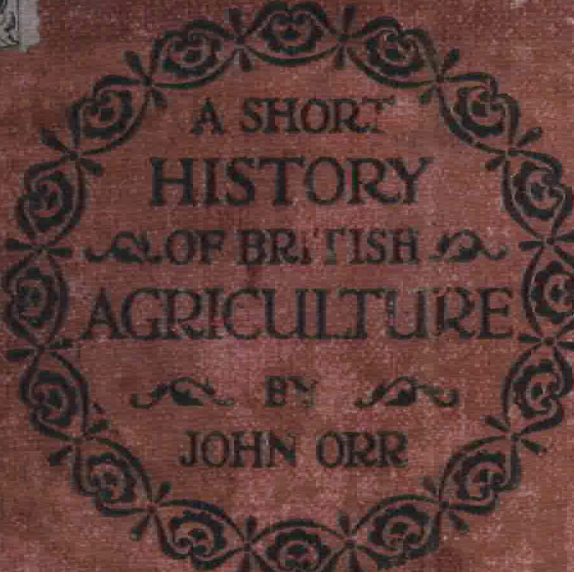


INTERNATIONAL

63:9

or 7



A SHORT
HISTORY
OF BRITISH
AGRICULTURE
BY
JOHN ORR

LIST OF ILLUSTRATIONS

	PAGE
An English Countryside	<i>Frontispiece</i>
Map showing 'Three Field' System	6
A Mediaeval Harrow. From a fifteenth-century wood carving	24
A Modern Harrow	25
Sowing by hand. Flemish Horse of the century	28
Sowing with a modern Horse-drill	29
Chillingham Wild White Cattle, 1794. From Bailey's and Culley's <i>Survey of Agriculture in Northumberland, 1795</i>	31
Ploughing and Digging, second half of fifteenth century. (From Dance MS. 374. <i>Miracles of the Virgin</i>	38
Parts of a Modern Plough	39
Reaping with a Sickle. (Queen Mary's Psalter. Royal MS. 2B VII Brit. Mus. Early fourteenth century)	43
Model of McCormick's Reaper shown in 1851. By the courtesy of Messrs. Cassell & Co., Ltd.	43
Motor Tractor pulling a Modern Reaping Machine. <i>Photograph by E. A. Underwood</i> , supplied by the Crawley Agrimotor Co.	43
Jethro Tull. (From a contemporary painting. By permission of the Royal Agricultural Society)	56
Jethro Tull's Wheat Drill	57
Shorthorn Bull (Comet), 1810 (by courtesy of the Shorthorn Society)	60
Shorthorn Bull (Bridgebank Paymaster), 1921	61
A Cheviot Ram, 1794. (From <i>Survey of Agriculture in Northumberland, 1795</i>)	62
A Cheviot Ram, 1921 (The Conqueror)	63
A view of the First Royal Show at Oxford, 17 July, 1839	75
Threshing with Flails. (Queen Mary's Psalter. Royal MS. 2B VII Brit. Mus., Early sixteenth century)	78
A Hand-Threshing Mill. (From Mavor's <i>Survey of Agriculture in Berkshire, 1808</i>)	78
A Water-Threshing Mill. Erected at Chillingham in 1789. (From <i>Survey of Agriculture in Northumberland, 1795</i>)	79
A Threshing Machine exhibited in 1851. Slight & Brown, <i>Farm Imple- ments and Machines, 1858</i>	79
The Norfolk Plough (1796) showing type of team-horses. (From Kent's <i>General View of the Agriculture of Norfolk</i>)	90
A Shire Stallion. (Field Marshal 5th)	91
A Clydesdale Stallion. (Dunure Footprint.) <i>Photograph by A. Brown & Co.</i>	91
A Survival. Ploughing with oxen on the Cotswolds. <i>Photograph by P. Simms</i>	94
A Modern Motor-plough. <i>Photograph by E. A. Underwood</i> , supplied by the Crawley Agrimotor Co.	95

Oxford University Press

London Edinburgh Glasgow Copenhagen

New York Toronto Melbourne Cape Town

Bombay Calcutta Madras Shanghai

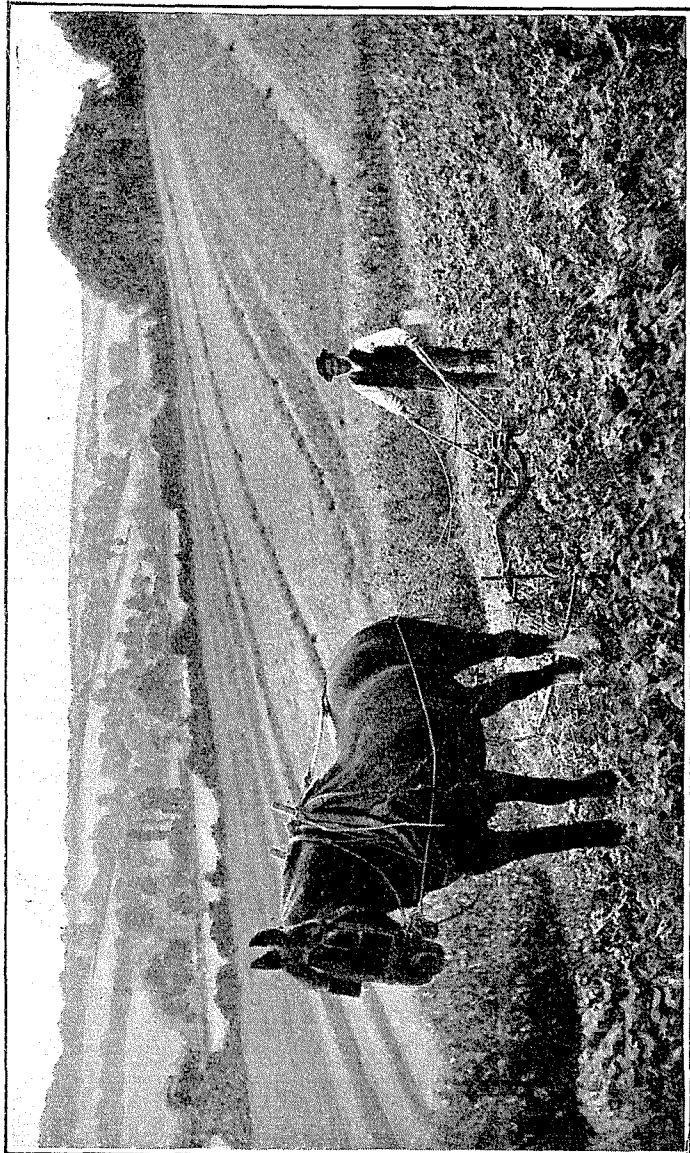
Humphrey Milford Publisher to the UNIVERSITY

23541

63:9

024

H
M
L

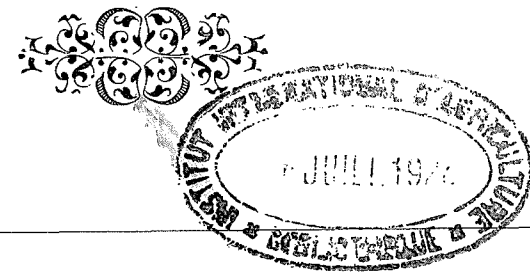


An English Countryside

A Short History
of BRITISH
AGRICULTURE

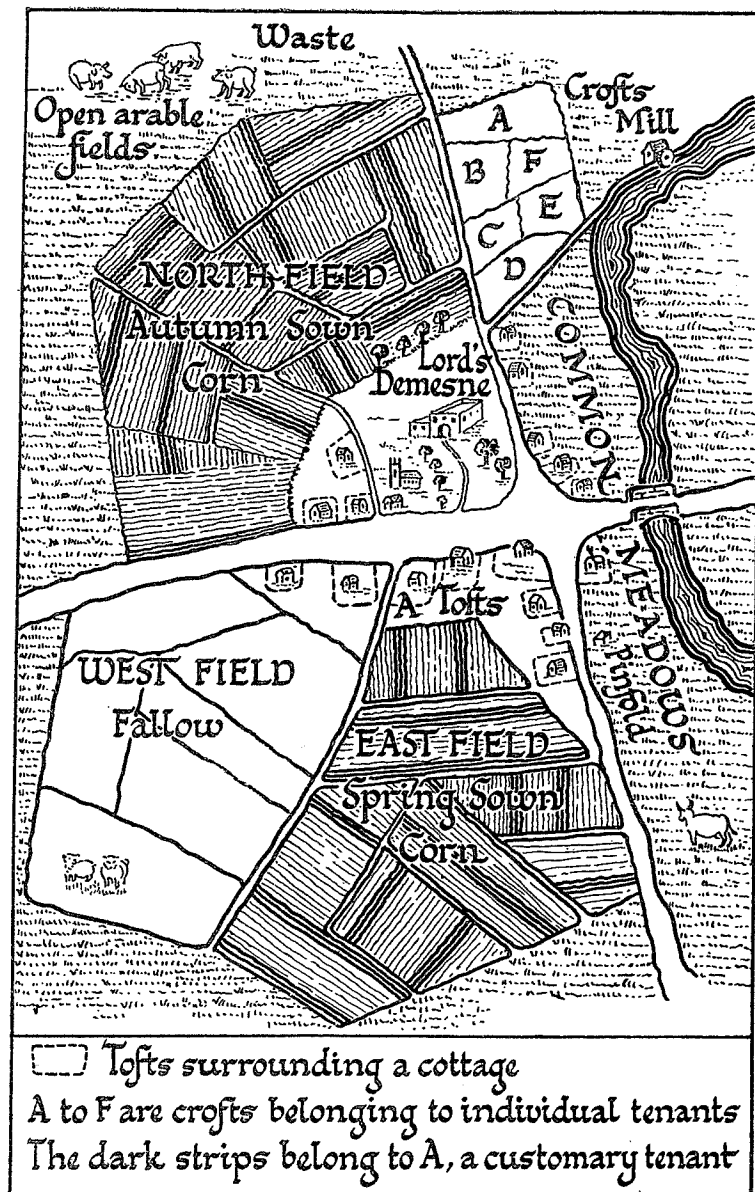
BY

JOHN ORR



LONDON
OXFORD UNIVERSITY PRESS
HUMPHREY MILFORD

1922



I

The Earliest Farming

A GREAT space of time lies between us and the people who first became farmers. Let us look back thousands of years. Men got their living by hunting and fishing. They moved about in tribes seeking the places where animals, birds, and fish were most plentiful, and they did not stop long in one place. Gradually they discovered among the animals some which could be tamed and thus made more useful. The dog and horse were won from their wild state for their swiftness and strength; they could help in capturing other animals and in carrying loads. The cow, sheep, goat, and pig were tamed for their milk, flesh, hides, and wool. If some attention was given to them, they were a much more convenient and certain source of wealth than when they ran wild.

With the possession of flocks and herds the tribesmen lost some of their freedom. The loss was not serious if they kept only cattle and horses; it was when they added sheep and pigs that their possessions imposed restrictions on their movements. From the earliest times the different tribes fought each other for possession of the best hunting grounds, and when they began to rear herds and flocks they fought still more. While they continued to hunt, they found that they gained far more when they came on the camp of another tribe, killed or scattered its members and added their cattle and sheep to their own. There was no security for what belonged to a tribe, if a more powerful neighbour fell on it.

This wild, free life had, and still has, great attractions for men. In spite of the hardships which attend it there is something in it which appeals to the men who become soldiers, travellers, sports-

men and pioneer-farmers to-day; and many a man who is doomed to live and work in a city feels the call that it makes. The necessity of making a sure living for his wife and children is the thing that keeps him from breaking away, and it was this same need which first led to the cultivation of land.

After men had spent thousands of years hardily and precariously as hunters and herdsmen they discovered the art of tillage, and thereby added greatly to their supply of food. How did they learn to grow corn? This is a question which has puzzled inquirers for a long time. It all seems very easy to us who have seen ploughs, harrows, and drills all our lives, who have seen wagon-loads of seed coming from the stations and hundreds of sacks carried from the mills. But let us imagine ourselves living in Britain at a time when, no matter if we tramped with our tribe from Land's End to John o' Groats, we should not see a single ploughed field or a delved garden. In some parts of the world wheat, barley, oats, beans, and peas were growing wild among the other vegetation just as wild vetches do to-day. While our savage forefathers lived chiefly on venison and game with milk and meat from such flocks and herds as they had, like boys to-day they tried all the berries, fruits, seeds, nuts, and other forms of vegetation which seemed likely to satisfy their hunger or prove pleasant to the taste. Among the seeds which they found most satisfying were wheat, barley, and oats. If they gathered a considerable quantity of these, they might alter to a small extent their monotonous diet of meat and milk, and no doubt they appreciated this change, and set a high value on these seeds as part of their food.

To the question how it came that corn was grown by cultivation the most satisfactory answer seems to be as follows. When a member of a savage tribe died and was buried, one of the customs was for the relations to place food in the grave for the use of the departed spirit. In the newly dug earth they put portions of all

the kinds of food the dead person had when alive—meat, game, and handfuls of corn. But while the perishable things decayed, the corn grew and spread over the grave, and when the tribe revisited it the next summer or autumn they found a rich and thick crop of the seeds which formerly they could only gather on single stalks scattered among other grasses. There was twenty or thirty times as much corn growing on eighteen square feet as they had previously collected from as many acres. Having seen this happen more than once, the tribesmen dug more ground and put in more corn-seed, and to their amazement found a similar return for what they had planted.

This explanation of how corn was first grown is probably correct. The discovery had a great influence on the lives and habits of men. We have seen that when they ceased to be hunters only and became owners of flocks and herds they lost some of their freedom of movement. They had more wealth and they had to look after it. As grazing farmers it was an advantage for them to move their cattle and sheep frequently to fresh pastures, but now when they were becoming cultivators, they had to think of giving up this roaming life. If they were to be sure of getting a crop, they must not only sow their corn; they had to protect it from wild animals and from their own cattle. They had to reap and store it for their use in winter; they could not carry their whole crop of corn on their journeys. They had to settle beside their little plots of delved land and their little stacks of corn, and learn how to plough and put up fences. Their camps became permanent settlements, and they built the best houses they could of turf, or of logs and turf.

Strabo, a Greek and the greatest writer on geography among the Greeks and Romans, has described the kind of life led by the German tribes before they adopted the cultivation of land. He wrote a few years before the birth of Christ, and was referring to the tribes who lived between the Rhine and the Elbe, and perhaps

to the Saxons and Angles further north. 'The ease with which they migrate', he says, 'is common to all the people in these parts. They do this because of their simple style of life and of their indifference to agriculture, and because they do not store up anything, but live in huts and make provision only for the day. Like the nomads, they get most of their food from animals, and also, following their example, they fasten their goods on wagons and roam about with their cattle wherever fancy takes them.'

We can picture what was going on among the tribes at this time. As the knowledge of how to grow corn spread among them, there was a long struggle before the new habit of settling down beat the old one of wandering. We can imagine with what scorn and pride a strong, swift man who loved the roving life passionately, and who had won great renown as a hunter, would regard the proposal to abandon it. 'You ask me', he says, 'to tie myself like a slave to a patch of corn. I can go for days without food, and by speed of foot and stealth and steady aim I can get the last deer in the forest. I can rear cattle to feed us with their milk in summer and with cheese and meat in winter. You ask me to give up the risks, excitement, and prizes of this life for the certainty, dullness, and softness of a corn-grower's. It would break my heart.' Against him were his mother and wife, and perhaps even his father now that he was getting stiff with age and with a digestion less robust. 'See', they say, 'how much nice food we get from a little stack of corn. It is at our door all winter. If we can gather but a hundred sheaves, that will be something secure, and then you can go hunting and fighting and bring home more to add to our little store.' In time the brave, hardy man surrenders. The appeal of the fuller and more secure livelihood is irresistible. He becomes a farmer.

We may think that, when the method of growing corn was once discovered, rapid progress would be made, and that there would soon be great stretches of land under crops such as we

see to-day. We must get rid of this idea. The people who had only just learned to cultivate land in the simplest way never dreamed of the chemical and botanical activities that went on in the soil and seed, in the air and plant. Much less did they imagine that they could direct and stimulate these activities. Like all people they were religious, and religion played a greater part in their lives than it does in ours. There was an extraordinary mystery for them in the growing corn. The precariousness of their lives generally made them afraid as they felt their helplessness and dependence. When they saw the corn grow away fast and promising amid sunshine and rain in spring they rejoiced, but, when they saw it wither and shrink and bring before them the prospect of scarcity and famine, their hearts sank. Instead of seeking to discover all the conditions favourable to good crops they fell back on their religion. In this and in other parts of their uncertain lives they believed it was a god or spirit who wrought this particular evil and good. He would make the corn grow if he was pleased with them, and blight it if he was angry. To win his favour and get good crops they sacrificed to him. Some offered human victims with a great deal of ceremony; others offered animals or fruits, but none of these things improved the methods of cultivation, or increased the yield of corn.

The decision whether a man was to become a cultivator or continue to be a hunter and herdsman did not rest with himself alone. He was member of a tribe, and was subject to certain rules laid down by his chief, or by the council of the tribe. They objected to the cultivation of the land on a large scale, or in a serious way, and made laws against it. They believed it would imperil the existence of the tribe. A group of nations round the Mediterranean Sea had abandoned this view—the Egyptians, Phoenicians, Hebrews, Persians, Greeks, and Romans. They devoted themselves to agriculture, and became both civilized and

strong as a result. They saw that agriculture by giving them abundance also gave them time to do other things than hunt like beasts of prey for every day's food. They grew as much as they could of corn and all the seeds and fruits which they found nourishing. None of them tells what a long fight went on among their own people before they reached this stage, but Caesar and others from these civilized countries who visited Britain or saw German tribes on the eastern frontier of Gaul, tell us what a struggle our savage ancestors were having at that time over this question.

Writing about the people in Western Germany he says: 'Their whole life is given up to hunting and fighting. . . . They do not apply themselves to agriculture. The greater part of their food consists of milk, cheese and meat. No one holds a fixed amount of land, or any that he can call his own, but the magistrates and chiefs from year to year allot to the tribes and families who live together as much land as they think proper, and in whatever place they please, and in the following year they compel them to move to another place. They give many reasons for this arrangement. They fear that the habit of settlement may grow on them and change their inclination for fighting into a love of agriculture, that they may become eager to acquire large estates, that the more powerful may turn the weaker out of their holdings, and that they may build their houses too carefully to avoid cold and heat.'

Caesar gives other reasons which led the German rulers to discourage the pursuit of corn-growing. Most of these reasons can be reduced to two. First of all they thought the people would become soft and unfit for fighting if they settled down steadily to the cultivation of land, and to be able to fight was the greatest virtue in a man in those times. In the second place they could not see how they could retain the freedom and equality which they enjoyed as nomads.

Roman Britain and Early England

WE shall probably never know in which country the art of growing corn was first discovered, or whether it was hit upon independently in more than one. Egypt is the country in which we first hear of it, but long before America was discovered by Europeans the natives had learned how to grow maize. The inhabitants of Britain were comparatively late in gaining this knowledge. Either by the migration of tribes from the mainland of Europe, or by intercourse between Britons and tribes to whom the art was known, agriculture had been introduced into the country before any records which we now have were written. The knowledge had spread north and west from the civilized nations round the Mediterranean Sea.

Caesar visited Britain in 55 and 54 B.C. and we get from him the first clear account of what progress had been made. He landed in Kent on both occasions. He fought his way up through that county and through Surrey, and crossed the Thames above London. In the course of their march his men found corn which they reaped for their own use, and when he imposed conditions on the British chiefs after they had been defeated, one of these was that they should supply a certain amount of corn for his army. They fulfilled the agreement. During his second campaign he learned a good deal about the south-eastern part of England. The chiefs told him that the tribes who lived close to the coast had originally come from Belgium. They came at first only for the purpose of making raids and carrying off the plunder, but the more they saw of the country the more they liked it, so they conquered the parts near the sea and settled down to cultivate the land. These parts were thickly populated; the houses were numerous and the people possessed a great many cattle.

The tribes which lived further inland were, according to tradition, native to the island. Most of them did not sow corn, but lived on milk and meat, and were clothed in skins. This means that they had migrated from Europe at a much earlier time, that they had no intercourse with foreigners, and probably only a fighting intercourse with neighbouring and more civilized tribes. These lived along the eastern coast, for communication was easier by sea than by land, and the best corn-growing soils lie close to the North Sea.

About thirty years after Caesar's visits Strabo gave an interesting account of the Britons, of what they produced as well as of their looks and habits. Among the exports from the island were corn, cattle, skins, captive slaves, and hounds of a good breed for hunting-packs. 'The men are taller', he says, 'than the Celts and not so fair-haired, but they are rather loosely built. A proof of their size can be seen in some of them here in Rome just out of their boyhood, but all the same taller by half a foot than the tallest men here. Their legs and feet are badly shaped, and altogether they have not graceful figures. In habits they are like the Celts, rather simple and barbarous. Some of them live on milk not made into cheese; for they do not know how to make cheese, and they have no experience of gardening and other kinds of agriculture. Their towns are coppice-woods; for they fence in a wide circle of country with trees which they have felled, build huts and put up stalls for their cattle only for a short time.'

Under the Roman rule the Britons had necessarily to become more civilized. A great amount of corn was grown and exported to Roman provinces on the Continent. The best methods of cultivation known to the Romans at the time were introduced as far as they could be with a backward people, most of whom had been reduced to slavery. While the country was being improved by the construction of roads and by cultivation, the people were being demoralized. In spite of rebellions against oppressive

treatment they never succeeded in throwing off the yoke of the Romans, and when the latter withdrew from the island in 410, the Britons were faced with difficulties which they could not overcome.

A weak people in possession of a land which was rich and well cultivated for these times, they became an object of attack by the hardy and unconquered tribes of Wales and Scotland, as well as by the more daring tribes from across the North Sea. With such fierce enemies on every side the Britons thought it was wise to choose one of them for an ally to assist in defending them against the others. They chose the tribes who came from North Germany, and they again, like those who came from Belgium earlier, seeing the country, and noticing how inferior to themselves the Britons were as fighters, decided on a bolder policy. Some time in the fifth century they began to come, not with the object of acting as allies, but of conquering the country and settling permanently in it. The tribes who came were the Angles, Saxons, Jutes, and a few Frisians. The Angles came as a people—nobles, freemen, and slaves, with all their flocks and herds. More than 200 years later we are told that their old home-land in North Germany, which they abandoned so utterly, still remained a desert. The Saxons, Frisians, and others also took their cattle, for they had special breeds on which they set a high value; and it is strange that to-day a breed of milch cows from these districts fetches the highest prices. They would not lose many lives or many cattle on the voyage; they were better sailors than Caesar's men, and they had better ships than those in which he carried his cavalry across the channel 500 years before.

We must now look at the face of Britain as it was then, and at the people who had come to conquer and inhabit it. We are apt to think that when the Anglo-Saxons arrived, the country was exceedingly rough and uninviting. There were certainly more woods and marshes than now in the valleys and in the low-lying parts where trees grow naturally, but there were no planta-

tions, and there were great stretches where grass, natural uncultivated clover, and other vegetation grew luxuriantly and made some of the best pasture in the world. This was not only because the Romans had opened up the country with roads and put much grass land under the plough, but because Britain was then, as it is now, an extremely attractive and sound country in which to carry on the business of farming. In the year A.D. 84 Agricola led a large army with at least 3,000 cavalry to the north of the Tay. It was British agriculture which supported this force as well as the larger one which opposed it, and Roman and British cavalry, and the war chariots then in use, strongly built as they were, had passable country in which to travel and manoeuvre. If the restless, migrating tribes of the world had been able to visit every country at that time, and to choose one in which to settle, some of the wisest would have chosen Britain.

More important than the country were the people who had now taken possession. The Anglo-Saxons came by tribes and families, and apart from their losses in the war of conquest and from dispersion on their journey they settled in Britain as they had lived in Germany. They had never enjoyed the advantages or suffered the disadvantages of being ruled by the Romans. They were not accustomed to cities, and if they did not destroy those they found in Britain, they avoided them. They chose places in which to plant their *tuns* or townships. They marked off a tract of land sufficiently large to supply all the needs of the group of families who were to live together. Somewhere near the centre of this tract they fenced in a portion with a hedge, and here they built their houses. Each house stood apart from the rest in a little plot of land, and this was the only land which belonged privately to a member of the township.

The ploughed or arable land lay in open fields, and it was cut up into strips of one acre, separated from each other by a narrow line of turf. Each member had a certain number of strips

according to his rank; and none of these strips lay together. The strips were all cultivated in common. The meadows from which hay was got were split up into lots every spring, and these were assigned to the members. When the hay began to grow, the meadows were fenced off, and when it had been mowed and carried home, the fences were removed and the cattle and sheep were allowed to graze in them till the following spring. Beyond the meadow and ploughed land were the common pasture and the woods from which timber and fuel came.

To understand why the land was held and cultivated in this awkward manner we must go back and look again at the German tribes who were neighbours of the Saxons. It is through Caesar that we first get this view 500 years before they came to Britain. Somewhere near the Rhine one day, when his zeal for conquest had given place to his eagerness for learning, he sat in the midst of his camp, and had the wisest men of the Germans seated round him. Their customs and ideas interested him greatly, particularly their objection to agriculture, and their clumsy methods of pursuing it. They mixed up their fighting and farming so thoroughly that they could turn to both callings with equal ease. One part of a tribe went to war one year, while the other stayed at home and cultivated for themselves and for those who were away fighting. The next year the latter stayed at home, while the former went to the wars. They were farmers one year and soldiers the next. They had no private land, no land separate from that which was held by the tribe as a whole, and they were never allowed to stay longer than one year in the same place.

Caesar had a great many questions to ask about these customs, but before we look at the German chiefs' replies we must read a later record to see the struggle which was taking place among them. About the year A.D. 80, or earlier, agriculture had taken a firm hold on them. By this time they had learned to make beer from barley. They were great drinkers, and their love of

beer as much as their fondness for bread made them give attention to corn-growing. But the old opposition to a settled life always came up. The noble youths despised work. If their own tribe was not fighting, they joined themselves to one that was at war. 'They would rather challenge an enemy', says Tacitus, 'and earn the honour of wounds than plough the soil and wait for the season to bring its return. They think it dull and stupid to get by the sweat of their toil what they can win by their blood.' Besides wounds they brought home booty of all kinds to show the extent of their victories. A restless spirit was moving in these men which was destined to make them conquerors of several lands. The men of greatest prowess in war were made nobles and chiefs or kings, and war also led to an increase in the number of slaves, but at the time agriculture was beginning to take firm hold of these wild tribes and forcing them to give it serious attention there were few nobles and not many slaves, and the majority of the tribesmen were freemen of equal rank.

These things explain the open fields, the strip-holdings, and the common cultivation which seem so strange and foolish to us. In the midst of perpetual war men had to live in tribes for safety, and being practically all free and of equal rank they insisted on an equality of treatment in every enterprise. Caesar got at this fact in his talk with the German chiefs. When he asked why they refused to become farmers, they gave several reasons, some of which have already been mentioned. 'They were afraid', he adds, 'the love of money would grow, and from this would spring divisions and quarrels. They wished to keep the people contented and therefore quiet, and this would be done when each man saw his property made equal to that of the most powerful.'

The advance of agriculture was met by this protest of the tribal freemen against the division and holding of land as private property; and the strip-holding system, so difficult to work, was the only plan they could think of to carry out their ideas.

We should not be surprised that this plan was adopted. It would have been much more wonderful if anything different had been done. A community of hunters and warriors, accustomed to divide the game and venison at the end of the day, and the plunder at the end of the raid, equally among them, what else could they do? If the bag consisted of partridges, hares, deer, and wild boars, each man had one of each, or a portion of each. So to the different kinds of land they must apply the hunters', the warriors', rules. They knew nothing better, and their ideal was good. The desire for equal and fair treatment is the most powerful and unquenchable in human nature, but it is not the only one. Very strong and deep is the desire of men to find the easiest way of doing things, and if a plan intended to secure fair play does not also secure economy and efficiency it is bound to fail.

The progress of agriculture depends (1) on man's knowledge of the nature of soils and seeds, and of the proper way in which to handle them, and (2) on his knowledge of human nature, and of the way in which men should treat each in order, as the German chiefs said, 'to preserve their contentment', their loyalty to each other in their pursuit of a common enterprise. For hundreds of years there are few achievements to record on either of these possible lines of progress.

3

Growth of the Manor

THE restless spirit which was driving the German tribes and the Northmen southward and westward into France and Britain was shaping all their habits and customs. As the dominion of Rome shrank, or was beaten, back into Italy and south-west Europe, those tribes pressed forward to take its place. There are few parts of the world, and few periods in its history, in which fighting was so incessant as in western Europe between 450 and

1100. Whole races or great portions of them had moved from their old homes, and nothing was destined to stop them except the impassable ocean, or other races who could fight them to a standstill.

Even after they had carried the conquest of Britain very far the Anglo-Saxons had to settle the boundaries of the territory within which they were to group themselves, and the only method they had of settling this was by fighting. They attempted to set up numerous little independent kingdoms, and each one had to defend itself against its neighbours. Gradually these little kingdoms were subdued and absorbed by the more powerful, until near the end of the Anglo-Saxon period Wessex, Mercia, and Northumbria were the only considerable kingdoms left.

We can imagine what a disturbed time the men who were trying to farm had in their little townships. If the Danes were not ravaging and burning their crops and carrying off their cattle, their neighbours were doing it. Agriculture made little progress. It was an easy thing for the British who settled in North America, New Zealand, and Australia to become good and prosperous farmers. Even if they had not started with a fair knowledge of agriculture, they were favoured by the comparative absence of serious attacks from hostile and powerful races. They were able to devote themselves wholly to the rearing of herds and flocks and to the cultivation of their land.

For the farmers in western Europe, including Britain, it was little good to grow crops unless they were in a position to protect them. The only nation whose crops were secure was the nation which was supreme in war. The experience of hundreds of years had made this clear to all the Anglo-Saxons and still more to their kindred tribes across the Channel. We have seen that it was the custom for all the freemen in a tribe to take part in fighting when the call came. When a nation was invaded, the council of each township was called to decide who should go.

This was a slow procedure, and when the Danes began to use cavalry they were far into the country before an army could be raised to meet them. The freemen began to see that it was better for them to put themselves under the protection of a lord who could maintain in readiness a large force, and pay him a contribution towards its upkeep. The king also found this a much more useful arrangement, especially when horsemen had to be raised to meet the swift-moving invaders. In this way a system grew up under which the king held one lord responsible for raising the forces which were due from several townships, while the lord was entitled to payment by the landholders in the townships for the maintenance of these forces. This provided a more efficient army, better trained and always ready to act.

The worst of the trouble for the Anglo-Saxons from outside had yet to come. Unfortunately for them this system had been brought to greater perfection in France, and although France is a pleasant and fruitful country there was one of the races which occupied it whose leaders thought Britain still more desirable. The Normans, whose ancestors had come from Scandinavia several generations before, were, as events proved, one of the greatest military races in the world. William, Duke of Normandy, coveted the land of Britain. Looking at the Anglo-Saxons and their leaders, and measuring his strength against theirs, he invaded the country, and in a few years conquered it, extending his supremacy more widely and thoroughly over it than any of their own kings had done. Things were not settled at once. The Anglo-Saxons fought hard for their possessions. Rebellions took place, and in quelling them William waged war in a cruel and terrible manner. He laid waste nearly the whole of Yorkshire, and carried a campaign into the centre of Scotland. He hastened the organization of the townships for military purposes. Most of the Anglo-Saxon lords had perished or fled in the war. Their lands were seized, as well as most of the lands of those who

survived and remained. These were appropriated by the King himself, or handed over to his Norman barons. William was determined to make war in earnest, and he was supremely capable of doing it. He resolved to increase the military strength of the country to the utmost. No resentment, reluctance, or indifference of any part of the country was to delay and weaken his military operations as they had done those of King Harold and his predecessors.

The country was already divided into townships, and it was through them that he took a firmer grip of its allegiance and strength. The township often came to be called the manor, and the manor was in the first place a piece of military organization, although it was through it that agriculture was organized. Life was still simple. From the king downwards every one did many different things. The king was the acting commander-in-chief of the army, the chief lawgiver, the chief judge, and the head of the whole agricultural organization of the country; the nobles under him were commanders in the army, lawgivers, judges, and heads of the agricultural organization in a number of manors.

In 1086, twenty years after his invasion, William had a survey of the country made. He wished to know who held the land, how much they paid for it, and how much more they might be able to pay. He wished to make sure that every man contributed his proper share to the fighting strength of Britain. The survey was made by king's commissioners, and the information about the land was given on oath by the sheriff of the shire, by officers of the hundred (a division of the shire), by the priest, the reeve and six villains or smallholders, of each township. The book in which all this information was entered is called Domesday Book, because the people said that the inquiry into what every one possessed, and what every one did, was as searching and exact as would be the investigation on the Day of Judgement.

Manors varied greatly in size, but the land was shared by the

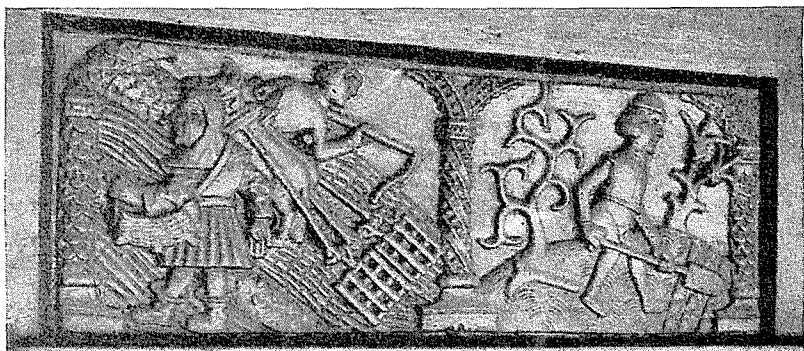
lords and by their dependents in much the same way all over the country. The lord had his demesne land, and this might lie all together in one compact farm round the manor-house, like a home-farm to-day, or it might lie in the common, open fields, divided into a number of strips scattered among the strips of the villains. On the larger manors there might be a church, the priest in charge of which would hold a certain amount of land, and there would be one or more mills. The most numerous class of cultivators were the villains. They were not free. They were bound to stay on the lord's land at his will. On an average their holdings extended to thirty acres. Instead of rent they generally gave two days' labour in the week on the demesne from the end of September to the end of July, and during the two months, August and September, they gave three days' labour. Another class, the bordars, were numerous. They had smaller holdings for which they also performed some services. The days which were given in service to the lord during seed-time and harvest were called 'boon-days'.

The total population mentioned in Domesday Book was 283,242, but it is not possible to make any close estimate of the population of eleventh-century England from the Domesday record. It did not include the women and children, while the four northern counties were left out of the survey. Of the different classes there were 108,407 villains, 82,609 bordars (490 of whom were paupers), 25,156 slaves, 23,072 sokemen, 10,097 freemen, 7,871 'mesne lords' or sub-tenants, holding manors on the estates of the greater lords, and just under 1,400 tenants-in-chief who held land directly from the king. The sokemen may be counted as free, for the only difference between them and freemen was that their legal troubles came under the jurisdiction of a lord, and he received any fees which arose from this. There were, therefore, at least 216,172 men engaged in the cultivation of the land who were not free.

In apportioning the land of the country to its new possessors

William the Conqueror first of all kept 1,420 manors to himself, to his half-brother Robert, Count of Mortain, he gave 970 manors; to another half-brother Odo, Bishop of Bayeux, he gave 450; to Alan, Earl of Brittany, 440; and to William de Warenne 298.

Some idea of what was produced from the land and how the system worked may be gathered from the records of the abbeys which were established about this time and later. It was not only great military lords who were tenants-in-chief of the king. The archbishops, bishops, and abbots held great estates, many

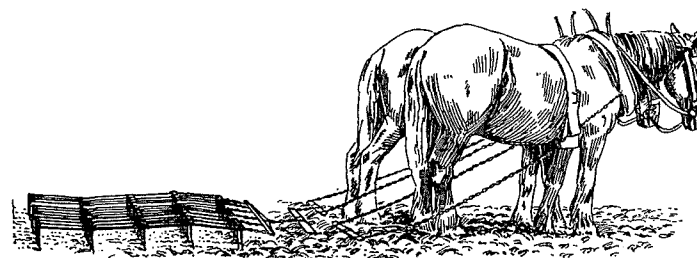


In the centre a Mediaeval Harrow. A 15th-century wood-carving.

of them on the same terms as the barons, on condition that they provided and maintained so many fighting men. A great lord like Alan of Brittany could move from one part of his estates to another; he could carry his retinue of men-at-arms, servants, horses, hounds, and hawks, and live for weeks or months on one manor, and call for the produce from others in the neighbourhood. But the whole body of monks in an abbey could not move all over their estates, and instead of going where the produce was they had it sent to them. The manors sent their produce once or several times a year to the monastery. The supply for a fortnight sent to Ramsey Abbey was as follows: '12 quarters of ground

wheat valued at 20s. for the monks and guests, 2,000 loaves for the servants, 50 measures of barley for ale valued at 32s., 25 measures of malt valued at 24s., 24 measures of fodder, 10 lb. of cheese, 10 lb. of lard, 2 tray-loads of beans, 2 tray-loads of butter, bacon, honey, 10 fressings, 14 lambs, 125 hens, 14 geese, 2,200 eggs, 1,000 herrings. In addition 5 cartloads of hay were sent from certain manors, and £4 in money from every manor.'

The use of money was extending very slowly, and it was many centuries before the payment of rent in money became common. The cultivators of land who were not free had to perform every kind of labour service for their lord except the purely household



A Modern Harrow.

and personal services, and they had to furnish him with a portion of all they produced which he wished to have. There was a bailiff appointed by the lord on every manor, and it was his business to supervise and check all the work done by the unfree cultivators. The majority of the cultivators, therefore, were part-time agricultural labourers and part-time small holders, and they were unable to leave the manor. The development of the system had exalted some men to a great height, and weighed down others to an inferior and overburdened position. No progress could be made in agriculture. But the pressure of war had made this system inevitable, and for some time this pressure was to be felt to a terrible extent.

With William the Conqueror there were no half measures.

In 1069 the Anglo-Saxon leaders in Yorkshire revolted against the Norman rule. He set out to quell the rebellion. He slaughtered the inhabitants of the county between the Humber and the Tees and laid it waste so thoroughly that when the Domesday inquiry was made several years later the only inhabitants on 411 manors were 35 villains and 8 bordars. He waged war with a skill, determination, and thoroughness far beyond any of his predecessors or rivals, and the practice of war to this point of perfection deprived Englishmen of almost every form of freedom except freedom from foreign attack or serious internal quarrels. The Anglo-Saxons had travelled far from the time when as freemen they spent the whole of their lives in hunting and war. William, according to the Saxon Chronicle, 'made large forests for the deer, and enacted laws concerning them, so that whoever killed a hart or a hind should be blinded. As he forbade killing the deer, so also the boars, and he loved the tall stags as if he were their father.'

The forests and the laws which governed them were a cause of strife between the barons and the kings, and of grievance to other people. The kings were constantly trying to extend the forests, while the barons and freeholders were trying to encroach on them. When any part of the country was made into a forest, the king had a monopoly of hunting, and the barons lost their rights. The freeholders could not clear away trees, or take any steps to bring land in the forests under cultivation. Poorer people could not get fuel or material for building without paying what the foresters demanded. Inside the forests the common law of the country was not in force. The inhabitants had to attend the forest courts. They were compelled to give information in any case of poaching, and if they failed to satisfy the king's officials, they were fined in an arbitrary manner.

As late as 1250, in the reign of Henry III, Matthew Paris says: 'At this time a certain knight, named Geoffrey of Langley, a royal bailiff and inquisitor of trespasses in the royal forests, made

the circuit of several districts of England, and showed such cunning wantonness and violence in the collection of money, especially from the northern nobles, that the amount of treasure collected passed the belief and excited the wonder of all who heard of it. . . . The said Geoffrey had a large armed retinue, and if he heard any of the aforesaid nobles making excuses or murmuring he ordered them to be at once arrested and lodged in the king's prison, since the judges were hostile to them; nor could any reply be given for fear of censure. For a single small beast, a fawn or a hare, though straying in an out of the way place, he impoverished some men of noble birth even to ruin, sparing neither blood nor fortune.'¹

The peasants were unable to resist encroachments, or to prevent the tyranny, of the Crown officials, but the barons were in a position to give a better account of themselves. These grievances, these restrictions on their freedom, the humiliating treatment at the hands of arbitrary officers, were some of the causes which led to the frequent struggles between them and the king. The success which attended the resistance of the barons had a far-reaching influence on the future history of the country. At the time of the Norman Conquest there were probably few or no marks of difference in the manorial system as it existed in England, France, and Germany, but very soon after this forces began to work in the different countries which have given a distinct character to the organization of agriculture in each.

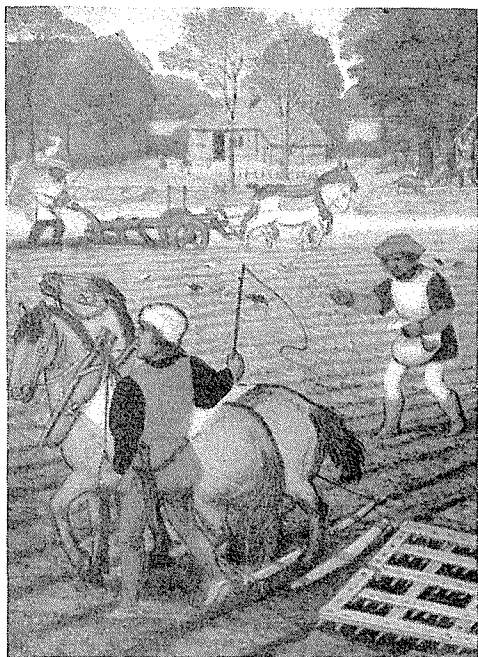
4

Manor-Farming

If we speak honestly, we shall admit that little progress was to be expected in agriculture from the English people under the manor. A great body of cultivators, partly agricultural labourers,

¹ Quoted by W. H. Hutton, *Misrule of Henry III.*

partly serfs bound to the land, and partly small holders working their holdings in an awkward and wasteful manner, could not achieve much. Nor could the bailiffs, half policemen, half land agents, contribute much. Nor had lords of the manor time or interest to give to farming. The bailiffs always, and the lords



Sowing by Hand. In the foreground a harrow and a plough in the background.

famine and scarcity became less common.

From an early stage in the growth of the manor the value of manure was appreciated, perhaps as much as it is to-day, but the chief source of manure at that time was the live stock on the manor. In many cases the villains and smaller semi-servile farmers were compelled to fold their sheep and less often their cattle in the lord's fold. This regulation generally held from

generally, by the exercise of their power repressed enterprise instead of opening the ways and stimulating it.

There was one class of men, the monks, some of whom gave a little of their interest to this work. The monasteries had huge estates, and a few of the monks who were familiar with the works of Roman writers on agriculture, and who had a natural love for farming, did something to lead and instruct the cultivators in better methods. By very slow steps the yield of corn was increased and

Hokeday, the second Tuesday after Easter, to the 11th of November, which was the whole of the proper grazing season. At times the lord's fold was moved from place to place on the demesne, so that the manure was distributed as it was made, but at other times a stationary fold was used, from which the villains had to cart out the manure on to the lord's land. Where this was the custom, if a villain kept his cattle and sheep in his own fold, he



Sowing with a modern Horse-drill.

had to pay a penny for every ox and dry cow, and a penny for every five sheep.

The system of folding is still one of the principal sources from which manure is obtained throughout the south of England. It is a method of transferring the fertility which is collected by the vegetation on the wastes and downs to the ploughed land from which corn crops are taken. Although this process has gone on for more than a thousand years, it still yields some profit. The grasses and clovers on the downs and wolds in the south of England are not abundant, but they still feed sheep very well

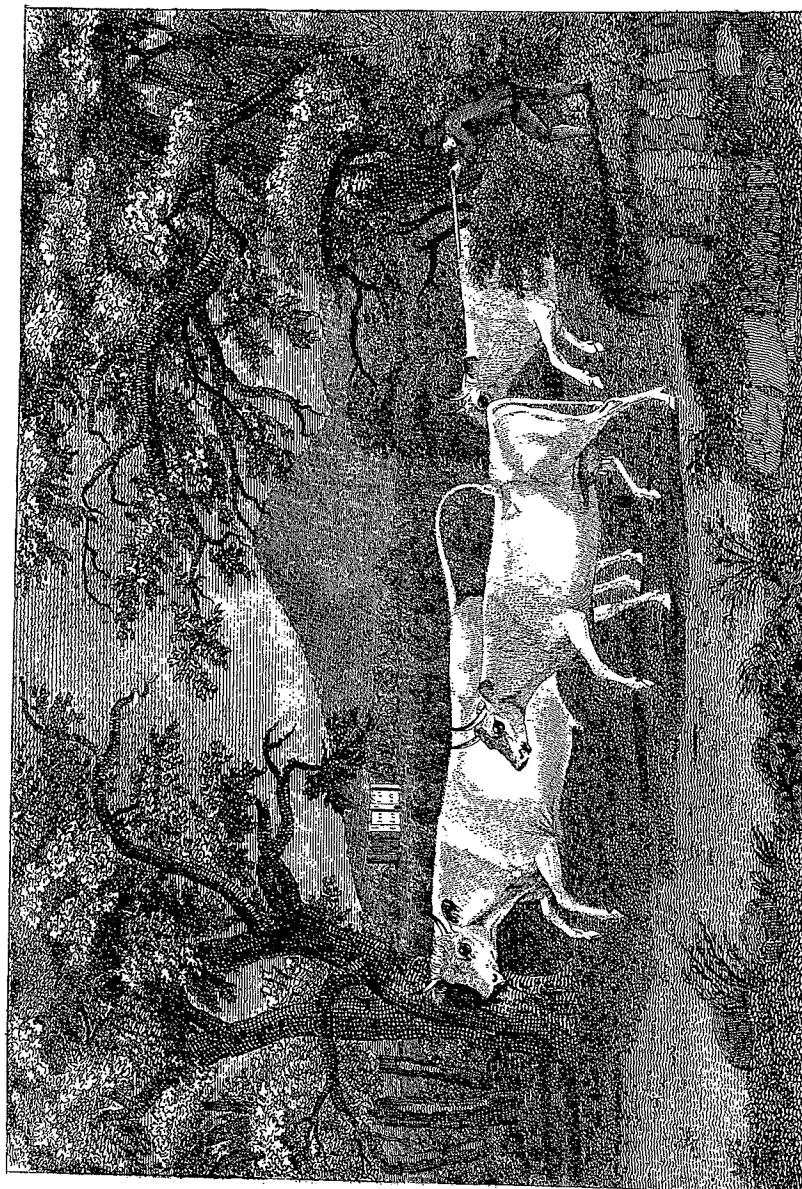
without receiving any return from the hands of men, thus making a gift to the lower grounds of the manure which the sheep leave where they are folded for the night. The capacity of the vegetation on the downs for replenishing its store of nitrogen from the air provides the chief source of manure for corn-growing in many parts to-day.

With this limited supply of manure, and with the help of marl and chalk which even the original Britons had learned to apply with advantage to different soils, the peasants grew their corn. From the records which remain we know that the crops were poor. There was not only the want of sufficient manure, but the method of cultivation was bad. We may think that the tilling of land is an easy thing, that it is enough to turn the soil in any way so long as it looks red or brown. This is a mistake. The difference between one kind of tillage and another may be seen where farmers club together and each gives a day's ploughing to a new neighbour. If twelve ploughs are worked on the same day in the same field, clear differences will be seen in the crop grown on the parts ploughed by different men and teams.

Besides manure and tillage the kind of seed used is important. During the thirteenth century English agriculturists became aware of this. Whether it was monks, or merchants, or crusaders, men who had travelled had brought into England rare kinds of grain.

But in spite of all that they did in these ways the yield of corn was low. Towards the end of the same century the average amount of wheat grown on an acre was 9 or 10 bushels, of barley about 15 bushels, and of oats about 14 bushels. Famine visited the country once at least between 1314 and 1321, and scarcity was often felt.

Little is known about the quality of the live stock which flourished on the manor. There was plenty of cattle, sheep, and pigs, and most writers think they were very poor kinds. This may be true if we compare them with our fine breeds of to-day,



Chillingham Wild White Cattle (1794).

but we must not allow ourselves to imagine the cattle and sheep of that day as weedy, ill-bred animals. The exports from England to Germany early in the twelfth century included meat, fat cattle, and fine wool, and from this time onward English wool made itself a great reputation in the world. Merchants came from Italy and from other countries to assist in building up a great trade. To be recognized as the growers of the best wool and as the breeders of some of the best cattle in the world was a creditable thing. The Anglo-Saxons had a love and probably a genius for breeding stock, and if their political and social conditions gave them little encouragement, the land of England with its fine grazing qualities in parts helped them. They never lost spirit, and so long as an English farmer keeps his courage, he and his land together can produce good live stock of every kind.

Life on the small farms was hard at times, as it is to-day. William Langland describes it in the words of the small holder in the *Vision of Piers Plowman* :

‘ I have no penny, quoth Piers, pullets for to buy,
 Nor neither geese nor grys,¹ but two green cheeses,
 A few curds and cream and an oaten cake,
 And two loaves of beans and bran to bake for my bairns
 And yet I say, by my soul, I have no salt bacon
 Nor no kokeney,² collops for to make.
 But I have parsley and leeks, and many kale-plants,
 And eke a cow and a calf and a cart-mare
 To draw afield my dung, the while the drought lasteth.
 And by this livelihood we must live till Lammas-tide,
 And by that I hope to have harvest in my croft.’

Piers was speaking in spring or early summer. He had run short of money, and apparently he had killed off all his poultry and pigs. He had come to the bottom of his flour-barrel and was thrown back on oatmeal, beans, and bran for bread. The cow supplied the best part of the subsistence for the family, as

¹ pigs.

² A small egg.

it has done so often in the case of smallholders. For a large number of the villains and bordars the problem of making ends meet from one harvest to another must have been terribly difficult. Now men in the same position may borrow money on their growing crops, or on their wool, if they have sheep, to carry them over the time of scarcity; they may get assistance from credit banks, but in those days men had to rely on what they grew themselves on their holdings.

Some serfs gave up their land with or without their lord's consent, and became free labourers working for wages. The Normans freed the slaves at a more rapid rate than the Anglo-Saxons, as they found that landless labourers who had to look after themselves were less troublesome and more profitable than slaves who had to be cared for and maintained. Thus men were added to the class of free labourers from two sides, but between one harvest and another there must have been long intervals when there was no work and no wages. There were no potatoes, no mangolds, no turnips, and no clover crops upon which men might find employment, and with which they might be able to feed cattle and sheep throughout the winter.

5

Decay of the Manor

THE manor reached its most perfect form under the late Norman and early Plantagenet kings, but enough has been said to suggest that it was a system which could not last in a perfect form. For different reasons different races could not tolerate this tight-laced style of life. A weak and spiritless race would collapse under it as a feeble man would under a heavy coat of mail; a spirited, ambitious, enterprising race like the English kicked and strained until it eased the yoke of the galling harness and leading strings. It was a fine organization for war, as a ship

with every port-hole and every hatch, every opening on her deck and sides closed, is a fine thing with which to weather a storm, but people hate to be battened down in stuffy cabins, engine-rooms, and lower decks when the storm has passed and the weather is fine. The King had difficulty in governing his people and in building up the prosperity of his country under the feudal system. He was surrounded by powerful barons, some of whom were always ready to challenge his position, and to extend their power at the expense of his. In turn he was probably ambitious to push his authority further over theirs, and to tighten the bonds which held them in dependence. Nor was the great mass of the people inclined to form the lowest layers of a pyramid with all the weight of royal and baronial tyranny resting on them. Spirited men that they were, and not wanting in sound sense, they seized the opportunities which offered of claiming better conditions for themselves.

From the time that England was secure against serious attacks from an outside nation the whole structure of feudalism was subject to upheavals and undermining which have continued to the present time. The system was not a good one, but it worked better under some kings than others, as kings were its heads and directors and had the greatest influence over its character. From its very beginning certain things worked to weaken it. People on the manor were at first very much Jacks-of-all-trades. Besides growing all their food, they spun all their cloth, tanned their hides, and made their clothes and footwear. But even before the Conquest they were altering their manner of life. Men began to spend more of their time at one special kind of work. They became armourers, carpenters, smiths, weavers, and tailors. After the Conquest a large number were employed in building castles, cathedrals, and churches. Many of these craftsmen came from abroad. The growth of commerce was also attracting labour from agriculture. The export of wool and the import of

wine and other fine products which the wealthy aristocracy demanded absorbed more men every year, and the evidence of this increasing activity outside agriculture was seen in the growth of towns.

Nothing stood still with the lords and serfs on the manors. The scheming, intriguing, and open warfare that went on between king and barons, king and church, and barons and church had their counterpart on the manors. Each estate had its own style of management. On some, conditions were easy and favourable to the villains; on others the lords sought to confirm their grip on the lives of the people in a savage manner. The Black Death in 1349 and subsequent years gave the labourers and the tenants who had arranged to pay their rents in money and not in labour services a great advantage over the lords of the manors. By the grim process of carrying off a great part of the population the plague increased wages. To prevent the labourers from leaving the manors to which they were attached, and to keep down wages, the Statute of Labourers was passed in 1349, and many times afterwards in different forms.

In 1388 a very complete and sweeping Act was passed. 'Because servants and labourers', it said, 'will not and for long time have not been willing to serve and labour without outrageous and excessive hire and much greater than has been given to such servants and labourers in any time past, so that for dearth of the said labourers and servants, husbandmen and tenants of land cannot pay their rent or hardly live on their lands, to the exceeding great damage and loss as well of the lords as of the whole commons; and also because the wages of the said labourers and servants have not been put in certainty before these times, it is agreed and assented that the bailiff for husbandry take 13s. 4d. a year and his clothing once a year at most, the master hind 10s., the carter 10s., the shepherd 10s., the oxherd 6s. 8d., the cowherd 6s. 8d., the swineherd 6s., the woman labourer 6s., the dairymaid

6s., the ploughman 7s. at most, and every other labourer and servant according to his degree. . . . Further it is ordained that he or she who is employed in labouring at the plough or cart or other labour or service of husbandry until they be of the age of 12 years shall remain thenceforward at that labour without being put to a mystery or craft, and if any covenant or bond of apprentice be made henceforth to the contrary it shall be holden for nought.'

This legislation did not accomplish what it was meant to do. Less than sixty years later, in 1444, another Act was passed providing for heavier penalties but at the same time fixing the wages of chief hinds, carters, and chief shepherds at 20s. and clothing worth 4s. with meat and drink. Stocks were to be erected in every town, and if a wandering servant or labourer had not a letter issued under the King's seal, authorizing his movement, he was to be kept in the stocks 'until he have found surety to return to his service, or to serve or labour in the town from which he comes.'

What had happened was that the Black Death had opened up to the peasants the vision and possibility of a fuller and freer life. Their masters, the nobles, abbots, and all landlords, stepped in front to bar the way to this new world. They tried to exact work for low wages from the free labourers; they claimed more services from their villains who were still bound to labour for them, and forced those who regarded themselves as free from this to prove it by law. Abbeys like St. Albans were holding the abbey towns under restrictions that had long been galling, forcing the townsmen to grind their corn at the abbot's mill. The wealthier villains supported those who were poorer in their agitation. The wars in France had made new and heavy taxation necessary. It was not because they were suffering from poverty in 1381 that the Peasants' Revolt took place, but rather because they had been irritated by the deliberate attempts to deprive them of the little freedom they had gained, and to shut them out

from the better conditions which were opening to them. Gower describes the attitude of the hired labourers. 'They are unwilling to serve anyone by the year; a man will hardly hold them even for a month. . . . Scarcely one workman in a thousand will stick to his agreement. . . . He refuses any common kind of food; this beer or meat is no use to him, and he won't come back to-morrow unless you provide better fare.'

The peasants demanded (1) the abolition of bondage, (2) a general pardon, (3) the abolition of tolls, (4) the payment of money rents instead of labour rents, and that the rent of all land held in bondage and by service should be no more than fourpence an acre. When Wat Tyler had been killed and the revolt put down, the Essex men asked the King that they should be made equal in liberty to their lords. He replied, 'peasants you have been and are, and you will remain in bondage not as hitherto but incomparably more vile'. Both sides were angry. The peasants gained little or nothing at the time, but had to settle down and win liberty by minute degrees rather than by giant strides. Enlightened men among the aristocracy began to see the disadvantage of villainage. Fitzherbert, writing about 1523, deplored its continuance as a disgrace to the country.

If the peasants did not obtain an improvement in their status, they continued to prosper during the fifteenth century. Wages rose, and with fair prices for their wool and what they had to sell many of the villains became reasonably well off. They kept quiet amidst the wars waged between York and Lancaster, and as a class they fared better than their lords and masters. The Wars of the Roses lessened the power of the barons; the teaching of reformers like Wycliffe, and still more the luxury, greed, and selfishness of the Church, diminished its influence, and made it and its property the object of attack. When Edward IV came to the throne his power was greater than that of any previous king. Parliament had played an important and splendid part on

several occasions before this, but its influence had come from its control of finance, and for a time the King had solved the difficulty of getting money without its aid. Under a bill of attainder which followed the battle of Towton in 1461 the estates of twelve great nobles and over a hundred knights and squires were confiscated for his use. The revenue from these possessions enabled him to rule without any check.

It was with the same absolute power that Henry VIII dissolved the monasteries and confiscated their land. In 1536 he sup-

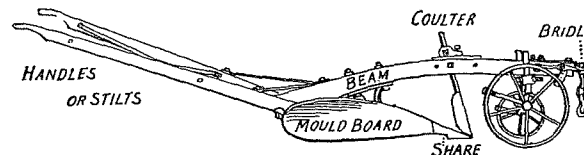


Ploughing and Digging. Second half of 15th century.

pressed 376 of the smaller houses whose income was less than £200, and in 1539 some 645 of the greater houses were given up or seized. Most of these estates, estimated to contain one-fifth of the land in the country, were given to his courtiers and others on whom he could depend. The creation of this new aristocracy had an influence on agriculture, for in the management of their estates the new landlords differed in many ways from the officials of the monasteries.

Progress had been made during those turbulent centuries. Even in scientific and mechanical things farmers had not stood still. The ploughs they used were such as men might handle to-day to good purpose. Fitzherbert in his *Husbandry*, published

in 1523, partly describes one of these. 'The share', he says, 'is a piece of yren, sharpe before and brode behynde, a fote longe, made with a socket to be set on the further ende of the share-beame. The culture (coultter) is a bende piece of yren set in a mortice in the midst of the plough-beame, fastened with wedges on every side, and the back thereof is half an inch thick and more, and three inches brode, and made keen before to cutte the erthe clean, and it must be well steeled.' The instructions Fitzherbert gives about the smearing of sheep with grease to prevent the attacks of parasites and skin diseases were those given by flockmasters to their shepherds as late as the middle of last century. He has a quaint remark about the effect of proper



Parts of a Modern Plough.

feeding in keeping sheep healthy: 'That is the beste grease that is to a shepe, to grease him in the mouth with good meat.'

The greatest progress had been made, however, not on this side, but in the new status gained by different classes and their changed relations to each other. Every order in England had fought hard for what it regarded as its rights. On the whole the higher orders had lost to the lower. The Crown had been compelled to concede things to the nobility and to the burgesses of the towns. The cultivators of the soil were no longer villains or bordars: they were now freemen. Partly owing to their direct efforts, and partly from the decay in the minds of their lords of the belief that the state of bondage was useful for any purpose, personal bondage had disappeared. Circumstances had assisted the labourers to get higher wages, although the ruling classes had legislated from 1349 to 1541 to keep them down. But

because of all this levelling, this approach to equality in certain directions, there was more harmony among all classes than ever before.

By the end of Henry VIII's reign the form in which English agriculture was to be organized had been decided. The landlord-tenant system had taken shape, and this system has had great influence on English agriculture. The manorial system in this country was never abruptly or violently ended as it was in other countries. It gradually developed into the organization which has continued to serve the demands of the industry to the present time. Great Britain differs in this respect from other nations, and there have always been people who have said that she differs for the worse. Nothing is more important for a proper understanding of the history of agriculture than to get a clear view of the changes which had taken place between the Norman Conquest and the reign of Edward VI. The landlord-tenant system is an expression of a peculiar element in the English character. Parliamentary government is another expression of this element, and thus the two institutions are related to each other. The same changes did not take place during the same period in countries like France, Germany, and Denmark. There the serfs had accepted defeat and remained subject to feudal burdens for centuries.

In England in 1550 the orders into which the people were divided were (1) the King, (2) the nobility and large landlords, (3) the clergy, (4) the burgesses of the towns, including manufacturers, merchants, and traders, (5) the yeoman farmers, or occupying owners, and the large tenant-farmers, (6) the small farmers or copyholders who still held their share of the common land on the manors, (7) the free, landless labourers. All those orders worked together, and showed some respect for each other, sometimes willingly, but more often by necessity. The King spent so much money that he had to come to Parliament for supplies, and the Lords and Commons shared in the legislation and administration

of the country. The ranks of the nobility were open to successful traders, and members of the nobility stooped to enter upon trade. The sons of farmers became successful merchants, and the smaller farmers extended their holdings. Even the labourers had been given so much power by economic conditions that the Government had to legislate over and over again between 1349 and 1541 to keep down wages, and generally failed in the attempt.

In France events had taken a different course, and produced a different result. There were struggles between King and nobles, and the nobles lost; between nobles and peasants, and the peasants lost. Neither nobles nor peasants fought so hard or so well as did their neighbours in England. Their defeats were so absolute that there was nothing like a working arrangement possible among the different orders. The King with one powerful minister drove and kept the nobles out of any share in legislation and administration. The nobles treated the merchants and traders as inferior orders. They went down to their estates and imitated there the tyranny that flourished on the throne. They escaped taxation, and this fell with crushing weight on the peasants. The different orders could not work together, either in politics or in agriculture. The break came in the Revolution in 1789. The feudal dues were repealed, the nobility were driven out, and the French peasants became occupying owners.

The German experience also reflected the character of the people. From about 1490 to 1525 the peasants were restless and engaged in formidable revolts to shake off their bondage. The fighting and bloodshed were terrible compared with what took place in the English risings under Wat Tyler and Ket. But the serfs were completely subdued, and the burdens and restrictions against which they rebelled were more firmly fastened on them. They became more docile and submissive under the fierce tyranny of their rulers and lords, and it was only in 1807 and the following years that the Government took the German peasants

from beneath the yoke of their lords and placed them on separate holdings as proprietors and cultivators. It is only necessary to mention Russia, where the course of events was most of all unlike that in England. The Revolution there is the last illustration of the fatal break between owners and cultivators of the soil, which in Great Britain alone has not taken place.

The landlord-tenant system is criticized, and no conclusive argument has been advanced to prove that it is the best. Under it there has been a great deal of inequality, but the fact remains that it is on this basis that our agriculture has been developed. The struggles in which this system was evolved from the manor reflect a peculiar feature of the English character. None of the peasants' revolts went near to winning its aims, but none of them left the peasants so helpless as they were before. The successful party in the struggles refrained from taking all the immediate advantage they could have taken from them. The winners gave to the losers some part of what the latter had demanded, and the losers never acknowledged defeat. There has never been that devastating ferocity in putting down a healthy restlessness which drove the aspirations of peasants in European countries underground for centuries, and to all appearance had killed them. The ties which have bound the English landlords, tenants, and labourers together have been severely strained, but their continuance is a proof that two or three important classes in the country can work together as they have not done in other countries, and perhaps the ability to do this may be counted as a virtue.

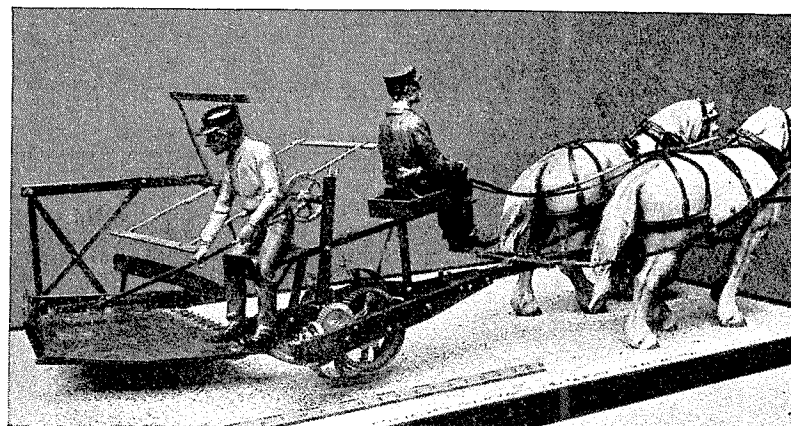
6

Beginning of Modern Farming

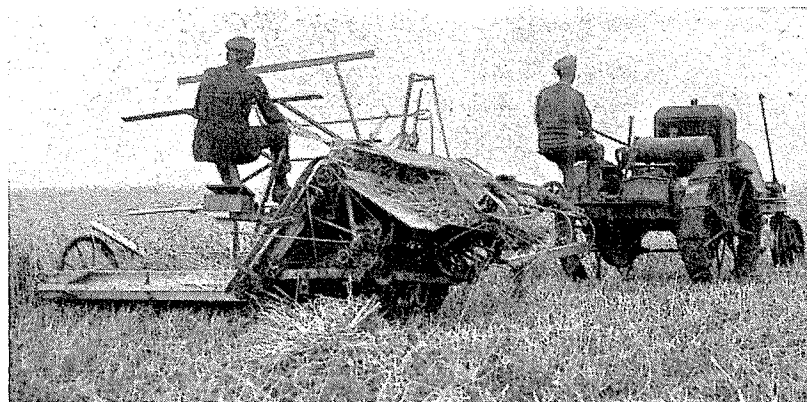
It has been said already that the manorial system of farming was designed to serve the needs of men living in a society where their chief object was to defend their lives and property from



Reaping with a Sickle (14th century).



Model of McCormick's Reaper shown in 1851.



Motor Tractor pulling modern Reaping Machine.

hostile attack. As soon as the danger of invasion became less men began to live more for other objects. The chief of these was the increase of their wealth. This work of adding to their possessions was so different from that of defending them that it required an entirely different form of organization. Experience had proved that the safety of life and property could best be secured by a highly organized, communal effort. The manor, like every part of a military organization, was communal and bureaucratic. In making fortunes for themselves men discovered that the best and easiest method was as far as possible to follow their own private courses.

For farmers the aim was to increase their crops of corn, their flocks and herds, and the first step towards this was to obtain not only more land but more complete control over it. From early times they had busied themselves in attempts to accomplish this. Magna Carta, as it was revised in 1217, had a provision against the indiscriminate sale of land by one freeholder to another, in order that the services or dues payable from it might not be lost. The Statute of Merton in 1236 provided that lords of manors might enclose portions of the common pastures or wastes, so long as they left sufficient pasture along with 'free and sufficient entry and issue' to the freeholders. This legislation shows that enclosures and consolidation of holdings were taking place.

The movement away from the manorial system, from the strip holdings cultivated in common, became more rapid as time went on, and towards the end of the fifteenth century and during the whole of the sixteenth, it was great enough to cause the Government very serious trouble. It took several forms. Freeholders and villains bought and exchanged strips so that they might regroup them in compact blocks which they could work individually with their own teams. In many places they enlarged these blocks by breaking in and adding to them portions of the common pasture. A constant incentive to this process of enclosure and consolidation was the desire to render cultivation easier and

to increase production. This reason operated whatever system of farming men wished to pursue.

There was a special stimulus towards this course in the great and steady growth of the wool trade and in the large profits which it offered to growers of wool. As early as 1193 the ransom of Richard I was paid largely out of money got from wool. A century later Edward I developed a habit of seizing wool from the merchants when he wanted money to pay for his wars. In 1337 Parliament gave Edward III a subsidy for the French war by allowing him to act as a wool broker, and buy and sell 20,000 sacks of wool. The farmers got £3 a sack, the king got £10, while the merchants could get £20 in the markets of Brabant. Not only was the raw wool sought after by the Flemings in Brabant, and by the Italians in Lombardy, Englishmen themselves became manufacturers on a large scale. Norfolk, Suffolk, Wiltshire, and other counties in the south became centres of the textile industry, and the competition of home and foreign buyers made wool the most profitable article grown by farmers in the sixteenth century. There was also a large trade in leather and undressed skins, and this helped to increase the demand for grazing farms on which these things could be produced.

Besides the profits from wool the difficulty with labour and wages turned the landlords and farmers towards grazing. The experience they had gained in the methods of enclosure on a small scale during many generations made them ready to adopt it on a large scale, and a movement swept over a great part of the country which wiped out the open, arable fields and cast adrift the population which had lived by their cultivation. Few movements have produced so great an outcry while they were proceeding, or have left such a legacy of controversy to posterity. There were protests or criticism of an extreme kind from men like Sir Thomas More and Hugh Latimer, of a moderate and restrained character from Francis Bacon, Robert Cecil, and in

Acts of Parliament; there was legislation against the decay of tillage, and active rebellion against enclosure under Ket and others in Norfolk, Suffolk, and in the Midland counties.

‘Your shepe’, says Sir Thomas More, ‘that were wont to be so meke and tame, and so smal eaters, now, as I heare saye, be become so great devowerers and so wylde, that they eat up and swallowe downe the very men them selves. They consume, distroye, and devoure whole fieldes, howses, and cities. For look in what partes of the realme doth growe the fynest, and therefore dearest woll, these noblemen and gentlemen: yea and certayn Abbottes, holy men no doubt, not contenting them selves with the yearely revenues and profytes, that were wont to grow to their forefathers and predecessours of their landes, nor beyng content that they live in rest and pleasure nothinge profiting, yea much noyinge the weale publique: leave no grounde for tillage, thei inclose al into pastures: thei throw downe houses: they plucke downe townes, and leave nothing standynge, but only the churche to be made a shepe-howse.’

Latimer was even bolder and sharper than More. In his first sermon preached before Edward VI on 8 March, 1549, he said: ‘My father was a yeoman, and had no lands of his own, only he had a farm of three or four pound by year at the uttermost, and hereupon he tilled so much as kept half a dozen men. He had walk for a hundred sheep; and my mother milked thirty kine. He was able, and did find the king a harness, with himself and his horse, while he came to the place that he should receive the king’s wages. . . . He kept me to school, or else I had not been able to have preached before the king’s majesty now. He married my sisters with five pound, or twenty nobles apiece; so that he brought them up in godliness and fear of God. He kept hospitality for his poor neighbours, and some alms he gave to the poor. And all this he did of the said farm, where he that now hath it payeth sixteen pound by the year, or more, and is not

able to do anything for his prince, for himself, nor for his children, or give a cup of drink to the poor. . . . You landlords, you rent-raisers, I may say you step-lords, you unnatural lords, you have for your possession yearly too much. For that herebefore went for twenty or forty pounds by year . . . now is let for fifty or an hundred pound by year.’

Bacon in his *History of King Henry VII* describes the enclosure movement and its effects in restrained language. Speaking of the early years of that reign he said: ‘Enclosures at that time began to be more frequent, whereby arable land, which could not be manured without people and families was turned into pasture, which was easily rid by a few herdsmen, and tenancies for years, lives and at will whereupon much of the yeomanry lived, were turned into demesnes. This bred a decay of people, and by consequence a decay of towns, churches, tithes, and the like.’ He says the King and Parliament dealt wisely with the situation, not forbidding enclosure which would be to forbid improvement, nor compelling tillage which would be striving against nature and utility.

In 1489 an Act was passed providing ‘that all houses of husbandry that were used with 20 acres of ground and upwards should be maintained and kept up for ever, together with a competent proportion of land to be used and occupied with them’. Between this year and 1598 several strengthening Acts were passed with the same purpose. In spite of these endeavours to stop or restrict the progress of enclosure it continued and resulted in detaching large numbers of people from their holdings, and in casting them adrift to look for employment, and so gave rise to the problem of the vagabond, tramp, rogue, and sturdy beggar who was the subject of so much penal legislation, a problem which has remained with us in various forms ever since.

In 1601 a debate took place in Parliament on the question whether this legislation on tillage should be repealed or continued. Robert Cecil, afterwards first Earl of Salisbury, spoke in

its favour. 'If we debar tillage,' he said, 'we give scope to the depopulator; and then if the poor being thrust out of their homes go to dwell with others, straight we catch them with the Statute of Inmates; if they wander abroad they are within danger of the Statute of the Poor to be whipped.' The Statute of Inmates, passed in 1589, forbade more than one family to live in a house. The Statute of the Poor, passed in 1572, laid it down that for a first offence a vagabond was to be whipped and bored through the ear, unless some one would go surety for him and take him into service for a year.

Between 1455 and 1607 the area of land enclosed amounted to 516,673 acres. The greatest proportion of it was in Leicester, Northampton, Rutland, and South-east Warwick. Next to these counties came Bedford, Berkshire, Buckingham, Oxford, and Middlesex.¹ The young industry of cloth manufacture, in spite of the progress it had made, could not take in and give employment to all the people thrown out of agriculture. If the wool and cloth trade was interrupted as it was by the brief war with the Netherlands in 1528 and the closing of the Spanish ports to English cloth in 1622, the greatest misery accompanied the unemployment which followed. Poor Law Acts were passed, and parish and municipal authorities were called upon to provide work for the able-bodied. The Government also tried to overcome the difficulty by forcing the employers to find work for the men, although they could find no market for their produce. There have been few periods in the history of the country when the contrast between the fortunes of the rich and poor were so wide. The new landlords, the larger farmers, the manufacturers and merchants were growing wealthy, while the evicted smallholders and the labourers discharged from the old, arable holdings, losing the certainty of employment and of a share in the produce of the soil which they cultivated, were seeking to enter new

¹ A. H. Johnson, *Disappearance of the Small Landowner*.

trades more precarious because they depended entirely on markets for their prosperity.

There is nothing more tragic in history than this situation where the legislators and administrators of 'justice' were the people whose fortunes were founded largely or wholly on the withdrawal of the sources of employment and livelihood from the men whose punishment they ordered and whose 'crimes' were directly due to this withdrawal. It is small wonder that there was discontent and rebellion. Latimer pointed to the cause of the trouble. Preaching about the peasants after Ket's rebellion in a sermon before the king in 1550 he declared: 'They must have swine for their food. . . . They must have other cattle. . . . These cattle must have pasture, which pasture if they lack, the rest must needs fail them; and pasture they cannot have, if the land be taken in, and enclosed from them. So, as I said, there was in both parts rebellion. Therefore, for God's love, restore their sufficient unto them, and search no more what is the cause of rebellion.'

Some people may think that the old organization of the manor might have been made to serve the demands of a developing agriculture; others believe that the course which events took was the proper one, that if fair play and equality of treatment were sacrificed, nothing else was possible or desirable. There is no reason to think that any of the statesmen of the time seriously endeavoured to devise an alternative scheme for using land in a more progressive way. At least they did not harmonize the desire of men to increase their wealth with the least possible effort with their desire for fair play between man and man. The Duke of Somerset probably sympathized with the peasants in their complaints. That was not enough. The negative and unconstructive character of the risings under Ket and others offered no suggestion of a solution of the difficulty; nor did the prohibitory Acts of Parliament, nor the definite protests of Bacon and Cecil, nor the fiercer ones of Latimer, More, and many

other writers, nor the prayers in the first Prayer Book of Edward VI. By far the strongest force at work in society at that time arose from the prospect of gain offered to men who were in a position to carry through enclosures. They alone worked with a clear purpose. When the throne itself and vast estates had been the object of wars costly in blood and treasure, there could be few scruples on the part of men about displacing some scores of small cultivators to secure the power and wealth which come from the possession of a compact estate. Enclosure went on from the thirteenth century to the nineteenth, and not in those 600 years were men able to find a scheme which would give scope to progressive aspirations and satisfy the instinct which insistently demands fair play between one man and another, or one class and another.¹

By the beginning of the seventeenth century England was committed to the system of farming which in a highly developed form prevails to-day. During 150 years half a million acres had been changed from open fields cultivated in common, or from common pasture and waste, to farms cultivated and managed by

¹ It is only in recent years that anything has been done to harmonize these two demands of human nature. In 1915 and 1916 the British Government issued two ordinances which define a system of holding and using land in the Protectorates of East Africa and Nigeria. The following quotations from the ordinance applying to Nigeria will give an idea of the system: 'The whole of the lands of Northern Provinces, whether occupied or unoccupied on the date of the commencement of this Ordinance, are hereby declared to be native lands. . . . All native lands, and all rights over the same, are hereby declared to be under the control and subject to the disposition of the Governor, and shall be held and administered for the use and common benefit of the natives; and no title to the occupation and use of any such lands shall be valid without the consent of the Governor. . . . It shall be lawful for the Governor (a) to grant rights of occupancy to natives and to non-natives; (b) to demand a rental for the use of any native lands granted to any native or non-native; and (c) to revise the said rental in the case of (agricultural) land at intervals of not more than seven years. . . . Except with the consent of the Secretary of State no single right of occupancy granted to a non-native shall exceed 1,200 acres if granted for agricultural purposes, or 12,500 acres if granted for grazing purposes.'

individuals as they are at present. This alteration presented a new problem to farmers. At first they largely simplified their task by turning arable into pasture. Cattle as well as sheep had increased in numbers. Dairy-farming on a large scale was common, especially in the north. When the suppressors of the monasteries were at work taking an inventory of the property which belonged to the monks of Fountains Abbey in Yorkshire they found on the demesne of this abbey 2,356 cattle and 1,326 sheep. The herd contained 738 cows, and the dairy produce for sale must have been considerable. During the sixteenth and seventeenth centuries there was a large export trade in butter and cheese, and occasionally in cattle to the Continent, so that in this branch of farming much progress had been made.

One form of enclosure was so much associated with reclamation that it is more frequently referred to under this name. From the complaints made about the creation of sheep-runs in the Midlands it is apparent that enclosure was often carried out at the expense of cultivation. The Acts of Parliament were directed against the decay of tillage. Conditions were different in the east of England, in all that stretch of level country which faces the Wash, the deep bight of the North Sea which lies between Lincoln and Norfolk. This great level embraces parts of Norfolk, Suffolk, Cambridge, Huntingdon, Northampton, and Lincoln, and it is said to extend to over 700,000 acres, the area of a large county. In its character it resembles more than any other part of England the low-lying territory of The Netherlands on the opposite shores of the sea, and it had to be reclaimed by methods with which the Dutch more than any other people were familiar.

The draining and enclosure of small portions of this land had begun in the reign of Henry VIII, but it was under the Stuart kings and the Commonwealth that the work was most actively undertaken. For several generations the Earls of Bedford took the leading part in the enterprise, and they have given the name

of the Bedford Level to that central stretch of the reclaimed and improved area which lies north-east of Cambridge. The usual arrangement was that the adventurer, the person who undertook to carry out the draining, received a third, a half, or two-thirds of the land which he reclaimed, the amount doubtless being proportioned to the difficulty and cost of the work. In the Act of 1663 the number of acres to be allotted to the Earl of Bedford, who was chairman of the Company of Adventurers, and to other members, is stated. The motives for proceeding with this work were as clear and strong as for the enclosing of grazing lands in Leicestershire. Although provision was made in the Acts of Parliament for recognition of the rights of the commoners, the distribution of the reclaimed land was in the hands of the Commissioners of Sewers, and the area allotted to the adventurers was so great that many of the previous holders were displaced.

This added to the difficulties of draining. The men who inhabited the fens loved their strange life among the marshes. They were content to take what the sea allowed them. They fished and shot the wild birds for their subsistence, and for them the freedom they enjoyed outweighed the misery of a precarious and monotonous livelihood. The adventurers employed Dutchmen to do the work of draining. Cornelius Vermuyden, who was afterwards knighted for his services, was the director and engineer. The presence of foreigners, and often their settlement on the reclaimed land, irritated the commoners who were turned out, and they frequently broke the embankments erected to keep out the water.

Similar reclamations were made on both sides of the Thames, in Essex and Kent. By the patient process of warping, also, a large area of land has been made available for agriculture round the estuary of the Humber. The Humberhead Levels, including all the land about the mouths of the Trent, the Don, and the Ouse, consist largely of warped land. Warping is a method by

which the waters of a muddy river are caught in embanked fields at high tide, and kept there until they deposit the mud which they hold. A wide, open, warping drain is cut from the river to the field, the level of which is to be raised. Sluices are fitted to admit the waters of the flowing tide, and to keep them in when it has reached its highest point. After the mud has been deposited, the clear water is allowed to flow off. Each tide leaves a layer of sand and clay only a fraction of an inch in thickness, and it may take several years by using the tides when they are suitable to raise the level two to three feet.

7

Improvements in Farming

ANOTHER revolt against enclosures took place in 1607. The Levellers' or Diggers' movement in 1649 was an impracticable attempt to adopt a different scheme of using land in common. From the beginning of the seventeenth century there came a time when the landlords and farmers who had carved out and taken control of private estates and farms set about cultivating them according to new methods. They found plenty to do, and they did it generally in a creditable way. There is a common belief that the period after this active burst of enclosure was one of little progress in agriculture. If we apply the proper test to a situation of the kind, we shall admit that little time was lost by farmers. By 1760, which is a short interval as these things go, they had built up a system of farming which was admirable in many ways.

The change from strips of land cultivated in common to enclosed fields under the control of one man was a revolution. This prepared the way for another revolution in the method of growing crops and rearing live stock. Men were free to make experiments in rendering their land more productive. They could

learn little or nothing from past experience in the long centuries during which the same things had been grown in the same way. They were free to search the world for improved ways of farming, and a remarkable number set out on inquiries and brought home the results to their fellows.

The interest in farming, and the eagerness to instruct in better methods through writings began with Walter of Henley in the thirteenth century, but it was in the sixteenth century that the great work in this direction began. Fitzherbert in 1523 published his *Book of Husbandry*, and in 1557 Tusser published *A Hundred Good Points of Husbandry*, which he afterwards enlarged to Five Hundred. From this time onwards the number of such books increased rapidly, and through them agricultural education was extended. Looking back with our knowledge of what can be done in agriculture beyond growing corn for one or two years and then fallowing, beyond cutting hay on the same meadow from one generation to another, feeding cattle and horses in winter on nothing but hay, and letting them breed as they would rather than by selection, we are apt to forget what a difficult problem our fathers had. Clover, turnips, and the other feeding stuffs that keep our live stock nearly as fat in spring as they are in autumn were hardly known, and never cultivated on farms. The only rotation of crops with which farmers were familiar was corn, beans or peas, and fallow. Their efforts were naturally directed towards increasing the yield of these. There is no clear description of how they were doing this, but progress was made where conditions were favourable. Whitelock, in his *Memorials*, his diary of events between 1625 and 1660, says that on the 6th September, 1650, the day before news of the battle of Dunbar reached London, letters came to the Parliament from Cromwell's army telling them 'that in those parts where the army marched (in East Lothian) was the greatest plenty of corn that they ever saw, and not one fallow field, and now extremely trodden down

and wasted, and the soldiers enforced to give the wheat to their horses.' Probably most of Cromwell's soldiers were farmers, and this may account for their interest in the crops and in the absence of fallows. It is evident that the Scottish farmers had given up the wasteful system, and that in spite of this they were growing the heaviest crops of corn those English farmers had ever seen.

The chief problem in agriculture was the introduction of a rotation which would at once increase the production of corn, meat, and milk. Many theories as to how this could be done were circulating among landlords, advanced farmers and others interested in agriculture. Hartlib, a friend of Milton, busied himself in collecting every piece of information he could find which appeared useful. His *Legacy of Husbandry* published in 1651 contains the writings of men like Sir Richard Weston, good, sound instruction from whatever sources it came. He advocates the growing of sainfoin, trefoil, clover and lucerne. Farmers before sowing were to 'make their ground fine, and kill all sorts of other grasses and plants, otherwise they being native English will by no means give way to the French ones, especially in this moist climate.' For lucerne they are not to spare the seed, not to expect that it will continue to yield a good crop more than seven years, and to see that neither sheep nor cattle should be allowed to graze it in the first year.

Dutch farming was frequently presented to the English farmers as an example. Hartlib tells what the Dutch do. 'They keep their cattle housed winter and summer: for the winter provision they lay in not only hay, but also grains (which they buy in summer and bury in the ground) and also rape seed and linseed cakes, and sow turnips not only for themselves but their cows also, with the which turnips being sliced and their tops and rapeseed cakes and grains they make mashes for their cows and give it them warm, which the cows will slop up like hogs, and by this means they give very much milk.' A correspondent denied that the Dutch

cows were housed in summer, and controversy went on about facts and theories. The mixture of food for winter described here will compare favourably with anything used to-day.

In agricultural education one of the most enthusiastic and practical teachers was Richard Bradley, professor of botany in



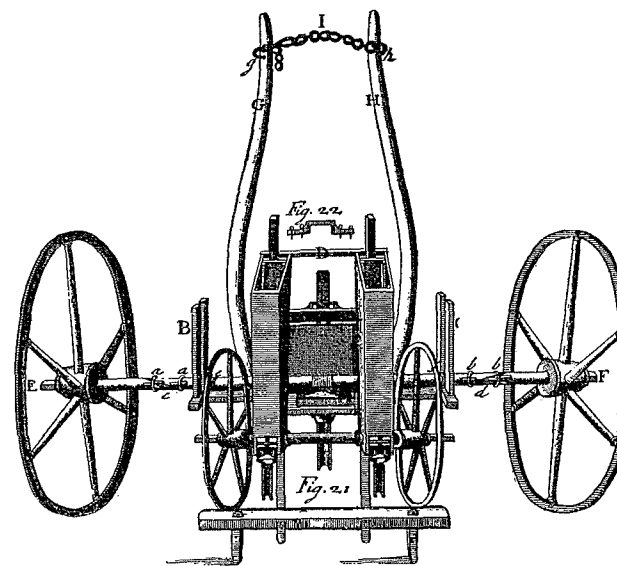
Jethro Tull. From a contemporary painting.

Cambridge University. People criticized him as a pure botanist, but the work he did for agriculture was thoroughly good. In 1726 he published a book on *Husbandry and Gardening*. He seems to have gone about the country urging farmers to adopt arable farming on a larger scale, and to use a full rotation instead of fallow. 'Some gentlemen about Salisbury', he says, 'have come into my method; they have begun to turn up land for corn, peas, turnips, and such like.' The rotation he recommended was for the first year barley, for the second turnips, to be eaten off by cattle or sheep, for the third peas, and for the fourth wheat.

This was on stiff soil, which should have about two inches of sharp gravel or sand spread on it. This land 'may at any time be laid down for grass by sowing it with ryegrass and clover after it is made as level as the ground will allow'.

Jethro Tull, who was active about the same time, was more than a teacher. He was a practical farmer and inventor. His work

was original. He formed strong views about the importance of deep and thorough cultivation, believing that to work the soil, to keep it well pulverized and clear of weeds, rendered the use of manure largely or wholly unnecessary. About 1701 he invented the drill for sowing wheat and other crops, so that there might be space enough between the rows to run a horse-hoe. In 1733



Jethro Tull's Wheat Drill.

he published his *Horse-hoeing Industry* in which he advocated this system. His drill was not at all widely adopted during his lifetime. After an interval it was introduced in Scotland, and its use spread slowly back to England.

Between 1730 and 1760 Lord Townshend devoted himself with great energy to the cultivation of his estate in Norfolk. The profitableness of a rotation which brought in turnips and clover between the corn crops, and the avoidance of a cropless year of fallow, had been impressed by Bradley and others on all interested

men, and Townshend by his success proved the truth of this view. The rotation which he chose still holds its place, and is known as the Norfolk or four-course system. The order of the crops is (1) turnips, (2) barley or oats, (3) clover and ryegrass, (4) wheat. Under turnips the land is cleaned, while clover extracts nitrogen from the air, and leaves it in the soil to feed the following crops. On the light soils of his estate he revived the old custom of marling heavily, and got fine yields of corn.

About 1776 another Norfolk landowner, Coke of Holkham, took up the work of farming on his estate. Where he farmed himself he did it on the same progressive lines as Townshend. He went further and made his work an educational thing not only for his tenants but for men who came to his sheep-shearings from any place at home or abroad. He made his shearings the occasions for discussing the best methods of farming with all the men who attended them. Big and magnanimous in his nature he treated his tenants well, won their confidence, and in turn received increased rents from them.

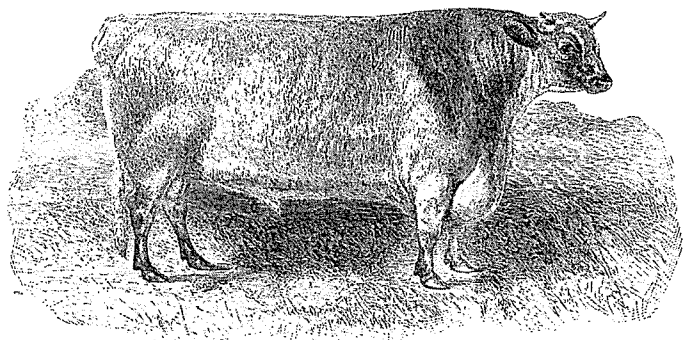
There were farmers in all parts of the country making similar progress in a smaller way. Many of them, led by their tasks or by the conditions under which they farmed, devoted themselves to the improvement of live stock. We have seen that some of the monks were great breeders of cattle, and the value of wool always made it worth the large sheep-farmers' while to improve the quality of their flocks. The opinion of what a good beast was in those days differed from ours. William Harrison writing in *The Description of Britain* about 1580 said: 'The cattle which are bred are commonly such as for greatness of bone, sweetness of flesh, and other benefits to be reaped by the same, give place to none other; as may appear first by our oxen whose largeness, height, weight, tallow, hides, and horns are such as none of any other nation do commonly or may easily exceed them. Our sheep likewise, for good taste of flesh, quantity of limbs, fineness

of fleece . . . give no place unto any.' The animals he thus describes and praises would not win the admiration of stock farmers to-day. Big bones do not mean that the cows would give much milk, or that the bullocks would yield much meat of a good quality. We must remember, however, that oxen were then draught animals, and that it was only gradually that the yield of meat and milk became the most important considerations.

It was not until about 1760 that a methodical attempt was made to produce a certain type of animal. Robert Bakewell of Dishley in Leicestershire was the first to make notable progress of this kind. He chose the Longhorn breed of cattle for his experiments. He wanted to get smallness of bone, a large amount of beef and a beast that would fatten easily. He was not successful with the Longhorns, except in proving that a special kind of animal could be bred by selection and in-breeding by mating bulls and cows of the same family. The Longhorns have too long legs in proportion to the weight and depth of their body, and they do not give much milk.

Before Bakewell's time, about 1700, Aislabie, whose ancestor had got possession of Fountains Abbey and the herd of cattle on it from the monks, had gone to Holland and bought some Dutch bulls. Michael Dobinson of Durham and Sir William St. Quentin also followed his example. The Fountains Abbey cattle were white, the Dutch bulls were red, or red and white, and the offspring of these bulls and the white cows were generally roan. This was one source from which the Shorthorn breed came, the breed that is still by far the most common in England. For a long time farmers in the north and east of England had been working actively on the improvement of their stock, but it was only when Charles Colling of Ketton, near Darlington, began to follow the rules of breeding which Bakewell had applied to the Longhorns that rapid progress was made. He adopted in-breeding in 1793, and produced at once bulls and cows whose

size and beauty of form made them famous over the whole country. He continued his work on the same lines until 1810, when he sold his herd. One bull, Comet, fetched 1,000 guineas, and the herd of 47 averaged £151 a head. Charles Colling was followed by his brother Robert, and by Thomas Booth of Killerby, near Northallerton. It must not be thought that the Shorthorns had not been well bred before this, or that they were kept in one small part of the country. In the last quarter of the eighteenth century they were by far the most common breed in Northumberland, Durham, Yorkshire, and Lincolnshire.



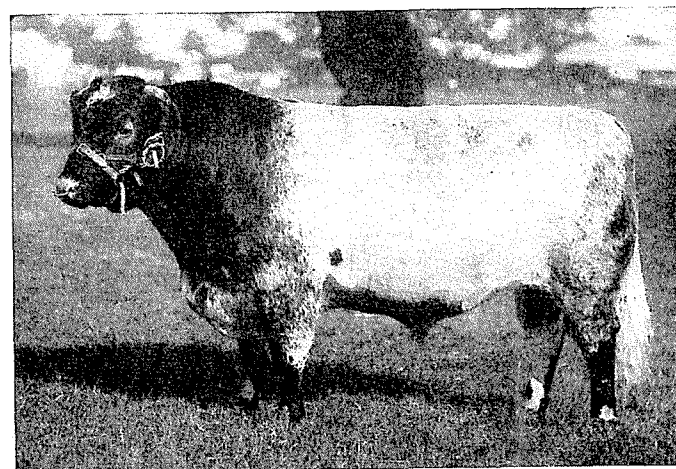
Shorthorn Bull (Comet), 1810.

In their report on the agriculture of Northumberland published in 1795, Messrs. Bailey & Culley say that the Shorthorns 'have been long established over the whole county, the other kinds are found only in the hands of a few individuals who have introduced them with the laudable view of comparing their merits with the established breed'. They give the weights of some very heavy bullocks, but add that large size is not now considered a good point. 'Quick feeders that lay their fat upon the most valuable parts, and have the least offal in the coarse parts, are the kind which every enlightened breeder wishes to be possessed of.'

The success of the Collings induced others to take up the work

in the neighbourhood. Thomas Bates, who had farmed in Northumberland, moved to Kirklevington, a few miles south of the Tees, in 1811. He had a clear idea of the type of Shorthorn he wished to produce, and at his death in 1849 he left several strains or families in his herd, members of which in later years were sold for enormously high prices in England and in the United States, where many of them had gone.

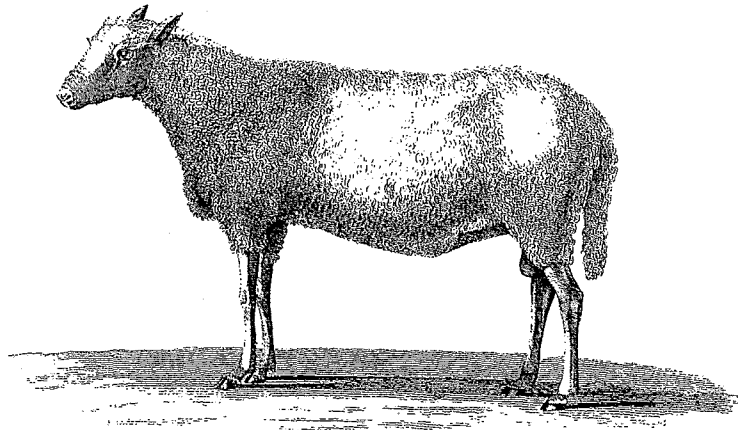
The work of these prominent breeders carried the reputation of the Shorthorns over the whole country, and the cattle them-



Shorthorn Bull (Bridgebank Paymaster), 1921.

selves soon followed the good report. But apart from this more brilliant side of their development the ordinary Shorthorn had commended itself widely by its profitable qualities. Marshall, writing in 1799 in his *Agriculture in the Southern Counties*, says that 'the cowkeepers in the environs of London keep, almost solely, the shorthorned or Yorkshire breed. . . . These are bought in Yorkshire and Durham, and some I believe in Lincolnshire, by dealers, who drive them southward into Northamptonshire or Bedfordshire, where they are met by other dealers, who supply

the cowkeepers, or by the cowkeepers themselves. Their motives for choosing this breed of cows in preference to every other are two. They preserve a fulness of flesh even when in full milk, and may when their milk fails them, or accidents overtake them, be disposed of the next market day in Smithfield, with advantages that a leaner kind would not afford. And another reason for their choice is that they give a larger quantity of milk than cows of the longhorned breed.' This is exactly the argument used



A Cheviot Ram, 1794.

by the Shorthorn breeder to-day, when he commends it as the best dual-purpose animal.

Bakewell applied himself to the improvement of sheep as he had done with cattle. He took the old Leicester sheep, and improved it to the much finer animal, which has only been slightly modified and bears the same name to-day. The good qualities of this sheep became known after a few years, and farmers paid him very high prices for the hire of his rams. In 1789 he made 6,200 guineas in this way.

Other farmers were quick to apply Bakewell's principles to

other breeds of sheep. John Ellman of Glynde, in Sussex, evolved the South Down breed thus, a breed which still keeps the highest reputation for quality. The enthusiasm for improvement in most parts of the country is indicated by the high fees paid for the use of rams. In Northumberland as much as in Leicestershire the possessors of well-bred Leicesters received extraordinary sums.

The object and result of most of these experiments in stock-breeding was to produce animals of finer quality. The increasing



A Cheviot Ram, 1921 (The Conqueror).

use of horses instead of bullocks for ploughing and carting removed the necessity for attempting to produce a breed that would be equally useful as draught animals and for producing the greatest amount of good beef and milk. It is difficult enough to get a breed which will do the last two things, and it is impossible to find one which at the same time will rival the horse as a working animal.

Arthur Young was strongly in favour of keeping bullocks for farm work instead of horses, and he pressed his views with undue

insistence. He and the people who agreed with him based their arguments on the fact that bullocks were less expensive to keep than horses, and that their carcasses could be sold for food when their working days were over, no matter how old and tough they might be. The common sense and practice of the farmers went against Young. They did not mind if a horse cost twice as much to keep as a bullock, so long as his work on the farm and on the road was worth three times as much. Between 1760 and 1820, when expeditious and thorough cultivation became more urgent and the need for carting produce long distances on hard roads arose, horses rapidly displaced bullocks.

From this came a stimulus towards improving the breed of farm horses. Bakewell took up this work, and improved the Leicestershire breed of the old English horse. Marshall, writing in 1790, says that 'during the last thirty years the long fore-end, long back, and long, thick, hairy legs have been contracting into a short thick carcase, a short but upright fore-end and short clean legs, it having been at length discovered by men of superior penetration that strength and activity, rather than height and weight, are the more essential properties of farm horses, and there appears to be at present some hope of men in general gaining their senses so far as to see them in the same light'. The increased demand sent up the value of horses. In Scotland the prices of the best Clydesdale horses in 1784 were from £18 to £20. In 1795 Robertson, who surveyed the agriculture of Mid-Lothian, said the prices had risen to £30 and £35. The Scotsmen had tried some horses of Bakewell's breeding, but considered them too slow.

Unsystematic draining was performed in England for a long time before trouble was taken to find the most efficient methods. Water, which damages crops, comes from two sources. Spring water is thrown out on the surface where the soil strata lie in certain ways, and this water often spreads and injures many acres of grass or crops before it disappears. Surface water from

rain, or from the overflowing of streams, has the same result when it cannot penetrate the stiff or hard layers of subsoil. About 1760 Joseph Elkington, a farmer in Warwickshire, devised a scheme for getting at springs and leading off the waters before they broke from their underground channels and spread themselves over the surface. This often meant deep cutting or boring and frequent failure.

Practical men in different counties had adopted the system of drainage in use to-day. Arthur Young made his survey of farming in Suffolk in 1803, and he tells of two men whom he discovered pursuing the modern method, which he considered wrong. 'There are two errors', he says, 'very common in the performance of this improvement. The first is making the drains in, or nearly in, the direction of the declivity, whereas they ought always to be made obliquely across it. The other is that of marking out and making numerous drains across the sides of springy hills, which might in many cases be drained completely with a single drain judiciously disposed, according to those obvious principles upon which Mr. Elkington proceeds. Mr. Simpson of Wilnesham and Captain Wootton of Rattlesden contend that, in drawing out hollow drains, it is right to mark them with the declivity and not across it, as the drains then draw both ways, whereas when across the slope they can draw only on one side.' Young returns to the subject again. 'In hollow draining,' he says, 'Mr. Simpson has a singular practice . . . he draws them with the slope . . . the idea is new, and the fact is that no fields can be better drained, he asserts, than his own in this method. . . . His common drains are 16 to 18 feet asunder, and 26 to 30 inches deep, and filled with straw.'

The credit for discovering this sensible system of drainage is generally given to James Smith of Deanston, Perthshire, who introduced it in 1823. He not only practised it and made a vast improvement on the land which he farmed, he published a little

book in 1831 called *Remarks on Thorough Draining and Deep Ploughing*, in which he advocated the system. He advertised his success and people came long distances to see the evidences of it. Smith's drains were 16 to 21 feet apart and 30 inches deep. They were filled with stones to the depth of several inches, not with straw as Simpson's were. It was later that the use of fire-clay pipes or tiles became general. They were then subject to a tax which made them expensive.

8

The Revolution in Agriculture

MANUFACTURERS and merchants were as busy as farmers during this period. Outside agriculture the woollen industry was still the largest. The counties in which it chiefly flourished in the early part of the eighteenth century were Norfolk, Yorkshire, Gloucester, Wiltshire, Somerset, and Devon. Weavers generally had their hand-loom in their houses, and there were few factories until steam was discovered and labour-saving machinery invented. Towards the end of the century this change took place. Steam was used to drive machines in which the labour had previously been done by hand or occasionally by water-power. It was then that the woollen industry was drawn from the eastern and south-western counties of England to the West Riding of Yorkshire, and that the cotton industry took its strong hold in Lancashire. We have seen how gradually agriculture took on its modern form. The younger industries made more rapid progress. Between 1770 and 1820 most of them chose the places where they flourish to-day.

Agriculture, with which they had nearly all been linked up as little offshoots, found that they were growing into great and apparently independent rivals. Men were no longer part-time farmers and part-time weavers or tailors or shoemakers. They

were much more generally either one thing or another all the time. This great hiving-off of industries made a vast difference to farmers. The larger the population which did not live by agriculture the greater became the demand for everything which the farmers produced. The people who earned wages as spinners, weavers, metal-workers, miners, merchants, and carriers by land and sea became good customers for corn, meat, dairy produce, wool, and leather. They themselves were beginning to supply the whole of the world with the things they produced, and the towns where they lived were good markets.

One kind of progress makes other kinds necessary. The means of communication between one town and another and between country and town had to be improved. Telford and Macadam as builders of bridges and roads, Brindley and the Duke of Bridgewater as constructors of canals, led enterprise in this direction. Rivers were widened, deepened, and straightened to make transport easier. Produce from the farms could be carried in wagons and in barges instead of on pack-horses.

The high prices made a strong appeal to landlords and farmers. Instead of farming for little more than a bare subsistence under the old, common-field system and with common flocks and herds, they saw a way to become wealthy by getting complete control of arable and grazing land and by producing as large a surplus as possible to sell. The only way of obtaining this control was by enclosure. The movement which had gone on slowly after 1607 became active again. Between 1455 and 1607 515,673 acres had been enclosed. It was the demand for wool and its high price that had caused this. The far greater demand and the high prices for everything the farmer produced called for a much greater area in the eighteenth and nineteenth centuries. Between 1700 and 1845 6,042,569 acres were enclosed, and since 1845 a further area of 532,227 acres has been added.

We can imagine how great was the upheaval, how many

thousand families were removed from their old homes, such as they were, how in a few years many landlords had built up estates, how a minority of the farmers became tenants with a large if not unlimited control of much larger farms than they had held before, how the majority of the displaced landholders distributed themselves among the new industries, or became farm labourers, or went as emigrants to the new worlds. The period from 1770 to 1850 was one of extraordinary unsettlement and resettlement. The country was like a hive of bees which kept swarming all the time. There were serious hardships and injustices, as was inevitable. The struggle for and against enclosure was not only one between individuals; it was one between the two deep principles in human nature, the desire for efficiency and the desire for fair play. Fair-minded men like Arthur Young, who were keen on progress, advocated enclosure, and at a later time they expressed regret for the great suffering and injustice which had been inflicted on thousands of displaced families. 'By nineteen out of twenty Inclosure Bills', said Arthur Young in 1801, 'the poor are injured, and some grossly injured.' Many protests were made against the methods of enclosure and many appeals on behalf of schemes which would provide the evicted families with an allotment and cottage. They had no success. In 1800, and even in 1900, the British people were no more capable of harmonizing the demand for efficiency with the demand for fair play in this matter of enclosure than they were in 1500. This problem still faces us.

To stir up and confuse things more thoroughly England went to war with France in 1793. Except for two short interruptions the war lasted till 1815. It made certain things come about more quickly than they would otherwise have done. It raised prices and hastened enclosures; it forced people to realize again that next to fighting agriculture is the most important business in any serious war. During the twenty-three years of war the

average price of a quarter of wheat was 80s.; during the twenty-three years before its outbreak the average price was 46s. The first Board of Agriculture was established in 1793 with Sir John Sinclair as President and Arthur Young as Secretary. The enthusiasm which they and others had shown for agricultural education got fuller scope. Young worked with great energy, travelling through the country. He described good and bad methods of agriculture wherever he found them, holding up the first for imitation and the second for a warning. His activity was like that of a bee which passes from flower to flower and spreads fertility. The Board of Agriculture sent other men through most of the counties in Great Britain to make surveys similar to those made by Young. It employed Sir Humphry Davy to lecture on agricultural chemistry in 1803 and following years, and thus took the first step towards giving farmers a scientific education in a systematic form.

These things make it clear that the Government, landlords, and farmers set about the improvement of agriculture with zeal and efficiency in several directions. In handling soils, crops, and live stock they made great progress, but they failed seriously in handling each other, and still more in handling their labourers and customers. They were better as chemists and botanists than as economists. Agriculture had been prosperous before the war: it became much more prosperous during its course. The payment of the labourers was an important matter, and we might expect that it would have been dealt with in the progressive and enterprising spirit which was active in other ways. This did not happen. Landlords had the chief influence in Parliament and in the local administration of justice. Wages had been fixed by Act of Parliament as early as 1349, and since 1563 by the Justices in the different counties. Instead of sharing the great prosperity in agriculture with the labourers they squeezed them down to the meanest limit of subsistence. An Act of Parliament in 1782

made it legal to supplement the wages of able-bodied men from the rates. In 1795 the Berkshire magistrates made a regulation which provided that only part of the wages might be paid directly out of what the labourers produced, and that the other part should be paid from the poor-rates. 'When the gallon loaf', they said, 'weighing 8 lb. 11 oz. shall cost 1s., then every poor and industrious man shall have for his own support 3s. weekly, either produced by his own or his family's labour or an allowance from the poor-rates, and for the support of his wife and every other of his family 1s. 6d.' That is, a man's wages were fixed at a sum which would buy for himself 26 lb. of bread in the week, and for his wife and children 13 lb. each.

The labourers were not paid more when they produced more. They were paid more when their children increased in number. They were not encouraged to work hard but to have big families. The resolution of the Berkshire magistrates was called the Speenhamland Act, because the meeting at which it was passed was held at Speenhamland near Newbury, and nearly all the counties in England adopted this scheme as if it had been an Act of Parliament. The northern counties refused to have it. The policy was too absurd to continue long. In 1814 the power of fixing wages was taken from the Justices, although the right to pay wages out of the poor-rates remained until 1834.

The people who had controlled the legislation and administration of the country had too much power. Enclosures deprived thousands of families of their foothold on the land, and the Poor Law was an utterly inadequate method of giving them an opportunity to be good and useful members of the community. The influence of the Poor Law was always bad, but during the forty years from 1795 to 1834 when the wages which they earned were withheld from them, and charitable doles substituted, the labourers were demoralized to such an extent that they have not yet recovered. This policy has done much to retard progress in

agriculture. Economic reasons justify enclosures, but both moral and economic reasons condemn this treatment of people who had already suffered injustice in the loss of their land through enclosure.

Men in power found it difficult to adapt themselves to new conditions. They could not easily impose restraint on the use of opportunities for making money by any means. They were tried seriously by another development. The rapid increase of industries outside of agriculture and of a population engaged in these industries created a new problem. Agriculture was losing its pre-eminent place against all these new forms of production. Manufacturers, merchants, and miners were Englishmen just as much as landlords and farmers were, and as members of the same community their interests had to receive similar consideration. This was what they claimed. But landlords, who were a majority of the legislators, found it difficult to accept this view. They had been accustomed to use Parliament to fix prices as well as wages. They had imposed taxes on imported corn to keep up the price, and had granted bounties on exported corn to add something to what the farmers got from foreign buyers. Between 1697 and 1773 bounties amounting to £6,237,176 had been paid to farmers by the Treasury on corn that was exported. From 1789 onwards the amount of corn imported exceeded the amount exported.

Having been accustomed to the high rents which were possible during the war when wheat was sold for 80s. a quarter the landlords could not allow prices to fall again to the old level. When the war ended in 1815 they passed the Corn Law which prohibited foreign corn from being brought to British markets when the price was less than 80s. a quarter. Corn could be imported, but it had to be stored at the ports. The intention of those who passed the Corn Law was to keep the price of wheat at 80s., and landlords and farmers expected they would succeed in doing this.

Rents were fixed and other arrangements made in this expectation. But prices did not behave as landlords and farmers wished. They went up and down violently. Between January 1816 and June 1817 they varied from 53s. to 112s., and in the twenty years from 1816 to 1835 the average price was only 53s. There was more distress among farmers during this time than in any similar period in the history of agriculture. Select committees of the House of Commons sat in 1820, 1821, 1822, 1833, and 1836 to hear evidence and to consider remedies. They accomplished nothing.

The opposition to the Corn Law came chiefly from the manufacturers of Lancashire, Yorkshire, and other industrial centres. The challenge to the claim of the landlords was bound to come. This claim was that all the classes not engaged in agriculture should be taxed for the benefit of agriculture, that to a very great extent, if not absolutely, the English market for corn should be kept for English farmers. The conflict between the two views was one of the most critical in the history of the country. The manufacturers asked that agriculture should take its place among the industries of the country with no special privileges, that the interests of the whole community should be placed above the interests of any one class. It would have been strange if such a request had not led to a severe struggle.

The result was creditable to Englishmen. They fought and won and lost like sportsmen. In 1776 Adam Smith had published his book *Wealth of Nations*, and in this he had shown clearly that protection seriously injured the trade of a country, that it would limit and prevent the expansion of Britain if her other industries were subordinated to agriculture, if we tried to grow all our own food instead of sending our manufactures abroad to people who would send us better food than we could grow in return. Smith's arguments had convinced a great many men in all classes that free trade in corn and in everything else was the best thing for

the country. Landlords and farmers did not all want to keep up the price of food by taxation or prohibition of imports, but men hesitated to act on their principles. The conflict which was going on in men's minds may be best seen in a passage from the Report of the Select Committee of 1821. 'If', say the Commissioners, 'your Committee look to the permanent improvements which have been made in the country itself within the same period (since 1773), the bridges which have been built, the roads which have been formed, the rivers which have been rendered navigable, the canals which have been completed, the harbours which have been made and improved . . ., if they look at the same time at the growth of manufactures and commerce—in the contemplation of this augmentation of internal wealth, which defies all illustration from comparison with any former portion of our history, or of the history of any other State—your Committee may entertain a doubt whether the only solid foundation of the flourishing state of agriculture is not laid in abstaining as much as possible from interference, either by protection or prohibition, with the application of capital in any branch of industry, whether all fears for the decline of agriculture . . . are not in a great degree imaginary, whether commerce can expand, manufactures thrive, and great public works be undertaken, without furnishing to the skill and labour which the capitals thus employed put in motion, increased means of paying for the productions of the land.'

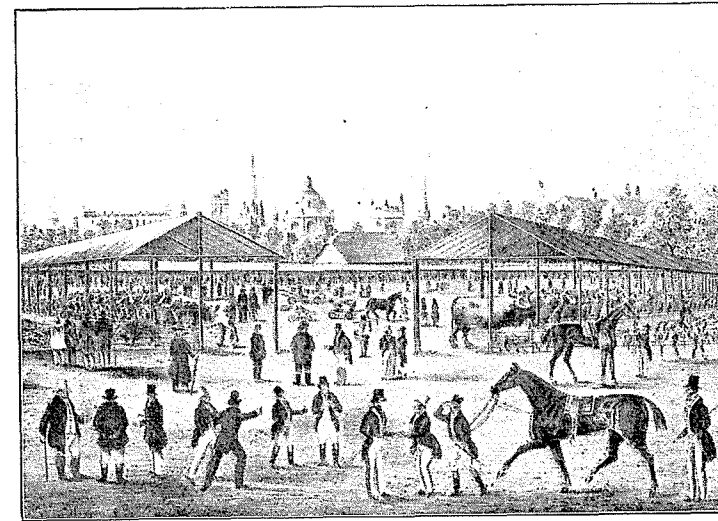
The Committee described very clearly in the form of a question the situation as it appeared to enlightened men. They came to no decision. But a growing number of men were coming to the conclusion that it would be much better for agriculture and for all other industries if the Government were to abstain from all interference by protection or prohibition. The anti-Corn Law League was formed by free-traders, by the Hon. Charles Villiers, Richard Cobden, and manufacturers chiefly of Lancashire and

Yorkshire. Cobden was the hardest worker on the platforms of the country. He showed most clearly in his speeches to large audiences, as well as to members of the House of Commons, what the most intelligent readers of Adam Smith had seen for years. The question which the country had to decide was whether the younger industries were to be given the fullest opportunity to win the trade of the world in all they produced, or whether the immediate interests of agriculture were to be secured, no matter how much the cost of living and the cost of production were increased.

In a debate in the House of Lords on the 14th March, 1844, the Duke of Richmond argued that the prosperity of the farmers should be guaranteed by keeping up the value of their produce, and that the farmers would then be the best customers of the manufacturers. Earl Fitzwilliam argued that the true source of agricultural prosperity was a thriving condition of manufactures and commerce. A Conservative Government was elected in 1841 pledged to support the Corn Law. The agitation of the anti-Corn Law League had moved the country against the law, and the arguments of Cobden had made Sir Robert Peel and Sir James Graham, the leaders of the Government, convinced free-traders. The failure of the potato crop in 1845 had caused a famine in Ireland. Peel and Graham gave expression to their convictions. They carried the repeal of the Corn Law in 1846, to take effect in 1849. They did this at the cost of their political existence, for their party refused to have them any longer as leaders.

The fight over this question had been long and frequently bitter, but the fact that the different classes in the country could fight by argument and hold together while they settled great issues of this kind gave promise of a better future. The period from 1770 to 1850 had been one of progress not only in agriculture but in all the affairs of the country. It had been a time of restless

hustling and scrambling. Terrible suffering had been caused by the slight regard given to the establishment of fair play and justice in the multitude of changed relationships between men and classes. In agriculture and in the younger industries men were too eager to gain the fullest and most immediate material returns from the new opportunities offered to them to consider what



A view of the First Royal Show held at Oxford, 17 July, 1839.

was necessary and just for those who had been made dependent on them. Restraints had been imposed on the greed of the masters in the new industries. All the agricultural classes had been deprived of arbitrary aids. The reform of the Poor Law in 1834 had left the labourer to make his bargain with the farmer for the reward of his work. No doubt many of them resented the loss of the doles, but it was a wholesome piece of surgery to cut away the degrading support. Landlords and farmers were now in a similar position. They looked forward to 1849 with fear. They believed that when the prop of the Corn Law was

removed prices would fall and they would be ruined. It was a great achievement when the power of the Government to control wages and prices in favour of a few classes was so far shaken off. The freedom and the stimulus to progress thus gained by the country as a whole was invaluable.

9

Freedom and Progress

THE bad times which followed 1815 checked some forms of enterprise. In 1822 the Board of Agriculture was abolished. There was a demand for economy and for relief from the heavy burden of taxation. The affairs of agriculture were put under the care of the Board of Trade and the Local Government Board until 1889. In spite of this slackening in the Government's educational and administrative interest private enterprise continued. Adversity did not extinguish the ambition of landlords and farmers who had a genuine enthusiasm for improvement. Nor did the fight about protection and free trade divert them from their object. They found satisfaction in producing better crops and better stock. Although most of them did believe in protection, and also believed that the manufacturers had agitated for the repeal of the Corn Law from purely selfish motives, they accepted the situation and kept on farming their best.

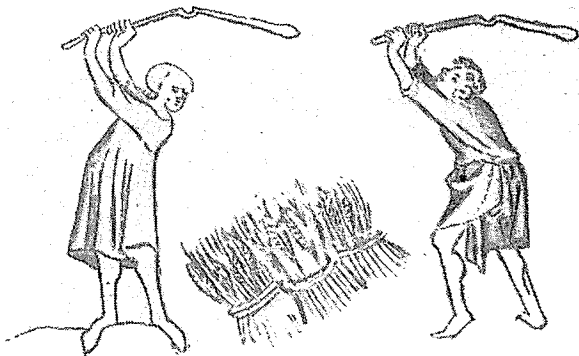
Their fears of financial ruin were not fulfilled. Revolutions were going on in France and Germany in 1848, and things were unsettled everywhere for a few years. Prices fell in 1849, and remained lower until 1853. Landlords, farmers, and labourers had to rely on their own efforts and on voluntary arrangements among themselves. These did more for them than Government interference. Before the Board of Agriculture was established in 1793 the Bath and West of England Agricultural Society and the Highland and Agricultural Society had been formed. In

1838 the Royal Agricultural Society of England came into existence, and numerous local clubs and associations sprang up over the country, all of them designed to stimulate and promote agriculture.

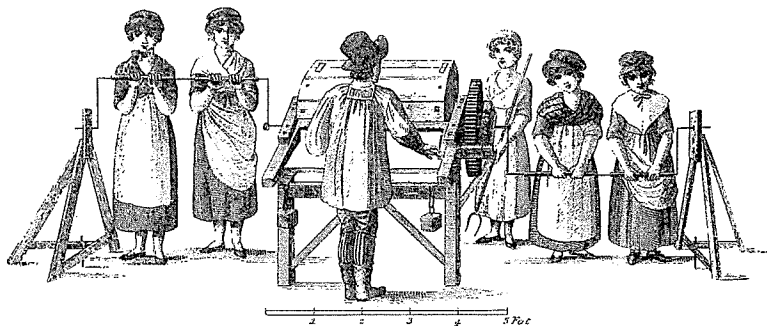
In 1840 Liebig, a German chemist, published a book on *Chemistry in its Application to Agriculture and Physiology*, and both he and his book were received with appreciation and criticism by scientific men and by agriculturists in England. His contribution to knowledge on the subject made more stir than anything of the kind had previously done. What he did was to make clear some of the processes by which plants are nourished, on what elements in the air and in the soil they feed. His work was sufficient to show how 'artificial' manures could be made to supply the needs of crops, and also to explain why the practice of farmers in using certain manures was successful. In 1843 Sir J. B. Lawes founded the Rothamsted Experimental Station to develop and test such ideas as Liebig's. This kind of progress had an attraction for men. There was a romantic exhilaration in the hope that chemistry and botany might any day do something great for agriculture.

While farmers had to depend on experts for such scientific work, they frequently helped themselves in mechanics and engineering. The threshing machine which we use to-day was invented by farmers, one man adding something to the work of another. In 1784 Andrew Meikle, a farmer in East Lothian, erected the first machine which did all the essential things that modern machines do. A farmer of Hawick, named Rogers, seems to have made the first winnowing machine about 1733. We have seen that farmers themselves improved the methods of draining. The use of threshing machines, turnip-slicers, and chaff-cutters became much more general about 1850. They were driven by horses, or by water where this was available. On many estates, however, in Scotland and England boilers and engines of

the same type as those used in factories were part of the equipment of farms, and they were only given up when travelling, steam-driven machines were perfected and did the work at less cost.



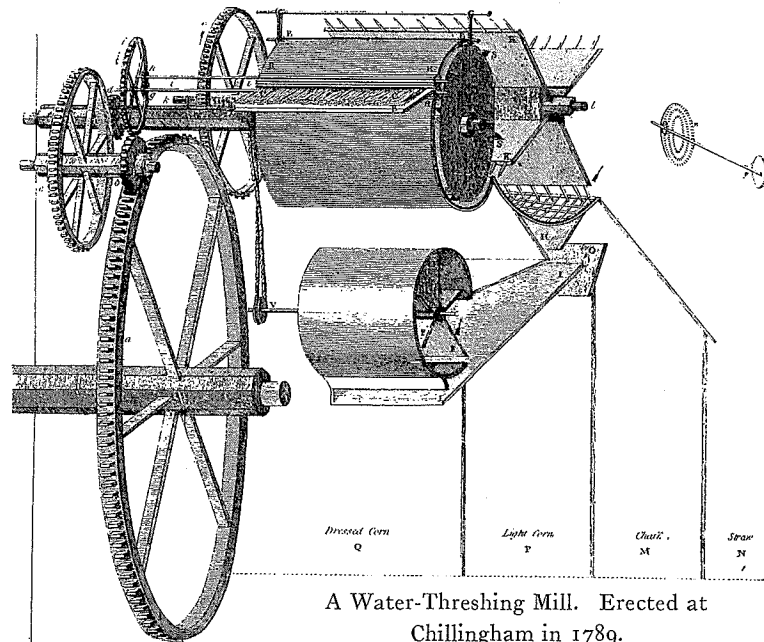
Threshing with Flails (14th century).



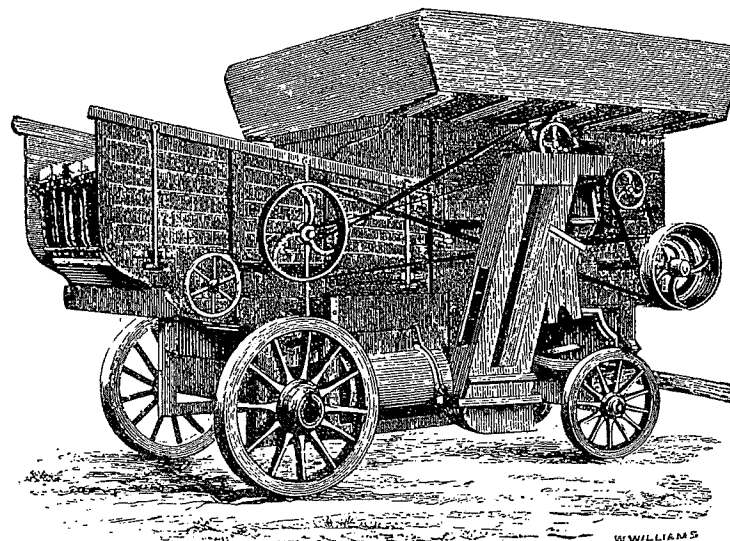
A Hand-Threshing Mill.

(From Mavor's *Survey of Agriculture in Berkshire*, 1808.)

In 1850 James Caird took the place of Arthur Young as a writer on agriculture. During that year and the following he travelled through the greater part of England as commissioner of *The Times*, to give an account of how landlords, farmers, and labourers were playing their part under the new conditions of freedom.



A Water-Threshing Mill. Erected at Chillingham in 1789.



A Threshing Machine exhibited in 1851.

His picture of agriculture, compared with that given in the reports of Young and others at the beginning of the century, shows that great progress had been made, that the industry was already organized much as it is to-day.

One thing which was assisting farmers and changing their methods was the development of railway communication. The county of Norfolk supplied London with much of its meat during the months of spring, as it still does. On the long journey by road fat bullocks lost considerable weight, and it saved the farmers' money and meat for the country, when they were carried by railways in a few hours. 'Formerly,' said Caird, 'when several days were occupied in driving (fat stock) to London, a sheep was found on the average to have lost 7 lb. weight and 3 lb. inside fat, and a bullock 28 lb.' This revolution in transport brought thousands of farms within easy reach of growing cities for the marketing of even such a perishable commodity as milk. It was not until the epidemic of rinderpest in 1865 had swept away most of the cows in the London dairies that the change took full effect. Many of the dairies were never set up again. The dealers went out through the nearest counties and offered prices for milk which induced farmers to sell it to them and to abandon the manufacture of butter and cheese.

The contrast between the old and new systems of transport may be realized from an account of the old given by the Rev. T. Mozley in his *Reminiscences of Towns and Villages*. He was rector of Moreton Pinkney in Northamptonshire about 1832, and he tells what the farmers produced then, and how it went to market. 'Butter, pigs, and calves', he says, 'were the chief products of the parish, and they went mostly to London. My nearest neighbour, the farmer occupying the old manor-house, had sent up his butter many years to the dealer in Newgate Street who supplied George IV, and he had lost a hundred pounds through the irregularity with which the King, then Regent, had

paid his butter bill, and the consequent ruin of the dealer. The calves were taken to points on the great roads, and put into immense vans two stories high, accommodating thirty or forty of the poor creatures. These huge machines, drawn by half a dozen horses, and doing much of the journey by night, were the terror of the stage-coachmen. The drivers slept, and even if they were awake would not take the trouble to keep their own side of the road. The coachmen had their revenge. When the place was convenient they would alight and turn the calver's horses into a cross-road, or even right round, when the driver upon waking found himself home again.' By 1850 the railways had removed from the roads many stage-coaches and many wagons which carried farm-produce. The lower prices for corn did not hold long. They rose in 1853, and on the outbreak of the Crimean War in 1854 a further rise took place. Between 1854 and 1871 wars occurred in Europe and in the United States at short intervals. They interfered with production and trade on a smaller scale than the Napoleonic wars, but still sufficiently to increase and maintain agricultural prices. The period from 1853 to 1876 was one of the most prosperous in the history of British farming.

Under this prosperity a problem which had arisen at two previous times made its appearance. It affected the relations of landlords and tenants. When profits in farming were high competition for farms became keen, and frequently old tenants were turned out of their holdings to make room for men who offered higher rents. The hardship and injustice seemed all the greater because very often the tenants who were turned out had improved their holdings, and it was the appearance of the farms due to this improvement which attracted competitors. This was an evil of long standing. Writers in the time of the Tudors had dwelt on the mischief caused by the exaction of excessive rents. There were three periods when the problem became

acute. First of all after the enclosures of the sixteenth century, then during the Napoleonic wars, and again between 1853 and 1876.

Each of these periods had been preceded by enclosure of land and amalgamation of farms. Prices were high and farmers were enterprising. Like Tennyson's Northern Farmer who stubbed Thornaby waste, they reclaimed or broke in land not of the best quality—stiff clay that was difficult to work, land that ran easily to gorse or scrub of some kind, light, sandy soil which had to be made by marling, or high-lying land on which the crops ripened late. Farmers pushed their improvements to the farthest practical limit, and sometimes beyond it.

The problem was clearly enough stated by Walter Blith in 1649. In his work *The English Improver* he mentioned 'eight prejudices to improvements', of which the following is the first: 'If a tenant be at never so great paines or cost for the Improvement of his Land, he doth thereby but occasion a greater Rack upon himself, or else invests his landlord into his cost and labour gratis, or at best lies at his landlord's mercy for requitall,' which occasions a neglect of all good Husbandry, to his owne, the land, the landlord, and the Commonwealth's suffering. Now this I humbly conceive may be removed if there were a Law inacted by which every landlord should be obliged either to give him reasonable allowance for his cleare Improvement, or else suffer him or his to enjoy it so much longer as till he hath a proportionable requitall.'

The evil described so clearly by Blith went on without any remedy being attempted for more than two centuries. Leases were advocated strongly by the men who reported on agriculture in the counties between 1793 and 1815. They did little good. When farmers had their rents raised, or were turned out, at the ends of their leases, they began 'farming to leave' four or five years before the end came. They laid out as little as possible in

manuring and cultivating, and took everything they could out of the land. When a new tenant came in he had to spend six or seven years in bringing the land back into good cropping condition. This practice of letting the fertility down kept the standard of production low.

It was 1875 before a law such as Blith recommended was passed. The Agricultural Holdings Act of that year recognized that a tenant on leaving a farm had a right to compensation for unexhausted improvements, and it made provision for securing this. Unfortunately it allowed the landlord and tenant to make a bargain that the latter would not ask for the fulfilment of this right at the end of the lease. Landlords in so many cases pressed this bargain on the tenant that the Act was practically useless, and in 1883 a new Act was passed making it illegal to contract out of the obligation to pay compensation.

In 1880 the Ground Game Act was passed. The opening words of the Act are: 'Whereas it is expedient in the interests of good husbandry, and for the better security for the capital and labour invested by the occupiers of the land in the cultivation of the soil, that further provision should be made to enable such occupiers to protect their crops from injury and loss by ground game . . . Every occupier of land shall have, as incident to and inseparable from his occupation of the land, the right to kill and take ground game thereon, concurrently with any other person who may be entitled to kill and take ground game on the same land.' Under the Agricultural Holdings Act of 1908 occupiers are allowed compensation for injury done to crops by game which they are not allowed to kill or take.

During the prosperous time from 1853 to 1876 the condition of the labourers was still unsatisfactory. Almost anything was better than the old system which encouraged them to become paupers. But the use of the Poor Law for such mistaken purposes during so long a period had given rise to far-reaching evils.

A strange type of character must have been produced when a strong man of twenty-five could not get more than a shilling a day, while idle men with a large family to get the head-rate received four times as much. It was a healthy piece of legislation which repealed the old law and threw the whole responsibility for the wages of the labourers on the employers. The bad old customs did leave their impression, and if any peculiar deficiency shows itself in the labourers to-day, it may be traced largely to this strange experiment in economics.

But the labourers suffered not only in wages. The Poor Law and the Law of Settlement together made it the apparent interest of the landowner and put it in his power to hustle the labourers from his own parish to another. Hundreds of cottages were pulled down so that there might be no inhabitants to claim relief from the rates, and in many parishes the deficiency has never been repaired. Labourers had to be drawn from long distances to do the work on farms. The gang-system arose from this, under which men, women, and children went round under a gang-master, having to walk many miles to and from work, or sleep in barns and other outhouses.

A quotation from the report of Mr. S. C. Denison, one of the assistant Poor Law Commissioners in 1843, gives some idea of conditions. He reported on Suffolk, Norfolk, and Lincoln. 'I believe', he says, 'those who first (unintentionally and unknowingly) caused the mischief can alone cure it: I mean the neighbouring landowners. If those 103 stranger families, who now swell the amount of crime and misery at Castle Acre, were living in their own parishes, subject to the control of their landlords . . . Castle Acre would not be reproached as "the coop of all the scrapings in the country": its own native population would be uncontaminated by the refuse of other parishes: the gang-system would necessarily cease; and Castle Acre would no longer be, what it now is, the most miserable rural parish

I ever saw anywhere.' The scarcity of cottages to-day is due in part to this foolish policy.

The good sense and ordinary human feeling of landowners and farmers frequently modified this policy. Time was required to improve the relationships between masters and men. The tradition and memory of past wrongs made the latter bitter. Caird says that in 1851 rick-burning was common in Cambridgeshire and Northamptonshire. The impression gained ground not only among the labourers that they were not receiving a due share of the prosperity which agriculture enjoyed. About 1868 Canon Girdlestone, a Devonshire clergyman, took up the cause of the labourers and the Rev. Charles Stubbs did the same in Buckinghamshire, and in 1872 the National Agricultural Labourers' Union was formed. Combination of workmen to secure higher wages and better conditions of employment had taken place in other industries. Joseph Arch, a Warwickshire labourer, founded the above Union, and became the leader of the movement. Branches sprang up over the country. By local strikes and by other forms of pressure they succeeded in raising wages by two or three shillings a week in certain districts, and they secured the abolition of the gang-system in its vicious forms.

Their isolation and their poverty made it difficult for farm labourers to come together and to keep themselves organized, and other and wider forces were working against them. Farmers in North and South America, in Australia and New Zealand had been steadily increasing their production. Before 1850 a reaping and threshing machine combined had been invented in Australia, and shortly afterwards the reaping machine came into use in America. These inventions enabled farmers in the new countries to overcome the difficulties due to shortage of labour. Cheap and rapid transport by railways and steamships was available for all the corn, wool, and meat they could send to British markets. By 1879 the fall in prices which landlords and farmers expected

in 1849 took place, and an exceptionally wet season, which wasted the crops and caused the death by fluke or 'rot' of millions of sheep, put a definite end to the prosperous period. The depression which followed lasted for over twenty years, and provided an argument against any general increase in wages.

In most of the things they produced British farmers were competing with farmers all over the world, who had any surplus supplies to send here. Besides this the demand for agricultural produce in this country had fallen. Trade was bad. Speculation, when prices were high during the different wars, brought about failures of business firms and of banks. The wages of the working people in other industries were low and irregular, and they were unable to purchase as much as they formerly did. Farmers had therefore not only to share their market with a new set of producers; the market itself was less good.

10

Bad Times and Recovery

FARMERS who had a reasonable amount of capital, who were good managers, and whose standard of living was not extravagant were able to keep their farms. Men who started to farm with little capital in a small way, who were intelligent and hard-working, made progress. Farmers who had accustomed themselves and their families to an expensive style of living, whose costs of production were suited to a period of high prices, and who did not alter their management, lost money. The years from 1879 to 1894 were a testing, purging time. Thousands of farmers had to give up their farms, and land went out of cultivation. They held on as long as they could in the hope that things would improve, and rents were frequently maintained at too high a level in this hope, but the prices of corn, meat, and wool continued to fall. In 1894 the average price of wheat was 22s. 10d. a quarter,

and there are still farmers who tell how they sold it in that year for 18s. a quarter.

This great and long-lasting fall in prices made changes in farming necessary. The farmers who had grown corn on strong land and fed bullocks in yards, and who failed to adapt themselves to the new conditions, gave place to farmers from Scotland and from the northern and western counties of England, who turned the land to the production of milk and of potatoes where the soil was suitable. Dairy-farming meant harder work, but the prices of milk were steady, and there were profits even if they were small. The depression reached its lowest point about 1894. Things got no worse after this, even if they improved little. By adopting new methods, and by working hard farmers held their ground, or gained something, and occasionally, by exceptional enterprise in some new line, individuals prospered. About 1906 the slow and steady improvement became more marked. The demand for farm produce was increasing, the number of people not engaged in agriculture all over the world was growing, trade was reviving and prices gradually rose. Farmers who had been trained in the severe school of the depression were able to make profits. They increased their capital by degrees, employed more labour, spent more on manures and implements, and much of the land was farmed better than it had been for years.

The bad times between 1879 and 1906 differed from those between 1815 and 1836. They were more straightforward. They kept on getting worse for about fifteen years, and remained steadily bad for ten or twelve more. There were no great fluctuations, with high prices in one year and low prices in the next. They did not hold out false hopes, or encourage speculation. Two Royal Commissions sat to consider the distress in agriculture, one from 1879 to 1883, the other from 1893 to 1897, but little or nothing was done as a result of their inquiries.

The explanation of these great changes was that British

farming had lost its supremacy, or its high position, in some things owing to the development of farming in British Colonies and foreign countries. Australia had given herself up largely to sheep-farming, and for yield and quality of wool nothing has ever equalled the Merino breed of sheep evolved there since 1850. We may compete with, and excel, her in the production of the best quality of mutton but not of wool. Again, for quality of wheat Canada, the United States, and parts of Southern Europe have long surpassed England. The causes which have brought about these changes are permanent.

But something is still left. Britain is pre-eminent in producing certain breeds of cattle and horses, and of sheep which are sought for their mutton. There is a large export trade in these. The chief encouragement and support of enterprise in producing these comes, however, from the home demand for milk and for the best qualities of beef and mutton. The genius of the British farmer, his inborn love for breeding live stock, together with these economic conditions and, probably, the British climate co-operated so that the work of the old breeders was continued and improved. In the hands of many successful men after Bates and the Booths the Shorthorn cattle became the outstanding and typical English breed. After 1850 two types of the Shorthorn gradually made their appearance. Amos Cruickshank of Sittyton, Aberdeenshire, had founded a herd. He had paid frequent visits to England and purchased the best bulls of a certain kind. He worked quietly for many years, finding a market for his surplus bulls and heifers in his own neighbourhood, in Canada, the United States, and in the Argentine. The kind of work he had done only became clear when his herd was sold in 1890. It was seen that he had evolved a type of Shorthorn which was almost perfect as a producer of beef, but which had largely lost its capacity for yielding milk. If all breeders had followed his example, the shorthorns would now be in the same class as the

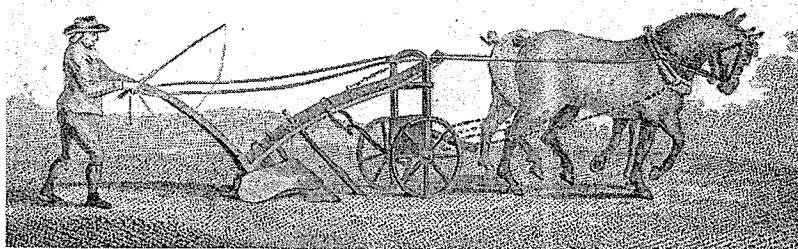
Herefords and Aberdeen-Angus, profitable only for their beef. English farmers, however, continued on the old lines, or even worked in the opposite direction. They aimed at getting an animal which would serve the two purposes of yielding a large amount of milk, and also when fattened a large amount of beef. The two kinds are sufficiently distinct. The first is called the 'Beef', 'Scotch', or 'Cruickshank' type, and the second the 'Dual-purpose' or 'Dairy' type. High prices are paid for both by home and foreign buyers. Similar progress has been made in improving other breeds less numerous or more local in their distribution.

Two breeds of horses do most of the agricultural work in Great Britain, the Shire in the midland and southern counties of England, and the Clydesdale in the northern counties and in Scotland. Both breeds have been evolved during the last century and a half. The Shire is heavy and rather slow in action, but is peculiarly suited for working strong soils. The Clydesdale is lighter and more active. On medium and light soils it does more work than the Shire.

During the same period numerous breeds of sheep have been established. Bakewell's Leicester still holds its ground in the Midlands and especially in the East and North Ridings of Yorkshire, where it is by far the most common sheep. In the south there are several kinds of Down sheep, most of them taking their origin from a cross between the South Down and an old county or district breed which has died out. These are suited for folding on roots and catch crops like rye, clover, and vetches. The increased cost of labour and the decline in the area of arable land have led farmers to reduce or give up their flocks of these breeds, and to substitute for them grazing breeds.

Agricultural education in a systematic form began with the establishment of the Agricultural College at Cirencester in 1845. There were chairs of agriculture in the universities of Oxford and

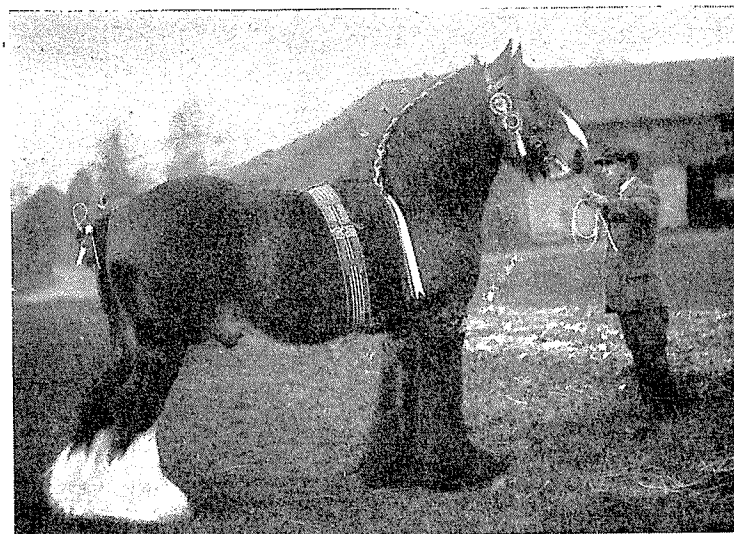
Edinburgh, but there was no complete course of instruction associated with them. The course at Cirencester by its expense was more suited to the sons of the wealthier people than to farmers' sons, but it led to further results. William Norman, who had studied there, returned to Cumberland to farm. His ability to explain the chemical and botanical mysteries of their craft to his neighbours so impressed one of them, John Twentymen, that he became the moving spirit in founding Aspatria College in Cumberland in 1874. The teaching and fees here were designed to meet the needs and means of farmers' sons.



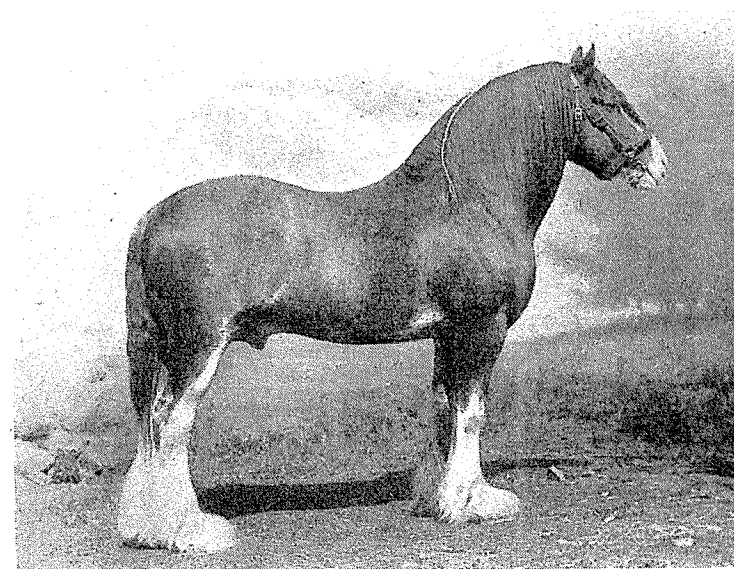
The Norfolk plough (1796) showing type of team-horses.

Downton College, near Salisbury, was established in 1880. These pioneer schools have closed, but they flourished long enough to hand on their work to younger institutions which sprang up in representative centres all over the country. These later and more fortunate enterprises have been fostered by assistance from the Government. Progress has been slower in the south-west of England than in any other part of the country. There the farmers seem to have had such an exclusive respect for practical achievement that they are only now beginning to appreciate education or science.

Since the death of Sir John Lawes Rothamsted Experimental Station has been carried on with the help of private subscriptions



A Shire Stallion.



A Clydesdale Stallion.

and Government grants. There are now schools of agriculture at Cambridge and Oxford, and in connexion with other universities in England and Scotland, and under the co-ordinating agency of the Development Commission every branch of agricultural research and teaching receives a measure of financial support from the Government.

The invention and improvement of agricultural machinery and implements have passed rather more into the hands of specialists. Steam and internal-combustion engines drive every kind of machinery and drag most kinds of implements on farms where there is scope for them. There has been a rapid development in the use of these since 1914. All these movements had an influence on production. The average yield of wheat in 1770 was 23 bushels per acre; in 1880 it was 28 bushels; it is now about 30.

In the midst of this progress the demands of the landless people made themselves heard. The National Agricultural Labourers' Union had made it one of their objects to secure allotments and small holdings for their members. Mr. Joseph Chamberlain and Mr. Jesse Collings were associated with this movement. In whatever form it expressed itself, it was clear that the desire to possess and cultivate land for themselves had never forsaken the agricultural labourers and others who had found employment in various industries. Some holdings had become very large during the bad times, partly because men were not then keen to take farms. The land was often badly cultivated. Men who wished to become small farmers believed they could do better for themselves and for the land if they were given a few acres. In 1908 an Act was passed giving County Councils authority to buy and lease land and let it out in holdings up to fifty acres in extent. Under this scheme small holdings have been created in considerable numbers in some counties, and, where they have been chosen with judgement, the majority of occupiers have succeeded.

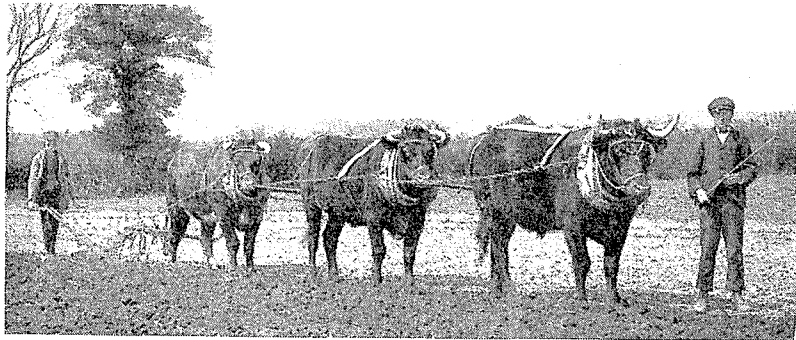
The policy of regulating the relations between landlords and tenants was carried a step further in the Agricultural Holdings Act of 1908. The principle of compensation for unexhausted improvements was extended, farmers were set free from restrictions about cropping in certain ways, and not selling certain crops such as hay and straw, and the new principle of compensation for unreasonable disturbance was introduced. This new principle has been carried further in the Second Part of the Agricultural Act of 1920, which provides that a tenant may receive up to two years' rent, if he is turned out for any reason except bad farming.

When the war came in 1914 agriculture was enjoying a modest prosperity. The census of 1901 showed the smallest number of people ever recorded as engaged in the industry. In 1911 they had increased; the slight improvement had attracted men back to it. Wages had risen, although every one admitted that they were much too low in many parts of the country. Cottages were poor and scarce in most places. On most estates little building had been done since 1879. A political movement had been started to deal with questions of tenure, taxation, housing, and wages. Most people recognized that there was a serious problem, however much they might differ about the methods of dealing with it.

The war put a stop to all this, and created new conditions. Prices rose. Labourers joined the army and wages rose. Farmers went on without interference, ploughing more land to get the benefit of the high prices, or in response to appeals from the Government, until 1917. They were then put under control of the Board of Agriculture, and advised or ultimately compelled, to plough still more under the supervision of County Councils. Prices of corn, meat, wool, milk, and other products were controlled to prevent them from going too high. A Wages Board was set up to fix the wages of labourers. The first minimum

fixed was 25*s.* a week. It went up by instalments till it reached 46*s.* 6*d.* in September 1919.

Landlords generally shared last in the prosperity. In most cases rents did not rise early enough. To get round this difficulty a great many estates were sold. When they were sold privately to tenants, the prices were reasonable, but when they were sold by auction, competition forced the prices to an unduly high level. If the prices of farm produce were to remain high for ten years, these new owner-farmers might be in a sound



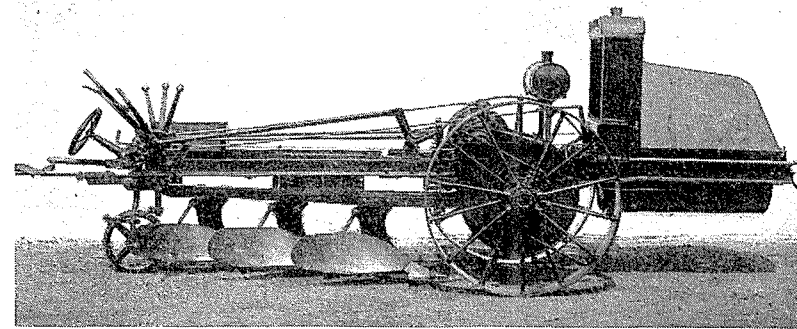
A Survival. Ploughing with Oxen on the Cotswolds.

position, but already prices have fallen, and the value of land has also gone down.

The lingering desire of many people to protect or support agriculture by State assistance gathered new strength in the war. This gave us the First Part of the Agriculture Act of 1920. Under the First Part of this Act farmers were guaranteed a definite price for the wheat and oats which they grew. The price was to be fixed from year to year with reference to the cost of production, and the Government were to pay the difference between the prices actually received by the farmers and this fixed price. This part of the Act also provided for the continuance of the Wages Board, the fixed prices and the fixed wages

being bound up together. Four years' notice of repeal was to be given. The Act was passed in December 1920, and was repealed in June 1921. The Government compensated the farmers by paying £3 for every acre of wheat grown in 1921, and £4 for every acre of oats.

Agriculture is free again as it was in the years between 1850 and 1914. There has been a serious fall in prices, and very heavy losses have been sustained. Wool for which farmers refused 3*s.* 6*d.* per lb. in the summer of 1920 they have had to sell at 4*d.*



A Modern Motor-plough.

and 6*d.* per lb. in the summer of 1921. Agricultural wages have been reduced. The cause of the depression is the diminution in the purchasing power of the people. The war left an enormous burden of taxation; it stopped production and commerce. Workmen are idle in every industry, and wages have fallen in most. The market for farm produce is weak. Agriculture must share the bad fortune as well as the good fortune of the country and even of the world. In view of the magnitude of the war its evil effects will probably be very great and very prolonged. But however difficult times may be there is promise for the future in the better feeling that exists between landlords and

tenants, employers and employed as compared with that which prevailed a century ago. There has been no poor-law payment of wages, and the difference between the treatment of the labourer then and now is an indication of the progress that has been made.

2527
1922

