat to that of imported was under consideration. Fortunately this evil has been remedied, for since January 1st, 1923, under the Corn Sales Act of 1921, the hundredweight has become the only recognised unit of measurement for the sale, not only of cereals, but also of meal, beans, potatoes and agricultural seeds. How it was that steps to this end had not been taken years before will always be a mystery. Not only was the system of measures in vogue indefensible, but frequently the enforcing of it was neglected, and such powers as the Weights and Measures Act conferred were not taken advantage of. The evidence adduced on this point before the Commission of 1887 was overwhelming, the vast majority of the sufferers being small agriculturists. As an extraordinary anomaly it may be mentioned that the University of Cambridge was long invested by Act of Parliament with the custody and use of the weights and measures (including a rod used to check that peculiar local unit, the yard of butter) used in the

town, and had the appointment of the Inspectors. Gunning, in his account of Sturbridge Fair, says that after the proclamation, solemnly announcing that punishment would be meted out to any who sold beer in mugs other than those allowed by the University, it would be observed that the majority present were partaking of refreshment from mugs shamefully under the standard measure. He added that the publicans appeared genuinely to believe that the money they paid for licences at the Commissary's court was for permission to sell short measure. If such things could happen under University jurisdiction, what irregularities must have existed in remote markets to the detriment of the agricultural trader?

It is henceforward necessary to differentiate between the methods of sale traditional to each of the commodities produced by the agriculturist. In mediaeval times the bulk of the wheat, in common with the other cereals, did not travel beyond the confines of the manor or parish in which it had been grown, but certain minor movements between individual manors have been recorded, and small quantities of grain of course travelled to the towns, but in general wheat was consumed on the spot. The necessity for conserving supplies was always present, for during the Roman occupation of this country stone-built granaries had been freely erected, and the clerical tithe-owners referred to in Chapter V were constantly exercised as to the best means of storing their corn. When a surplus was made available by improved methods of husbandry, and its transportation facilitated by new means of communication, repressive measures aimed at the middleman were instituted. Even recognised dealings at approved centres were hedged in by countless restrictions, as witness an extract from the *Liber Albus* of the time of Edward I, quoted in the *Report of the Commission on markets*—"Also as to corn dealers who bring corn into the city [of London] for sale—that no one shall sell by show or sample. But they shall come to certain places in the city established with their carts laden, and with their horses having the loads upon them, without selling anything, and without getting rid of anything...and that no corn shall be sold until the hour of Prime rung at St Paul's, under the penalty of forfeiting the corn."

Eventually dealers came to be recognised as essential links in the commercial chain, and for the export trade at least were granted considerable rights. East Anglia always provided a surplus for movement either to other parts of the country or to foreign states, and here intermediaries were in the strongest position. Under the later Corn Laws it became necessary to ascertain the average price of grain, and for this purpose certain zones were at first delimited, but eventually numerous markets scattered about the country became officially recognised as providing the data required for such purposes as the Tithe Commutation Act of 1836, and certain of them were again adopted as centres under the Corn Returns Act of 1882. The average values prepared from the reports of Inspectors under the above Act have already been referred to as furnishing grounds of contention to farmers and other payers of tithe, but from the statistical standpoint they are of some value as showing the fluctuations in the quantities of cereals sold at different markets over a long series of years. Of course, only a fraction of all the grain dealt in comes within this official purview. The prohibition of sale by sample, contained in the *Liber Albus*, would strike present day vendors as an intolerable restriction, but the contemporary legislators doubtless had good grounds for distrusting this form of transaction and for standardising what came to be known as "pitch sales." The general tendency evidenced during the last half century has been towards the aggrandisement of certain already important grain markets and the decay of many of the lesser; this is mainly attributable to the introduction of large commercial mills which attract the bulk of the grain from districts within a considerable radius, at the same time catering for foreign supplies. Apart from the markets specially reserved for dealings in imported grain such as Liverpool and, in London, the Baltic, the largest transactions take place in a handful of centres mainly situated within range of the corn producing areas. Prominent among these are Norwich, Cambridge, Peterborough and Lincoln. The old-fashioned miller, who often bought direct from the farmer, has in large measure disappeared, even as his wind and water mills have given way to steam, his place being taken by dealers buying on behalf of companies.

Whilst much can be urged against the anachronisms involved in the British system of selling grain, no complaints have been put forward that the middleman is, in this particular trade, taking an undue share of the profits, whatever may be the delinquencies of subsequent functionaries. Dealers have not been accused of securing more than a very small fraction of the cost of the grain, and, when it reaches the miller, British wheat has been saddled with only a few additional pence per quarter. The processes it then passes through before reaching the consumer, and the persons involved in those processes, must bear the brunt of the charges so frequently levied. From the farmer's point of view the selling of his grain is one of the most straightforward transactions that are open to him, for he is sure of finding purchasers at current prices whenever he chooses to part with it, and can rely upon securing immediate payment. Grain keeps better than most of the articles he produces, requires no preparation for market and travels well; if the same could be said for other agricultural products, some of the principal difficulties and expenses attendant on their sale would be absent. Incidentally, grain is almost the prerogative of large farmers, which no doubt accounts for the absence of attempts to extend co-operative principles to its sale in this country, and to their comparative failure except for export trade abroad.

Compared with conditions in the United States and other large exporting centres, the internal marketing of British grain seems a parochial affair. This country has need for no such organisation as that represented by the three-stage transportation found in North America, and lack of space therefore forbids an account of the transport of wheat from the field to the local market, thence to the primary market and finally to the seaboard, but certain features deserve a few passing words. The United States Government plays a far more intimate part in the handling and safeguarding of grain than is the case in European countries. By an elaborate system of inspection, from the primary markets onwards, it secures a high standard and strict classification in the various grades; it also takes steps to check the tendency for combinations among warehouse and elevator interests to attain too much prominence. The value of these measures can best

be appreciated when it is stated that, prior to the war, the costs added to a bushel of wheat, after travelling from the central States to the sea-coast, amounted to about sevenpence. The suggestion sometimes put forward that operations on the Chicago and other exchanges were apt to raise prices unduly has been shown to be without foundation. But if neither transport or financial dealings have so far adversely affected the final purchaser, there remain possibilities that will require watching in the future. In no other country in the world has the cleavage between the producer and the middleman become so marked, and many thousands of persons make a living by buying and selling grain that they never handle. Then, despite State regulations there exists what virtually amounts to a monopoly in the shape of Associations of dealers; the railway companies also generally succeed in fending off competition from fresh elevator interests by refusing access to their lines. The whole trade differs so widely from that found in this country that criticism or appreciation are both difficult, but from the American farmer's standpoint the rapidity with which he can secure the bulk of his money, and the small amount of trouble involved after he has threshed his crops, are noteworthy features. If the American system of mixing and grading wheat appears open to abuse, it must be remembered that the State authorises, and indeed superintends, all processes which it undergoes in transit and that the producer benefits by having additional outlets for inferior qualities provided him.

Apart from Canada, exporting countries of the world have not attained to such levels either in the physical or the financial handling of grain; and one finds in the Argentine and elsewhere human power taking the place of mechanical, and dealings confined within more exact boundaries both of time and space. That within a generation or so the United States will possess an internal trade only in wheat is tolerably certain, and the importing countries of Europe will be dependent upon nations whose methods of marketing will require to be remodelled; but producers at home will reap little benefit until that more distant time when world conditions and the world standard of production tend to equalise. Indications are not lacking, however,

that British Dependencies at least will soon be equipped for export on the American plan, for South Africa, New South Wales and Victoria have recently decided to instal elevators in order to deal with maize and wheat in bulk. The inhabitants of this country are apt to look upon the problems of wheat production overseas exclusively from their bearing on prices at home, but it must be remembered that the producer abroad is only interested in getting the maximum price for his wares, and does not in the least care what their ultimate destination may be. On the other hand, British farmers are dependent upon conditions ruling abroad, and the prices of British grain will always bear a close relationship to that secured by these competitors, so that once again the old problem of the divergent interests of the producer and consumer is raised. Both British and American farmers see large profits made in the cereals they have raised, but these are realised in the last, or manufactured stage, and do not represent potential gains lost to themselves. This factor has been frequently commented on in the past, for the disparity between the price of wheat and that of the quartern loaf has received full treatment from such writers as Sir H. Rew. In a contribution to the *Journal of the Royal Agricultural Society* some thirty years ago he drew attention to the fact that when wheat had stood at 30s. the quarter the loaf was retailed at 5½d. but only a halfpenny reduction was effected when a 10s. drop occurred in the cost of grain. Similar evidence has been forthcoming on many occasions during the last century, so that the failure of the loaf to return to a level commensurate with that of wheat, after the fall in prices of 1921, is nothing novel. In this, the latest, instance, combination among retailers must be held partly responsible, but there is permanently a large margin for profit in those trades which prepare goods for consumption. The consumer can always be interested in attempts at reducing the price he is asked to pay, but the agricultural producer, when naturally attempting to secure a larger share in those prices, ceases to be an object of sympathy to the former. Fuller consideration of this problem of the relationship between the price of wheat and that of bread is deferred to the end of Chapter XV.

CHAPTER XII

MARKETS AND MARKETING (CONTINUED)

Marketing of livestock and sales by weight; methods of selling other agricultural produce; difficulties confronting fruit-growers; preparation for market; costs of carriage; the measure of State assistance in Great Britain, and in the United States; summary of the position.

THE sale of livestock, which represents another and most important branch of the agricultural industry, has not the halo formed by legal custom and enactments attaching to it that was observed in the case of cereals. Works, as the *Liber Albus*, in this connection confine themselves to quoting ordinances such as the following, which merely deals with recalcitrant buyers—"and whereas some butchers do buy beasts of country folks, and as soon as they have the beasts in their houses kill them and then at their own pleasures delay the peasants of their pay; or else tell them that they may take their beasts..."; to this a list of penalties was appended. That the system now in vogue for transporting all forms of livestock is quite recent in origin is sometimes overlooked. Until within living memory not only cattle, but such smaller stock as geese and turkeys, all made their way to London and other centres by road. All the marsh-fed bullocks of Norfolk were driven to Smithfield, and the North Road itself was incessantly traversed by parties of drovers and their charges, the latter having been specially shod for the purpose; calves were occasionally conveyed in huge two-storied wagons; turkeys from Norfolk and geese from the Midlands walked, by easy stages and in large flocks, the hundred miles to market, losing apparently little weight on the journey. The spectacle of frenzied cattle being urged through the streets was familiar to Londoners until the middle of the last century. The coming of the railways finally obviated the necessity to convey livestock by road, and the increasing proportion of our meat supplied from overseas was reflected in the altered appearance of Smithfield and other markets.

Consideration of the methods of selling livestock must be confined to the problems involved in transactions between the breeder, or rearer, and the butcher, reference to such questions as the local movements and sale of stock for fattening purposes being omitted. The outstanding feature, and one which has been adversely commented on for upwards of a century, is that animals are sold "by eye," and the farmers thus lose, and others gain, what must annually amount to a large sum of money. Sir H. Rew has again investigated the past history of this custom, and has shown that attempts innumerable have been made to demonstrate to farmers that weight alone should be the guiding factor in sales at least of cattle. Tables of calculated weights based on measurements were repeatedly compiled, and actual demonstrations arranged by such persons as Sir John Lawes showed convincingly the bias that exists in favour of the expert purchaser; but the farmer, who was the one person to have compelled a change in custom, seemed genuinely to prefer that sales should proceed without reference to any consideration other than that of the appearance of the animals. All impartial authorities agreed that the butcher, by dint of constant practice, must inevitably be a better judge of the amount of meat he was purchasing than was the farmer, and test after test showed the truth of this. In 1891 the Markets and Fairs (Weighing of Cattle) Act required those in charge of markets to provide means of weighing animals. This represented a considerable advance, but so great was their apathy, that it is doubtful if the Act would ever have been placed on the Statute book if it had been left to the initiative of farmers alone. For years after the compulsory introduction of these facilities little advantage was taken of them, but during the last decade there has been a steady accession to the numbers of beasts sold by weight. The following table, recently issued by the Ministry of Agriculture, records the progress made since 1911. It should be observed that the statistics relate only to certain markets, and that the years when rigid control of sales existed have been excised.

Fat Cattle

Store Cattle

Year	Numbers entering	Numbers weighed	Percentage of number weighed to number entering	Numbers entering	Numbers weighed	Percentage of number weighed to number entering
1911	605,187	175,255	29.0	298,993	37,702	12.6
1912	483,837	151,102	31.2	314,248	47,980	15.3
1913	505,848	159,464	31.5	442,715	66,059	14.9
1914	486,187	164,453	33.8	382,121	63,896	16.7
1915	494,567	180,319	36.5	411,075	74,821	18.2
1916	511,086	188,809	36.9	415,260	80,113	19.3
1917	512,509	207,292	40.4	408,188	81,813	20.0
1920	171,437*	68,490*	40.0*	446,565	89,453	20.0
1921	337,829	153,787	45.5	332,519	60,160	18.1

* Six months only

It is noteworthy that the percentage of fat cattle weighed is much higher than that of stores, but the increase in this figure during the ten years in question has been greater in the case of the latter. Scotland leads the way in this connection, for there the proportion of fat cattle weighed is some eighty per cent. of the total, but of the numbers of livestock of all kinds changing hands in the United Kingdom, it is obvious that only a fraction passes over the weigh-bridge, so that there is ample room for further efforts to be made at popularising this method of sale. The usual reasons adduced against it are that "farmers prefer the old ways," and that naturally butchers do not urge its merits upon them. It is also possible that market authorities may in the past have been partly to blame, for in many recorded instances they have appeared to consider that their liabilities were met so long as a weigh-bridge was installed somewhere in the vicinity of their market. Such erections are not likely to be in great demand if their presence is not patent, or if access to them is difficult, especially if there is a feeling abroad that they are merely intended to comply with some unnecessary regulation. Sale by weight at once introduces the question of the relationship borne by dressed carcasses to living animals—a point that cannot be pursued further than by saying that over sixty years ago experiments at Rothamsted gave a figure varying from 58 per cent. to 60 per cent., and special investigations made for the Commission on Markets and Tolls in 1887 recorded from 55 per

cent. up to 62 per cent.; fat stock at Smithfield have been found to yield over 64 per cent., and the Army Cattle Committee during the war published figures varying between 51 per cent. and 63 per cent. These results show that, even when the weigh-bridge is utilised, there is still considerable discrepancy between the quantities of meat butchers secure from different classes of animals—a discrepancy that some farmers would perhaps claim the traditional methods of sale would take account of.

Once more the disparity between the price secured by the producer and that charged to the consumer is apparent, but again it is most marked in the last stage. Meat is retailed in butchers' shops at prices that seem frequently to court enquiry, the explanation tendered being invariably associated with indirect charges. Here, as with that other raw material, wheat, the farmer is practically powerless, for the processes necessary to prepare both articles for human consumption are entirely outside his capacity to undertake. The urban dweller protests vigorously at the cost of his loaf and his joint, expresses surprise that the farmer receives so small a part of the sum he pays, but naturally is only interested in steps that may effect a reduction in retail prices, considering any re-allocation of profits as a matter outside his concern. On those occasions when farmers, or associations of farmers, have attempted to short circuit the middlemen by slaughtering their own livestock they have succeeded in demonstrating these facts, but have lacked the trade organisation to carry on such a policy indefinitely. It would seem that, in the case of wheat and livestock, the agriculturist can do nothing but look upon himself as the producer of raw material, and leave to the State the responsibility of checking the rapacity of those who afterwards handle or prepare it for market.

Where the producer raises articles that reach the consumer in practically unchanged form he should be in a position to secure better terms, but actually he is often at a worse disadvantage than in the previous examples. Fruit, vegetables, eggs and poultry are purchased retail exactly as they left the farm, but the apparent profit taken by the shopkeeper is apt to be out of all proportion to the producer's share. Here matters are on

a totally different footing from the sale of wheat or livestock, and numerous attempts have been made to eliminate altogether the middleman and the retailer, but have not met with unqualified success. It is probable that, as with the exception of milk, these commodities are mainly the standby of small farmers, the industry as a whole has not felt compelled actively to collaborate, large farmers who possess the necessary influence and capital often treating products other than cereals, livestock and milk as merely side lines. Joint action on the part of producers has on more than one occasion enabled dairy farmers to counter combinations of milk retailers, but here they had a virtual monopoly in their hands. All other "small stuff" has to meet competition from abroad, but the margin for increased profits is none the less large. That the bearings of the problem, both in regard to foreign competition and the multifarious commissions sometimes extracted, are not new, can be seen from such excerpts as the following, taken from the *Times* of May 20th 1822. "A vessel with 40 tons of potatoes arrived here [Portsmouth] a few days since, from Jersey, for which the master had given in that island 20/- per ton; immediately on her anchoring she was visited by a speculator in the article who purchased the cargo at forty-five shillings per ton; on his way from Spithead to the Point he met a second speculator, who gave him fifty shillings per ton, which this third speculator retailed in a few hours after the arrival of the vessel at eighty shillings per ton. If they were sold retail at the then market price £7. 6. 8 was obtained for what a few days before cost twenty shillings."

On all sides are seen comparable present day examples of growers receiving pence for articles that are paid for by the public in shillings, and that have reached the latter in untouched condition. Reference to co-operation—the favourite remedial measure put forward—is deferred to a separate chapter, but other suggestions deserve brief notice. The traditional method of securing direct access to the final purchaser is by means of the public market. Formerly there is no doubt that the bulk of butter, eggs, fruit and poultry was so disposed of, but the multiplication of large stores and the trend of shopkeepers themselves to appropriate positions in the markets has modified

the situation. The actual cost of engaging a stall was almost insignificant, but the obligation of constant attendance that devolved upon either a member of the farmer's family or of a hired representative tended to act as a deterrent. That this form of direct sale affects retailers is obvious when the growing number of stalls occupied by them in provincial markets is observed. The real Small Holder has another outlet, for he can hawk his goods from door to door in neighbouring towns. Associations of smaller producers again occasionally trespass upon the retailer's own ground by setting up shops for what amounts to co-operative sale; but here the necessity to provide permanent supervision involves considerable outgoings, and has frequently led to disunion between the undertakers. Arguments used against the individual system of sale mainly attach to its apparent wastefulness; it is pointed out that the bi-weekly setting forth of three or four men, each with pony and cart, to convey a few pounds' weight of produce to a distant market is uneconomic, and that a motor lorry would collect from scores of such farmers and deliver at less cost and in shorter time. But it is answered that the human element is apt to be left out of consideration, and the absence of the small farmer from his holding for a day does not necessarily imply a loss of efficiency, and an individual selling on his own behalf claims that he is more likely to secure good terms than a paid representative. It is also said that regular visits by the farmer to market are conducive to widening his business aptitude, and at the same time facilitate the purchase of his own requirements. Where direct sales are the rule nothing save the institution of some form of duty on imported commodities that are in rivalry with his own can of course enable the grower to obtain larger returns than he already gets. When indirect sales are in question steps can be taken to invade the retailer's province, but in this event prices must of course be reduced to a lower level.

Milk, cheese, wool and fruit each present special problems. Transport of the former has expanded from a local into a long distance undertaking, and individual farmers are scarcely concerned with the retail sale or the actual delivery of their milk, nor are they equipped to undertake either operation. Acting

together, however, they have shown that this commodity, from its very nature, places considerable power in their hands, and dairy farmers have generally succeeded in securing a reasonable rate of profit. Cheese is nowadays rarely the subject of individual sale, for the bulk of it goes through the hands of middlemen at special markets. Wool again provides examples of large annual sales conducted on peculiar principles, but ones that appear to satisfy all concerned; here it must be remembered that British farmers have by no means a monopoly, and prices are subject to wide-flung influences. Fruit presents special difficulties, for it is more prone to fluctuations in supply (and therefore in price) than any other product of the soil, and at the same time it is never free from potential competition from abroad; there is also nowhere greater disparity found between first and last costs. All are familiar with accounts of tons of plums consigned to Covent Garden or other centres of distribution, which after picking, carriage and commission have been paid, have returned merely a few shillings to the grower; but such things are bound to occur with seasonal fruit, and the regular returns from smaller consignments on other occasions are apt to be overlooked. The same argument applies to the profits secured by retailers in this trade, for it is too often assumed that their annual receipts are closely linked with the exceptional turnover occurring in a few weeks of summer. Probably much of the feeling engendered against them would be dissipated if the results of their year's trading, which covered long periods when overhead charges predominated, were laid open for examination by producers. Sale of fruit by commission is open to attack, but when, as a result, all the difficulties attendant upon finding a regular outlet disappear, it is not easy to put forward counter proposals. Nothing short of a complete retail organisation, and one capable of extremely rapid expansion, could meet the situation, but for long periods of the year charges would be mounting up while trade was at a standstill. Again, only a limited number of towns in this country can absorb large quantities of fruit, and as matters now are, the producing districts send practically the whole of their output either to London or the great cities of the North, and no alteration in the

system of retailing could affect the demands from elsewhere. All indications lead to the supposition that the commercial grower even now in the long run secures commercial profits, for the acreage under fruit increases year by year, and fresh districts are devoted to this form of husbandry.

The sale of all forms of small agricultural produce within Great Britain suffers under one unexpected but serious disability, for there is no legal compulsion that results in a certain standard of quality or level of packing being maintained. Overseas competitors—especially for example the Danes—are forced to conform to fixed rules in this respect, and the result is seen in the uniformly high quality associated with all their produce. The reason is two-fold. Practically confined to an export trade, producers are bound to join an association, which in turn must enforce a high standard from its individual members. The State itself is interested in seeing that Danish produce leaves the country in a condition to meet severe competition, and therefore initiates, or supplements, every step taken by the associations. British producers are free to adopt any or no standard, so that when their articles meet those of the foreigner, packing, grading and guarantees are at best divergent, and often inferior. It may be urged that such things matter little in the case of a purely internal trade, but second thoughts will show that, so long as growers are dependent upon retailers, a uniform standard that can be relied on is a considerable asset. The efforts of individuals frequently need directing, and fresh openings could often be secured if attention was paid to certain elementary details. Ireland should occupy the position in relation to this country that Denmark has secured for herself; her climate and soil are more suitable for the production of bacon, eggs and cheese than are those of the latter, and she is within easier access. Peculiarity of temperament and a lack of the sense of corporate responsibility must be held to blame, of which defects the several attempts made by a certain English family to deal with Southern Irish producers will afford an illustration. An answer to an advertisement offering fowls for sale resulted in a pair of birds arriving, which on examination were found to be perforated by innumerable pellets. On expostulations and enquiry being made,

the reply came from Ireland that the birds were very wild and had to be shot when roosting in the trees! On another occasion an order for a turkey resulted in a magnificent bird being delivered in a condition that showed it had been high before it left its native country. A third effort was made when sections of honey were being advertised. This time the English post office notified the consignees that some sticky brown paper, which could not be placed in contact with other parcels, awaited their orders. The honey had been merely wrapped up in string and paper. Finally—and lastly for that particular family—a sackful of wood anemone plants arrived, the contents of which had been shaved off level with the ground, and the long roots, of course, severed. The minute attention paid to detail by the French and other Continental nations would never allow such happenings as the above, and it is to be feared that when preference is shown for imported articles, the Irish producer often has nobody but himself, or rather, his kind to blame. The creameries established in Ireland, and the resultant large quantities of Irish butter sold in Great Britain, show what can be accomplished by a disciplined body, even if individuals fail to perceive that (in the event of direct sale) the producer's part is not accomplished when he has raised his commodities, and that the art of retail salesmanship consists not only in securing a market, but in retaining it by the aid of satisfied customers.

If marketing associations can but improve the means by which articles are prepared and delivered for sale, a higher value is bound in the long run to accrue to the latter. The contention that the costs of carriage eat up an undue proportion of profits is difficult to generalise upon, but it is significant that it is most audible when a "slump" prevails and prices have fallen. If plums are flooding the market, or a million additional tons of potatoes are available, the railway companies are certain to be blamed for the pecuniary situation created. That a wide-spread system of delivery by motor lorries would be cheaper, is doubtful; that it would be as certain and efficient in functioning under the rapidly changing conditions associated with the marketing of agricultural products, is highly improbable. The alleged preference accorded consignments of imported fruit by British

railways has been shown to be baseless; the British producer has only to offer his wares in equal bulk to secure at least comparable rates. On the other hand attempts made by the companies to help small producers—notably that of the Great Eastern Railway, by which not only special rates were granted, but even boxes supplied—have not been favourably received. Foreign competition in all subsidiary branches of the industry is increasing, and it behoves the home producer to see that he leaves no stone unturned to improve his means of countering it, for he will have to rely mainly on his own efforts without direct support from the State.

Indirectly he does get a measure of State assistance. Certain imported articles have to be marked with their country of origin; but this is not necessarily a handicap to them, and indeed is sometimes in the nature of an advertisement. The provision of markets and their adequate maintenance represents the State assumption of duties afterwards delegated to local authorities. The collection of statistics relating not only to prices current, but to the numbers of certain commodities exhibited for sale, is perhaps not the least useful function undertaken for agriculturists by the administration. A description of the former will be found in Chapter XVII, and in regard to the latter it may be pointed out that only in the case of livestock and cereals (and in certain markets) is there any statutory obligation on the Ministry of Agriculture to prepare *data* on these lines. That very comprehensive descriptions of conditions ruling at numerous centres are available each week for producers is therefore due to voluntary action on the part of the Ministry. The value of these accounts is apparent to anyone who will take the trouble to glance through the so-called market reports of provincial papers—reports which would otherwise afford the farmer his only source of information. There, only inaccurate generalisations repeated week after week, exaggerated reports, or such extraordinary statistical expressions as that “prices have fallen one hundred per cent.” greet his eyes. That in the course of the next few years the State will extend the scope of such functions is assured, for already certain countries abroad have undertaken much of the work that has been in

the past looked upon as the duty of the private trader to perform.

In the United States the problem of affording some measure of help to agricultural producers has been left in the hands of individual States, with the result that in the last few years attempts on different lines have been made. "Bureaux of markets" and "State Directors of Marketing" have been established, the activities of the latter officials covering such widespread duties as the dissemination of information relative to the movements of farm products, and prices and statistics of supplies; the promotion of co-operative associations; the encouraging of standardised packing, grading, inspection and methods of sale; the issuing of official marks for approved merchandise; the supplying of advice and assistance to individual producers; and generally the facilitating of the internal and external sale of their State's agricultural commodities. As the typically American cry of "Swat the middleman" has been raised in regard to the marketing of such articles as fruit and vegetables, it is not surprising to find that Market Bureaux have extended their operations to include direct intervention in certain methods of sale. As an instance, James E. Boyle in *Agricultural Economics* declares that the newly formed New York Department of Foods and Markets "pursued a militant course from the start. The New York bakers were forced to restore the 5 cent loaf of bread, after raising it to 6 cents. The price of cold storage eggs was attacked. Jobbers and retailers were required to put signs on cold storage eggs. To help the milk production interests, an auction of dairy cows was held under the supervision of the Department. Farm shippers used the Department in investigating claims against transportation companies." The same writer holds that under a new law, passed in 1918, "the State of New York is equipped with the most complete administrative machinery in the field of marketing to be found in the United States. Aside from investigation, advice etc. provided for in all recent market laws, this New York law provides for the establishment of public markets in cities, towns and villages, and for State financial aid to those markets to the extent of 50 per cent. of the expense." With the exception of the attack on the New York price of bread

described above, almost all these American plans have had, as their primary object, the transference to the producer of the retailer's profit, and for that reason it will be interesting in the future to see if they are able to keep up prices, or whether the consumer will succeed in lowering them through legislation or by the encouragement of free lance competition. It would be interesting also to peruse a full account of the executive machinery by which the retail price of bread was lowered, and to be in a position to know whether its operations were of permanent or only of transitory benefit. That, except in the case of fruit or vegetables, the retailer's rate of profit is not really excessive in America—whatever may be the case in this country—is shown by an analysis, brought together in Boyle's work, of the distribution of the total cost of different products. Thus the Kansas farmer in 1914 received 87 cents for a bushel of wheat, the price of which delivered in Liverpool amounted to 116.75 cents. Freights accounted for 21 cents of the difference; insurance, loading and inspection represented the remainder, with a maximum payment to any one organisation of three cents, this going to the local elevator. On the other hand, after being turned into flour that cost the American householder 111.65 cents, wheat that brought the farmer 64 cents left 10 cents in the miller's hands and 20 cents in the retailer's. For cattle the retailer's gross returns appeared to be in the neighbourhood of 25 per cent., for butter from 10 per cent. to 20 per cent., for eggs 16 per cent., for potatoes 15 per cent. to 30 per cent., and for such articles as fruit 30 per cent. to 40 per cent. In the latter example the extreme perishability of the goods concerned, and the long distances they must be conveyed, are admitted by American writers as being factors in favour of the retailer. All the above figures must be accepted as merely affording rough indications of the division of the ultimate cost between the retailer and the producer; they do not of course afford any criterion as to the rate of return on capital secured by each party, and the comparative expenses involved in raising and selling the different commodities are left out of the calculation. When comparing marketing conditions in the United States with those in this country, it must not be forgotten that, not only do

the distances involved call for the provision of storage and other facilities on almost an export level, but that the machinery of transport is on a vastly different scale—thirty to forty ton trucks are the unit, and “broken” loads, filling perhaps a quarter of an eight ton truck, would not be permitted there.

The United States Tariff Act of 1922, representing a measure of universal as opposed to local assistance, has imposed really high duties on, among other commodities, practically all forms of agricultural products ranging from livestock to fruit trees. Whilst this Act affords unmistakable evidence of the States’ solicitude for trade in general, it cannot be held that agriculture will benefit to any peculiar extent, for the American farmer, apart from Canada, has not much competition to meet at home. In the case of the latter country there is a growing exportation of farm products across the international boundary, which no doubt will be affected.

A Commission that recently investigated the conditions of agriculture in America made recommendations under the following ten heads:

- (1) That co-operative combinations of farmers for the purpose of marketing, grading, sorting or distributing their products be legalised.
- (2) That the banking system be adapted to allow farmers to obtain credits corresponding to their turnover with maturity of from six months to three years.
- (3) That the warehousing system be made uniform in all the several States of the Union.
- (4) That reductions of freight rates on agricultural produce are absolutely necessary.
- (5) That the statistical divisions of the Department of Agriculture be extended, particularly to improve the livestock statistics.
- (6) That agricultural *attachés* be provided in the principal foreign countries.
- (7) That more accurate, uniform and practical grades of agricultural products and standards of measures be developed.
- (8) That better book- and record-keeping of costs of productions be promoted.
- (9) That practical and scientific investigation directed towards reducing the hazards of climate and weather conditions and of plant and animal diseases and insect pests be provided.

- (10) That facilities for distribution at large consuming centres be better organised and more adequate facilities be provided for handling produce.

The importance attached both to internal and external facilities for marketing is thus well illustrated, for only two of the sections fail to deal directly with this problem. Allowing for the absence of an export trade in this country, almost all the above recommendations have already been given expression to in permissive form or have been recently the subject of similar advocacy here. Our own Dependencies and Colonies have in several instances adopted "farmers' pools," or national marketing schemes, the success of which time alone can show, but all start with the initial advantage of a considerable export trade. In such circumstances the provincial government has considerable hold over the trade in question, and it is not surprising to find the Union of South Africa, New Zealand and the Australian States making regulations in regard to packing and grading. The Boards themselves act as agents for disposal, but in many instances share with the executives the duty of compelling a high standard in their countries' products.

The whole question of the return secured by the British farmer for his various products has assumed more importance since the war, and the position to which the industry was previously becoming reconciled has received fresh attention from the State and the consumer. This is partly attributable to a feeling of restlessness engendered in the latter from the failure of retail prices closely to follow those of the producer—a phenomenon that has been frequently observed in the past in times of falling costs. During another period of depression the Royal Commission of 1893 secured the views of representative agriculturists upon this vexed question, when criticism of conditions existing at that time generally took the form of protests against the alleged masquerading as British of imported meat and other goods, whereby the home producer lost part of his market and the retailer secured fraudulent profits. More stringent regulations to compel the marking of all foreign articles exposed for sale were demanded. The existence of monopolistic markets was unfavourably commented on, and the unfettered provision

of these facilities at any time and in any place was urged, one witness advocating the setting up in London of an equivalent to the Paris Halles, by which means produce might be safeguarded against the salesman. For the small producer it was suggested that the Post Office might come to his assistance through a lowering of parcel rates, thereby following precedents found abroad. The position revealed some thirty years ago differs little save in degree from that of the present, but the tentative proposals of 1893, which the course of time has in the main seen effected, require to be superseded by larger constructive efforts. The National Farmers' Union was as outspoken in its election address of 1922 as any individual representatives of the industry had been in 1893, for two of its demands were thus phrased: (a) "The way in which Government statistics of prices are presented to the public successfully prevents any proper comparison being made between the price *you* pay and that received by the producer. Farmers ask that full information shall be given to the public and that an enquiry shall be conducted into costs of distribution." (b) "Much imported produce is now palmed off on the public as home grown. Farmers ask that the Merchandise Marks Act shall be amended so that this fraud on the consumer may be stopped." The first demand has been met; the second statement is probably an exaggeration, due to the atmosphere prevailing at the time it was uttered, but it is interesting as showing the survival of a generation-old belief.

Remedial measures are once again extraordinarily difficult to put forward, owing to the fact that different branches of agriculture are producing widely divergent types of commodity, some of which require much preparation for market and others none; some are in steady supply irrespective of seasons or climatic influences, others again are dependent on nature to a high degree; lastly, some are the prerogative of large undertakings, others are raised mainly by small producers. One is forced, therefore, in any enquiry, to differentiate both between the nature of the commodity and the scale on which it is raised. Proceeding thus, it is possible roughly to summarise certain conclusions. Wheat is essentially the product of large scale farming, and its price is not only governed by that of imported

supplies, but its preparation as food accounts for the large charges added to its original cost; this preparation moreover is not within the power of the grower to undertake, for co-operative principles neither appeal to the large farmer or are efficacious when extended to manufacturing processes. Other cereals are consumed in the raw state, or, exceptionally, as in the case of malting barley bring to the grower reasonably good returns. Cattle and sheep, in the main, represent the product of medium and large farms, and there is considerable profit made by those who prepare them for sale in retail form. Again, however, these final stages cannot be undertaken by the farmer, and even combination to secure higher primary returns would ultimately be checked by the competition of imported meat. Pigs intended for conversion into bacon stand in a class by themselves. They emanate preponderatingly from the small farm, and if they have to undergo elaborate processes, the resultant food does not call for immediate retail sale. For these reasons co-operative, as well as individual, bacon factories have, even in recent times, been enabled to secure very good profits, and there appears to be no valid reason why their numbers should not increase. Milk comes from farms of all sizes, but calls for a most highly organised system of transport and delivery. At first glance the disparity of prices here seems overwhelming, but this is one of the few articles which is delivered to individual purchasers, frequently after being conveyed very long distances. That the retailer makes large profits is not denied, but that the producer could satisfactorily usurp his multifarious duties, is questionable. From its very nature, however, milk confers certain assets upon its original possessor, and combination for the purposes of withholding or diverting supplies has been shown to be a weapon of considerable utility. One is now left with the "small" produce of agriculture. Fruit growing, whilst undoubtedly returning fair profits to favourably situated undertakings, satisfies neither producer nor consumer by reason of the unexampled disparity in values with which they come in contact, and the situation in regard to poultry and eggs is very similar. In both cases, if large scale commercial undertakings are excluded, there does appear to be considerable

opening for some method by which the gap between producer and consumer could be bridged. But any thoughts of transferring the whole retail profit to the former would have to be given up, for the latter would immediately lose interest in the proposition and express preference for the scheme with which he was familiar. Again, it is doubtful if combination is feasible save for local distribution and sale; the organisation demanded for long distance transport and retail distribution involves a large personnel and much delegation of duties to paid officials. District or village associations of producers, formed for the express purpose of retailing either in shops, in public markets, or from door to door, those articles which are peculiar to Small Holders and small farmers, should have a future before them. Their only handicap is the inherent conservatism of their potential members.

CHAPTER XIII

AGRICULTURAL CO-OPERATION

Co-operation on the manor; its history and its advocates in the nineteenth century; agricultural co-operation abroad; Raiffeisen banks and alternative forms of co-operation in Germany; its development in France, Belgium and other European countries; in the New World; the peculiar position occupied by Denmark; co-operation in Great Britain and Ireland; the Agricultural Organisation Society; provision of credit; Irish conditions; future prospects.

THERE is only one organisation, whose advocates insistently claim can eliminate all the drawbacks referred to in the two previous chapters. Co-operative principles, if widely adopted, we are told, would, at one and the same time, bring the farmer a larger return for his produce, provide the consumer with better and cheaper food, and alleviate the whole agricultural situation by facilitating purchases, supplying credit and improving the standard of farming. *Ex parte* statements always require modification and, whilst certain of these contentions can be substantiated both here and abroad, many of them have yet to emerge satisfactorily from a prolonged practical test in this country.

The earliest example of co-operation applied to agriculture—and indeed to any industry—was the system of combined labour found on the mediaeval manor and in the still earlier village community. Co-operation was there literally typified, for each man assisted his neighbour at the plough by furnishing oxen to the extent of his ability, all helped in the common harvest and supported the common herdsman, ploughs and other implements were used by more than one cultivator. This was the form of husbandry extending over millions of acres in Western Europe for many hundreds of years. It was co-operative so far as labour and the supply of material were concerned, but in the modern acceptance of the word it lacked full development, in that the association of farmers was not the ultimate authority—the lord of the manor was always in the back-ground, representing, in the eyes of modern critics, the capitalist. The lord possessed

powers that no modern body of tenants would tolerate, hence the analogy abruptly ceases, but historically one can point to this combination of tenants, for purposes of mutual benefit in the actual field-operations, as of immemorial antiquity. The present day societies of Small Holders who band together to hire or purchase such machines as lie beyond their individual purses to acquire are therefore but reverting to the customs of their Saxon forefathers. Both practices, however, represent co-operative agriculture, not agricultural co-operation, which is a very different matter. It is a common form of accusation to make against present day farmers that they are both backward in acknowledging the advantages of co-operation and antagonistic to its principles. Perhaps in the light of the above account it is legitimate to answer that they were acquainted with these principles centuries before the birth of those industries which have now extensively put them into execution, and that if they have not precipitately followed, it is because they have preferred to watch developments and to pick and choose those features that tradition and reason suggested would stand them in best stead. With the disappearance of the manor as an agricultural unit went this method of communal husbandry.

The next form in which mutual collaboration appeared in rural districts in this country was represented by the village clubs and insurance societies which sprang up in the middle of the nineteenth century. A generation earlier co-operation had been tentatively applied to a few industrial undertakings, and at intervals throughout the century attempts were made by individuals to extend its principles to the tenancy of land, by establishing groups of workers on a profit-sharing basis. The former of course represented the beginnings of that vast and widely successful application of co-operation to all branches of urban distribution, generally initiated by the consumer, the latter nowhere survived for more than a very few years.

It is, however, frequently assumed that there was an interregnum between the demise of the village insurance clubs and the inauguration of the modern societies at the commencement of the twentieth century. But if actual associations were few in number, enthusiastic advocates were not lacking, and academic

discussions at least afforded opportunities for familiarising rural districts with the principles at stake. Thus in 1887 the position was placed very fully before the Essex Chamber of Commerce in a paper read by H. E. Moore and entitled "Agricultural Co-operation," in which the success achieved by such bodies as the "Western Counties Landowners' and Farmers' Agricultural Co-operative Society" was referred to. Whilst it is impossible to follow the author's detailed account of the ideal society, acknowledgment must be made of the fact that he foresaw the lines development would follow, and correctly anticipated the difficulties that would be encountered. He summarised the aims of rural co-operators under the following nine heads:

1. To obtain for members foods, manures, seeds and implements direct from the wholesale manufacturer or merchant.
2. To obtain steam or other agricultural implements for the use of members.
3. To place the farmer in direct communication with the consumer by the establishment of depots and shops for the sale of agricultural produce.
4. To assist in the establishment of the factory system for dairy and other produce.
5. To provide free chemical analysis of manures and foods, and botanical examination of seeds purchased by members.
6. To offer prizes for every description of agricultural labour.
7. To make temporary loans to farmers.
8. To provide superannuation allowances for old servants.
9. To provide club accommodation for members, and to effect such union among them that they might be able to protect their interests.

This affords an extremely interesting commentary on the subsequent assumption of duties by the State and the farming community respectively, for almost all of these recommendations have since been carried out. The first four have been included as essential elements in the programmes of co-operative societies, the fifth has been the subject of legislation, the sixth is still practised extensively, the seventh has been provided for, first by Societies and latterly by the State, responsibility for the eighth has also been definitely assumed by the State, and lastly

the ninth has been carried out as well by the Farmers' Union as by the formation of village clubs. Thus, even in agriculture the ideals of one generation become the accomplishments of the next.

The whole subject of co-operation received ventilation a few years later when the Royal Commission afforded an opportunity for its disciples and its derogators to express their views. It is apparent, from reading through the evidence of witnesses, that many landowners assumed that co-operation implied some system of profit-sharing among employees, the success of which they did not look forward to. On the other hand farmers, whilst almost invariably admitting that co-operation was not practised in their own neighbourhood, agreed that it should advantage them in the purchase of requirements and might do so in their sales. Fortunately all were not so antagonistic as the Scots farmer who declared: "I think nothing of it all; everything is far better left to individual effort...; it [a Dairy Company] was to distribute milk cheaper and do everything to make things better, but the only thing it has done has been to lose a lot of money of the shareholders." The third class of witness, comprising the scientist and the economist, urged the claims of combination, especially in the realm of marketing, and advocated the setting up of creameries on the lines of the already very successful ventures in Denmark. As a result of the Commission, no official steps were taken to aid the movement, and its history in Great Britain during the subsequent ten years contains little of moment.

From this point onward it is necessary to turn to other countries and to trace there the separate development of each branch, finally reverting to the United Kingdom for discussion of the modifications peculiar to it. Germany must be accorded pride of place, for with her are always associated the names of those two individuals who acted as pioneers in the first half of the nineteenth century—Friedrich Wilhelm Raiffeisen and Franz Hermann Schulze-Delitzsch. The organisation that took its name from the former was in origin philanthropic and in scope rural, while Schulze-Delitzsch banks were grounded on a business foundation and practically confined to the towns.

Raiffeisen in his capacity of burgomaster, saw the peasants, whenever they desired to add to their capital resources, thrown irrevocably into the hands of money-lenders, and in times of distress permanently weighed down by their burdens. Accordingly he founded in 1849 a "Loan-Bank," based on principles, which despite subsequent modifications, still distinguish it and its successors from other banking concerns. In the first place none but persons of irreproachable character could become members, and secondly the activities of each individual bank were rigidly confined to some small area, such as a single parish or village. Strictly speaking, the liability of members is unlimited, and at first share-holders were non-existent, but ultimately, as a result of legislation, shares in very small denominations (upon which no interest was paid) were issued. The money to promote the objects of these banks is raised by members themselves, that is from the savings of the peasants, augmented by the help of their better off neighbours. The aim of Raiffeisen was to enable the small agriculturist to borrow money for the furtherance of his business, hence the formation of members' committees to investigate applications for loans, which are only issued after close enquiry. Local Raiffeisen banks are grouped together into Unions, and these in turn draw on a central bank. By these means money is borrowed at a low rate of interest and advanced on their corporate responsibility to individual members. This briefly is the principle upon which a system of rural credit-banks has successfully spread itself over Germany. There is little doubt that, by inculcating the advantages of thrift and mutual help, they led to an improvement in rural conditions, but the claims put forward on their behalf in this and other countries have frequently been very exaggerated, and many of their later advances into fresh economic fields have not been so successful.

Schulze was a man of different type from Raiffeisen. The object of this judge of Delitzsch, in Prussia, when setting up his first banks, was to encourage the town artisans and shopkeepers by affording them facilities that they had hitherto lacked. These banks were founded on ordinary business principles, paid dividends to their shareholders, advanced loans on reasonable

security without the rigorous enquiries common to Raiffeisen establishments, and extended their activities over wide urban areas. As agricultural interests were not specifically catered for by them, it is unnecessary to pursue their description further; they have merely been referred to in passing as evidence of the congenial soil that awaited any form of co-operative banking in Germany.

The predilection shown there for this form of co-operation was almost unique, for in most other European countries societies for the provision of credit to agriculturists have generally taken secondary place to those having different objects. Statistics relating to all agricultural co-operative associations in Germany show that in 1918, out of a total of 29,600, no less than 18,200 were credit societies, the remainder being distributed between what we should describe as wholesale purchase societies (3100), dairies (3600), and miscellaneous bodies (4700). The other distinction at once apparent is the predominant position agriculture has secured for itself in German co-operation in general, for out of 37,000 registered societies, the great bulk (consisting of the above mentioned 29,600) are purely agricultural in character. Prior to the outbreak of war the accession of new societies averaged some thousand per annum, but in the four years that succeeded 1914 the net increase only amounted to thirteen hundred. An interesting analysis of what may be described as the density of these societies, both in relation to population and agriculture, has been published by the International Institute of Agriculture. This shows that for the whole of Germany there was in 1918 one agricultural society for every 2192 persons and for every 1175 hectares of cultivated land. Individual districts of course varied widely in these respects, for purely rural States had provided one society to every 900 persons, and on the left of the Rhine there was a society for every 427 hectares, whilst East Prussia, where large estates were numerous, had only one for every 4264 hectares. Of this the *Bulletin* said: "During the last few years there has been little or no change in the situation as regards agricultural co-operative societies in the various districts. For the whole of Germany, as the number of societies is increasing, the average

extent of cultivated land per society slowly tends to diminish; from 1238 hectares on June 1st 1914 the average area had fallen to 1175 hectares on June 1st 1918." This account of course fails to show the important fact that only a fraction of the potential rural membership has been secured. There are upwards of five million holdings under forty-five acres in extent, and it is apparent that not half of their owners adhere to the Societies. Much remains to be done before agricultural co-operation is universal in Germany—the home of the movement.

Before turning to other branches, it is important to note that even the credit banks have their vicissitudes, for in 1913 a German *Report* was issued under the following title: "Causes and effects of the recent want of success in the department of co-operative agricultural credit in Germany, and the lessons to be learned from it." In one of the cases referred to, the village bank at Nieder Modau had invested its members' savings in such holdings as mortgages on building land. Inefficient management, combined with these and other insecure investments, resulted in members being faced with a very heavy deficit; this in turn caused a run on the central banks by other societies, which led to the Darmstadt bank suspending payment. In the end, co-operators in the Duchy of Hesse found themselves faced with a prospective loss of some eleven million marks. At about the same time the agricultural credit-bank of Frankfort-on-the-Main also failed for fourteen million marks—mainly owing to bad management. Judging from the recommendations that accompanied the *Report*, it would appear that these disasters were recognised as being due to the overgrowth and complex nature of the societies themselves. They had tended to become organisations for the transaction of every conceivable undertaking connected with land and money, and their commitments were too wide-flung. It was demanded that closer inspection and supervision should be extended to these bodies, with a view to guarding against further calamities. In a word, it had begun to be seen that the splendid Raiffeisen scheme of the village Mutual Benefit Society was not only outrun but in danger of breaking up. Its very success had led to its extension into realms

of trading and finance where safeguards were less easy to provide, and vigilance too often called for.

The ramifications in question involve the classification of numerous types of society. A recently published tabular statement included those that had such divergent objects as the storage of grain, the sale of spirit, the provision of starch factories, the sale of honey, the acquisition in common of grazing land, the supplying of electricity, the desiccation of potatoes, the joint use of machinery, the provision of water, the milling of grain, and the combination of vine-growers. In addition, there were, of course, societies formed for the more usually accepted purposes, such as the marketing of fruit and vegetables, and the improvement of livestock. A further analysis of the financial results achieved by each of these divisions tends to bear out the strictures of certain German writers, for so long as purely agricultural activities were indulged in, either profits were made, or losses kept within reasonable limits. But in 1914, when conditions were still normal, the majority of the electricity supplying bodies were showing losses, as were those providing water, utilising machinery in common, desiccating potatoes, and even those concerned with livestock. The impartial *Bulletin* says in regard to the milling, the distilling and the vine growers' societies that, although many made a profit, there were also in numerous cases considerable losses to record. In the existing economic circumstances of Germany it is useless to compare the financial standing of the societies at the present time with that which they occupied in 1914, but during the first year after the war, and before the effects of her defeat had made themselves felt internally, the position was summed up by the *Bulletin*. Thus we are told that in 1919 there had been "strong development of the credit-societies in regard to their very important function as centres for the collection of agricultural savings; increase of societies for purchase and sale, and side by side with a decrease in their business, a tendency, such as was noticeable before the war, to devote themselves more to purchasing than to selling; continued and aggravated crises in the business of the dairy societies; and finally brisk development of the miscellaneous societies."

This epitomises the tendencies that are always in evidence when agricultural co-operation in Germany is closely examined. The inborn thrift and frugality of the peasant needed but little stimulus to respond fully to every encouragement afforded him for the provision of banking facilities. As soon as the banks found themselves in a strong position, and suffered considerable freedom of action by the State, they launched out into diverse operations, the success of which depended on widely different factors. Of these operations naturally the most favoured were those that appealed to the large farmer as well as the small; hence the prosperity of the "purchase and sale," or supply, societies. Such organisations appear to be the only ones that can meet with success in all countries and among all types of agriculturists; the power to buy small quantities of goods at wholesale prices is everywhere a great lodestone, and in Germany one saw the "Supply Union" develop inevitably into one huge wholesale supply society. Corn-selling and granary societies, despite financial assistance to the latter from the State, had a much more difficult path to follow, appealing as they did only to certain types of farmer, and those not the smallest. Incursions into the field of milling and baking, in attempts to eliminate the middleman, convinced those responsible for their guidance that here they lacked sufficient financial or moral backing to make any appreciable headway against strongly entrenched interests. Prior to the war, certain societies were embarking upon cattle-dealing operations, the success of which, judged alone, must have been very problematic, for reasons similar to those just recorded. The orthodox societies engaged upon the sale of the Small Holders' products were in general flourishing, and certain of the miscellaneous ones, which would in this and other countries have lacked every incentive, in Germany were at least satisfying a demand, whilst remaining solvent, if they were not increasing in numbers. The reasons why, in the United Kingdom agricultural co-operation can never be expected to compare with the German organisation, will be adduced later, but it must be pointed out here that conditions in this country have never called for the provision of credit-banks (that most successful of all co-operative ventures in Germany), and again that the

German small farmer and peasant have always been, both in temperament and by environment, more likely subjects for the propagation of communal activities than the natives of these Islands.

Among the Latin, as opposed to the Teutonic, peoples co-operation in rural districts has been distinguished by no marked predilection for any one branch, but has spread uniformly, and in both France and Belgium the provision of credit has not been the predominant issue. The French *Syndicats agricoles*, and later, the Belgian *ligues*, have undertaken multifarious duties and have met with considerable support. In Belgium, especially, during their process of evolution, they became the centre of religious and political strife, which ended in the church authorities securing power in the agricultural centres and the socialists having a determining voice in the town societies. Since their legalisation in the year 1884 French co-operative societies have annually increased in numbers and influence, and after exactly thirty years, on the outbreak of war, had an approximate membership of three-quarters of a million. Typical development has taken the form of decentralisation, which aimed at a reduction in the number of controlling societies and an increase in that of local bodies, the commune itself being regarded as the ideal unit. Every branch of agriculture is now catered for, from societies of vine growers to those connected with cheese factories; their distribution geographically is of course uneven, but the bulk of the numerous dairying *syndicats* is found in the West of France. The total membership, compared with the rural population or with the very numerous Small Holders, is amazingly meagre, and relatively falls far short of the German figures; the same remark applies to the Belgian *ligues*.

In Italy, Holland, Switzerland, and in fact in all European countries agricultural co-operation exists, the form in which it is most represented depending upon the predominant type of husbandry. For instance, in Holland and Switzerland dairy societies and those whose object is the insurance of livestock, will be found in abundance, whilst in parts of Italy and Southern France societies for insurance against hail are much in demand.

Enough has been said about the history of this movement on

the Continent of Europe to show its ubiquity and, within certain limits, its popularity; after glancing at conditions in the newer countries, there remains for consideration the peculiar case of Denmark. In the United States, Canada and Australia are found large scale combinations of farmers organised for the purpose of marketing grain. This is a development that is naturally not met with in the countries so far reviewed, but one that has thoroughly justified itself in cases where there is a large export trade. As was pointed out in the previous chapter, the co-operative marketing of wheat for internal consumption presents difficulties of considerable magnitude, but an export trade modifies the position in favour of combined handling. In certain areas of the United States the bulk of the wheat is thus marketed with, it is claimed, very great advantage to the producer. It is probable that the small Continental co-operator would look askance at this development, which in truth approximates to a ring or combine of sellers, and has little of the atmosphere of neighbourly help that is elsewhere associated with unions of agriculturists. During the war period, when Governments themselves bought and sold entire cereal crops, the obligation to present a united front led to the extension of these "Pools," as they were generally designated, and their activities have subsequently been continued. A recent report from the British Consul at Portland, Oregon, describes the rapid expansion of such co-operative associations, the objects of which are to make the growers independent of dealers and middlemen, and, in addition, to provide them with storage room, thus obviating the necessity for precipitate sales. In fact the erection of numerous elevators is one of the first steps taken by bodies such as the "United States Grain Growers Incorporated," and by the year 1920 there were in the Middle West alone upwards of five thousand co-operative storehouses of this description. There are two aspects of this type of undertaking which at once distinguish it from the older and more orthodox form. In the first place the financial operations involved are on an extremely large scale; for instance the capital required for the work of the above mentioned association runs into hundreds of millions of dollars, the bulk of which must have been invested in buildings.

Secondly, it is essential that membership should be placed on a quasi-permanent basis, and to this end it is customary to stipulate that members must contract to market their crops through the "Pool" for a period of years. Only by these means can a sufficient bulk of supplies be assured, and at the same time the less loyal or enthusiastic members be prevented from dispensing with the services of the organisation by withholding their crops or dealing direct with purchasers. It is impossible to forecast what will be the future of these corporations—whether they will in the end dominate the market or whether the opposition, which is already strong, will cause them to abandon their efforts, but in the meantime they afford an interesting example of agricultural co-operation applied on a very large scale, and to a body that has in the past presented unusual difficulties. A stage still further removed from the village society is revealed if the corporate steps taken by the producers in a whole Colony or a Dependency are examined. When the fruit growers of Australia and of South Africa combine for the purposes of marketing their products in this country, they do so with the approbation and the encouragement of their respective Governments. The objects of each party are then as follows: on the part of the producers, that maximum prices should be secured and that they as a body shall be more formidable competitors in the British market than as individuals; on the part of their Government, the necessity—frequently overlooked by the producers—for a uniformly high standard both of quality and packing is the motive that causes State intervention, often sweetened by financial assistance. In every case combination for the purposes of securing admission to a distant market is preferable to individual effort, and for newer countries attempting to obtain a footing for the first time in some established trade it becomes imperative.

In America, co-operation for the purposes of local marketing has already been indirectly referred to in the previous chapter, where the elimination of the commission agent was shown to be the great desideratum. That much headway has yet to be made is apparent when the fact is elicited that only some eight per cent. of American farmers were effecting sales through

co-operative associations in 1919, and the value of what they thus disposed of was inflated by the preponderance of wheat and cotton sold through the export organisations. Certain individual States had, however, good records. Minnesota, for example, claimed that in 1920 co-operative societies had disposed of one-fifth of its potato crop, more than a third of its grain and almost two-thirds of all the butter produced within its boundaries; in addition, sixty-five per cent. of the livestock sent to market passed through the associations' hands. Every branch, from credit banks to hail insurance societies, is represented in America, and difficulties that are not met with in Europe are gradually being circumvented. Among these, native writers include the scattered nature of the farms, the long distances involved, and the heterogeneous character of the agriculturists themselves. The depression in agriculture that set in after 1920 was of course world-wide and affected co-operating and non-co-operating nations indiscriminately. The American Commission of enquiry into the state of agriculture, however, in common with similar bodies engaged upon like tasks elsewhere, regretted its inability to suggest any remedy, "legislative or economic, which will of itself reduce the difference between producers' and consumers' prices." In its opinion, co-operative principles deserved encouragement, especially when they aimed at a higher standard of quality and better preparation for market, but it held that until the grower, by these or other means, could assume responsibility for the final appearance of his products in the retail state, the middleman's share of the cost would remain at its existing level. From independent testimony it is apparent that the tendency to claim for the producer the whole of the extra profits obtained when the services of the middleman have been dispensed with is as general in America as in other countries. This disinclination to share with the ultimate purchaser any benefits accruing from more efficient methods of marketing is doubly unfortunate, for it militates against an increase in business and at the same time alienates sympathy from the one class upon which the producer is then dependent.

The peculiar position occupied by Denmark as a centre of

agricultural co-operation must now be referred to. It has become the fashion categorically to claim that the placing of British agriculture upon a firm basis of prosperity can be achieved by sedulously copying the methods in vogue across the North Sea; that, in a word, every step taken in Denmark has but to be repeated here in order to effect a transformation similar to that witnessed there during the last half century. There are, however, certain fundamental differences between the economic and agricultural position of the two countries which are generally overlooked. In the first place the vast bulk of the Danish farms are producing those commodities which are pre-eminently the most suitable for co-operative handling; bacon, cheese, butter and eggs in all countries of the world lend themselves readily to such methods. Secondly, and this is the most important factor in the success of Danish co-operation, virtually the whole trade is an export one, for there is but one large town, Copenhagen, which can absorb but a fraction of the agricultural output. This inevitably confers great strength upon the societies, for they can compel obedience to their regulations and insist upon a uniform standard being observed. In other countries, where alternative outlets exist, there is a constant leakage of the best type of article, due to surreptitious sales, which no rules can obviate. In Denmark, however, it is a case of handing over to the societies the whole of one's output or running the risk of losing the only existing market. This practice of selling picked samples behind the back of the society, as it were, has unfortunately been much in evidence in Great Britain, and has tended at one and the same time to lower the reputation of the former, and to cause individual members to look upon it as merely a channel for their second grade goods.

It is sometimes suggested that in Denmark Small Holdings are ubiquitous and have alone led to the formation of the co-operative societies. Statistics show that the "average" size of all Danish farms is in the neighbourhood of thirty acres, and that in 1916 small farms numbered 106,000, covering some eighteen acres each, while what are officially described as "large" numbered upwards of 78,000 with an average area of seventy-four acres. Enough has before been said in regard to the danger

of generalising from such figures, but it may be pointed out that holdings appear to average a little less than half the size of those found in England and Wales, and that there are actually more than 26,000 farms over 120 acres in extent. That the latter are not mainly confined to the poorer and sandier soils, and therefore possibly in reality "Small Holdings," is evidenced by the fact that the value per hectare of each class increases from the smallest to the largest size; again even in Jutland there are actually more Small than large holdings. It is therefore very doubtful if the scale upon which agricultural operations have been conducted has had any direct bearing upon the course events pursued. Rather must the altered types of farming forced upon the country two generations ago, be looked upon as giving a direct lead to the formation of combinations of producers. At that time Danish farmers suffered, in common with those in other European countries, from the exploitation of the cereal resources of North America, and they had also their own peculiar difficulties to contend with, caused by the recent loss of territory and markets to Germany. They turned from the orthodox practices of cereal raising and cattle grazing to the intensive production of dairy products, retained a small area of corn on the best land, and supported their cattle on the produce of their arable fields. The large landowners shared equally with the small farmer in this metamorphosis, and as co-operative societies came into being for the purpose of affording an outlet to the new products of Danish soil, they, equally with their smaller neighbours and tenants, enrolled themselves as members. At the present time the man who farms his two hundred, five hundred or even a thousand acres of land is, as far as membership goes, on an equality with the one who tends his five or ten acres. Very occasionally complaints are heard from the former that the principle of "one member one vote" in the councils of the societies presses hard on the large producer, but in the long run, such absolute equality is recognised as the only possible solution of the situation.

Co-operation in Denmark has been extended to every branch of purchase and sale, but the Raiffeisen system of credit-banks has not been taken up, their place being filled by the ample

facilities afforded for the purchase of land on easy terms, and by the existence of a limited number of Credit-Union Banks of a private character. As might be anticipated, the strongest societies are those engaged in dairying, bacon-curing and egg collecting, but numerous others exist, whose activities extend to livestock insurance, the improvement of horse, cattle and pig breeding and all forms of wholesale purchasing. It is unnecessary to quote statistics to show the numerical and pecuniary growth of these societies; it is sufficient to acknowledge that practically the whole of the agricultural trade of the country is in their hands. But it is interesting to note, as evidence of the thoroughness with which those responsible for guiding the societies act, that organisations have been established in connection with the latter, whose functions are to collect economic and statistical data relating to both internal and external conditions. That this policy was adopted early in the movement is shown by reference to an account of Danish agriculture contained in the *Report* of the Royal Commission of 1893. It is there stated that in 1880 the plan of delivering butter to local dealers, who in turn disposed of it through a broker to the exporters, was given up and direct intercourse between producers and exporters established. The next step was subsequently taken, and the English agents' services dispensed with, direct business relations being entered into, first with the wholesale merchants, and later with the retail dealers in this country. The activities of Danish representatives became familiar to British traders when they were engaged in re-establishing their products in our markets after the return of peace, and it was due to their "intelligence branch," in conjunction with the undoubted superiority of the articles themselves, that such efforts were speedily successful. The Danes have learnt that it is necessary to study the foreigner's requirements, and even his peculiar fancies, on the spot, and they have effected numerous modifications in their methods of packing expressly to meet conditions in Great Britain, which forms easily their principal market. Again, the fostering of farmers' clubs and societies, the establishment of societies for scientific research and the pursuit of economic problems all come within the radius of action of

Danish co-operation. For an account of these multifarious activities it is advisable to read such a work as Rider Haggard's *Rural Denmark*, where after giving a full description of all that he himself witnessed, the author sums up the principal lessons to be learned thus—

1. That in a free trade country of limited area and lacking virgin soil, co-operation is necessary to a full measure of agricultural success.
2. That only free-holders, or farmers holding under some form of perpetual lease, which in practice amounts to the same thing as free-hold, will co-operate to any wide extent.
3. That the accumulation of estates, which for the most part descend intact from one owner to another, and are hired out piecemeal to tenants, is not conducive to the multiplication of free-holders, nor therefore to the establishment of general co-operation.

It will be observed that this authority attributes the success achieved in Denmark principally to the system of land-tenure rather than to the compelling influence of an export trade comprising precisely those articles that best lend themselves to co-operative handling. Nothing further will be said upon this question here, for the steps taken in Denmark to facilitate the establishment of occupying owners has been already discussed, and readers must form their own judgment as to the comparative influence of various contributory causes upon a movement, which, there is general agreement, has met with unqualified success.

In Great Britain and Ireland the struggle to establish rural co-operation has been an uphill one, nor can impartial observers feel that its position is even yet assured. In England and Wales the Agricultural Organisation Society has had a life of over twenty years, and at the present time can claim that it has affiliated to it upwards of fourteen hundred societies with a membership of 145,000 persons. There are few societies that do not owe allegiance to that body, so that the above statistics of membership afford an approximate indication of the volume of support accorded co-operation by the rural districts of this country. At first glance a membership of such proportions conveys the impression that one in every three of the farmers in England and Wales adheres, at least indirectly, to the Society,

but if the figures relating to the different branches themselves are examined it will be found that there are only some 227 Farmers' Societies, with a membership of 64,000, and that no less than 1054 affiliated bodies are solely concerned with allotments. These latter were mainly a result of the war, and the bulk are centred in urban districts. Even if all the other miscellaneous societies are included as being representative of agriculture, there are then only 406 out of the total of 1460. It is therefore obvious that but a fraction of the farmers (approximately one in seven) have as yet been enrolled. If one turns to the financial position of the Society itself one finds that it has been buttressed up with the aid of government grants received through the Development Commissioners. Immediately after the war these annual subventions were greatly increased to assist the Society in its attempts to extend its operations, and sums ranging from fifteen to upwards of forty thousand pounds were allotted from the financial year 1919-20 to that of 1922-3. After this latter year all forms of direct State assistance terminate, and the Agricultural Organisation Society is left to its own resources. The financial standing of this body has been on a different basis to corresponding organisations abroad, where it is the exception to find State funds on a large scale placed at their disposal. The policy was no doubt justifiable as a temporary measure, but few would be found to advocate its permanent retention. The corollary of official grants in aid has taken the form of diminutive subscription lists, and in future the only possible course, if the Society's activities are to be maintained, is to demand that those who benefit by its membership shall subscribe adequately to its support. During the year 1921-2, the independent income of the Society amounted to only £4500, of which £800 was derived from subscriptions, £3000 from Farmers' Societies and £700 from Allotment Societies. It is surely not too much to ask of each agricultural member that he should directly contribute some ten shillings per annum, as by such means the Society's income could be retained at its past level? If such a moderate request resulted—as has been prognosticated would be the case—in a wholesale depletion of members, then one can only conclude that British farmers are

right when they aver that they do not benefit by collective assistance, or, alternatively, that the claims of the Society in relation to agriculture have been exaggerated, and that its work is best confined to the allotment holder.

The comparative popularity of the different branches of the Agricultural Organisation Society can be gauged fairly accurately if their annual turnover is examined. Neglecting the Allotment Societies, it would appear that in the year 1921-2 feeding-stuffs, fertilisers, seeds and implements were purchased to the value of some six and a half million pounds, and agricultural produce disposed of for the sum of seven and a half million pounds. Feeding-stuffs accounted for over two-thirds of the former figure, and the latter was subdivided as follows—milk and dairy produce £3,100,000, livestock, meat and bacon, £2,700,000, fruit and garden produce, £370,000, eggs and poultry £540,000. In times of steady prices the fluctuations of these yearly turnovers might be accepted as affording an indication of the extent of the trade carried on by the societies concerned, but since 1914 such a method is obviously fallacious, yet writers are not lacking who adduce the figures of pre-war years as proof of the advance recorded. Thus, even C. R. Fay in an appendix to the last edition of that very comprehensive work *Co-operation at Home and Abroad* compares the turnover of various branches in 1912 with those of 1918. A total trade in 1918 of £7,190,000 appears large when placed side by side with that valued at £1,825,000 in 1912, as do the following, culled from the same pages: turnover of purchase societies (1912, £1,334,000; 1918, £4,674,000); turnover of dairy societies (1912, £406,000; 1918, £1,467,000); trade of egg and poultry societies (1912, £28,000; 1918, £352,000). There should be a word of warning or explanation given that by 1918 values were already much inflated, otherwise the method of comparison employed is akin to using an altered scale of measurement. Lacking the unknown factor of the weight of goods bought and disposed of per head, no test other than that of membership affords any criterion as to the prosperity of the movement. If comparison of the above two years is made on these lines one finds that the turnover in 1918 represents an increase of 294 per cent. over that existing in 1912,

but the membership was only augmented by 195 per cent. Similarly for the purchase societies the figures are 250 and 98 per cent.—the value of trade done by the dairy societies increased by some 261 per cent., their membership by only 112 per cent.; for the egg and poultry societies the figures were even more startling, as values increased by no less than 1116 per cent. and membership by only 169 per cent. Lastly, if the index numbers representing commodity values be consulted, and the necessary adjustments made, it will be found that only in the case of eggs and poultry is there evidence of any substantial increase in the bulk of articles handled by the societies in 1918. For example the 1912 turnover (£406,000) of the dairy societies, if their business *per capita* remained constant, would have been automatically increased in 1918 to £860,000 by the addition of 112 per cent. to their membership. The average increase in the value of milk for the year 1918 was 151 per cent., for butter 109 per cent. and for cheese 133 per cent.; an increase of only 100 per cent. added to the £860,000 would have given a total of £1,720,000, so it is evident that claims of increasing business, based on a turnover of £1,467,000 are, to say the least, unconvincing. In common with other post-war writers, W. H. Warman in *Agricultural Co-operation* pursues a similar course in a description of the dairy societies' progress between 1913 and 1920, for he omits any reference to changed values, and confines himself to a table of figures, prefaced with the remark that, "Co-operation has made as much progress in dairy organisation as in any other branch, as the following statistics show." The war admittedly strengthened the position of the Society and of its branches, but it is unfortunate that its financial operations should have been selected as proof of this (even when placed side by side with statistics of membership) without some explanation. Membership almost doubled again between 1918 and 1920, whilst the value of the society's transactions increased still more, but the bulk of the new members were allotment-holders and the peak of commodity values was only reached in the latter year; by 1922 members had seceded heavily, and the turnover of the Society reflected declining values.

The principal activities of the parent Society have been

indicated in the course of the last few pages, but there remain one or two comments to make on certain features that have not been touched on. The provision of credit has frequently been made the sole object of new societies, but almost invariably the latter have failed to develop; in fact the number of affiliated branches devoted to this purpose has shrunk in recent years, and at no time have their advances to members amounted to more than a few hundred pounds—in 1918 twenty-two societies with a membership of 420 advanced £601. This failure is probably due to several causes. In this country, despite popular belief, the agriculturist, except in times of depression, is reasonably prosperous, and can secure what fresh sums he requires as capital either from his own resources or from the existing banks, upon giving reasonable security. The Continental system appeals mainly to the peasant proprietor, and in many cases is contrived to benefit solely the small occupying owner—a type of farmer still represented by a small minority here. English farmers again would not appreciate the extension of co-operative principles to the intimate knowledge of one another's business affairs that is called for by the typical Raiffeisen bank. It has also been suggested that the provision of credit by dealers and merchants in this country partly abrogates the necessity for borrowing by farmers. The combination of some, or all, of these factors has certainly up to recent times resulted in no demand for fresh means of raising capital being forthcoming. Whether a continuation of severe depression, in conjunction with the setting up of several thousand Small Holders, will affect the position remains to be seen. This was one of the matters specifically referred to enquiry by the Government in the winter of 1922-3, with a view to possible legislation. The results of the deliberations of the Committee entrusted with this enquiry have only been made public as this volume goes to press, so that there is no opportunity of discussing them in their final form. It may be recorded, however, that it is recommended that credit be granted to two classes of agriculturists. In the first instance those farmers who purchased their holdings between the passage of the Corn Production Act of 1917 and the repeal of its successor in 1921

are to be enabled to borrow up to seventy-five per cent. of the present value of the land in question, such sums to be repayable within forty years on an annuity basis. Secondly, short term credit is to be made available to the general body of agriculturists by means of State aid on a pound for pound basis towards the capitalisation of Agricultural Credit Societies. It is very problematical as to what number of the purchasers of farms between the years in question were led to that course of action by the "promises" conveyed in the Corn Production Acts, but even assuming that a large percentage were so swayed, the course of action now advocated will merely aid a class of farmers who showed little business aptitude, and will exclude from its benefits numerous more deserving cases. Nor will a loan of three-quarters of the values current in 1923 necessarily enable those who purchased at the levels of 1918 and 1919 to clear their financial position. The provision of the alternative type of financial assistance merely connotes a State attempt to enter a field where private enterprise has hitherto failed from lack of support. Here in such times as the present, when the accepted sources for obtaining advances are tending to dry up as the position of the prospective borrower becomes more straitened, it is certain that funds backed by the State will be drawn on by those struggling to keep their heads above water; whether, in consequence, any scheme devised to meet the situation can, while remaining solvent, conduct its operations on a strictly business footing, is another question. The provision of credit in normal times to farmers in general, and in abnormal times to a preponderating number of small men, many of whom were artificially established at times of high values, presents two very different financial risks.

The Agricultural Wholesale Society represents a recent attempt to combine into one body the purchasing machinery of the dependant societies. Formed during the war, it traded at a profit at a time when it was virtually impossible to avoid prosperity; then fell on evil times, only to show signs of ultimate recovery. Such an agency should in ordinary circumstances secure considerable support from the adhesion of numerous branches, for it is obviously to the advantage of the latter to

effect their purchases through its medium. The difficulties it has had to contend with, apart from the natural hostility of the dealers it sought to oust, have taken the shape of a tendency on the part of societies to refrain from placing the whole of their orders through it, or by their refusal to commit themselves to such a course of action for more than a short period of time. A strongly supported wholesale purchase society could confer great benefits upon agriculturists, not only by obtaining for them the highest class of goods at wholesale prices, but, by pursuing their interests back to the manufacturing stage, might cause competition for really extensive orders to result in further reductions.

In Scotland and Ireland are to be found examples of all the societies enumerated above as existing in England and Wales, but their comparative popularity, and, therefore, their development has been determined by local conditions. Thus in Ireland the creameries have met with more success than all other types put together, and even credit societies were, prior to the war, more numerous than in England, whilst in Scotland, purchase societies and those devoted to the sale of mixed products had the largest trade and membership. The growth of agricultural co-operation in Ireland has been credited to two causes—the individual efforts of Sir Horace Plunkett, dating from the early 'nineties, and the fact that the land purchase Acts of the British government resulted, in less than a generation, in the bulk of the peasants becoming their own landlords. It is invidious to attempt to differentiate between these two causes; one might perhaps hazard the suggestion that the former, by precept and example, prepared the ground, and that subsequent land purchase caused numerous small proprietors to stand in need of organisation. The creameries are run on orthodox lines, and apparently leave little to be desired in the way of technical methods, but it is doubtful if the same thoroughness can be claimed for their actual marketing operations. In this connection it must be remembered that they are in active competition for the British butter trade with Denmark and New Zealand, and the trading equipment of the former country has already been dilated upon. That co-operation could be successfully applied

to Irish agriculture in a much larger degree is widely acknowledged; that it would have beneficial results by raising the standard of production is also a subject of common agreement, but the Celtic temperament, especially when found in agricultural surroundings, requires patient methods, and cannot be hustled. In the Irish Agricultural Organisation Society is centred the controlling body, one that has had a few years longer life than the corresponding Society in England. It has achieved much, and the measure of the difficulties it has overcome can be best appreciated by those who have perused that excellent work *Rural Reconstruction in Ireland* by L. Smith Gordon and L. C. Staples. The authors themselves make the following reasonable claims on behalf of the movement in Ireland—

As a business organisation the co-operative society has introduced its members to a field in which they had little practical knowledge. For the most part, the vision of the Irish farmer did not extend beyond the community in which he lived. If he sold his produce, it was to the gombeen man or to the buyer at the fair, who was his only connection with the outside economic world. Nowhere did farmers carry on their farming on a business basis. For them it was an occupation which in good years brought good living, and in lean years made it hard to get along. Cost-accounting systems, insurance, productive loans—these were matters beyond their ken. The co-operative society, which made necessary considerable business knowledge, developed capacities which were of advantage in individual business relations.... To-day Irish farmers conduct their co-operative societies for themselves. In their more individual relations they understand the nature of a productive loan; if necessary they are able to establish connections with buyers in England and Scotland. They have learned to demand a guarantee with their artificial manures, and are gradually understanding that the quality as well as the quantity of their products counts. They are undertaking, often on their own account, experiments in co-operative enterprise, are buying tractors and installing mills. In fact the farmer has come to realise that he is as much a business man as an agriculturist.

The absolute fairness of these writers, in contradistinction to the exaggerated statements only too frequently made on behalf of co-operation, is emphasised when one finds them pointing out that, "the record of progress is indeed a great one in comparison with the records of most other agencies which have

tried to do something for the betterment of Ireland; yet it is not particularly impressive from the point of view of the student of agricultural co-operation in general. Nor can the enquirers find, in visiting the country districts, more than a comparatively small number of societies which are in any way qualified to serve as patterns either of business methods or of co-operative faith." If Irish co-operation is as well served by its officials as by its historians it deserves to flourish in the future.

A short description having been given of the past history of agricultural co-operation in this and other countries, it remains to discuss in general terms its future outlook here. For this purpose it is necessary to deal separately with each of the different forms the movement can assume. Take the purchase side first. Here it is impossible but that eventually the bulk of agriculturists will see the advantages attaching to corporate trading. This branch has the great asset of appealing with almost equal strength to the large as well as the small farmer, and moreover no manufacturing processes need obtrude themselves, as is the case where the majority of articles the farmer sells are concerned. There is also a more homogeneous trade in agricultural requisites than in products of the soil, for the requirements of all classes differ mainly in degree and but little in character, hence when dealing with manufacturers an additional lever is placed in their hands.

The provision of credit, for reasons already given, is never likely to be the subject of widespread organisation. In times of distress, schemes whereby insolvent agriculturists could defer the inevitable bankruptcy, will naturally be well received, but in ordinary circumstances British farmers are sufficiently independent, and British banks sufficiently accommodating, to negate the possibility of Raiffeisen-like bodies meeting with approbation.

The communal ownership of machinery is a matter that has received scanty attention in this chapter. Abroad one sees that it has secured a certain measure of support, but in the British Isles only spasmodic attempts have been made, and the majority of these have not achieved even local success. This is essentially co-operative agriculture rather than agricultural co-operation, and as such is of immemorial antiquity, but its extension to

modern machinery on separate holdings introduces complications that were non-existent in "champion" husbandry. Thus, anyone who has followed the story of some local association formed for the purpose of acquiring by purchase an expensive piece of portable machinery, will agree that the human element frustrates the latter's equitable use. Many hundreds of pounds—doubtless borrowed from a bank—are expended by a group of small farmers on a steam-threshing plant. At once discussion arises over such questions as the following. What system of priority is to be adopted? Is the largest shareholder to have first claim on the machine, or is it to go to whichever calls for it first? When the machine is idle, how are such overhead charges as the attendants' wages to be allocated, and how are those due to varying lengths of journey from farm to farm to be equalised? How is the single-handed Small Holder to provide manual assistance when his farm is visited? Add to these human difficulties the economic factor that, unless such machinery can be kept fully employed, it is cheaper to hire from contractors, and there is sufficient explanation of why really expensive plant is not the subject of co-operative ownership. Opportunity for such use in the case of smaller implements has not arisen on any considerable scale between the final period of enclosure and the present time, except in isolated survivals such as the Isle of Axholme. Here one may see binders being worked by groups of adjacent strip-owners, and in certain areas given up to Small Holdings, seasonal operations are facilitated by the common use of machinery, but these are exceptions to the existing custom whereby each farmer in the first instance provides himself with all the implements he will require. That a further extension of Small Holdings may result in co-operation stepping into the breach and providing some satisfactory method by which both machinery and implements are made available to their proprietors, is possible, but at present the signs are not very promising.

Co-operative agriculture, pure and simple, has everywhere proved a failure, from the philanthropic efforts of individual landowners of the early nineteenth century down to the post-war colonies provided for ex-service men by the State. In the former

no doubt the human factor was again responsible, for no man will work as conscientiously or hard for a community as he will for himself alone, whilst in the colonies, to these same influences must be added the wastefulness always associated with official control.

One is then left with that large branch connected with co-operative sale, but here again subdivision is essential for the purpose of analysis. Corn, whatever may be the conditions ruling in the new countries of the world, has never lent itself to co-operative marketing in this country, and is annually less likely to do so. Being essentially the product of large farms, and forming but a fraction of the total supply, it is entirely absorbed within the country and offers little scope for economies in handling, and none for collective bargaining. It also requires to undergo elaborate and expensive processes before it is fit for human consumption. Livestock, such as cattle and sheep, again present difficulties, for despite all that has been urged against sales by auction or on commission, these methods, in conjunction with direct dealings with butchers (on admittedly uneconomic principles), have become thoroughly standardised, and co-operative societies would have the active opposition of a powerful trade as well as the lethargy of the farmer to combat. Pigs present an easier problem, and already societies in all parts of the United Kingdom are doing considerable trade by buying these animals from their members, and, after completing the intermediate processes, marketing the bacon. Milk, in which the home producer has a virtual monopoly, has already shown the value of combination for the purposes of negotiating its sale, and Ireland has proved that, in grazing countries with an export trade, co-operation can be carried several stages further and be made to include manufacturing processes and, finally, marketing. But it is when one approaches the typical Small Holder's and the market gardener's province that the latent possibilities of co-operation are opened out, and the fact that it has so far only touched the fringe of the problem becomes apparent. For here, in the collection and disposal of poultry, eggs, fruit and butter there is a real opportunity afforded, at one and the same time, to reduce the cost to the consumer and, by eliminating the

middleman, to secure additional profits for the producer. But the hasty and promiscuous establishment of societies in unsuitable localities, or staffed with officials dependent upon a distant headquarters, is certainly not the way to attain success. There are at present only certain districts that fulfil the necessary requirements; among these must be reckoned those containing small farms and commercial gardens to be found within a radius of all large towns, certain market-garden districts such as parts of Bedfordshire, the Isle of Ely and the Cornish peninsula, and lastly the fruit growing areas of Evesham, Cambridgeshire and Kent. In the first case an assured market is ready at hand for everything that the surrounding farms can produce, and in the case of the districts particularised there is that homogeneity of interests, of soil, and of output that should favour combination in every step taken to secure more distant outlets.

It is questionable whether the most efficient type of society for a group of Small Holders is not one, the complete responsibility for the running of which devolves upon the associates in common. If paid officials can be dispensed with, or their services confined to an occasional visit of an advisory nature, there is both a financial saving and a stimulus to work. The disposal of profits, after a fixed and small rate of interest has been paid on capital, can also be made to form a useful incentive, by adhesion to the rule that members benefit in strict proportion to the volume of trade they have contributed. Absolute equality in regard to voting power, and the possession of shares limited to a very moderate amount are necessary features in any small society; liability should also be confined to the value of the shares subscribed. Further, it is not too much to insist that all the commodities produced by members should, for a fixed period, be handled by the society; this at once obviates the possibility of only inferior goods being tendered, and leads to a higher standard being maintained in the society's output.

If the economic conditions postulated above are taken advantage of and the rules just quoted adhered to, there is no reason why agricultural co-operation in this country should not be extended without artificial and deleterious State subventions—unless indeed the apathy of the small farmer is as great as we

are still led to believe. Some twelve years ago Mr (now Sir Daniel) Hall wrote thus of the Small Holders in the Isle of Axholme: "We are told that the economic success of Small Holdings depends on welding them together into co-operative communities, but if the Isle of Axholme furnishes any indication of the future, the men who are going to teach the English farmers to co-operate have got an uphill task before them." The intervening years have shown a certain improvement in this respect, but when one finds, even in France and Germany, only a fraction of the far more numerous small men drawn within the co-operative net, is it to be wondered at that in this country progress is still very slow? The more sturdy and independent the individual—and therefore the more likely to succeed by his own efforts—the less does co-operation appeal to him, and no one familiar with the history of British agriculture will deny that in the past such men as these were the ones who came through bad times with least hurt. An appeal to them to throw in their lot with the average and with the inefficient farmer is not at first glance an attractive proposition, and the advantages of combination are not easy to place before them, yet this lies at the very root of the matter, for is not co-operation founded on the ideal of the strong helping the weak?

The reasons adduced in the foregoing pages for the non-success of co-operation in this country—namely the fact that there is virtually no export trade, the absence of numerous Small Holders, and the inability of farmers, from temperamental causes, to pool their resources—are those universally accepted, but is it not possible that there may exist deeper rooted economic causes which might be partly responsible? For instance, if it could be shown that British agriculture had never touched the depths of depression in the middle of the nineteenth century, that the majority of Continental nations experienced, or, expressed differently, that its followers had never been forced to work so desperately hard for such poor returns as their neighbours, might not this account for their failure to sink individualism here, while the German and the Frenchman eagerly clutched at the last straw—that of co-operation? Assume for a moment that the Commission of 1893 had not resulted in the many

minor aids to farming that owed their origin to its deliberations, and that the depression had continued in its severest form for another decade, is it not conceivable that, thrown entirely on their own resources, agriculturists would have responded more kindly to the overtures of co-operative leaders? Extreme distress led to the popularity of Raiffeisen in Germany, the Danes turned to co-operation when their whole outlook was changed by constitutional and economic losses, and no one would claim that Irish agriculturists were as prosperous as the English when Sir Horace Plunkett commenced his work. In this country agriculture has yielded better returns to those investing in it, or, conversely, has permitted a less strenuous life to be led, for the system of landlord and tenant, with its corollary of fair-sized holdings, has not made such demands upon the physical and financial reserves of farmers as have systems in which small owners predominate. Margins have been correspondingly larger in this country, and depression has not resulted in such acute suffering. Is it unreasonable to suggest therefore that the factor of compulsion has to a great extent been absent?

CHAPTER XIV

THE WHEAT SUPPLY OF THE UNITED KINGDOM

Review of the present situation; the mediaeval loaf and its constituents; the value attached to wheat; growth of the Corn Laws; the Assize of bread; conditions prior to and during the French War; the Corn Law Act of 1815; the situation prior to 1846; delayed results of the Repeal; decline in wheat prices and concurrently of acreage; cycles; foreign competition.

AN eminent authority has accurately summed up the present position of this country in relation to its supply of bread-stuffs by designating it "a nation of week-enders," for our requirements are only met from the produce of our own fields as to one-fifth—or from a Saturday afternoon to a Monday morning. The whole history of farming in Great Britain is bound up with this question of the supply of the staple article of food, and it is not too strong a statement to make that the nation's only interest in the industry has been dictated by its varying dependence on it for its daily bread. From time immemorial, until some hundred and thirty years ago, the matter of wheat production was simply a domestic one for this and other nations to settle, either by allowing free play to economic laws or by legislating to encourage growers or importers. Then began the transition stage when certain countries could, by no ordinary means, compass their own supplies, and attempts were made to create special privileges to meet their wants. Finally, appeared the beginning of what must be the last stage in the development of a world wheat market; a stage in which the thickly populated nations of the world will concentrate on the production of other soil products, leaving to the new countries of both hemispheres the business of raising their cereals. A time will perhaps come when scrambles for overseas supplies cease, and a uniform system of purchase and distribution be practised. Then, the rate of yield will doubtless be uniformly high in all countries, and the costs of production therefore placed on a comparable basis. At that distant time there will pre-

sumably still remain one source of anxiety to the wheat growing peoples of the world. A yield from the hundreds of millions of acres of prairie land of North and South America at the rate of thirty bushels to the acre, similar rates of production on a hundred thousand square miles in Russia, and lesser tracts in Australia and other quarters of the globe as yet untouched, will provide them with their food, but there will be ever present the haunting fear of what might happen if the rice-eating peoples of China, India and elsewhere changed their habits of diet, for the world could not indefinitely feed its total population (assuming a constant rate of increase) on wheat, even if the highest existing level of production became the universal standard. This however is an argument worn threadbare in the case of this country during the past century, and its extension to the world at large will doubtless be the cause of alternate anxiety and satisfaction a century hence. In this and the following chapter it is proposed first to review the past position of the United Kingdom as a wheat producer and importer, then to describe the world's sources of supply, and finally to discuss the question of the artificial stimulation of production.

One is accustomed to read that in Anglo-Saxon and Norman times one of the common fields was annually sown with autumn wheat, and that therefore exactly one third of the arable land of the country was devoted to the production of a white loaf, but recent investigations have tended to show that rye was frequently a larger crop than had been supposed by earlier writers, and there is distinct evidence of a diversion of the brown and the white loaf respectively to the manorial retainers and to the lord himself. That by the fourteenth century there was antipathy to rye, or other inferior types of bread, is plain from the well-known lines in *Piers Plowman*:

Nor would beggars eat bread with beans in it,
But stamped bread, fine bread, clear wheaten bread.

This aversion spread more rapidly here than on the Continent, and England was the first European country whose peasantry turned exclusively to the wheaten loaf. But even in Elizabethan times wheat was still not the universal constituent of the loaf, for in Holinshed's *Chronicles* the following passage occurs:

“The bread throughout the land is made of such graine as the soile yeldeth, nevertheless the gentilitie commonlie provide themselves sufficientlie of wheate for their own tables, whilst their household and poor neighbours in some shires are enforced to content themselves with rie or barleie, yea and in time of dearth manie with bread made either of beans peason or otes or of altogether and some acorns among, of which scourge the poorest doo soonest tast, sith they are least able to provide themselves of better.” The acreage under wheat and rye in mediaeval times has been a constant source of enquiry among economists, to whom Domesday has provided a foundation upon which edifices of conjecture have been reared as to the rate of yield obtained and the consumption per head of the population. More exact *data* are available in the records of prices current in certain districts for century after century, for there have been published in such works as Thorold Rogers' *History of prices in the United Kingdom* annual tables, from which it is possible to trace, by the fluctuations in the price of cereals, the incidence of famine and lesser failures caused by climatic conditions. Such records indeed form the oldest complete series of agricultural statistics that exist in this or any country, and are of more use to the historian than categorical statements that so many hundred shiploads of grain were occasionally exported to the Continent, or conjectures that the rate of yield of wheat over a space of three centuries showed an improvement of so many bushels per acre. Prices give very clear indications of the existence of a shortage or surplus, and afford evidence of any tendency for supply to fall short of demand. The only proviso to make is that in the middle ages prices of grain were always extraordinarily susceptible to adverse influences. The slightest sign of an outturn below the normal requirements had the immediate effect of advancing values out of all proportion to the anticipated deficit; this phenomenon has been frequently analysed, and it is no exaggeration to say that, while a possible decline in total yield of five per cent. might raise the price ten per cent., a shortage of ten per cent. would result in advancing prices by perhaps thirty to fifty per cent. This was inevitable when alternative sources of supply were practically non-existent, and when the loaf repre-

sented a far larger element in the nation's total food supply than it does in modern times. The value attaching to wheat was indeed such that it was adopted as a standard of value in lieu of gold in the case of certain payments—*e.g.* in Elizabethan times and even later, as we have already seen, Colleges and other corporate bodies frequently prescribed that their rents should be rendered partly in the form of grain in order to obviate losses from fluctuations in the value of money.

Because of its paramount importance, the efforts of the State were incessantly directed towards the maintenance of adequate supplies of home-grown wheat, the provision of inducements to importers, the placing of severe restrictions upon those who dealt in corn, and lastly the actual control of the quality and size of the loaf itself. Space does not permit of a description of the individual Corn Laws, but the principle upon which they were conceived must be borne in mind. The whole system at first depended upon the virtual prohibition of export, and the placing of no impediments in the way of importation. Gradually a measure of exportation was allowed, the deciding factor being the prices ruling at any given time. From the seventeenth century onwards a composite plan was in force, by which in times of low prices export was actually encouraged by the granting of a small bounty, and imports subjected to a duty; as prices rose export was successively forbidden and imports finally freed from payment. These measures carried the country to the time of the French War, but after the first half of the eighteenth century the position had become one of difficulty. Two points should be noticed before passing to the consideration of subsequent happenings. These regulations applied to all cereals, and not to wheat alone, the importance of which has subsequently tended to obscure this feature; similar encouragement was therefore afforded to the grower of other cereals. Again, whilst there is little doubt that the Corn Laws tended to maintain a steady, and probably enhanced, acreage under corn crops, it is open to question whether in the matter of prices their effects were of great weight. It is probable that the weather had more influence than could be corrected by the action of artificial restraints. The whole of Western Europe was, and is,

subject to very similar climatic conditions, and the mere fact that a bad harvest had occurred in England, causing a demand for foreign wheat, implied that Continental growers were suffering from similar disabilities. Also at times when export was permitted from our shores, the prospective supplies of those with whom we would trade were apt to be at their maxima.

The regulation of dealings in corn was a mediaeval method of coping with a difficulty which is still rife. The elimination, or rigid control of, the middleman, and especially of the speculator, seemed an obvious way of obtaining the maximum profit to the producer and at the same time of mollifying the purchaser. As the internal trade and commerce of the country grew, it became out of the question to impose a form of restraint on one trade whilst permitting it on others, and gradually, from the seventeenth century onwards, freedom was allowed to corn dealers. The last link in the chain consisted of the Assize of Bread, and this persisted into the last century. Precedents can be found for almost all that is now looked upon as novel, and each step taken by the Ministry of Food had its counterpart in the history of agriculture. The control of millers and merchants was nothing but a reversion to the laws aimed at "engrossers," and the statutory ninepenny loaf, of a fixed weight and containing a legal percentage of admixture, represented merely a reintroduction of the powers possessed by those who sat in assize on the mediaeval loaf. Many are familiar with this excellent institution which placed in the hands of local Justices of the Peace the power to regulate the profits of bakers, and at the same time to ensure that consumers received loaves of a fixed weight and bread of a standard quality, but the fact that it persisted up to comparatively modern times is often overlooked. In the case of London, the Assize was abolished in 1822, but in the rest of the country it remained in force until 1836, and such notices as the following appeared at frequent intervals in all the local newspapers: "The Assize of Bread for this town was reduced $\frac{3}{4}d.$ in the quartern loaf wheaten, the price of which is now $8\frac{3}{4}d.$ " (*Cambridge Chronicle*, 1822).

Up to the middle of the eighteenth century this country had not only been self-supporting (except of course for individual

years of shortage), but on balance had been an exporter of wheat. Additional acres of land had annually come under the plough from the enclosure of wastes, augmented by such occurrences as the drainage of the fens (which provided the country with some hundreds of thousands of the richest arable soil), whilst concurrently there had been a steady but unassessable improvement in the rate of yield per acre. Thus an increasing population, and a population that was already beginning to show signs of becoming industrial, was still fed from its own resources. But the second half of the century saw increased demands made upon an industry that could only just maintain its position, and made at a period when climatic conditions were on the whole distinctly unfavourable. The French War was the unlooked for climax to a movement that was inevitably tending to bring the Corn Laws into conflict with a large section of the community. Coke himself, it was claimed, materially contributed to our victory by his own efforts and example in producing wheat, but the methods of all these "improvers in husbandry," if sedulously copied throughout the kingdom, could not have done more than postpone for a few years the civil strife between town and country that followed the French War. The prognostications of most economists as well as of practical agriculturists, however, complacently showed that the country could be self-supporting for indefinite periods, thanks to the improved methods of crop-raising that it was assumed would soon be of universal application; at the same time the physical impossibility of meeting from abroad more than a fraction of the nation's needs was convincingly put forward. In 1793 for instance Thomas Baird held that Middlesex alone could meet the additional requirements of the nation by merely placing another 15,000 acres under wheat, "consequently it is an easy matter to prevent our being obliged to depend on foreign countries for bread. Encouragement to the husbandman, or rather the removal of discouragements, is all that is necessary for securing that valuable object." Then came Malthus and his disquieting doctrine, but as the latter was made public during the war, it, for the moment, received less attention than might have been expected.

This, then, was the position in 1792 on the outbreak of the

war. If actual hostilities were not continuous up to 1815, certainly the whole intervening period was one of economic instability. The country emerged victoriously, but possessed of legacies similar to those with which the present generation is again familiar. High prices had caused the widespread expansion of arable farming, which in turn led to the most rapid enclosure movement that this country has known. Upon this occasion it assumed a double form, by causing the disappearance of the open-fields and, unfortunately, also of the majority of the commons. As has been pointed out in the chapters on labour, the results in the first case were certainly beneficial, leading as they did, to a higher level of cultivation, but the loss of the commons, for the avowed purposes of producing food in war time, was not made the subject of adequate recompense. The increased area under the plough, brought about entirely by the lure of high prices, would doubtless have carried the nation through the war period, but the government, leaving nothing to chance, despatched purchasers to those foreign States with which our relations permitted trade to be conducted. Propaganda was also indulged in, for efforts were made to induce the consumption of bread made of flour of an altered extraction or diluted with oats and barley. A poster issued in 1795 by the Mayor of Chester pointed out that palatable bread could be made by the addition of one third potatoes to two-thirds wheaten flour. In 1918 the State was setting up mills for the manufacture of potato flour, so even to the smallest detail does history repeat itself.

It is not proposed to record in this chapter the fluctuations in the current prices of wheat at earlier periods, as information relative to the purchasing power of money in terms of present values would have to be added, and after 1780 a glance at the diagram facing page 333 will at once answer any questions; but broadly speaking, the great rise in the price of all commodities, and of wheat in particular, brought wealth to farmers and increased rents to landlords in the last decade of the eighteenth and the first of the nineteenth centuries. The agricultural labourer alone suffered from high prices and wages that were insufficiently augmented to meet them. This then was the position in the last year of the war, and one which the agri-

cultural industry, as represented by landlords and tenants, persuaded Parliament to legislate for the perpetuating of.

The Corn Law Act of 1815 was the result—an Act that deserves individual mention, as it formed the last serious attempt of an already declining section of the nation to secure for itself preferential treatment at the expense of the rest of the country. The Act in question, whilst permitting the importation of cereals, forbade their removal from bond for internal consumption until the price of British wheat stood at 80s. the quarter, rye, beans and peas at 53s. the quarter, barley 40s. the quarter and oats 26s. the quarter. When these price-levels were attained the grains in question might be withdrawn for consumption free of duty. Special treatment was accorded Canada, for a clause permitted the introduction of her products when the following prices for British grain were touched: wheat 67s.; rye, peas and beans 44s.; barley 33s.; oats 22s. The principles upon which this Act was conceived were therefore two-fold; they comprised an attempt to maintain prices at a war level, and at the same time conferred a measure of preference on a British colony. The history of the previous year explains certain of these provisions, for the Act was substituted for an abortive Bill of 1814, which had ordained a sliding scale of duties, ranging from 24s. per quarter when the home price stood at 64s. to 1s. when 86s. was reached; additionally, unrestricted importation was to have been permitted, and the bounty, previously granted, abrogated. Now the last two clauses alone passed into law in company with the 1815 Act. Both agricultural Committees and the landed interests had held that sums varying from 120s. down to 80s. ought to be fixed as the limit at which the introduction of duty-free wheat should be sanctioned; on the other hand, in the words of M'Culloch "manufacturers and every class not supported by agriculture, stigmatised it as unjustifiable artificially to keep up the price of food and to secure excessive rents and large profits to the landowners and farmers, at the expense of the consumers."

That, for the moment, the pendulum had swung in favour of the agriculturist, is obvious by the passage of the 1815 Act, but the times in which he might be granted exclusive privileges

were fast drawing to a close. Moreover the Act failed in its purpose, for owing to good harvests internal prices were not maintained at the expected levels, and only for a short period did its provisions come into effect. The country was still sufficiently self-supporting to meet its own needs in years of abundance, and in these circumstances no regulations could maintain prices artificially above their normal level. Just at first, in 1816 and 1817, it appeared as if the rural arguments were going to be borne out, for as land reverted to grass so the prices of cereals rose. But finally fresh areas were again sown to wheat, and favourable conditions brought about yields that once and for all demonstrated that low prices had come to stay. Economists, writing near the time, pointed out that the restrictions adopted occasioned the very evils they were supposed to remove and, in many cases, held that the bulk of the distress that followed was directly attributable to their influence. One writer, indeed, went so far as to say that Protection was an impossible policy, as not only did it fail to prevent the occurrence of low prices, but, as then contrived, made exportation impossible until values had sunk unnaturally low—in a word he argued that the only sound proposition was to destroy a part of the grain produced at home in good seasons!

From 1821, after the setting up of a Committee of enquiry, the remaining Acts which led up to the Repeal, successively reduced the disabilities under which foreign grain suffered, and standardised the principle of the sliding-scale duty. They were of course strenuously opposed by the bulk of the land-owners, who still clung to the belief that their salvation rested on Protection. The particular Acts passed in 1822 and 1828, apart from rousing the hostility of merchants, were not the subject of especial annoyance to the nation, for the reason that a series of good harvests supervened, and prices remained moderately low. Those engaged in the corn trade, however, held that, from the existence of the sliding-scale, the uncertainty attaching to the amount of import duty payable made their business a hazardous one. It should perhaps be explained that already the necessity for ascertaining the "average price" of cereals had led to the introduction of an elaborate system of

checking supplies, which gave employment to numerous officials. In 1791 all the sea-board Counties of England had been grouped into twelve districts, and the inward and outward movements of grain were subject to the prices ruling within these divisions, the prices themselves being ascertained at four quarterly periods. Thirteen years later the official price was represented by the aggregate average of these areas, separate figures for Scotland being based upon the returns of four maritime districts. Finally, in 1805, Great Britain itself was taken as a single unit for the purposes of price assessment; the following year trade between the component parts of the United Kingdom was further facilitated by the extension to Ireland of freedom in the movement of grain.

The Acts of 1822 and 1828 proved merely the precursors to what was to become the greatest political and economic fight that has ever been waged round British agriculture. The second of these two has an academic interest, as it inaugurated the existing system by which returns of corn prices are rendered weekly by inspectors from numerous centres, to be incorporated into the official "Gazette average." Its main provisions proved innocuous until 1837, from causes that have already been indicated, but, from that year onwards, prices rose very considerably and importation on a generous scale was necessitated. This led to the actual conflict upon which so much was then, and has subsequently, been written. An Act of 1842 once more toned down the duties on imported grain, and at the same time roused further opposition from farmers by making free the importation of live cattle and of other agricultural commodities. The slope that led to Free Trade was therefore fully embarked upon by the nation. It is not necessary to describe the steps taken by Peel that led to the introduction and passage of the famous Act of 1846. One must however point out that circumstances compelled legislation on these lines. The famine in Ireland in 1845 has been spoken of as an immediate contributory cause, but famine or no famine this country could not have maintained the principle of Protection for one branch of agriculture for more than a very short period. A population that could not be supported on the products of its own soil, even in

years of bountiful harvests, was in a totally different position from that which it had occupied when a surplus of corn was a frequent occurrence and could be turned to advantage as a steadying influence on prices. Three years after the passage of the Act of 1846 Free Trade was nominally adopted, although for twenty years a small duty, amounting to a shilling a quarter, was in operation. Thereafter, but for one subsequent attempt to place an even smaller tax on foreign wheat, Free Trade has been an actuality.

The position at the time can now be surveyed free from bias, and the only conclusion that can fairly be arrived at is that the attempt made on behalf of one section of the nation to secure for itself special consideration rightly failed. The interests of the country as a whole were paramount, and the Corn Laws had outlived their surroundings. Subsequent happenings confounded the prophets, both schools of thought being shown to be fallacious guides to the future. The farmers were not, to their surprise, immediately ruined, and the townsmen, equally to their disappointment, did not at once revel in supplies of cheap bread. Agriculture did not decay—even the acreage under the plough was, according to all contemporaneous accounts, well maintained; indeed the conditions ruling from 1850 up to 1870 have sometimes been described as affording one of those rare periods when British agriculture was flourishing. The causes of the maintenance of cereal prices at a comparatively high level are familiar—unrest and actual hostilities in several parts of the world, the absence of large areas of newly won land abroad and of facilities for importing quantities of cheaply raised overseas grain. It must be pointed out also that, despite an admittedly increased consumption of wheat (both individually and from the demands of a growing population) its cost in a time of rising prices remained stationary; there is no doubt that, but for the Repeal, wheat would have risen very considerably during the next two or three decades. This feature is often overlooked when the apparent negative results of the action taken in 1846 are commented on.

From the late 'seventies, however, the effects, thus postponed, were fully apparent, and the world price of wheat fell, naturally

taking with it that of our native supplies. The causes are partly positive and partly negative in origin. On the one hand there was the absence of troubles abroad; peace reigned among the nations, which, on the Continent, had turned to hard work and industrialism, and, in the newer countries, to the development of their latent resources. The construction of tens of thousands of miles of railway connecting the wheat raising districts of the middle and Western States of America with the sea-board, in conjunction with the progress made in ocean transport, had resulted in creating a form of competition that later generations of farmers have perforce become familiar with. Statistics of the acreage devoted to wheat from 1866, which was the year the official series commenced, will be found in Tables I and II of the Appendix, but the diagram facing page 154, conveys far more vividly than can bare columns of figures, the measure of the change forced on English farmers; the term English is used advisedly, for those who were engaged in the cultivation of the soil in the other component parts of the Kingdom did not suffer to anything like the same extent. The area under oats in the United Kingdom remained almost constant from 1866 up to the outbreak of war, and that under barley declined by only about half a million acres. The bulk of the loss fell upon the Midland Counties of England, and upon those particular districts of heavy land, which wherever situated, are the first to suffer from a decline in the value of wheat. At some critical point in the scale of prices—indicated roughly by a level of 50s. the quarter—wheat ceases to be a paying proposition on this type of land, and it reverts (if circumstances are kind) to grass; failing that, it tumbles down. The diagram facing page 333 will at once show the connection between prices and acreage after 1875; for from an average of 56s. in 1871 the fall in the value of wheat was continuous, until in the brief space of twenty years it touched 30s. From 1890 there were few occasions when the price, if averaged over a series of five years, exceeded 28s. Only after 1907 could definite signs of improvement be seen. The acreage itself fell by a series of abrupt declines, superimposed on a regular annual loss; the incidence of such disastrous years as 1879, 1891, 1892, and especially of 1894, can easily

be traced in the reduced areas sown in the following seasons. In the first few years during which official statistics were collected, the area under wheat in the United Kingdom had amounted to just under four million acres, in 1895 it was under one and a half million. At first, there is evidence that the wheat thus lost to the nation was replaced by barley, for if the diagram be closely examined, it will appear that up to 1880 heavy declines in wheat areas were partially made good by the sowing of the alternative cereal; after that year, however, the struggle to sustain arable farming on the accustomed scale was clearly given up.

Those readers who are interested in the theory of cycles, or periodic movements, may perhaps care to have their attention drawn to the fact that there was apparently some influence at work which led to an especially marked fall in wheat acreage every ninth year, commencing with 1877; for the years 1886, 1895, 1904 and, to a lesser extent 1913, represent larger declines than any reached during intervening seasons. The cycle of nine years, if cycle it be, and not merely a coincidence, is not one that has been especially commented on by writers such as Sir W. Beveridge, who have detected numerous examples that might have a bearing on wheat prices; these range from those that appear at intervals of a little over two years to others that occur many years apart. They have been related to rainfall, temperature, barometric pressure and other natural phenomena, and include one that indicated in Greenwich temperatures a periodicity of nine and a half years. Fluctuations in the acreage sown, rather than in the rate of production, have apparently not been considered as a possibly circuitous expression of such causes. This connotes the carrying forward of climatic effects into the years succeeding bad harvests, a phenomenon for the existence of which there is undoubtedly evidence.

On the other hand, attempts made to forecast coming seasons from past records have always met with failure, and recent instances are but the successors of those initiated more than a hundred years ago. For example, in 1817 Lieut. George Mackenzie confidently claimed to have discovered a method, based on the prevailing direction of the wind, whereby it was

possible accurately to forecast the weather for several seasons ahead—indeed he published forecasts for ten years in advance. He modestly expressed the belief that, “the operation, however simple in itself, will not only distinguish Britain among nations, but it will also excite the admiration and gratitude of the rest of the world towards this forward country, through all succeeding ages.” To the agriculturist, he held that his discovery was of the highest order, “inasmuch as the foreknowledge of the character of the seasons will ever after have the effect of preventing those sudden and calamitous elevations and depressions of prices of commodities which have occasioned hitherto the distress of whole nations and the speedy ruin of millions of individuals. The advantages derived extend to every inch of land in cultivation, the management of which will be varied according to the quantity of rain and temperature of the coming seasons.” And yet neither Lieut. Mackenzie or his present day followers prepared the agriculturist for such seasons as 1879 and 1894! On the other hand, the more direct relationship between weather and crops provides a totally different field for research from that involved by forecasting climatic conditions in future years. And here such investigators as A. Wallén, in Sweden, and R. H. Hooker, in this country, have, by close examination of past records, shown a certain correlation between, for example, the quantity of autumn rainfall and the yield of wheat. This subject, then, opens up possibilities of real moment to agriculturists, by suggesting that short-dated estimates of yield may, in the course of time, be found feasible to make. This is, however, a digression from what is intended as an account of the plight of English wheat raisers in the second half of the nineteenth century. High farming, and all that it implied in the way of labour and purchases, was soon put aside as an impossible expedient in such times as these, and the conditions ruling in the early sixteenth century, after sheep farming had been turned to from causes widely different, seemed likely to reappear. Just in time, however, to save the bulk of the agricultural population, came the opportunity to supply the townsman with, at first, part of his increasing supplies of meat, and afterwards almost entirely to meet his renewed demands for milk, fruit and

vegetables. Farming did not cease to be practised, it merely dispensed with the services of a large proportion of its workers, reduced drastically its outgoings—whether in the form of rent or in the purchase of commodities—and turned to new methods. The days when wheat growing formed the staple branch of the industry had gone for ever except in that highly favoured portion of the Kingdom, where breadstuffs have ever since been profitably raised in the teeth of the worst foreign competition.

This was the position after 1870 in the United Kingdom; in the rest of Europe, however, protective tariffs still enabled other countries not only to raise wheat at a profit, but generally to be self-supporting, and in certain cases even to add considerably to their cereal acreage. Here, the nation as a whole had quite naturally decided that its needs were paramount, and that the growing millions of consumers in the North and Midlands must be its first consideration. A cheap loaf was secured for the latter, and the difficulties that faced the agriculturist were regarded as of secondary importance. The usual palliatives were tried, and the State eased certain minor burdens for the farmer, but it was left to him to raise corn or not exactly as he willed, and the re-imposition of any special measures aiming at the encouragement of wheat production was not even mooted. Farmer witnesses before the Commission of 1893 declared that wheat in parts of Cornwall was grown for thatching purposes, and others stated that the bulk of what they produced was ground and boiled in lieu of cake for stock; other witnesses confined their evidence to statements relating to the nature of the foreign competition, and gave forecasts of the ultimate possibilities of wheat production in India, the Argentine and North America that did not augur well for the British farmer in future decades. Yet within twelve years the wheat area in this country had taken an upward turn, and although the ends of the earth contributed to the supplies shipped to our ports, it was still possible for us to produce a fifth of our supplies at a profit to growers.

The history of wheat production at home having been reviewed, our present sources of supply and the conditions in other countries deserve some notice before we pass to the consideration of the problems raised by the war. If we turn to figures relating to imported supplies of wheat some sixty years

ago—by when Free Trade had been in force for over a decade—it is surprising to note the relative importance of the countries we then dealt with. In 1860, for instance, both France and Prussia sent us over a million quarters, and there was not a State or dependency in Europe, from Turkey to Sweden, which did not add its contribution. Europe as a whole was more than self-supporting. India, Australia and the Argentine were still wanting as exporters, the only large quantities that came from non-European sources being the products of the quaintly described “British North America” and the “United States, including California.” It is necessary to omit a detailed account of the development of what are now our main sources of supply; but the following table records this movement statistically, by giving the percentage of our total supplies derived from each centre for periods averaged over a number of years in order to eliminate fortuitous causes.

Percentage of total wheat imports (including flour expressed in terms of wheat) derived from different countries at certain periods.

	1875-7	1881-3	1893-5	1904-13	1914-8
European Countries	20.8	10.7	4.7	1.2	—
Russia ...	16.7	11.5	16.6	14.0	1.6
U.S. and Canada	47.0	59.0	55.5	38.7	76.6
India ...	6.1	11.4	6.8	15.5	6.3
Argentine ...	—	—	11.0	17.6	8.3
Australia*	—	—	—	9.6	6.1
Other Countries ...	9.4	7.4	5.4	3.4	1.1

* Included in “Other Countries” until 1904-13.

It will be observed that in recent pre-war years our sources of supply consisted of five really large exporting areas—in order of merit, North America (*i.e.* the United States and Canada), the Argentine, Russia, India and Australia. Only the first could be looked upon as really dependable, Australia and India in particular being subject to partial crop failure once or twice in each decade. For this reason, whilst in the aggregate the needs of the importing nations of the world were regularly met, the proportions of the total annually supplied by each exporting country fluctuated widely. Tables IX and X in Appendix II contain records of the acreage and yield of the world’s principal

countries, divided into exporting and importing groups. Both acreage and yield are included, for it must be reiterated that acreage in no case affords any criterion as to outturn; it can indeed be shown that, as a rule, the greater the area under a cereal crop such as wheat, the lower the yield per acre. Again, those countries situated in parts of the world subjected to extremes of either heat or cold are not in the position to reap more than a varying percentage of the acreage sown. These circumstances, combined with the methods of farming practised in all the new countries, are responsible for the world's average yield of wheat being in the neighbourhood of fourteen bushels to the acre. The production achieved on a few hundred thousand acres on selected land in such countries as Denmark and Belgium, and by dint of assiduous work and the expenditure of much capital, affords merely isolated examples of what theoretically is possible elsewhere. Russia, on an area that varied between seventy and ninety million acres, represented the other extremity of the scale, producing, as she did, only some nine or ten bushels to the acre, India and Australia on respectively a third and an eighth of that extent of crop, yielded at the rate of eleven bushels, the Argentine, on fifteen million acres, at ten bushels. The methods of cultivation practised in Australia, the Argentine and Western North America have sometimes been compared with those in vogue on the mediaeval manor. This comparison is true so far as the non-application of any form of manure to the soil is concerned, and there is also similarity in the introduction of a bare fallow into the rotation, but the quantity of labour employed would be widely divergent. The rates of production attained eight hundred years ago in this country were doubtless equal to those which prevail now twelve thousand miles away, but whilst the actual treatment of the soil, by taking from it everything and returning nothing save the straw, was shared in common, the modern "land-robber" is enabled to make his profits by maintaining a paucity of highly paid workers or, even himself alone, with the aid of elaborate machinery, performing all the operations called for on a square mile of wheat. The manor, on the other hand, provided "denser" employment for numerous workers and tenants.

CHAPTER XV

THE WHEAT SUPPLY OF THE UNITED KINGDOM (CONTINUED)

Methods of production and rates of yield abroad; comparative supplies from different sources; effects of the war on production abroad; conditions in Russia; the world's total exports; consumption in the United Kingdom; price fixing; the Agriculture Act of 1920; Protection *versus* a subsidy; the price of the wheaten loaf.

AFTER 1860 the five main exporting countries, three of which are situated in the Northern Hemisphere and two in the Southern, gradually ousted other producers, and became responsible for meeting the ever-growing needs of Europe. For, not only did France, Germany and the smaller States cease to be exporters, but the majority of them became, in varying degree, dependent on extraneous sources. But in 1914 the world's supply of wheat was still more than able to meet the demands made on it, and, as Sir H. Rew has shown, the increase in the acreage under wheat in the bulk of the producing countries between 1901 and 1911 more than counterbalanced the increase in their population. Statistics relating to the world itself would be of course quite fallacious here, as the important consideration is the staple diet of the peoples concerned, but so long as enquiry is confined, as in the case given above, to the wheat producing and wheat consuming peoples, one is on safe ground. If China or India, however, turned to consumption of the wheaten loaf on a large scale per head, the position would at once become hopelessly straitened. Sir H. Rew's figures recorded an increase of 6.6 per cent. in the population of the British Empire and of 45.5 per cent. in its wheat producing area, the corresponding figures for a selected group of countries being 13.0 per cent. and 22.9 per cent. It will be observed that the wheat figures relate to acreage and not to yield, but nevertheless the position before the outbreak of war was clearly an improving one, and there seemed no reason to doubt that the next decade would continue to provide additional supplies of breadstuffs, partly

by an increase in acreage and partly by a gradual raising of the average yield. There was evidence that the latter was already taking place in the newer and larger countries, as statistics in the case of the United States showed that the gradual spreading Westwards of more intensive methods of cultivation was reflected in heavier yields per acre for the whole country. When it is stated that there is scarcely a month in the year in which sowing and harvesting is not taking place in one or other of the wheat growing countries, the ramifications of the commerce in grain will be appreciated, as also the small likelihood of weather conditions interfering with our supplies. It can indeed be shown, if we assume a total failure in the crops of each of the five main sources of supply to occur once in ten years—a quite abnormal frequency—that the odds against that event occurring in all five simultaneously are overwhelming, quite apart from the fact that weather conditions are not only unrelated in each hemisphere, but, if anything, are apt to be counter-balanced by climatic happenings in another part of the globe. The partial failure of one exporting centre is a normal experience made good from the surplus of alternative sources.

As growing interest is taken in this subject of the world's supply of wheat, and it is becoming customary for the inexperienced to forecast the position of the importing countries for some months ahead, it may perhaps be well to point out certain difficulties that are encountered in the procedure. It is for instance, when reviewing the position of exporting countries, injudicious to calculate what is known as their "exportable surplus," by merely subtracting their estimated home consumption from their estimated outturn, for in times of bounteous crops, and therefore of low prices, considerable quantities of wheat are diverted to other uses, such as the feeding of livestock; in India, in such circumstances, the native population turns to it as a change from rice. A "carry over" from one exporting season to another is, for similar reasons, an uncertain element in all such calculations. Equally, the demands likely to eventuate from European countries depend in varying degrees on climatic conditions as well as on the prices ruling for overseas grain, and all estimates may prove to be well under the mark if world

prices fall substantially. That the operations in question are liable to be affected by numerous unexpected factors, anyone who has essayed this task in post-war years will appreciate, but elementary care in the handling of figures would obviate the publication of such extraordinary statements as the following: "our farmers are wonderful growers of wheat, perhaps because of the almost terrifying fact that we need as much as two hundred million tons (*sic*) of imported wheat every year." The first words are scarcely accurate as representing the facts of the situation, our rate of production is not directly increased by our dependence on imported grain, and, lastly, the figure mentioned is more than twice the *production* of the whole world—tons and bushels being widely different units.

Before 1914 the demands of the importing countries were fairly steady and subject mainly to climatic influences of a similar character; since the war, not only have their own resources diminished, but the majority of them, by reason of disorganised exchanges, can only afford to purchase within smaller limits. The United Kingdom was of course easily the largest importer of foreign wheat, followed in order by Germany, Holland, Belgium and Italy, our requirements representing approximately one-third of the world's export of wheat. The conditions created by the war are well illustrated by the following table, issued by the Ministry of Agriculture, which shows the quantities of wheat (and flour converted into its equivalent of grain) imported into this country from each source at different periods in the last decade.

Thousands of cwts.

Imports from	Average 1910-14	Average 1915-19	1920	1921
Russia ...	13,691	198	2	—
United States	29,699	56,774	53,529	47,037
Canada ...	25,972	25,003	13,410	22,736
Argentina ...	14,133	8,965	31,087	4,240
Australia ...	12,830	7,577	22,023	21,911
India ...	18,603	4,610	20	2,669
Other Countries	4,120	689	5,882	3,655
Total ...	119,048	103,816	125,953	102,248

The defection of Russia is of course familiar to all, but the rapidity with which other countries added to their cereal acreage is often overlooked. Australia had for example some twelve and a half million acres under wheat in 1915, compared with nine and a half in 1914; the United States added seven million acres in the same time, and Canada almost five million. As has been pointed out previously, the wheat was in the world, but lack of transport prevented its carriage to Europe. The above table explains this fact clearly, for it shows that as soon as peace was restored the more distant sources of supply were again drawn upon, and what remained of their accumulated stocks imported. In the case of Australia the British government had purchased the entire surplus of several seasons but was compelled to divert ships to the shorter transatlantic routes. Facilities for storage were lacking, and a large proportion of this Australian grain was destroyed by weevils and mice, representing a heavy loss to the British tax-payer.

Russia presents a difficult problem, for, from being a large exporter before the war, she has in recent times actually become an importer. The drought and resultant famine would in any case have reduced her home crops, but there is little doubt that the social conditions arising out of the war have at least as much bearing on the position. The expropriation of land in all East European countries has had similar effects in reducing the output of cereals; Roumania has already been cited as a case in point. Conditions agricultural in Russia have had strong light thrown on them by the publication of C. R. Buxton's account (*In a Russian Village*) of a visit to that country in 1920. The author records examples of villages that then had under the plough some two thousand acres instead of the pre-war seven thousand, whilst, concurrently, the average peasant had increased his holding from eight to eighty acres. The normal system of land tenure was still the "three field" with its inevitable bare fallow. The transference of the soil from its former owners to the peasants appeared to have taken place step by step, as for example when landlords fled, their tenants gradually appropriated to themselves further slices of the land so relinquished; thus "neither the landlord nor his manager ever

returned. The peasants discussed the matter and came to the conclusion they had better divide up the whole estate. They had meant to take a part only and to leave the remainder to him. They now divided up not only the land, but all the stock and the stores. Finally they pulled down the house and carried off the materials in every direction." Again, an owner of five hundred acres "argued and bargained, saying that he was prepared to give up some of it. The result was that he had to give up some of it at that time, and more of it after the October Revolution. He now has forty-five acres." It was already evident that dissension was spreading between the different classes, and that "rich" and "poor" peasants were quarrelling over their respective rights to real property; meanwhile the land went out of cultivation, the tools and machinery lay broken and neglected, the horses and livestock disappeared and, as a climax, the towns demanded bread from the country. The rest of the world has yet to see any measure of improvement from the conditions of 1920, and is still called upon to make good the deficiency in foodstuffs caused mainly by this social upheaval. The charitably-minded, who, year after year, urged the duty of "feeding the starving Russians" did not grasp the fundamental difficulties that faced them. Russia herself used to contribute liberally to the world's supply of wheat and other cereals; it was therefore manifestly impossible for the remaining exporting countries (reduced in corn area in some instances almost to a pre-war level) whilst making up this deficit, to feed in addition even a fraction of her teeming millions. Indeed, for the rest of Europe it may well present a serious problem within the next few years how the continued abstention of Russia is to be made good. Fortunately no other large exporter has seriously failed in output during the last two or three years, otherwise the situation might already have become serious. To exploit the drought and famine as not being accentuated by the economic conditions is misleading, since the landlord system had come through similar events on former occasions without reducing the country to a similar state of want. Had land tenure not been interfered with, the acreage under wheat would doubtless have been sufficient to meet home requirements, and certainly see

THE WHEAT SUPPLY

corn would not have been consumed, or earlier surpluses hidden in those "bursting bins" that proved such leaky structures. This question has been referred to at greater length in the chapter on Land Tenure, where the *Report on Economic Conditions in Russia*, prepared by the League of Nations, was adopted as the basis. Here it has been necessary to treat the matter as it affected the wheat crop.

For two seasons after the war, India was forced to prohibit export owing to partial crop failure, and this represented the only serious climatic interference with our supplies in the eight years that followed 1914. The total exports of wheat from the principal countries were, before the war and after, as follows. Further words explanatory of the situation created by the defection of Russia, Roumania and Hungary are unnecessary in the light of the bare figures.

Millions of qrs.

	Average net exports 1909-10 to 1913-4	Net exports 1919-20
Russia ...	20.5	—
United States	13.4	29.0
Canada ...	11.8	11.5
Argentina ...	10.4	33.0
Roumania ...	6.7	—
Australia ...	6.6	12.4
India ...	6.2	.3
Hungary ...	5.1	—
Other Countries	2.3	—
Total ...	83.0	86.2

Incidentally the position of this country in the wheat market was adversely affected during the war by the competition from allied nations. France, with a large part of her soil the scene of actual hostilities, and Italy, both made heavy demands on America and the Argentine, thereby tending, until co-ordinated purchasing was introduced, to raise even further the cost of provisioning ourselves and our allies.

A digression at some length has been necessitated into the question of our imported supplies of wheat, and the factors that have recently affected them. The measure of our dependence is sufficient excuse, however, and it is now possible to turn to the

purely domestic aspect of our wheat supply. The consumption of wheat and flour has been remarkably steady in this country, the Continental alternative of rye-bread having disappeared centuries ago. The actual pre-war average consumption for all purposes, including seed, was a little over six and a half bushels per person per annum. Fifty years ago it was just under the same figure. During the war years our total supplies of wheat and flour were as follows.

Thousands of qrs.

	Home production	Net imports	Total
Average of 1909-10 to 1913-14	7,455	26,973	34,428
1914-15	7,804	25,078	33,329
1915-16	9,240	25,913	34,453
1916-17	7,472	28,597	32,744
1917-18	8,040	17,827	28,023
1918-19	11,643	22,213	35,817
1919-20	8,665	27,128	35,163

Cereal years, running from September 1st, are the measure of time, and the apparent anomaly caused by the fact that the first and second columns, when added together, do not give exactly the total recorded in the third, is explained by the fact that the difference in stocks retained at the end of each year has been taken into consideration. We now see in its true perspective the statistical result of the food production campaign, which, although it led to one-third instead of one-fifth of our wheat supplies being home produced, bulks small when placed beside the figures representing imports. Even this increased supply was not fully utilised as human food—for the records of the Ministry of Food show that instead of the anticipated and theoretical fifteen to twenty per cent. being retained as seed and tail corn, thirty-three per cent. of the entire home crop failed to reach the millers in the years 1917-8 and 1918-9.

The saving effected in cargo space by the introduction of an increased proportion of our imported breadstuffs in the form of flour does not of course appear in the table; to the British farmer it implied a still further reduction in the amount of offals available. The diminution in total supplies for the worst

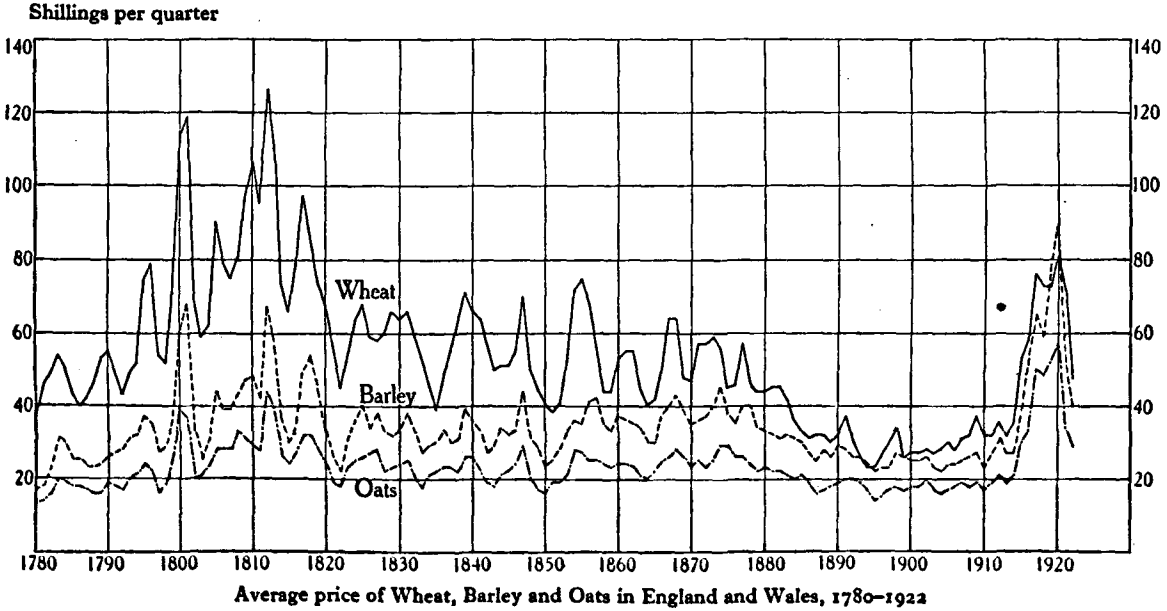
year—that of 1917-8, compared with pre-war figures, was some eighteen per cent., but, as previously stated, this deficit was made good by diluting the loaf and altering the rate of extraction of flour from seventy per cent. to over eighty.

Consideration of the methods employed by the State to secure supplies, when it had assumed responsibility for feeding the nation, can be omitted as not being of strictly agricultural interest, but it must be observed that the policy of subsidising the loaf by fixing its legal price at ninepence cost the taxpayer at least £160,000,000, and that when the pound was at its lowest level in terms of dollars the loss to us over the exchange alone on the purchase of a quarter of American wheat represented more than the pre-war value of the wheat itself. These are, however, merely the incidentals of State control in times when ordinary commercial transactions are impossible. Decontrol of the grain industry in 1921 was carried out gradually, but by the summer of that year private importers were again free to resume their business.

Wheat prices in this country have for more than two generations been dependent upon those ruling for imported grain; the latter in turn being generally swayed by the American markets. Whatever may be said about the morality of gambling in wheat, there is no evidence to prove that dealings in the Chicago and other grain markets have adversely affected prices; rather can a tendency in the other direction be traced, for present day records show a smaller margin of profit accruing to the intermediaries than was the case some decades back, and these very dealings have resulted in smaller fractions of a cent becoming the basis for quotations. The principal attempt, apart from the historic case of Joseph in Egypt, made seriously to "corner" the market—that of Leiter in 1897-8—failed disastrously, and subsequently the power of Chicago to dictate world prices has been somewhat modified by the growth in the exportable surplus of other countries, notably of Canada. A disproportionate increase in the cost of freight and insurance occurred during the height of the submarine blockade, which resulted in the pre-war cost of these two items for the New York to Liverpool voyage jumping from eight to ninety-nine shillings,

and correspondingly for other routes. For two years after 1918 prices remained at an inflated level; in August, 1920, for instance, United States wheat was costing 140s. when landed in the United Kingdom. The impossibility of forecasting exactly when prices would commence to decline—for it was obviously only a question of time before more normal conditions of trade supervened—must partly bear the responsibility for the introduction of measures to guarantee certain rates of profit to the home producer.

Before discussing the question of the Government's policy from 1920 onwards, it is necessary to trace the course that it had already pursued in the matter of price fixing. Untrammelled by legislation, the prices of cereals had by December 1916 reached the following levels: wheat 73s., barley 65s., and oats 45s. Official steps were then taken to fix maximum prices for the crops of 1917 at, respectively, 73s. 6d., 62s. 9d., and 44s. 3d., but in the meantime these maxima were temporarily exceeded. Under the Corn Production Act of 1917 minimum prices for the year in question (ranging in the case of wheat from 60s. down to 45s. in 1920) were theoretically in force, but actually of course were a dead letter. Subsequent developments took the form of guaranteeing that the prices for successive crops would not be reduced, and in 1919 fresh *minima* were fixed under the above Act, but as the average price remained above the guaranteed level, these provisions did not come into force. Finally, in 1920 home producers were encouraged by the promise that they would receive prices based upon the cost of the imported wheat that had entered the country during the three preceding months up to a limit of 95s. per quarter. This system was in force up to the decontrol of the grain trade in August 1921. It is impossible critically to examine the above successive price fixings, for the necessary *data* are now lacking, and also the perennial question of the respective claims of the producer and the consumer obtrudes itself. It is, however, tolerably certain that cereals were not produced at a loss in any of the six years that succeeded 1913-4, but farmers grumbled bitterly when they saw foreign wheat being paid for at prices fifty per cent. in excess of those they were receiving. They forgot the inflated charges for carriage and insurance, and omitted to refer



to the acknowledged superior milling qualities of most imported grain.

After the summer of 1921 prices, on a free market, fell by fifty per cent., bringing about exactly the conditions ruling after the Napoleonic War. In the meantime the State had taken that far-reaching step, in times of peace, of guaranteeing certain rates of profit to the raisers of wheat and oats. History was repeating itself line for line, and the cry of the farmers had worked on the public's memories of the past and played on its fears for the future. Under the Agriculture Act of 1920 minimum prices for the wheat and oats of the 1921 and successive harvests were to be rigidly related to the costs of production, and were to bear the same proportion to 68s. and 46s. respectively (prices of the standard year 1919) as the costs of production in 1921 bore to the costs of production in 1919. After each harvest Commissioners were to ascertain the percentage by which these costs were greater or less than those of the standard year, and the consequent minimum prices would then be announced. No payments would of course have been due unless these statutory prices proved to be in excess of the official prices as returned under the Corn Returns Act of 1882. But if the average price turned out to be less than the minimum, then growers would have received for each acre four times the difference between them in the case of wheat, and five times in that of oats. It will be observed that in this scheme the actual prices at which individual producers sold their crops would not have been taken into consideration, but the average value throughout the country substituted—a figure which, whether used in connection with tithe valuation or for other purposes, is always a suspect one to the average farmer. This measure had the usual two-fold object that is always associated with any form of special treatment for cereal producers; it was expected to result in the retention of an augmented area under cereals and to be a standby in case of another war. Additionally, in 1920, it was held that the world price of wheat might remain permanently at the inflated level it then stood at, and that therefore the direct cost to the State of a guaranteed rate of profit to growers would not be unduly heavy. It may perhaps be suggested that the

guarantee was extended to oats so as to bring the Scots farmer within the scope of these benefits, not because oats in themselves were of vital importance to the nation. Indeed at the time it was facetiously pointed out that the only important consumers of oats were the Englishman's horses and the Scotchman himself.

It is easy to be wise after the event, but one is compelled to draw attention to certain features of this—the second—historic instance of post-war legislation towards agriculture being misconceived and abandoned. The Corn Law Act of 1815 represented a precisely similar policy put into force by means of the then recognised machinery; the Agriculture Act of 1920 was based on the same grounds of public safety and goodwill towards the farming industry, but was given expression to by a novel method to avoid outraging any political feelings. In the early months of 1920 it was admittedly impossible to forecast when world prices would drop, but there was abundant evidence at the disposal of the Ministers concerned to show that supplies of wheat, for at least a year ahead, would not decline below the level necessary to meet the needs of those nations that could afford to effect purchases. Russia and Roumania had dropped out, but their loss had been more than made good by the increased deliveries of other countries. The fear of shortage in the immediate future was ill conceived, and everything pointed to an ultimate decline in prices. To what extent the Government was swayed by schemes, such as those referred to in Chapter VIII, did not appear, but no one who had the real interests of agriculture at heart, and could retain a sense of proportion in difficult social and economic circumstances, felt happy when the decision to subsidise British wheat and oats was made public. The annual sum that would have been payable was of course quite problematical, but it was anticipated that £20,000,000 would not be exceeded. It was indeed fortunate for those officials who would have been concerned in the administration of the Act that a reversion of policy spared them this duty, for an extraordinarily difficult task awaited them. The costs of producing wheat are in no parts of the country similar, and often vary considerably in the same County or even in the same

parish. A hard and fast ascertainment of these costs would have unduly benefited some growers and penalised others; farmers on certain types of land would have reaped undue profits, others, differently situated, would have struggled to make wheat production a paying business. Even when the "Standard cost" of production in any given year had been assessed, there remained the necessity to establish a complete organisation to remunerate individual farmers on the basis of the acreage they had grown.

When prices fell in the Autumn of 1920 the Government saw the extent of their possible commitments, and fortunately had the strength of mind to repeal the misconceived Act. This repeal was accompanied by an undertaking to pay £3 per acre for wheat and £4 per acre for oats of the 1921 crop; again the Scots farmer had scored at the expense of his Southern brother. The total sum thus expended was a little under fourteen million pounds; in addition another million was granted towards agricultural education in its widest sense. Future generations will agree that not only was a very wise course pursued, but that an exceptionally good bargain was made on behalf of the taxpayer, by the expenditure of a sum that was certainly smaller than the annual imposts would have turned out to be. Thus, in the course of only a few months a legislative attempt to direct the industry into particular lines failed. After 1815 it had taken successive steps extending over some thirty years to effect the same ends; this is the measure of the changed social and economic conditions of the times. On the former occasion the landowning classes were determined to obtain for themselves special terms on the lines they and their ancestors had been accustomed to, the bulk of the nation was agrarian in interests, and the majority of farmers were cereal raisers. In 1920 the landowner was not directly affected by the situation, and the remaining agricultural interests, representing but a fraction of the nation, were united neither in their methods of farming nor in their views on the suggested policy of the Government.

There are only two possible methods by which preferential treatment can be accorded to the producers of any particular crop; both have been tried and both laid aside—the first after

a long and honourable life, when it had become too effete to accommodate itself to the changing economic conditions of the time, the second in its infancy when it already displayed unhealthy signs. Other countries have remained true to a system of Protective duties, but in each case their dependence on imported grain is normally much less than that of this country. France by this means is almost self-supporting, but at the expense of an unduly poor yield per acre of cereals, and, as many people think, of a devitalised population; Germany has judiciously combined Protection with other forms of State assistance. The continuance of the Corn Laws after 1846, or their reintroduction at any subsequent date, would have added a penny or so to the cost of the loaf, and possibly averted the bulk of the loss in our wheat acreage, but the small difference in the proportion of grain produced at home by these means would in no way have made up for the increased cost of bread. The bulk of this urban nation argues thus: "The whole population consists of bread consumers, and any form of preference places a tax on them, whilst a bonus or guaranteed price, on the other hand, represents a burden on the taxpayer—and all bread eaters are not necessarily tax payers." The question in its broadest aspect therefore tends to become political and social, for a large section of the people, forgetful of indirect taxation, erroneously assumes that a subsidised loaf is secured at the expense of the income-tax payer, and is therefore prepared to acquiesce in the policy involved.

A bonus on wheat production was frequently mooted after Protection was taken away. In 1886, just when times were at their worst, such a scheme was put forward by an Essex agriculturist. After postulating the abolition of tithe, the halving of agricultural rates (an intelligent forecast of a coming event), and the drastic reduction of labour bills, rent and railway rates, the author asked if British farming would then be prosperous, and answered his own question by declaring that, even in such circumstances, competition with overseas producers would still have been impossible. He then elaborated a plan by which a bonus ranging from 20s. the quarter down to 5s., should be paid to producers—the annual amount due being dependent on

prices ruling in the previous year. The money to meet this payment was to have been raised by taxes on foreign (as opposed to Colonial) wheat and on all imported flour, augmented by a duty on manufactured goods. This was a very thinly disguised form of Protection, only the sliding-scale payment to the producer representing the modern conception of a subsidy. This and subsequent schemes were necessarily only of academic interest, but they exhibited, in common with the Bill of 1920, the inherent difficulties attaching to the actual allocation of the bonus and the basis on which it should be paid.

It is nowadays agreed that it is impossible, without the setting-up of a ramified bureaucracy, to pay each grower for the actual weight of grain that he produces, and therefore his acreage must be taken as the only alternative basis. Here, at once, the principle of equal treatment disappears, for the farmer who raises a crop of a few bushels to the acre on poor or unsuitable land receives remuneration at the same rate as he who produces his forty bushels to the acre. Whilst at first glance this appears to place a premium on bad land and to confer a benefit on careless farmers, it must be remembered that the principle generally suggested has been one whereby the grower would receive from the Government the difference between the price at which he sold his wheat in the market and a stated sum; for this reason the better farmers would not be so heavily handicapped, for they could obtain more cash per acre from buyers, and for grain of exceptional quality even prices up to the Government level, with the bonus as a subsequent addition. But, were acreage thus the sole basis, the feeling would inevitably get abroad that the State was not an advocate of good husbandry—a feeling that is certainly undesirable. The recent attempt adopted the acreage method of measuring the bulk of wheat raised (necessitating indeed upon the part of every claimant reference to the official number and situation of each field upon the twenty-five inch ordnance map, together with its "ploughed area" under wheat and oats), but proposed to remunerate growers without any reference whatever to the prices that they as individuals had secured for their grain. This system of basing its value to the farmer on the official average, instead of enquiring

into the nature of the hundreds of thousands of separate sales, was an obvious way of surmounting the difficulties opened up by the tentative schemes before referred to. Whether a combination of estimated acreage, official costs of production and the never sacrosanct "Gazette average" would have afforded satisfaction to agriculturists as the basis for their remuneration is very doubtful. Whilst the scheme might have proved capable of being put into execution, it is certain that its provisions would have led to great friction, and that in any given year the official cost of producing an acre of wheat would have conferred undue advantages on some growers and left others with very meagre profits. The obligation to check every acre claimed for would alone have involved heavy expense, and the corollary of a statutory wage for all farm workers would eventually have become displeasing at least to those agriculturists who were not raisers of wheat and oats. Any form of bonus also involves financial liabilities which cannot be measured in advance, and might prove to be intolerable. Finally, it is very unlikely that any form of guaranteed price would, at any normal period, add to existing areas under cereals, for there has always been evident a strong tendency on the part of agriculturists to continue in a particular course once embarked on. A check to the further spread of grass farming would at most be effected, the actual extension of arable cultivation being an unlikely consequence. It must be remembered that the loss of ploughland after 1880 was not entirely due to the fall in prices of cereals, but that alternative forms of husbandry made independent claims upon farmers' attention. As a guarantee that a spread of arable farming would ensue, it has sometimes been suggested that a proviso should be inserted by which payment would depend on a certain proportion of the recipient's land being under the plough, or that a minimum addition should have been effected within a given period. Such systems might be possible in times of war, but normally there are limits to the amount of interference that agriculturists will tolerate. The price obtainable for wheat would always decide the breadth maintained, and the nation would never agree to pay sums sufficiently high artificially to create additional acres.

Complete freedom being conferred by the repeal of the 1920 Act, values of all cereals were again dependent upon the prices ruling for imported varieties, but the close connection formerly observed between home and foreign grain was not at once re-established. British corn was still unduly cheap compared with foreign, and this, combined with the exceptional disparity between the sums received by the producer and paid by the consumer, formed a particular grievance. Seasonal fluctuations in prices are expected, as there is a recognised tendency for them to decline immediately after harvest, due to small farmers being compelled to market their grain. The causes in question are, however, deeper seated and owe their origin partly to a marked preference by the millers and the public for foreign wheat—hence the numerous suggestions put forward for the compulsory use of British wheat in certain circumstances, and the exclusion of foreign flour. It is very unlikely that price-fixing will again be extended to the producer, but there is always a possibility that the State may be compelled to regulate retailers' profits. If, after the war, whilst abolishing the local machinery of the Ministry of Food, some organisation similar to the Assize of Bread could have been centrally established, it is probable that retail prices would have returned to a normal level more quickly, and one of the causes of misunderstanding between the agricultural producer and the urban consumer set at rest.

That the State was cognisant of similar tendencies many years ago is evident from the enquiries that were circulated to British Consuls in Continental towns during the year 1895. These representatives were requested to forward statements showing the local prices of wheat and those of bread, adding any comments that they might care to. The fullest reply came from the consul at Rouen, who described the French system of fixing the cost of the loaf in relation to that of wheat. Powers were exercised by the mayors of some nine hundred towns and communes, in virtue of a law passed by the Constituent Assembly in 1791, infractions of it being punishable by fines. This official price, or "taxe officieuse," varied with the cost of flour on a scale commencing with 40 francs the sack, when bread had to be sold at a price not exceeding 26 centimes the

CHAPTER XVI

FORESTRY

History of British forestry; impediments to re-planting; effects of the war; statistics of British woods and forests; supplies of timber and the world's requirements.

ANY review of the rural economy of this country must contain at least some reference to past and present forest resources, for timber, if not a farm product, is at least an agricultural one in the widest sense of that word. Moreover, the history of British forestry has much in common with that relating to its farming. Roman influence can be traced as well among our trees as our livestock; the feudal conception of land tenure universally embraced forests; such occurrences as the Restoration affected almost equally the practice of farming and the amenities and productivity of our forests; lastly, critics would not be wanting to suggest that both farm and forest have, since the industrial revolution, shared in a common neglect. These similarities, however, cannot be stressed beyond a certain point, for during the greater part of their history the forests of this, and other European countries, not only formed exclusive preserves of the Crown itself, and in lesser degree of other land-owners, but also extended their influence far and wide over what was otherwise cultivatable land, and brought in their train those selfish and aggressive laws associated with the preservation of game, which in turn made their commercial value of secondary importance. There is no need to discuss in detail any of the above historic features, but it may perhaps be pointed out that in the middle ages the preservation of game restricted severely the practice of farming in many parts of the country where "forests" technically existed—but existed only in the sense of that word now associated with deer forests in Scotland. The King's warrens occupied thousands of acres of completely treeless land—land which would otherwise have been under the plough—thus denying both access and employment to the countryside. Small wonder then that such persons

as the high-spirited scholars of Cambridge in the middle of the thirteenth century not only confessed to entering the King's warren with greyhounds for the purpose of coursing hares, but sought in evidence to justify their conduct. If their modern successors still hunt their hares over precisely the same area—thus proving this to be the oldest academic sport—they do so not in the face of Royal opposition over land left purposely unproductive, but with the sanction of numerous individual cultivators.

After the feudal restrictions over forest land had been swept away at the Commonwealth, and, when on the Restoration Evelyn had been commissioned to write his *Sylva*, there appeared a possibility that the potential value of this branch of agriculture might at last be recognised and given effect to. All the annoying but picturesque customs, where they still survived, were thenceforward powerless to prevent access to this form of land; gone were the verderers and the regarders, their courts, their powers, and even the bulk of the beasts under their protection; gone also were the disabilities attaching to properties bordering forest land. The need for timber was never greater, indeed the powers that were still exercised aimed at the preservation of such as had survived the neglect and destruction caused by the Civil War, as also at the direct encouragement of "afforestation," in a sense widely different from that which it had formerly possessed. Yet, despite the success achieved by Evelyn, which led to the paramount requirements of the Navy being met so long as "wooden walls" were depended on, none has claimed that during the last two and a half centuries British forestry has occupied a position commensurate with that found in other countries. A probable factor to be reckoned with is the inability of the State and the private landowner to see eye to eye in the matter, complicated by the fact that the least accessible parts of the United Kingdom, and those under separate jurisdiction, have always been the most susceptible to forestal improvement or development. If the appeal of *Sylva* had been made principally to the private landowner, the State was within a short time sufficiently impressed by its obligations to pass legislation aiming at the maintenance of the supply of timber from the Royal forests, for in 1698 an Act relating to the New

Forest was placed on the Statute Book. In the preamble to the Bill, it was stated that "the woods and timber not only in the said New Forest, but in this Kingdom in general, have of late years been much wasted and impaired, and that the said Forest, which might be of great use and conveniency for supply of His Majesty's royal navy, is in danger of being destroyed if some speedy course is not taken to restore and preserve the growth of timber there." As a corrective measure, it was directed that some two thousand acres of waste land within the Forest boundaries should be planted, and, after the expiration of twenty years, a further enclosure of two hundred acres should be effected annually. The apathy and slackness, however, always associated with the work of re-planting in this country was evidenced when, a hundred years later, it was necessary to pass another Act of Parliament with the object of preserving the amenities of the forest as a timber producing estate.

If this was the fate of a Royal forest, it can be imagined that private landowners were not solicitous in regard to the existence of woods possessing an immediate commercial value, and local demands, whether for the purpose of smelting Sussex iron, ship-building or other trades in the North, in a comparatively short space of time, caused their almost total disappearance. The last few decades have seen repeated, but too often half-hearted, attempts made to encourage afforestation by private persons; and here one is insistently reminded of the ancient story of the orchard. Upon a friend proposing to a young man that he should plant apple trees, the latter, in refusing, answered that by the time they came into bearing he would be dead; a similar suggestion to the father of the young man met with the same answer. But when the septuagenarian grandfather was appealed to, he immediately planted an orchard and lived to break his neck by falling from a tree when gathering a heavy crop. Appeals from the State to landowners not meeting with success, generally for reasons akin to those expressed by the two younger generations above, it is to be hoped that the former will assume the part of the grandfather in planting; certainly it would avoid his fate in the financial sense for, as a certain writer has put it "the State is the only landowner that never

dies, is never called upon to pay succession and estate duties, and is never forced to look for something like immediate returns from the financial investments which it deems judicious to make for the national benefit." Ample sites suitable for the purpose have long been available, but too often are in the hands of those least able to advance the capital necessary to transform waste lands into ultimate revenue earning properties. For this reason the bulk of recent planting has been undertaken on semi-public land such as the catchment areas of large waterworks and estates in the possession of corporate bodies.

So far the activities of the State have principally been evidenced in the setting up of Commissions of enquiry. Thus, in 1887 a Parliamentary Committee reported; in 1902 a Committee of the Board of Agriculture recommended the provision of better means of instruction in Forestry; in 1906 a Royal Commission advocated the planting of nine million acres of land (of which six million were to be in Scotland). In 1910, however, more definite steps were taken, and the Development Commission allocated funds for the establishment of regional advisers in Forestry, and at the same time expressed its willingness to advance money to owners of land suitable for planting. Five pounds per acre was the maximum sum allowed, and a reasonable condition attaching to the grant was that land thus afforested should be available to the local Forestry officer for demonstration purposes. In both Scotland and Ireland prior to the war independent efforts were being made to secure eventually an additional reserve of timber.

This then was the position in 1914. Four years later a survey of the woods and forests of Great Britain would have shocked anyone familiar with their normal appearance, for the bulk of the coniferous trees had disappeared, having been felled for pit-props, or otherwise converted to immediate commercial needs. The explanation was of course the simple one that timber, from its bulky nature, was soon removed from the list of imported articles to which preference could be accorded when cargo space was being allocated, and, as this declining space had perforce to be more and more reserved for human food, munitions of war and other essential commodities, so it ceased

* almost entirely to figure on bills of lading, and the alternative sources at home were drawn upon. The Government itself assumed responsibility for the felling operations that followed, although private owners were generally not loth to reap an unexpected profit from their woods. Home supplies thus met the requirements of the nation, but at the end of the war the margin was extremely small and the reserves for future years had disappeared. Replanting was of course an obligation devolving upon the State, and in consequence of a *Report* issued by the Reconstruction Committee, it was proposed to plant with conifers 1,180,000 acres in the course of forty years, of which total 200,000 acres were earmarked for the first decade. In addition some 20,000 acres of land suitable for the propagation of hard woods were to be acquired, and private owners were to be reimbursed for undertaking similar obligations. If this programme was not followed out in its entirety, the reasons were those associated with all similar enterprises—inability of private individuals to undertake post-war operations with grants of money incompatible with the ruling costs of labour and materials, and the stringent economies effected in the direct expenditure of State funds. Under the Forestry Act of 1919 a sum amounting to £3,500,000 was set aside for the purposes in question, and the determination of the Government to proceed with its scheme was proved by the fact that the annual sum voted towards the expenses of the Forestry Commissioners increased from £99,000 in the year 1919–20 to £379,000 in 1920–1. But, subsequently, if the policy itself was not annulled, the money necessary to give full effect to it was drastically curtailed and the work of restoring our timber resources was thus referred to by the Geddes Committee—“We cannot recommend that this expenditure—which will always show a heavy loss and which cannot reach full fruition for something like eighty years—should be continued.” Comprehensive views of the situation created by the war had been taken by the British Empire Forestry Commission, sitting in London in 1920, and the need for a full enquiry into the timber resources of the Colonies and Dependencies was emphasised, but again nothing definite resulted. The position that Great Britain finds itself in is not

dissimilar to that which it occupies in the matter of its wheat supplies, being in both cases preponderatingly dependent upon extraneous sources of supply. In other periods of timber stringency, however, such as followed the Civil War or the Napoleonic conflict, the actual duration of the shortage was determined by the rate of growth of hard wood, now fortunately by that of soft wood. Any scheme therefore that may eventually be undertaken in this country, will produce commercial returns in a length of time less than half that experienced after previous re-planting operations.

It may be asked what is the statistical position of Great Britain in relation both to its own needs and supplies, and also in comparison with other countries. The answer evidences the inexact and irregular nature of the economic *data* relating to this industry, for while the import trade is of course the subject of full statistics, the woods and forests of this and other countries are not regularly surveyed, and the output of British timber has only been officially estimated on one occasion. The Census of Production of 1908 extended to the woods and forests of Great Britain, with the result that the following table was published, which differentiated between coniferous and hard wood areas.

	England and Wales	Scotland	Great Britain
Coniferous Woods:	acres	acres	acres
Scots Pine ...	49,000	156,000	205,000
Larch ...	69,000	25,000	94,000
Spruce ...	1,000	8,000	9,000
Others and Mixed	135,000	293,000	428,000
Total ...	254,000	482,000	736,000
Broad Leaved Woods:			
Oak ...	130,000	9,000	139,000
Beech ...	25,000	1,000	26,000
Birch ...	1,000	10,000	11,000
Others and Mixed	476,000	75,000	551,000
Total ...	632,000	95,000	727,000
Mixed Coniferous and Broad Leaved Woods	1,021,000	298,000	1,319,000
Total Acreage of Wood- land ...	1,907,000	875,000	2,782,000

* Whilst it cannot be claimed that these figures covered all the timber of the country, for very small areas were excluded, and the vast numbers of hedgerow and detached trees so peculiar to the English countryside were of course omitted, yet an enumeration of all woods of any importance was effected. Furthermore, the owners of these woods were requested to state the quantities of trees felled in the preceding year, together with their values. The result showed that, in a year which there was no reason to consider abnormal, some million and a half trees of all sorts were brought into use, supplying approximately fifteen million cubic feet of timber, valued with thinnings, faggots and other by-products at £800,000. The insignificance of these figures compared with the foreign trade of the country will be appreciated when it is stated that at the time in question some ten million tons of timber were being annually imported, the value of which was upwards of £26,000,000. Indeed, the United Kingdom absorbed more than half (both in weight and value) of the world's export of timber, our nearest competitor being Germany. Whilst a considerable trade was arising between the component parts of the British Empire, the latter was not self-supporting, but drew heavily upon Russia and Scandinavia for soft woods. The future supply of these latter provided the main cause for anxiety, for the drain upon them was immense, and whatever country was turned to exhibited the spectacle of continuous wasting, unaccompanied by any provision for replanting. The hard woods did not provide similar cause for anxiety because, apart from escaping the insatiable demands from the paper-maker and the colliery-owner, they were essentially tropical or sub-tropical in origin, and correspondingly difficult of access; moreover they represented an area almost equal to that occupied by the soft woods. Again, the consumption of timber per head of the population was rapidly increasing and, if it had not attained the dimensions found in the United States, was adding to a position that was already precarious.

During the war it was of course assumed by all authorities that, when peace was restored, Russia would again be able to meet the heavy demands made on her, and calculations were effected which showed that, with the inclusion of Siberia, her

potential resources were almost unlimited. Here, however, expectations were upset, and timber appears no more likely than is wheat to be exported in any considerable bulk for some years to come. Whilst Canada and Scandinavia can, for the time being, meet the requirements of the importing nations, there is no assurance that the former may not find her forests depleted unexpectedly quickly if export into the United States should occur on a grand scale. This then is the uncertain position that faces the country, for, while supplies are forthcoming to meet immediate requirements, those of the future are rapidly dwindling. None will of course suggest that Great Britain could be self-supporting in the matter of timber—indeed the previously mentioned Government scheme merely aimed at establishing a three years' reserve of soft wood—but certain advantages would accrue from a thorough investigation into the possibility of afforesting those parts of the country that at present from altitude, situation or soil are producing little or nothing. A glance at the statistics relating to the land surface will show that there exists a vast discrepancy between the total area and that "under crops and grass," which even the inclusion of some millions of acres of "rough grazings" only in part accounts for. An unofficial estimate of the existing "waste lands" has suggested that England contains 4,000,000 acres, Scotland 4,000,000 acres, Wales 700,000 acres and Ireland 1,500,000 acres, or a grand total of 10,200,000 acres. Whatever value may be placed upon the definition of the word "waste," the fact that some 30,000,000 acres are excluded from the agricultural returns of the United Kingdom demonstrates that the figure quoted allows ample margin for error. What proportion of either acreage in question could with advantage be planted is a matter for expert opinion, but a survey of the whole would at least inform the nation of the latent possibilities.

Advocates of afforestation too often base their arguments upon data relative to the proportionate acreage under woods and forests in this and other European countries, or quote statistics of the acreage thus represented per head of the various populations. It is easy to demonstrate that, for example, in the first instance, the United Kingdom compares badly with Germany,

and that Sweden has some nine acres per head whereas Great Britain has .07, but the mountainous nature of large parts of both countries, and the undeveloped state of the latter afford an explanation widely divergent from what inference might suggest. Indeed the preservation of forests of long standing affords a totally different economic problem from that involved in their establishment where none has existed for centuries. Again, the argument that much labour would be absorbed as a result of afforestation on any considerable scale, is misleading, for it has been shown that, if the whole of this country were covered with forests, permanent employment would be provided for but a few hundred thousand workers; even the initial work of clearing and planting does not call for labour on a large scale. It is rather upon general grounds that the arguments in favour of a liberal scheme of planting can best be adduced. These include the provision of a reserve of soft woods sufficient to enable the country to pass through an experience similar to the Great War; the curtailment within more restricted limits of our bill for imported timber; the development of land that at present contributes nothing or next to nothing in the way of agricultural produce; the limited additional openings for winter employment of agricultural labourers; and possibly the popularisation of home grown hard woods. Knowledge that the respective State authorities in countries as vast as the United States and India assume full responsibility for the maintenance and care of their national timber resources, encourages the belief that the small obligations involved here will eventually be assumed. Evidence from such a country as France proves that once the Government has undertaken this side of the task, the work of afforestation naturally follows.

CHAPTER XVII

AGRICULTURAL STATISTICS

Domesday Book and Gregory King's estimates; description of the first modern attempts made to collect returns in the British Isles; controversy over the utility of agricultural statistics; the present official series; methods employed in securing and analysing the information contained in the returns economic statistics; suggestions for additions and improvements in the British series; the International Institute of Agriculture; notes on the handling and use of agricultural statistics.

IN his *Journal*, under date June 8th, 1830, Carlyle entered the following appeal for statistical information: "Our political economists should collect statistical facts, such as What is the lowest sum a man can live on in various countries? What is the highest he gets to live on? How many people work with their hands? How many with their heads? How many not at all? and innumerable such. What all want to know is the condition of our fellow men; and, strange to say, it is the thing least of all understood, or to be understood, as matters go. The present 'science' of political economy requires far less intellect than successful bellows-mending; and perhaps does less good, if we deduct all the evil it brings us. Though young it already carries marks of decrepitude—a speedy and soft death to it." What improvement in this respect can be recorded during the intervening ninety years, so far as statistics relating to our rural economy are concerned? Would Carlyle now be satisfied with the official information obtained in regard to what is still one of the largest industries in this country, and easily the largest in the world?

The history of the collection of statistics relating to agriculture affords a striking example of the apathy of the mid-nineteenth century British farmer and his advisers, for when at length Government was empowered, or compelled, to obtain annual returns, complete statistics had long been available covering other and less important trades in the kingdom. On the other hand agriculture can claim to have afforded the earliest example of a statistical enquiry held in these Islands. This of course

was enframed in Domesday Book, and represented the economic state of England as it was in 1066 and 1086. It is quite legitimate to refer to this enquiry of William the Conqueror as an agricultural one, since agriculture at that time virtually afforded the sole occupation. Domesday set forth the value of the lands held in each manor, the numbers of the different grades of society in these communities, of their livestock, of their ploughs, of their mills. It was compulsory, whereas modern returns are voluntary. It was the obvious and businesslike action of a victorious sovereign who desired to compare, after twenty years' reign, the condition of his new territory with that pertaining in the last year of his predecessor's rule. It had for its main object the acquisition of knowledge as to the taxability of the country; and from that date down to 1860 the fear of resultant impositions on the land was always at the root of the opposition to any economic or statistical census. Domesday was compiled through local enquirers, prototypes of our "Crop Reporters"; it was, in the light of modern research, extraordinarily complete and accurate. Had it been followed by a series of similar visitations, even at intervals of a century, we should have been furnished with an invaluable piece of economic evidence. Even as matters are, comparison has been made between the nineteenth and eleventh century areas under the plough in particular Counties, based upon the answers contained in Domesday. For the area South of the Tees, and East of the Severn, it is probable that the land in common-fields, as well as that directly retained by the lords of the manor, amounted to about six million acres. At the present time the corresponding arable acreage is slightly less than double. Under the two and three course rotation the acreage of certain cereals might have been approximately the same, but the rate of yield was of course less than half. One author has shown that certain Counties in 1086 contained two and three times as large an arable acreage as they do now, *e.g.* Somerset had possibly upwards of 500,000 acres in this state at the former date and only 168,000 in 1922.

After Domesday the curtain falls for a period of exactly six hundred years, and we have absolutely no statistical information as to the fluctuations of the numbers of men, animals or acres

under the plough until 1688, when Gregory King prepared a very complete series of tables. He claimed to have enumerated all living creatures connected with the land—including in each case their families—from “temporal lords” (6400), through “knights” (7800), “gentlemen” (96,000), “freeholders” of one category (280,000), “freeholders” of another category (700,000), “farmers” (750,000), “cottagers and paupers” (1,300,000) to ‘beeves, sterks and calves’ (4,500,000), and even “hares and leverets” (24,000) and “rabbits and conies” (1,000,000). We must not allow these last items, so precisely recorded, to blind us to the fact that King gave what was probably as accurate an estimate of the different grades of society as was then possible. He also produced a tabular statement giving the acreage under the plough and under grass, together with the annual value of all land in England and Wales.

From 1688 until the second quarter of the last century we are again without figures, although McCulloch, Porter and Adam Smith had lamented their absence, but in 1808 W. T. Comber and in 1827 W. Couling had prepared estimates of, in the case of the former, land under various crops and in that of the latter of arable, grass and waste. Comber’s figures saw the light as a private publication, Couling’s were produced in evidence before a Select Committee on emigration, and, as the latter was by profession a surveyor, his *data* received considerable support. A generation earlier Arthur Young had made estimates of the numbers of livestock in the country, but this side of the question was ignored by those following, who confined their efforts to urging the need for estimates being secured of the produce of the three main cereals.

Chronologically, an attempt by the magistrates of Norfolk to obtain returns relating to the agriculture of that County in 1831 comes next—one year after Carlyle’s diatribe. Of the six hundred and eighty parishes circularised, four hundred and twenty-six responded, and the remaining two hundred and fifty-four declined to further the project. A discussion on the partial results obtained was raised at the meeting of the British Association at Cambridge in 1845, when reference was made to the number of agricultural labourers evidenced on different types

of farms, and apparently the hazardous project of "raising" the few returns secured, in order to obtain figures for the whole of England and Wales, was mooted.

The next move was made in May 1836 when the President of the Board of Trade sent out "simple but comprehensive" queries to all the incumbents in Bedfordshire. This is the first instance of a Government department taking any official interest in the collection of these statistics, and Bedfordshire appears to have been selected for no other reason than that it was alphabetically the first County. This was admittedly a test case, and if it had been successful it was hoped to extend the enquiry to the rest of the country. Unfortunately, however, out of the one hundred and twenty-six parish clergy who were invited to help, only twenty-seven took the trouble to reply. The schedules sent out were extremely complex and required answers to such questions as "modes of letting land," "depth of soil," "state of drainage," "rates of wages paid," "quantities of cheese and butter produced," and so forth, in addition to the more usual ones dealing with numbers and acreage. The majority of the twenty-seven completed forms showed evidence of a real desire to further the enquiry, but even they were freely sprinkled with such remarks as "farmers decline to say" and "unknown."

In 1844 correspondence between the Board of Trade and the Poor Law Commissioners resulted in a simultaneous experiment being carried out in England, Scotland and Ireland in the following year. In Ireland (Bailieborough Union) and Scotland (Midlothian) the effort was successful, but in England (two Unions in Hampshire) the result was a complete failure. In 1847 a bill to enforce the collection of agricultural statistics was introduced into the House of Commons but did not secure a second reading. This Bill provided for an annual enquiry on June 1st relating to all holdings over three acres in extent, for which the Guardians of the Poor were to have accepted responsibility. The same year, however, saw the successful inauguration of very complete machinery relating to Ireland. Doubtless the impending famine expedited matters, but the result has been that Ireland from that year onwards possessed

annual returns, covering her 500,000 farms, obtained through the medium of the Royal Irish Constabulary.

In 1849, members of the East Berwickshire Farmers' Club carried out a comprehensive enquiry, at a very small cost, relating to all the parishes in that area. Again, in 1853, the Highland Society collected statistics for the Counties of Roxburgh, Haddington and Sutherland, and next year, aided by a Treasury grant, for the whole of Scotland. But for an unfortunate disagreement between the society's officials and the Government regarding the precise allocation of the funds provided, it is tolerably certain that this experiment would have been the precursor of an annual series of returns for Scotland. The year 1854 saw the first large scale attempt made in England and Wales, by which the following eleven Counties were covered—Hampshire, Wiltshire, Leicester, Norfolk, Suffolk, Berkshire, Worcester, Brecknock, Shropshire, Denbigh and the West Riding of Yorkshire. The measure of improvement, due either to the methods of those employed—the Poor Law officials, or else to an enlightened sense of the importance of the returns to farmers themselves—can be judged when it is stated that out of 118,000 schedules distributed (although 17,000 had to be completed by the enumerators), only 8000 were not returned.

The feasibility of collecting agricultural statistics had by now been demonstrated, and the next dozen years were noticeable for the setting up of a Select Committee to enquire into the whole question, and for the appearance of several pamphlets and controversial articles on the subject. The principal witnesses heard by the Committee were those persons who had been primarily concerned with the above-mentioned enquiries, certain Poor Law Inspectors, Sir James Caird and individual landowners. All agreed as to the necessity for an annual return, but differed as to the machinery to be employed, the scope of the enquiry and the date at which it should be held. The great majority favoured the employment of the Poor Law officers, but Caird urged, in his capacity of *Times* commissioner, "that confidential and expert enquirers," to the number of two hundred, should perambulate the country during the three summer months, visiting twelve farms a day each. He estimated

the cost of this method at £20,000. Caird's strong advocacy was nothing new, for in December 1851 he had urged in one of his "letters" the vital importance of agricultural statistics, placing their collection indeed as one of five *desiderata* in the forefront of his agricultural programme. Mr Maxwell (Secretary of the Highland Society), Sir John Walsham, who had been mainly instrumental in organising the 1854 experiment in Norfolk, and Lord Ashburton all advocated the employment of more numerous, but unskilled local officials. Incidentally, these witnesses gave some interesting sidelights on the feelings of the rural community in the matter. We learn that "combined opposition of the occupants in certain parishes" led to difficulties in Norfolk—difficulties smoothed away in some instances by the action and example of the Earl of Leicester. This Committee unanimously recommended that an accurate return of the acreage under each crop and the numbers of livestock should be collected, and that approximate estimates of the harvest should be tabulated.

Matters rested there officially for several years, another bill introduced in 1856 meeting with no better fate than its predecessor. Meanwhile, however, unofficial persons were urging on the Government and the farmer the vital need for a comprehensive scheme being set up. Foremost among these were J. M. Buckland, who described himself as a "statist of Gloucester," John Hannam, Secretary to the Yorkshire Agricultural Society, and C. Wren Hoskyns, who in pamphlets and articles lost no opportunity of putting forward their views. They all stressed the importance of statistics being available to show the probable outturn of the staple crops, rather than numbers of livestock and acreage figures. They held that farmers in this respect were unduly handicapped by lack of knowledge, and adduced instances of individuals selling wheat at 40s. the quarter, and later in the same season at 80s. Lord Ashburton even pointed out that corn-dealers as long previously as 1833 had informed a Select Committee that it was their habit to employ agents to travel the corn-growing areas of the country in order to secure advance reports of the probable outturn; thus they were enabled to operate before the bulk of sellers knew

current prospects. Whatever real importance may have then attached to this question, it tended in later years to be modified as the bulk of our wheat came to be imported, but at that time, and for propaganda purposes, it was doubtless a useful cry. These same "statists" also flirted with the already thorny problem of the possibility of the United Kingdom being again self-supporting in wheat. Hannam wrote "How great will be the interest that will attach to such statistics, when experience shall have pointed out to us the proper questions to ask and the best modes of obtaining the answers. How useful for all the purposes of enquiry. And when in fifty years hence it shall fall to the lot of some person to address himself to an audience on the statistics of agriculture, the volume will be open to him from which he may draw at once the history of the past, the moral of the present and the prophecy of the future as regards agriculture."

Not so the farmer and his friends. Contemporary fears were raised that rents would be advanced if stocks were shown to be large or that restraint would be enforced if they were unduly small. A speaker was quoted thus: "I'll willingly give a return of my crops if the grocer is made to return the quantity of tea and sugar he sells and the draper of his broadcloth," and again the representatives of Downham Union, Norfolk, held that "Government might as well ask a farmer what his bank balance was or how many bottles of wine he had in his cellar." The farmer objected to the local Overseer of the poor being empowered to interrogate him about his business. But Hannam answered that, "The farmer has visited the markets with no more idea of the supply he must compete with, or the price his commodity was really worth, than if he were vending his produce in the planet Jupiter." On the same lines wrote Hoskyns: "You can be told every bale of calico that leaves the country, every box of gloves or yard of lace that enters it; you can hear how much tea, coffee, sugar and tobacco is consumed in the United Kingdom; but what is the growth, and what is the consumption of corn? The nearest weather-cock might be appealed to, with about as much expectation of a steady answer as the sources which exist and are usually taken as the data for

• calculation. Guess what you please, between twelve and twenty-five million quarters per annum, and you will have some statistician or other on your side." The same writer compared the country to a ship setting out on a twelve months' voyage, whose captain "steered on his errand across the trackless waste without any knowledge of the quantity or kind of food on board—its proportion to the number to be supported, and the length of the voyage." The writings of Buckland were directed to making the public familiar with the Norfolk experiment, and to setting forth details of a scheme for a full scale statistical enquiry, for which purpose he prepared schedules and forms and divided up the country into areas; but he also emphasised the unpopularity of the Guardians as supervisors of any such enquiry. All these writers were, however, apt to be carried away in their advocacy, as witness Hannam's question that had statistics of food supplies been available would 15,000 men have died during the Crimean War from sickness, starvation and neglect?

The penultimate stage in the campaign was entered on in 1862 when a circular letter was addressed by the Government to Chairmen of Quarter Sessions, seeking their opinion on the feasibility of collecting annually, or at longer intervals, such statistics as had been in the past experimentally obtained, and suggesting that the local police should act as enumerators. The Chairmen agreed in principle to the scheme, but demurred to the use of the police in this unorthodox capacity. Finally, in 1864, Caird carried a resolution in the House of Commons by which the Government was irrevocably committed to undertake the collection of agricultural statistics through one of its executive branches.

Thus ended the thirty years' fight, waged by a few enthusiasts against official apathy and rural opposition, for in 1866 the first annual statistics relating to acreage and numbers of livestock in England and Wales were collected by the Board of Trade. In the late 'eighties, when the Board of Agriculture was evolved from a branch of the Privy Council, it assumed responsibility for this work among its other duties.

What exactly are the *data* which are secured by these annual

returns, and through what medium and by what persons are they supplied? The one thousand two hundred representatives of the Board who acted as enumerators from 1866 until 1918 were the local Customs and Excise officials; since that year these persons have been superseded by three hundred and thirty specially appointed officials acting directly on behalf of the Ministry of Agriculture. The latter also act as estimators of the yield of crops, and are part time officials only, being generally occupied in business of their own as land valuers or in similar avocations. In addition, since 1904, other part time officers, known as "market Reporters" have been appointed, whose duty it is to furnish each week information as to the current prices of agricultural commodities at representative markets. In previous years publication of the statistics was effected in five reports, but post-war economy has necessitated their compression into three. The first of these deals with the numbers of holdings exceeding one acre in size, and places them in seven different groups, the smallest containing those above one acre and not exceeding five acres, and the largest those above three hundred acres in extent. A separate table is given, showing for similar size-groups, whether the holdings are owned or mainly owned by their occupiers. It should perhaps be premised that all figures are given for the areas of administrative Counties, and that these sixty-two Counties are, when necessary, themselves grouped into ten divisions. Only that portion of the 37,000,000 acres of England and Wales that is technically under "crops and grass," or covered by "mountain and heathland used for grazing," comes under review, and it cannot be too strongly emphasised that all holdings, whether farms, market gardens or allotments of one acre only or less in extent, are excluded. It is interesting to record that in some of the earlier enquiries previously referred to holdings above five acres only were covered, whilst it will be remembered that in the abortive Bill of 1847 it was proposed to enumerate those over three acres in extent. Naturally, year by year with the growth of towns, the extension of recreation fields, the construction of roads, railways, aerodromes and other urban conveniences, agricultural land tends to diminish, and this phenomenon is

shown clearly by the loss of some thousands of acres annually. Returns are called for from the occupiers of holdings, so that as a result there are recorded the total number of agricultural undertakings and not the number of farmers themselves, for those persons responsible for two or more farms fill in a separate schedule for each. Again, these returns relate to the state of land on a fixed day in each year, viz., June 4th. This day was selected after mature consideration of the circumstances affecting agriculture from Land's End to John O'Groats (for the Scotch returns are taken on the same date and those of Ireland on June 1st). At first sight it seems a simple matter to decide on some date in the summer when the bulk of the crops will be in the ground, but closer investigation will show that there is scarcely any latitude permitted, for it is essential to select a date sufficiently early to ensure that the first potatoes in Cornwall shall still be in evidence and yet sufficiently advanced to obtain a record of the last sowings of Spring corn and turnips in the bleak Northern Counties. June 4th is the best approximation to this ideal, although even then the forms still contain the following instruction: "land under preparation for a crop shall be returned as under that crop." The early advocates, previously mentioned, had assumed that their enquiries would be held in July or August, as they attached extreme importance to estimates of harvest yields, whilst Sir J. Walsham thought Christmas the most suitable time.

The date chosen must be rigidly adhered to in order to maintain the annual series of tables on a comparable basis. It is of even more importance in the case of livestock than of crops, as certain incidents during the war exemplified. In one case for instance it was decided by the Army Council, with a view to securing estimates of the future supplies of meat, to take a census of cattle and sheep during the early Spring months, and had the results been published without explanation, the public would have been extremely perturbed thereby, as decreases of hundreds of thousands of heads of stock were evidenced, due to the fact that the majority of births take place in the period from January to April. The same thing is liable to occur in the case of crops, but for a different reason. Here if the time of

enquiry is antedated there is a liability of more extensive areas being recorded as under cereals than the following returns of June 4th corroborate. An instance of this also occurred during the food production campaign, when a preliminary enquiry in the month of March showed a much larger area under wheat than did the subsequent one, the explanation being attributable partly to a desire by Government ridden farmers to anticipate possible commands, and partly to a genuine intention to sow an extra breadth of grain which an unduly wet Spring afterwards frustrated. Both these examples show the need for extreme orthodoxy and conservatism in organising any statistical enquiry relating to agriculture.

The type and area of land covered by these statistics, and the persons affected by them, having been enumerated and the chosen date accounted for, it remains to state exactly what products of the soil are included. The schedules served on occupiers contain upwards of eighty questions and eighteen explanatory notes and definitions calculated to facilitate the answering of them. Over forty relate to the acreage under various crops, and the bulk of the remainder to the numbers of livestock of different classes and ages. Further spaces are provided for details relating to the amount of labour employed and the condition as to ownership or tenancy. It is impossible in these pages to attempt to discuss the details of these schedules; it must suffice to say that they have been gradually developed during the past fifty years, contain all the essential points upon which information can be legitimately sought and, most important of all, have become familiar to those whose business it is to complete them. In this connection it should be noted that the returns are *voluntary*, and have always been so save for four years during the life of the Corn Production Acts (1918 to 1921), and also in 1917 when they were compulsory under the Defence of the Realm regulations. Yet this was one of the points upon which pioneers of the movement had been practically unanimous, and even the Bill of 1847 had contained provisions for inflicting maximum fines of £1 for refusal and of £5 for making false statements. Corresponding penalties had also been included in the second bill—that of 1856. The accuracy

of the returns is unaffected by their voluntary nature, however, and that for two reasons. In the first place only some two per cent. of occupiers fail to supply answers, which from a statistical standpoint is a quite immaterial proportion; and, secondly, the enumerators have access to local rate-books and with the information contained therein as to acreage, aided by enquiries on the spot, and the use of their own eyes, are soon placed in a position to fill up the *lacunae* themselves.

It is tempting to compare the earlier returns secured by the Board with the results of the experiments referred to previously in this chapter, but prudence forbids it. In any case comparison could only be effected in the case of certain Counties, and even there the necessary bases are lacking. One can at best generalise and say that all estimates and trial enumerations from that of Gregory King down to the experiment carried out in the eleven Counties bear evidence of a certain degree of probability; but that it is impossible to assign exact limits thereto or to say that the errors are within a certain percentage. It is worthy of note that during the first few years of their existence the official returns frequently called for answers to economic questions—questions which have since been tacitly omitted or left for special occasions or to individual experts to enquire into. Such matters as the types and amount of machinery used on the land, the prevalence of silos and the amount of drainage work undertaken furnish cases in point.

The accuracy of the figures contained in the printed tables is unquestionable; they probably represent the most complete and reliable agricultural statistics collected in the world, with the possible exception of those relating to the United States, where upwards of 220,000 persons are concerned in their compilation. But in the States complete returns are only collected every ten years, and the movements in the intervening periods are simply estimates and not precise returns as are those under review.

The second Part published relates to the total produce and yield per acre of crops, their condition and the duration of harvesting operations. It dates from 1884 and stands upon quite a different footing to Part I, as the individual occupier is not

concerned or consulted in its compilation. This work devolves entirely on the crop Reporters, who furnish estimates of the yields per acre in each of the thirteen thousand parishes of England and Wales, such estimates being based on their own observations and from local enquiry before and after harvest, checked by actual test weighings during threshing. They are applied to the parish areas and then added together to give results for the Counties and the country in general. Admittedly they are nothing more than estimates—but estimates made in great detail by skilled observers accustomed to the work, who have nothing to gain or lose by the results. The only possible alternative would be to ask farmers to supply their own figures of yield. All experts, however, are agreed that the result would not be so satisfactory as that attained by the present method, for there is a tendency—probably psychological—on the part of all those connected with the raising of crops to underestimate their yield and to exaggerate the effects of unfavourable weather conditions, whilst ignoring all countervailing influences. Official estimators and reporters are not immune from this tendency, as anyone who has studied forecasts issued in different countries, or even districts, will agree; for when final estimates are to hand the forecasts themselves are generally found to be exceeded. In the case of private individuals the tendency is doubtless also partly attributable to a desire to withhold information from landlords and creditors, but it is certainly a factor to be reckoned with, and one that would make its presence felt in any returns furnished exclusively by those interested in crop raising. In addition many occupiers would not be so competent as the Reporters to estimate the yields, and there would also be a risk of undue delay accruing in the work if it was left to numerous individuals. On the other hand there is one slight drawback attaching to the continuous employment of a single crop Reporter in a certain area, and that is the risk that he may become unconsciously biased and disinclined to acknowledge improvements of yield over a series of years. Evidence for the existence of this phenomenon can be obtained by anyone who takes the trouble to trace the records of yield for certain small Counties over a period of twenty or thirty years. These areas will

occasionally be found to have remained stationary whilst the circumscribing Counties, with similar soils, have improved their yield by ten or fifteen per cent. For this reason the ideal system would aim at circulating the Reporters, and never allowing an individual to stay more than a year or two in one centre; but this would only be feasible if the Reporters were full time officials.

The final returns of yield per acre for the whole country are obtained, not by averaging the parish and County yields on a simple arithmetical basis, but by means of the weighted average, *i.e.*, the area concerned as well as the yield it produces is taken into account. For example, the yield of oats in the Isle of Ely is some 60 bushels to the acre and that of Devonshire 38 bushels, but the yield of the two together would not be given as 49 bushels, for in the case of the former the area concerned is some 20,000 acres, and in the latter 120,000. The total production therefore from the two Counties amounts to 5,760,000 bushels from 140,000 acres, or a weighted average of 41.1 bushels. This principle is observed in recording all yields of crops, and results in the final figures published for England and Wales being greatly below those of the best Counties, for, generally speaking, the richest areas are the smallest in extent. This country has recently taken to issuing forecasts of yields based upon the acreage recorded on June 4th, though such forecasts made while crops are still growing are subject to modification as a result of subsequent weather conditions; previously only the above-mentioned estimates of actual yield had been issued after harvest operations were completed. The United States Government had for a long time gone to the other extreme and prepared estimates of the yield of the principal cereals to be released at a pre-arranged hour on a certain day—so great is the importance of these crop forecasts to the transatlantic dealers.

Part III of *Agricultural Statistics* now contains a proportion of the information formerly issued in Parts III, IV and V. To the economist, as opposed to the statistician, this is the most interesting of the series, as it provides the only authoritative annual summary of market prices for all forms of farm produce from wheat to poultry, and also for all farm requisites from sulphate of ammonia to maize. It embraces tables of foreign

statistics, gives the quantities of agricultural products imported from abroad, broadcasts the "Gazette" average for British cereals, and issues agricultural index numbers. These latter, when representing the price of a single article over a series of years, are of course free from criticism; if wheat was selling at 32s. per quarter in 1913, 96s. in 1920 and 64s. in 1921, then, taking 1913 as the basic year, it is perfectly legitimate to state that the cost in 1920 was represented by 300 (or an increase of 200 per cent.) and that of 1921 by 200 (or an increase over 1913 of 100 per cent.), and so on for all the commodities that the farmer sells. Difficulties, however, commence when a composite figure is evolved, which attempts to show the fluctuations in the cost of all articles sold. The cost of living index number of the Ministry of Labour has called forth certain destructive criticism, partly no doubt owing to ignorance of its nature; and this corresponding number in the case of agriculture is apt to be similarly misjudged if pains are not taken to apprehend its limitations. It is of course weighted on the basis of the relative value of each of the most important articles marketed by farmers, the "weights" assigned to each article being proportionate to the estimated total value of all such sold off the farms of the country. There are thus shown the annual variations in the sales on an imaginary or "average" farm—a farm that produces all the articles taken into consideration and markets them, moreover, in proportions corresponding exactly with the total sales off all the farms in the country. The East Anglian farmer who sold his wheat in the Autumn of 1922 at perhaps twenty per cent. above the 1913 level would therefore have had to consult the separate number given for wheat and not the general Agricultural index number for commodities sold off farms, which latter would have recorded a figure 57 per cent above that of 1913; failing this he was assumed to be producing his share of the fat stock, milk, poultry, fruit, and other articles which raised the figure to the higher level.

The Ministry does not attempt to issue a composite index number for articles purchased by the farmer, but is content with compiling separate figures for wages, feeding-stuffs and fertilisers, all of which must be accepted merely as indications

of the fluctuations recorded by individual items in the farmer's outgoings. For example, in the case of wages, allowances must be made for the value of payments in kind, for the unknown factors affecting the amount of labour employed, such as overtime, climatic interference, and alternative forms of labour; moreover the relative sizes of the Counties have also to be taken into consideration in such calculations. All that it is possible to record, therefore, in a popular form are the variations in the weekly cash wages of adult men. Enough has perhaps been said to demonstrate the difficulties encountered by anyone who attempts to display with the aid of index numbers the position of agriculture as a whole at any given time.

The official annual statistics of this country have now been reviewed, and it is a suitable occasion upon which to enquire if they are susceptible of improvement in any direction. Of course, finality is never reached, and it is easy to compile a list of *desiderata*—it would be advantageous to know, for example, the real value of everything sold and the quantities also, the rent paid for various types of land and the use made of machinery, glass, silos and other scientific aids to farming. But funds will not permit of such extensions. The reformer is, therefore, reduced to suggesting possible slight improvements in the present series of tables. For instance, there is considerable ambiguity in the classification of permanent and temporary grass, as certain Counties have, by custom, different age-limits at which grass becomes permanent; thus, temporary grass by the ten thousand acres in the Western Counties would be deemed permanent in East Anglia. There is apparently an opening here for more exact statistical definition, but if a precise age-limit was fixed at which temporary grass became permanent there would always be the possibility that new permanent grass would be designated temporary until it reached the critical age. This affords an example of the need for proceeding warily in such matters. Again, the area under "mountain and heath-land used for grazing purposes" is a suspect figure, partly because it varies year by year on the same holding due to weather conditions, and partly because complications are sometimes introduced by different occupiers having rights of grazing over

the same land. Here a suggested remedy might take the form of the separation, for statistical purposes, of this type of land from individual holdings, and its relegation to a category by itself, as is already the case with commons. During the ploughing up movement in 1918 it was apparent from the schedules that much permanent grass had been transferred to the "rough grazing" section by farmers who desired to evade the plough and thought that the latter title sounded less attractive to prospective breakers up. If this type of land had been outside their power to account for, such tactics could not have been indulged in. Lastly, there is a possible source of error in the tables of "holdings owned or mainly owned" by their occupiers, as it requires great alertness on the part of the enumerator to satisfy himself that all lettings and sales are immediately evidenced in the annual returns. Instances have occurred in which fields, reverting to their owner on the expiration of tenancies, have either fallen between the two stools, and missed enumeration altogether, or else have still been accounted for by their previous occupiers.

Mention should be made of the prefaces to the three annual Parts, as they are the work of experts, and if they were better known to the agriculturist would be of considerable use to him, since they take longer and generally more restrained views of the situation than he is accustomed to meet with in unofficial publications.

Other official statistical reports comprise a weekly review of current prices at home, entitled *The Agricultural Market Report*, which is intended to be found in every farmer's house, and a *Monthly Report* on agricultural conditions. In addition to the above routine undertakings, the Ministry occasionally conducts special statistical enquiries; among recent examples are to be found the censuses of allotments and of pedigree livestock—both matters of interest to different classes of persons, and both opening up a fresh field, for the vast majority of allotments, being less than an acre in extent, fail to appear in the June 4th returns, which also ignore the distinction between pedigree and non-pedigree stock. The above exhausts the list of enquiries for the conduct of which the Ministry of Agriculture itself

accepts responsibility, but one other closely concerns agriculture—that is the Census of Production, which it was intended to hold every five years, as an enquiry into the output of certain important industries in Great Britain, of which agriculture was one. Initiated by the Board of Trade and carried out by the Board of Agriculture on one occasion (in 1908), it has since lapsed, and it will be very unfortunate if it cannot be repeated, since it embraced many features which are not within the normal purview of the Ministry, such as the value of the produce of certain branches of agriculture, the extent of the area under glass, an analysis of the labour employed, the amount of machinery used and statistics of the woodlands of the country. Such a census on a quinquennial basis has obvious possibilities before it. It is only fair to point out that the cost to the country of all the annual returns collected by the Ministry itself is very reasonable, as it amounts to barely eighteen pence per holding for the enumerators' salaries and expenses (£34,000 for 420,000 holdings), plus certain headquarters and overhead charges.

There is not space here to discuss the various systems employed abroad for collecting returns relating to agriculture, but as a general rule it may be stated that the more civilised the country and the more densely populated it is, the more complete will be found its economic statistics. Most European countries had such services in operation by the mid 'sixties of the last century, and by the beginning of the twentieth century there was scarcely a nation in either hemisphere which did not make some attempt to collect information relating to its agricultural output. There is one organisation, however, which must be briefly described, and that is the International Institute of Agriculture—a body typical on a small scale of the League of Nations. Founded in 1905 by the King of Italy, at the suggestion of an American (Mr Lubin), its headquarters are at Rome and its members are representative of no less than fifty-nine countries. It is, as its name implies, an international body, supported by funds voted by its constituent members, and inaugurated by a personal grant from the King of Italy. Its objects are to collect statistics and economic information relating to agriculture in its widest sense, to disseminate the knowledge

thus acquired, and to emphasise by every means in its power, the international character of modern farming and of food supply. Its personnel is also international and its three-fold publications relating to statistics, economics and the scientific side of agriculture are issued in English, French, Spanish and Italian. Although a permanent committee is in constant session, meetings of representatives from all contributing countries are held at intervals. If this Institute has not yet obtained the authoritative position that it is clearly entitled to, yet the results of its work are already apparent. In particular the researches it has undertaken, and the mass of information it has published, relating to such divergent questions as co-operation, the provision of credit, the supplies of wheat and other cereals, the production of different types of farms, and the economics of forestry are invaluable to the student who wishes to secure unbiassed evidence from world-wide sources. If the producer, the importer and the merchant have not benefited by its work to the extent that its founders anticipated, the blame must not be attached to it, but rather to international jealousies and rivalry. It is for example asking much from a country with a large production of a certain commodity to lay bare to all the world (and its immediate rivals) the latest estimates of its outturn. Thus, hesitation has sometimes been apparent on the part of members of the Institute to part with their newly collected statistics, with the knowledge that the figures would be broadcast throughout the world. For this reason the Institute is often unable to publish comprehensive forecasts relative to one Hemisphere or even to all European countries until some time after the individual states concerned have themselves digested and issued separate reports. There is another drawback from which the Institute has suffered on occasion, and that is the form in which its statistical, as opposed to its economic, information has been published, for frequently bare columns of figures of acreage or yield of crops have been issued which were meaningless to any but experts. Recently, however, steps have been taken to improve this state of affairs and now, side by side with such tables, explanations of them are freely appended. The great war seriously interfered with work at Rome, and from 1914

until 1919 the continuity of its records was broken. Financial difficulties had also to be reckoned with, for, in common with other societies, a certain number of members are liable to be in arrears with their subscriptions, and with a membership ranging from Paraguay, Ethiopia and Turkey to China and Austria bad debts were certain to be encountered after such a world upheaval. The nucleus of an ideal and universal system of economic statistics is certainly present at Rome, and the passage of time and a peaceful world may achieve much within the next decade or two; in the meantime the publications and researches of the Institute deserve a wider recognition.

All the sources of agricultural economic knowledge have been passed in review. How should that material be handled, and what uses can it legitimately be put to? Nowadays statistics of any description are looked upon by the bulk of mankind as either the useless plaything of a small section of the community or else as a necessary evil to be mishandled and misapplied by all and sundry. To the former category no doubt belonged the British Chancellor of the Exchequer who, on being presented with a table of figures worked out to decimal places, enquired what "the d——d dots" were for. The second category contains the type of person who at once argues on the lines *post hoc, ergo propter hoc* whenever he discovers a corresponding phenomenon in two sets of figures. This doctrine is most evidenced in the columns of the daily press, where for example a rising death-rate is convincingly "proved" to be due solely to deficient ground temperature, lack of sunshine, excess of house-flies or numerous other causes. Its ultimate limit was reached when a close connection could be shown to exist between the prevalence of sun spots and victory by one University in the boat race. All economic knowledge, however, does depend on the securing of certain statistical information, together with its careful handling, and if any judgment on the past state of agriculture is to be formed or any deductions made from the present it is absolutely essential that such *data* should be available.

All statistics are full of pit-falls for the inexperienced and the hasty, and agricultural statistics are if anything more prone to

mislead than those relating to other occupations. For at first, glance nothing appears more simple than to obtain the numbers of farms and their "average" size in two areas and to compare these figures, or to enumerate the livestock in the United Kingdom and, say, France and then to draw conclusions as to the "density" found in each country. An actual example of the need for circumspection in this respect can be given. Someone hearing that a friend was working in the statistical branch of the Ministry of Agriculture said to him "Then you can of course give me such information as the number of celery plants in Cambridgeshire?" This is seemingly a perfectly simple question, always provided that the numbers of individual plants were collected—which of course they are not—but in reality to answer this query it would be necessary to demand three exact definitions, viz. (a) At what period of age, or on attaining what dimensions or weight, does a celery seedling become a plant; (b) what do you mean by "Cambridgeshire"—the whole geographical County, which includes the Isle of Ely, and, therefore, thousands of acres of the most prolific market-garden soil, or merely the administrative County, containing little soil suitable for vegetable propagation; (c) what does "in" mean—does it include only plants still in the soil or all celery plants raised or in transit at a certain point of time? This story exemplifies the extreme need for a clear definition, even at the expense of verbosity; other *desiderata* are continuity in a series, for numbers collected on isolated occasions are valueless, and what can only be described as comparability. Comparability should automatically follow on the first mentioned point—definition—but unfortunately when dealing with conditions in foreign countries it does not invariably do so; hence the need for close enquiry into the nature and similarity of the figures one seeks to place side by side.

There are certain specific warnings which should be heeded by all who seek to use the published statistics relating to British and foreign agriculture. Beware of that deceptive thing the "average" holding, and its comparative size in different countries. It is simply an arithmetical conception and may not be represented by a single example in point of fact. Take the case of

England and Wales; divide the 26,000,000 acres under crops and grass by the number of holdings, viz., 420,000 and the result gives as nearly as possible 62 acres. Does this mean that more holdings of 62 acres are found here than of any other size? Not at all; for if the size-groups were closely analysed by sub-division it would be found that more holdings existed in the region of three acres in extent than of any other size. Students of statistics will of course appreciate that here one is dealing with a curve, at one extremity arbitrarily cut short by the absence of holdings below an acre in extent and at the other theoretically capable of infinite extension, and accordingly neither the arithmetical average or the median affords us any precise information. It is a case in which the mode alone meets the situation, and the exact position of which we can only guess at. The fictitious case of a country having 500,000 holdings of an acre in extent and ten of a million acres each will illustrate this point. Here the conventional average works out at about 21 acres, a size that is not represented by any holding, and one that is twenty fold larger than the vast bulk of all the farms recorded. It is a remarkable fact that neither this nor any foreign country has ever attempted to locate the mode by analysing closely their annual returns. With comparatively little extra trouble it should be possible to evolve this figure and thus to show what is the "commonest" size of holding in each country. Another warning is necessary when comparing English farms with foreign, and that is to assure oneself that the latter do not include what are classified as allotments or "gardens" here. Again, one may be comparing "holdings" in the one country with "farmers" in the other, and "Small Holdings" of 300 acres with those of three. Livestock statistics contain serious traps, even when one satisfies oneself that the dates of the enquiries concerned are approximately similar; *e.g.* the British returns cover only horses "on agricultural holdings," not those employed in urban districts, whilst foreign statistics generally include the latter. Tables are published showing the "holdings owned or mainly owned" in this country; here it should be recognised that ownership in the generally accepted sense of the word is not necessarily implied, for a holding of five acres of which three are owned and

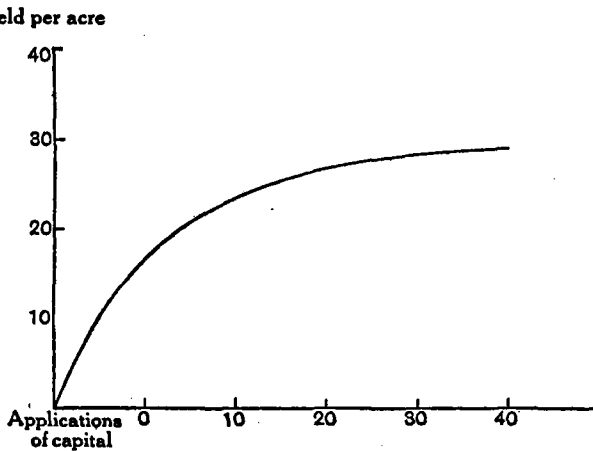
two held on a lease does not represent "peasant proprietorship" on a basis comparable with that found in France. The conditions under which the agricultural employee works have been discussed in previous chapters, but here it must be reiterated that cash wages in no country afford a criterion as to the emoluments received by workers on the land, and no international or even internal definition of the term "casual labourer" has been evolved. Forestry abroad employs many agricultural labourers in part time occupation. What are rough grazings in England may rank as farm land in one country abroad and be excluded in the statistical abstracts of another. A million acres of wheat in England represents a totally different potential supply of breadstuffs from the produce of a corresponding area in Russia or even in France. In many countries the breadth of land seeded bears no close relationship to the area finally harvested. In effect, agricultural statistics should be handled with extreme care. They can "prove" nothing, but used with circumspection can render valuable service by suggesting lines of enquiry to the State and by affording *data* for the farmer and the trader upon which to base their future actions.

APPENDIX I

NOTE ON THE LAW OF DIMINISHING RETURNS

IT has in recent years become a practice upon the part of certain writers to insert the prefix "so-called" in front of the word "Law" when used in relation to agriculture, whereby they seek to cast doubt upon the validity of the economic theory postulated in the expression in question. That it merely represents the results of certain contributory causes rather than exists as an independent phenomenon is not denied, but that it can anywhere, and for any considerable period of time, be nullified or widely evaded is unthinkable. What exactly is implied by this Law, and why is it mainly applicable to the practice of agriculture? In the majority of manufacturing and industrial undertakings it is rightly assumed that fresh application of capital, whether in the shape of giving employment to more hands by the erection of fresh buildings or by otherwise increasing output, will at least bring in a return comparable with that already accruing. Thus, a factory erected and equipped for the sum of £50,000, and engaged upon the production of certain articles for which there is a steady demand, may be making a net profit of twenty per cent., or £10,000 per annum. The accommodation for machinery and workers is then doubled by the expenditure of another £50,000 and the output follows suit, still bringing in twenty per cent. on the whole capital invested. It is even probable that there may be what is known as an "increasing return," for the capacity of the works may be doubled by an outlay of less than £50,000, as for instance if the accommodation for the management and clerical staff originally provided, suffices also for the additional buildings; other overhead charges again may not be increased proportionally. Thus in ordinary business ventures the return secured by the promoter or shareholder from the advancement of fresh capital is usually subject to no retarding influences—always provided that stability of manufacturing costs is assured and that certainty of demand can be determined in advance.

If we turn to agriculture, however, a totally different proposition faces us, for we find that in whatsoever form it is sought to apply more than a certain amount of capital to the preparation of the soil there is a limit beyond which not only do profits remain stationary but rapidly decline. In theory there may be almost no limit to the yield of crops per acre; indeed, before the Royal Commission of 1893 one witness declared that, by an abnormal application of "capital" (in this case stable manure), he had secured a yield of wheat of 130 bushels to the acre. Sir J. B. Lawes, giving evidence subsequently, agreed that this



might have been effected on a "few square feet" and with "the aid of pea-sticks," but emphasised the fact that the cultivation of land, if profit was the objective, could be very easily overdone; that in other words such yields achieved at enormous expense clearly could not "pay." Obviously if a crop of twenty bushels per acre could be doubled and then trebled by the outlay of two and three times the capital required to produce the twenty bushels, all farmers would pursue such a policy and yields of forty and sixty bushels would be universal. Here, however, is the vital distinction drawn between manufacturing and agricultural processes—the intrusion of a factor that may be ever varying and uncertain in its incidence, but one that is never

absent. The diagram on p. 375 illustrates in general the incidence of this Law, the figures on the base line of which may be taken as representing capital application in any of several forms, e.g. weight of manure per acre, wages per acre on preparation of the land and so forth. The following table also gives a concrete instance of its applicability to wheat production. These latter figures are taken from the *Book of the Rothamsted Experiments*, edited by the present director, Sir John Russell, and display strikingly the diminishing returns resulting from the progressive applications of capital in the shape of nitrogen.

Experiments on Wheat, Broadbalk Field.

(Averages, 1852-1864.)

Plot	Manures per acre	Dressed grain		Straw	
		Produce per acre	Increase for each additional 43 lbs. nitrogen in manure	Produce per acre	Increase for each additional 43 lbs. nitrogen per acre
5	Minerals alone	18·3	—	16·6	—
6	Minerals and 43 lbs. nitrogen as ammonium salts	28·6	10·3	27·1	10·5
7	Minerals and 86 lbs. nitrogen as ammonium salts	37·1	8·5	38·1	11·0
8	Minerals and 129 lbs. nitrogen as ammonium salts	39·0	1·9	42·7	4·6
16	Minerals and 172 lbs. nitrogen as ammonium salts	39·5	0·5	46·6	3·9

The critical figures are of course those contained in the columns which record the increase due to each additional 43 lbs. of nitrogen, for it is clear that the third and fourth "doses" were not resulting in gains that could be justified under commercial conditions. The figures of total produce per acre also harmonise well with the diagram, which, as stated above, is illustrative of the law in general and represents no particular example. It will be observed that the curve becomes practically horizontal, and in fact might almost be described as cycloidal in shape. While there was in the past unanimity in regard to the prevalence

of this Law, latterly certain economists have pinned their faith to the belief that "science," if it cannot already do so, will in the near future be able to surmount these difficulties, or in other words that the chemist will evolve some process by which at a relatively small outlay the soil will be forced to give almost uniform returns. If such were ever accomplished, then indeed the Law would be a thing to ignore, but the last sixty years, although prolific in discovery, have given no indication of the birth of any revolution in agricultural practice. Such slight modifications as have taken place have had reference to agriculture as a whole; among these may be placed the greater use made of machinery, by which the expenses of labour have been somewhat reduced, and the introduction of subsidiary branches of cultivation, by which a given tract of land has been made to yield a greater weight or value from the growth of intensively produced crops. The yield of the individual staple crops has, however, not been appreciably freed from the incidence of the Law by any striking advance in science.

It must be emphasised that the critical point at which the cash return secured from the additional yield exactly counterbalances (and thereafter exceeds) the outlay on procuring it varies within wide limits and has reference to numerous factors, among which must be placed the nature of the land and its past history, the ruling prices for agricultural products and the cost of labour and material. In this and other countries where agriculture has been long established, the second and third of the factors just enumerated are more potent than the first, although this has always to be reckoned with in certain districts; corroborative evidence is always present in times of economic depression when the resulting cry that "high farming is no remedy for low prices" correctly directs attention to the Law. In times of relatively high prices of wheat and other cereals, it "pays" to farm certain lands which otherwise either go out of cultivation or remain under grass; the reason being the simple one that there is a larger margin available before the Law reminds the cultivator of its existence. As has been pointed out previously the advantages of climate and soil in East Anglia have enabled wheat production to be carried on in that part of these

islands, when low prices virtually forced its abandonment elsewhere. The distinction to be drawn between a highly developed country and one situated in the newer parts of the world is as follows. The settlers in Canada, Australia, the Argentine and other new States, on commencing their operations, possess in their soil the stored fertility of past ages upon which to draw. At first no application of manure is called for, and their capital outlay is confined to the mere mechanical preparation of the richest tracts of land, even the rent of which is almost a negligible factor. As in the course of years this fertility is gradually absorbed, a relatively small application of manure, accompanied by a perhaps slightly augmented labour-bill and the abolition of a bare fallow in the rotation, will bring the cultivator almost *pro rata* returns—he is still only assisting nature to a slight degree. Within another generation or so, however, his land calls for as much “farming” as that situated in the older countries of the world, and the Law of diminishing returns, at first masked by the response of the virgin richness of the soil, makes itself felt when that wealth has been “stolen.” Thereafter, as population increases, means of communication are established, and demand springs up for land as the products of it rise in value, the Law assumes its place in the agricultural economy of the country. Before this full development is attained, however, there is another direction in which its incidence seems to be obviated, and that is when the agriculture of a whole country or a province alone is taken into consideration. Then the application of additional capital can take the form of adding fresh untilled soil to that already under the plough, when of course once more the latent resources are being drawn on and no expenditure is being laid out in assisting nature. Theoretically, such a position could be achieved in the case of individual farmers situated on the outskirts of land reclamation, whose properties were bordered by untouched tracts ready to be assimilated into the original holdings; thus for the time being even separate occupiers could in a fresh direction secure a non-diminishing return, but only precariously and at the expense of constant fresh commitments in real estate.

APPENDIX II

TABLE I.

*Acreeage under Wheat, Barley, Oats and Potatoes in the
United Kingdom from 1866 to 1921.*

Year	Thousands of acres			
	Wheat	Barley	Oats	Potatoes
1866	3661	2398	4471	1555
1867	3641	2440	4422	1501
1868	3951	2348	4469	1584
1869	3982	2483	4480	1635
1870	3774	2624	4425	1639
1871	3831	2617	4362	1694
1872	3840	2544	4341	1564
1873	3670	2575	4198	1426.
1874	3831	2507	4089	1421
1875	3514	2751	4176	1432
1876	3125	2762	4299	1392
1877	3321	2652	4239	1393
1878	3382	2723	4124	1365
1879	3056	2932	3998	1393
1880	3066	2695	4192	1381
1881	2967	2663	4306	1443
1882	3164	2452	4245	1388
1883	2713	2486	4370	1360
1884	2751	2346	4277	1374
1885	2553	2447	4283	1356
1886	2355	2436	4404	1354
1887	2384	2248	4403	1357
1888	2663	2257	4163	1394
1889	2539	2308	4128	1366
1890	2479	2294	4124	1310
1891	2388	2291	4115	1286
1892	2295	2212	4234	1265
1893	1953	2244	4420	1251
1894	1977	2261	4508	1221
1895	1454	2338	4512	1251
1896	1732	2278	4289	1269
1897	1939	2214	4226	1194
1898	2158	2069	4098	1201
1899	2055	2159	4110	1222
1900	1899	2164	4131	1215
1901	1744	2134	4096	1212
1902	1771	2077	4139	1203
1903	1619	2017	4238	1184
1904	1406	1999	4332	1188
1905	1835	1868	4118	1225
1906	1799	1928	4119	1182
1907	1664	1883	4198	1139
1908	1663	1822	4169	1149
1909	1867	1827	4018	1155
1910	1856	1897	4095	1132

APPENDIX II

TABLE I (CONTD.).

Acreeage under Wheat, Barley, Oats and Potatoes in the United Kingdom from 1866 to 1921.

Year	Thousands of acres			
	Wheat	Barley	Oats	Potatoes
1911	1951	1756	4051	1163
1912	1971	1814	4075	1207
1913	1792	1932	3983	1184
1914	1906	1873	3899	1209
1915	2335	1524	4182	1214
1916	2053	1053	4171	1155
1917	2106	1797	4789	1377
1918	2796	1839	5631	1518
1919	2372	1871	5144	1230
1920	1979	2049	4035	1291
1921	2084	1782	4415	1280

TABLE II.

Acreeage under Wheat, Barley and Oats in England and Wales from 1870 to 1922.

Year	Thousands of acres			Year	Thousands of acres		
	Wheat	Barley	Oats		Wheat	Barley	Oats
1870	3375	2128	1744	1897	1839	1803	2068
1871	3439	2134	1708	1898	2046	1666	1962
1872	3403	2064	1698	1899	1954	1742	2002
1873	3369	2090	1664	1900	1796	1750	2077
1874	3509	2042	1592	1901	1665	1737	2041
1875	3240	2245	1659	1902	1679	1680	2103
1876	2917	2263	1777	1903	1540	1644	2167
1877	3087	2148	1720	1904	1338	1640	2272
1878	3143	2211	1665	1905	1748	1502	2088
1879	2813	2389	1652	1906	1706	1533	2086
1880	2835	2203	1760	1907	1577	1502	2172
1881	2731	2172	1871	1908	1583	1470	2160
1882	2925	1993	1784	1909	1774	1464	2038
1883	2545	2046	1929	1910	1756	1537	2063
1884	2608	1938	1869	1911	1843	1424	2047
1885	2423	2020	1894	1912	1863	1457	2072
1886	2230	2023	2023	1913	1702	1559	1975
1887	2267	1879	2024	1914	1807	1505	1930
1888	2496	1860	1867	1915	2170	1232	2088
1889	2390	1898	1873	1916	1912	1332	2085
1890	2324	1895	1889	1917	1918	1460	2259
1891	2254	1890	1907	1918	2557	1501	2780
1892	2158	1824	1999	1919	2221	1510	2564
1893	1853	1863	2155	1920	1875	1637	2272
1894	1883	1878	2229	1921	1976	1436	2149
1895	1384	1950	2288	1922	1967	1364	2164
1896	1656	1886	2087				

TABLE III. *Extent of arable, permanent grass and corn (wheat, oats, barley) in England and Wales from 1870 to 1922.*

Year	Thousands of acres			Year	Thousands of acres		
	Arable	P. grass	Corn		Arable	P. grass	Corn
1870	14,849	11,108	7,246	1897	12,505	15,122	5,709
1871	14,946	11,375	7,280	1898	12,406	15,178	5,673
1872	14,943	11,522	7,225	1899	12,316	15,244	5,697
1873	14,721	11,819	7,123	1900	12,217	15,321	5,623
1874	14,615	12,072	7,143	1901	12,118	15,399	5,442
1875	14,607	12,203	7,144	1902	12,103	15,388	5,462
1876	14,527	12,386	6,957	1903	11,932	15,520	5,348
1877	14,453	12,590	6,964	1904	11,761	15,668	5,249
1878	14,407	12,758	7,019	1905	11,656	15,750	5,338
1879	14,255	13,007	6,854	1906	11,589	15,805	5,324
1880	14,096	13,267	6,798	1907	11,547	15,830	5,250
1881	13,978	13,471	6,773	1908	11,406	15,942	5,213
1882	13,892	13,638	6,702	1909	11,358	15,965	5,276
1883	13,721	13,874	6,520	1910	11,320	15,972	5,355
1884	13,570	14,084	6,416	1911	11,299	15,950	5,314
1885	13,576	14,122	6,337	1912	11,335	15,839	5,392
1886	13,412	14,325	6,275	1913	11,058	16,071	5,235
1887	13,278	14,476	6,169	1914	10,998	16,116	5,242
1888	13,251	14,555	6,222	1915	10,966	16,087	5,489
1889	13,195	14,050	6,160	1916	11,051	16,023	5,328
1890	13,080	14,792	6,109	1917	11,246	15,835	5,638
1891	12,904	15,098	6,060	1918	12,399	14,589	6,837
1892	12,764	15,020	5,981	1919	12,309	14,439	6,295
1893	12,627	15,127	5,872	1920	12,020	14,487	5,783
1894	12,627	15,111	5,990	1921	11,618	14,526	5,552
1895	12,460	15,223	5,621	1922	11,311	14,715	5,492
1896	12,335	15,331	5,630				

TABLE IV. *Yield in bushels per acre of Wheat, Barley and Oats in Great Britain 1885 to 1921.*

Year	Wheat	Barley	Oats	Year	Wheat	Barley	Oats
1885	31·3	35·1	36·8	1904	26·8	31·1	39·2
1886	26·9	32·2	37·8	1905	32·8	33·9	38·2
1887	32·1	31·3	34·7	1906	33·7	34·6	40·6
1888	28·0	32·8	37·2	1907	34·0	35·3	43·0
1889	29·9	31·8	39·3	1908	32·3	32·8	39·8
1890	30·7	35·0	41·4	1909	33·7	36·6	41·3
1891	31·3	34·1	38·8	1910	30·3	32·7	40·3
1892	26·4	34·6	38·8	1911	32·9	31·9	38·0
1893	25·9	28·7	35·6	1912	29·0	31·1	36·3
1894	30·7	34·5	41·6	1913	31·5	33·0	38·1
1895	26·2	31·7	37·1	1914	32·7	33·4	39·8
1896	33·7	33·6	36·8	1915	31·5	29·9	39·8
1897	29·1	32·8	38·5	1916	28·8	31·0	38·9
1898	34·7	35·7	40·8	1917	30·2	30·8	39·5
1899	32·7	34·2	38·8	1918	33·2	32·7	41·3
1900	28·5	31·3	37·9	1919	29·1	29·6	36·4
1901	30·8	31·0	36·7	1920	28·7	31·8	38·6
1902	32·8	34·8	42·6	1921	35·4	30·1	37·5
1903	30·1	32·0	39·7				

TABLE V.

Yield of Wheat, Barley and Oats for three decades in each County of England and Wales.

	Wheat			Barley			Oats		
	1885- 1894	1895- 1904	1905- 1914	1885- 1894	1895- 1904	1905- 1914	1885- 1894	1895- 1904	1905- 1914
Bedfordshire ...	28.82	29.66	31.19	32.10	29.62	30.89	39.42	37.53	41.02
Berkshire ...	28.06	28.92	29.95	31.19	28.23	29.48	41.66	38.52	36.60
Buckinghamshire ...	27.48	28.54	30.96	31.87	29.74	31.76	38.42	36.20	36.78
Cambridgeshire and the Isle of Ely	32.99	31.81	34.18	35.47	32.73	36.66	58.30	47.25	54.60
Cheshire ...	30.39	31.13	33.42	29.89	31.72	30.87	35.74	36.00	34.02
Cornwall ...	25.96	30.34	29.88	28.37	32.56	32.10	37.67	40.65	38.16
Cumberland ...	30.09	32.25	31.10	32.36	34.15	35.44	38.08	42.97	43.38
Derbyshire ...	29.07	30.21	34.11	32.87	32.84	34.41	37.47	36.42	36.74
Devonshire ...	21.18	24.40	28.27	27.03	28.21	31.36	32.85	34.75	37.75
Dorset ...	28.49	30.33	31.74	33.81	32.86	33.21	40.93	43.68	43.85
Durham ...	26.38	30.70	34.43	31.38	36.41	36.69	34.16	37.98	37.61
Essex ...	30.71	30.68	32.45	34.54	33.69	33.64	34.16	45.57	44.25
Gloucestershire ...	27.82	28.28	30.07	30.44	28.66	30.28	37.32	35.99	36.91
Hampshire ...	26.71	28.28	29.53	31.62	31.27	30.98	41.33	40.62	40.04
Herefordshire ...	26.72	29.05	31.12	28.12	30.34	32.31	33.88	35.47	36.32
Hertfordshire ...	28.36	29.83	31.37	32.82	31.78	31.90	40.69	38.36	37.22
Huntingdonshire ...	29.21	30.11	28.60	30.30	29.20	28.85	43.98	41.87	36.13
Kent ...	32.12	33.90	35.19	37.38	37.83	38.03	47.72	46.60	44.52
Lancashire ...	29.93	32.81	36.20	33.85	36.14	35.39	40.22	42.74	42.48
Leicestershire ...	31.00	29.43	31.59	31.79	30.48	32.65	34.48	32.62	35.42
Lincolnshire ...	32.46	34.04	34.93	34.95	33.75	34.41	48.22	48.92	49.32
Middlesex ...	30.02	31.50	35.04	34.32	29.86	31.21	45.90	38.53	43.95

Monmouthshire ...	24.46	24.29	27.78	25.88	25.74	27.63	30.69	30.66	31.69
Norfolk ...	31.36	32.57	32.87	34.52	33.59	33.00	46.51	47.62	47.05
Northamptonshire ...	31.16	31.65	34.09	33.38	30.99	35.12	38.68	36.37	40.05
Northumberland ...	29.85	33.14	36.26	35.34	35.79	35.77	36.00	37.72	36.50
Nottinghamshire ...	28.72	27.97	30.67	32.53	31.21	32.94	38.55	36.22	38.09
Oxfordshire ...	27.98	29.20	31.46	32.42	30.82	32.76	40.75	38.73	38.94
Rutland ...	30.50	30.60	34.20	32.16	29.03	35.04	37.39	34.51	41.64
Shropshire ...	29.59	30.09	30.75	31.61	31.57	31.60	35.38	35.90	34.34
Somersetshire ...	28.14	29.19	31.58	33.05	31.91	32.40	35.68	35.92	37.61
Staffordshire ...	28.08	29.96	32.45	30.53	30.80	31.25	33.57	33.42	35.50
Suffolk ...	29.05	29.63	31.75	32.81	32.06	32.87	40.86	43.32	46.64
Surrey ...	27.44	28.86	30.10	30.73	28.95	30.09	41.96	39.11	39.99
Sussex ...	30.58	31.92	32.47	34.50	32.82	32.54	46.25	46.33	42.60
Warwickshire ...	29.08	29.20	30.73	31.15	31.54	32.16	33.77	34.47	34.86
Westmorland ...	28.41	32.09	33.38	31.96	32.10	32.67	31.74	32.96	35.03
Wiltshire ...	29.13	31.17	32.23	32.80	30.06	32.03	44.53	43.97	41.59
Worcestershire ...	28.52	29.26	30.39	31.71	31.08	31.25	34.59	37.85	37.09
Yorkshire, E. Riding	29.88	31.07	31.13	33.56	34.14	33.14	45.86	43.64	42.12
Yorkshire, N. Riding	27.45	31.18	31.89	33.59	35.28	34.47	39.47	40.66	38.07
Yorkshire, W. Riding	27.04	28.34	30.43	32.80	33.84	33.97	42.21	40.36	39.73
Anglesey ...	26.84	38.11	34.02	31.77	40.46	34.11	41.02	45.54	44.62
Brecon ...	21.29	25.49	26.42	22.55	23.87	23.40	25.87	25.31	26.27
Cardigan ...	25.81	24.72	27.69	29.27	28.61	32.49	34.25	31.33	33.05
Carmarthen ...	19.16	20.70	23.44	23.10	24.93	24.64	27.64	25.79	28.48
Carnarvon ...	23.24	23.61	29.51	29.84	28.40	28.57	32.68	31.47	35.41
Denbigh ...	26.60	28.42	32.88	31.32	33.89	34.52	33.99	33.93	38.54
Flint ...	28.22	29.33	30.39	31.18	32.15	30.84	35.91	35.30	37.50
Glamorgan ...	26.52	28.78	30.89	31.90	32.01	32.72	36.75	39.85	41.05
Merioneth ...	26.31	26.18	30.51	35.19	32.34	30.69	44.96	38.65	38.76
Montgomery ...	20.72	21.71	25.01	29.36	28.09	27.25	26.98	29.42	26.53
Pembroke ...	20.68	27.51	29.03	26.50	33.23	36.00	31.64	37.27	43.93
Radnor ...	21.20	25.41	25.22	24.34	28.53	26.14	26.11	27.26	26.56

TABLE VI. *Comparative yields of the three principal cereals on old and new arable land in 1918.*

	Wheat		Oats		Barley	
	New arable	Old arable	New arable	Old arable	New arable	Old arable
Bedfordshire ...	27·8	30·1	31·0	39·3	20·7	30·8
Berkshire ...	25·6	31·0	32·0	40·0	20·0	29·5
Buckinghamshire ...	19·3	31·1	35·7	39·5	20·6	29·3
Cambridgeshire and Isle of Ely	23·9	32·4	34·2	48·8	—	—
Chester ...	31·3	35·5	38·5	39·0	28·2	31·3
Cornwall ...	38·5	35·1	48·3	45·4	34·3	37·6
Cumberland ...	—	—	50·1	44·2	—	—
Derbyshire ...	36·4	36·0	43·3	37·2	28·7	33·4
Devonshire ...	29·8	32·4	41·9	41·4	23·9	32·6
Dorset ...	43·2	36·5	49·7	43·2	21·3	31·8
Durham ...	34·3	39·1	41·6	42·8	29·8	37·1
Essex ...	36·9	32·9	39·3	45·3	29·0	32·1
Gloucestershire ...	27·3	30·7	32·6	36·9	24·2	29·3
Hampshire ...	30·8	30·7	33·6	37·5	28·3	30·0
Herefordshire ...	33·6	32·7	40·5	39·3	26·6	30·9
Hertfordshire ...	31·4	32·3	30·0	43·5	26·2	31·6
Huntingdonshire ...	23·8	28·3	29·6	36·9	19·9	28·4
Kent ...	24·3	36·2	31·4	46·0	22·8	33·0
Lancashire ...	40·0	33·8	40·6	36·6	37·9	29·0
Leicestershire ...	26·7	35·8	29·3	43·3	25·2	33·7
Lincolnshire ...	31·1	35·6	43·1	50·5	26·3	33·2
Middlesex ...	—	—	—	—	—	—
Monmouthshire ...	37·9	30·2	42·6	38·7	34·0	29·7
Norfolk ...	28·6	33·0	38·3	48·4	23·9	31·3
Northamptonshire ...	28·4	32·7	30·1	37·7	28·6	33·2
Northumberland ...	—	—	—	—	—	—
Nottinghamshire ...	28·5	32·6	35·9	39·8	34·2	30·8
Oxfordshire ...	28·3	32·0	30·1	35·7	29·6	30·2
Rutland ...	31·7	32·7	31·3	36·4	23·6	32·9
Shropshire ...	31·7	33·1	41·3	40·3	25·3	32·6
Somersetshire ...	30·9	35·7	40·8	37·7	29·4	36·2
Staffordshire ...	35·1	36·4	48·5	40·4	32·9	31·4
Suffolk ...	36·0	32·2	42·6	46·2	23·3	31·7
Surrey ...	22·5	30·3	27·4	39·6	22·1	29·6
Sussex ...	18·3	31·2	36·3	40·7	28·2	29·3
Warwickshire ...	30·5	29·6	48·3	36·0	30·1	34·0
Westmorland ...	—	—	45·2	37·6	—	—
Wiltshire ...	35·9	32·5	43·5	41·3	27·1	30·9
Worcester ...	31·2	30·8	44·3	37·2	31·2	29·7
Yorkshire, E. Riding	29·7	33·0	38·2	42·6	39·3	32·7
Yorkshire, N. Riding	39·5	35·2	45·5	45·3	41·5	36·1
Yorkshire, W. Riding	32·2	32·0	38·0	34·8	36·3	33·1
Anglesey ...	—	—	—	—	—	—
Brecon ...	29·6	28·2	44·0	29·6	28·3	24·4
Cardigan ...	33·8	28·4	25·6	30·4	29·0	30·3
Carmarthen ...	—	—	—	—	—	—
Carmarvon ...	37·4	27·9	41·8	33·6	37·2	28·3
Denbigh ...	34·0	32·7	40·1	35·6	38·0	32·0
Flint ...	35·5	34·8	43·5	39·2	31·0	31·4
Glamorgan ...	34·6	32·4	45·2	41·1	32·7	32·2
Merioneth ...	40·0	25·9	31·4	42·5	35·8	31·9
Montgomery ...	30·0	28·8	43·9	29·4	38·0	27·1
Pembroke ...	25·2	29·1	57·9	50·5	38·3	37·3
Radnor ...	—	—	25·0	25·1	26·0	22·9
England and Wales	31·2	32·0	40·7	41·2	28·8	32·4

TABLE VII. *Comparative yields of the three principal cereals on old and new arable land in 1919.*

	Wheat		Oats		Barley	
	New arable	Old arable	New arable	Old arable	New arable	Old arable
Bedfordshire ...	25·5	26·7	27·5	37·4	19·0	27·1
Berkshire ...	26·1	29·2	34·7	38·4	23·6	29·2
Buckinghamshire ...	21·1	26·9	29·7	33·7	16·7	28·6
Cambridgeshire ...	29·1	28·5	—	—	—	—
Cheshire ...	35·1	30·8	42·1	37·4	22·7	31·4
Cornwall ...	—	—	—	—	—	—
Cumberland ...	—	—	48·9	41·6	6·0	33·9
Derbyshire ...	14·7	25·3	25·9	25·5	17·8	25·0
Devonshire ...	31·2	29·2	32·2	37·7	25·2	31·5
Dorset ...	32·5	30·3	33·4	36·0	31·4	29·5
Durham ...	28·8	32·8	32·7	32·5	26·8	34·1
Essex ...	—	—	—	—	—	—
Gloucestershire ...	30·1	26·9	26·5	31·7	25·5	25·6
Hampshire ...	26·5	28·3	29·0	34·2	27·2	26·3
Herefordshire ...	23·7	28·7	25·5	29·3	38·1*	25·1
Hertfordshire ...	28·2	26·6	35·6	37·6	—	—
Huntingdonshire ...	—	—	—	—	—	—
Kent ...	21·4	29·3	24·1	38·4	18·9	27·2
Lancashire ...	—	—	—	—	—	—
Leicestershire ...	—	—	—	—	—	—
Lincolnshire ...	31·3	30·5	40·4	38·9	27·9	28·6
Middlesex ...	—	—	—	—	—	—
Monmouthshire ...	32·4	30·1	31·9	32·4	25·1	25·3
Norfolk ...	28·8	28·6	44·1	42·6	24·6	29·9
Northamptonshire ...	—	—	—	—	—	—
Northumberland ...	15·6	30·8	31·6	35·1	23·3	35·7
Nottinghamshire ...	32·0	26·1	26·2	23·8	22·3	25·3
Oxfordshire ...	—	—	—	—	—	—
Rutland ...	22·9	31·7	29·0	40·1	22·1	31·9
Shropshire ...	37·9	30·1	41·0	25·7	35·9	26·3
Somersetshire ...	31·7	31·7	33·9	37·3	30·5	29·9
Staffordshire ...	32·0	29·3	40·5	26·6	27·8	27·3
Suffolk ...	27·2	26·3	40·1	35·9	30·7	27·4
Surrey ...	27·0	26·7	34·1	30·4	21·2	24·4
Sussex ...	27·5	31·0	42·0	36·6	38·2	28·0
Warwickshire ...	29·4	28·6	27·3	23·2	21·1	27·0
Westmorland ...	—	—	32·2	33·4	36·0	32·2
Wiltshire ...	28·6	28·0	26·4	36·4	16·2	26·0
Worcestershire ...	27·6	27·0	29·7	26·4	20·0	25·3
Yorkshire, E. Riding	30·6	31·7	39·1	36·5	33·1	30·2
Yorkshire, N. Riding	25·4	30·1	43·1	37·4	33·1	32·2
Yorkshire, W. Riding	—	—	—	—	—	—
Anglesey ...	—	—	—	—	—	—
Brecon ...	27·0	26·4	32·0	25·6	31·9	22·9
Cardigan ...	—	—	—	—	—	—
Carmarthen ...	25·1	29·8	27·6	35·1	32·0	32·6
Carnarvon ...	33·6	30·0	42·2	34·4	32·8	28·8
Denbigh ...	36·5	28·5	41·8	33·9	31·9	29·0
Flint ...	31·6	30·8	34·5	34·8	38·5	31·3
Glamorgan ...	32·5	30·4	32·5	30·4	31·1	33·5
Merioneth ...	13·2	23·0	21·5	30·3	24·3	25·2
Montgomery ...	16·3	26·4	40·2	25·4	—	—
Pembroke ...	37·3	26·6	53·9	44·6	—	—
Radnor ...	47·6	23·2	22·2	21·6	21·0	23·8
England and Wales	28·4	28·7	36·6	35·6	28·0	29·0

TABLE VIII.

Area and Production of certain Crops on Large and Small Holdings in Roumania (Old Kingdom).

(From official Roumanian publications.)

	WHEAT					
	Large holdings			Small holdings		
	Area hectares	Yield hectolitres	Hecto-litres per hectare	Area hectares	Yield hectolitres	Hecto-litres per hectare
1907	924,419	8,464,001	9·2	789,898	6,420,306	8·1
1908	965,554	10,488,724	10·9	836,131	8,827,394	10·5
1909	907,338	11,752,595	12·9	781,706	8,246,284	10·5
1910	1,044,101	22,515,763	21·6	904,116	16,516,030	18·2
1911	983,827	17,340,919	17·7	946,337	15,687,176	16·6
1912	1,043,451	16,832,584	16·1	1,025,969	14,504,238	14·1
1913	758,582	14,573,290	19·2	864,523	14,758,893	17·0
1914	927,592	8,578,695	9·2	1,184,138	8,783,918	7·4
1915	852,022	15,732,206	18·4	1,052,227	15,716,086	14·9
1916	—	—	—	—	—	—
1917	—	—	—	—	—	—
1918*	672,189	2,681,522	3·99	943,853	3,838,771	4·06
1919	340,863	—	—	858,895	—	—
1920	91,550	—	—	746,986	—	—
	OATS					
1907	129,841	2,728,303	21·0	222,627	3,559,031	15·9
1908	186,197	2,579,369	13·8	304,141	3,486,058	11·4
1909	171,310	3,828,389	22·3	313,194	5,314,648	16·9
1910	150,254	3,860,545	25·7	296,506	6,587,078	22·2
1911	132,583	3,517,893	26·5	268,832	5,722,736	21·3
1912	116,483	2,704,217	23·2	265,302	4,616,813	17·4
1913	192,577	5,236,472	27·1	329,572	7,145,988	21·6
1914	131,063	3,056,344	23·3	296,443	5,758,731	19·4
1915	146,905	3,950,079	26·9	284,058	6,288,469	22·1
1916	—	—	—	—	—	—
1917	—	—	—	—	—	—
1918*	141,017	765,498	5·4	189,197	966,639	5·1
1919	39,766	—	—	201,945	—	—
1920	73,954	—	—	385,971	—	—
	BARLEY					
1907	126,626	2,098,895	16·6	383,067	4,970,963	12·9
1908	168,965	1,713,261	10·1	451,225	2,823,138	6·2
1909	152,889	2,249,931	14·7	396,297	4,782,257	12·0
1910	140,717	2,991,646	21·3	408,674	7,354,286	17·9
1911	121,928	2,404,794	19·7	385,273	6,812,933	17·7
1912	115,158	2,072,278	18·0	384,272	5,431,863	14·1
1913	146,276	2,868,273	19·7	416,263	6,765,934	16·2
1914	123,120	2,139,457	17·3	445,302	6,848,416	15·4
1915	122,121	2,390,998	19·6	432,779	7,718,754	17·8
1916	—	—	—	—	—	—
1917	—	—	—	—	—	—
1918*	81,136	313,747	3·8	165,915	465,459	2·8
1919	30,168	—	—	207,490	—	—
1920	49,388	—	—	402,387	—	—

TABLE VIII (CONTD.).

	MAIZE					
	Large holdings			Small holdings		
	Area hectares	Yield hectolitres	Hecto-litres per hectare	Area hectares	Yield hectolitres	Hecto-litres per hectare
1907	367,839	4,865,411	13.2	1,560,753	15,424,105	9.9
1908	300,199	4,610,535	15.3	1,720,116	23,190,685	13.4
1909	308,586	4,355,353	14.1	1,814,887	20,361,128	11.2
1910	266,845	6,027,817	22.5	1,719,414	30,503,609	17.7
1911	292,135	6,562,379	22.4	1,793,116	32,452,435	18.1
1912	226,716	5,671,372	25.0	1,812,504	30,950,013	17.1
1913	264,341	5,656,065	21.4	1,882,630	34,750,803	18.4
1914	235,732	4,901,840	20.8	1,829,834	31,237,206	17.0
1915	222,188	3,731,784	16.8	1,885,101	26,719,736	14.2
1916	—	—	—	—	—	—
1917	—	—	—	—	—	—
1918*	237,981	998,481	4.2	1,479,840	7,492,088	5.06
1919	83,795	—	—	1,883,667	—	—
1920	85,704	—	—	1,869,170	—	—
SUGAR BEET						
	Hectares	Quintals	Quintals per hectare	Hectares	Quintals	Quintals per hectare
1907	3,875	723,287	186.6	2,764	368,274	133.2
1908	5,741	1,160,695	202.2	3,277	507,735	154.9
1909	7,402	1,398,343	188.9	4,004	680,354	169.9
1910	7,808	1,954,380	250.3	5,510	1,126,979	204.5
1911	7,614	1,661,862	218.2	5,089	968,656	161.7
1912	8,483	1,670,772	196.9	5,880	1,251,617	212.8
1913	7,764	1,726,172	222.3	5,250	1,097,474	209.0
1914	7,329	1,265,725	172.7	7,456	983,900	131.9
1915	7,708	1,043,606	135.4	6,125	810,843	132.4
1916	—	—	—	—	—	—
1917	—	—	—	—	—	—
1918*	4,057	278,116	68.5	2,080	178,810	85.9
1919	277	—	—	1,689	—	—
1920	260	—	—	2,976	—	—
POTATOES						
	Hectares	Quintals	Quintals per hectare	Hectares	Quintals	Quintals per hectare
1907	2,447	268,240	109.6	7,339	549,066	74.8
1908	2,406	304,073	126.4	7,482	500,963	66.9
1909	1,559	192,465	123.4	7,091	474,756	66.9
1910	2,807	348,441	124.1	7,485	698,491	93.3
1911	3,310	361,893	109.3	8,721	792,050	90.8
1912	3,244	308,537	95.1	8,753	711,483	81.3
1913	2,353	186,401	79.2	7,792	500,247	64.2
1914	2,441	174,911	71.6	8,115	547,331	67.4
1915	2,437	260,995	109.5	8,851	757,713	85.6
1916	—	—	—	—	—	—
1917	—	—	—	—	—	—
1918*	2,724	68,270	25.06	11,234	385,864	34.3
1919	1,250	—	—	11,929	—	—
1920	1,100	—	—	13,026	—	—

* Excluding the Dobruja.

TABLE IX. *Acreage under Wheat in the principal countries of the world from 1913 to 1921.*

	Thousands of acres								
	1913	1914	1915	1916	1917	1918	1919	1920	1921
United Kingdom ...	1,792	1,906	2,335	2,053	2,106	2,796	2,372	1,979	2,084
Australia ...	9,287	9,651	12,484	11,533	9,775	7,990	7,410	9,082	9,405
Canada ...	11,015	10,294	15,109	15,370	14,759	17,354	19,126	18,232	23,201
Egypt ...	1,303	1,595	1,450	1,119	1,289	1,326	—	—	—
India ...	28,475	32,475	30,320	32,940	35,513	23,806	29,864	25,087	28,664
New Zealand ...	167	230	329	219	281	211	192	212	363
Union of South Africa ...	—	—	—	—	987	953	—	823	839
Algeria ...	3,446	3,367	3,208	3,271	3,220	3,185	2,799	2,647	2,816
Argentina ...	16,237	15,465	16,413	16,082	17,868	16,061	14,951	15,014	13,927
Belgium ...	394	400	—	—	—	—	328	306	353
Bulgaria ...	3,647	2,523	2,407	2,219	2,480	2,444	2,079	2,154	2,361
Chile ...	1,018	1,073	1,142	1,272	1,302	1,313	—	1,250	1,314
Czecho-Slovakia ...	—	—	—	—	—	—	—	1,567	1,538
Denmark ...	—	—	164	152	131	140	124	165	220
France ...	16,159	14,969	13,558	12,424	10,353	10,988	11,311	12,278	13,165
Germany ...	4,876	4,930	4,948	—	3,572	3,545	3,208	3,413	3,561
Hungary ...	8,480	8,620	8,201	—	—	—	—	2,081	2,697
Italy ...	11,837	11,780	12,497	11,674	10,552	10,794	10,567	11,290	11,780
Japan ...	1,184	1,173	1,227	1,303	1,393	1,389	1,375	1,300	—
Jugo-Slavia ...	—	—	—	—	—	—	—	3,952	—
Netherlands ...	141	148	163	134	121	143	162	156	176
Poland ...	—	—	—	—	—	—	—	1,791	2,081
Roumania ...	4,009	5,216	4,703	4,842	—	3,992	2,938	2,072	6,149
Russia (in Europe) ...	62,076	61,933	—	—	—	—	—	—	—
Russia (in Asia) ...	20,613	21,939	—	—	—	—	—	—	—
Spain ...	9,640	9,677	10,033	10,144	10,336	10,224	10,374	10,255	10,382
Sweden ...	288	269	299	307	329	381	348	360	360
Switzerland ...	105	103	113	124	139	202	130	119	117
Tunis ...	1,235	1,003	1,352	1,482	1,447	1,413	1,189	1,343	1,500
United States of America ...	50,184	53,541	60,469	52,316	45,089	59,110	73,243	57,192	62,408
Uruguay ...	911	783	949	779	975	839	720	750	741

For Egypt, India and countries in the Southern Hemisphere the agricultural years 1913-14, 1914-15, etc. are shown as 1913, 1914, etc.

After 1918 the boundaries of France, Germany, Hungary, Roumania, etc. differed from those previously existing; the necessary adjustments have been effected in the above returns.

TABLE X. *Production of Wheat in the principal countries of the world from 1913 to 1921.*

	Thousands of quarters										Average yield in bushels per acre*
	1913	1914	1915	1916	1917	1918	1919	1920	1921		
United Kingdom ...	7,087	7,804	9,239	7,472	8,040	11,643	8,665	7,104	9,224	30.4	
Australia ...	12,918	3,111	22,383	19,052	14,342	9,392	5,498	18,349	17,021	11.9	
Canada ...	28,965	20,160	49,193	32,848	29,218	23,634	24,157	32,899	37,607	13.5	
Egypt ...	4,105	4,892	4,567	3,728	4,068	3,766	—	—	—	25.2	
India ...	39,004	47,072	40,376	47,759	47,423	34,999	47,110	31,631	44,403	11.2	
New Zealand ...	654	830	889	635	851	821	500	747	—	28.0	
Union of South Africa	—	—	—	—	1,269	1,075	828	1,014	1,086	8.5	
Algeria ...	4,604	—	4,331	3,643	3,621	6,150	2,620	1,070	4,220	8.6	
Argentina ...	14,234	21,141	21,122	9,672	27,947	23,027	26,800	23,116	19,359	10.6	
Belgium ...	1,846	1,746	—	—	—	—	1,236	1,284	1,440	35.3	
Bulgaria ...	6,405	2,899	4,616	3,470	4,160	3,167	4,252	5,149	5,314	14.1	
Chile ...	2,050	2,374	2,526	2,811	2,889	2,698	—	3,395	2,958	18.2	
Czecho-Slovakia ...	—	—	—	—	—	—	—	3,271	5,083	16.8	
Denmark ...	805	696	960	727	517	791	739	868	1,401	39.2	
France ...	38,885	34,266	27,272	25,006	16,723	26,362	22,241	28,908	38,552	16.7	
Germany ...	21,379	18,238	17,795	—	10,221	11,288	9,978	10,357	13,475	24.6	
Hungary ...	21,025	13,151	18,920	—	—	—	—	3,643	5,886	14.4	
Italy ...	26,793	21,192	21,312	22,060	17,495	22,040	21,190	17,667	24,105	14.8	
Japan ...	3,241	2,783	3,243	3,650	4,208	3,987	3,726	3,536	3,484	23.1	
Jugo-Slavia ...	—	—	—	—	—	—	—	8,089	6,463	15.8	
Netherlands ...	625	700	859	580	478	603	752	835	1,086	34.9	
Poland ...	—	—	—	—	—	—	—	2,282	4,446	11.9	
Roumania ...	10,083	5,963	10,810	—	—	2,241	6,036	3,000	12,152	12.1	
Russia (in Europe) ...	104,397	72,182	—	—	—	—	—	—	—	10.2	
Russia (in Asia) ...	23,659	31,697	—	—	—	—	—	—	—	9.6	
Spain ...	14,046	14,507	17,407	19,036	17,829	16,959	16,152	17,326	18,139	13.6	
Sweden ...	1,138	1,017	1,109	1,109	833	1,105	1,188	1,316	1,572	25.6	
Switzerland ...	438	410	495	477	569	887	440	448	475	33.6	
Tunis ...	689	275	1,033	689	914	1,056	918	653	1,328	4.7	
United States of America	92,522	107,991	124,327	77,122	77,163	111,153	114,048	95,400	96,341	13.2	



1885—1894



1895—1904



1905—1914

Series 1. Yield per acre of Wheat during three successive decades in each county of England and Wales.

Under 28 bushels 28 bushels and under 30

30 bushels and under 32

32 bushels and under 34

34 bushels and over



1885—1894

Under 28 bushels

28 bushels and under 30



1895—1904

Series 2. Yield per acre of Barley during three successive decades in each county of England and Wales.

30 bushels and under 32



1905—1914

32 bushels and under 34

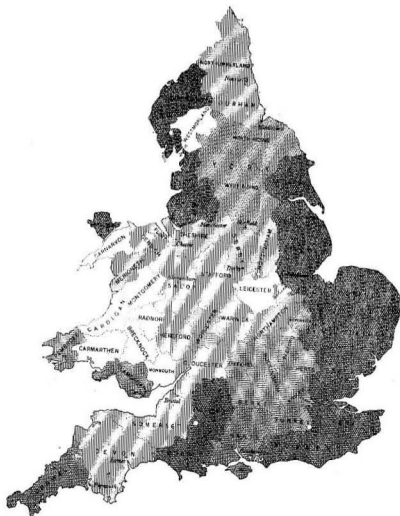
34 bushels and over



1885—1894

Under 33 bushels

33 bushels and under 36



1895—1904

Series 3. Yield per acre of Oats during three successive decades in each county of England and Wales.

36 bushels and under 39



1905—1914

39 bushels and under 42

42 bushels and over

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