Soil and Health Library

This document is a reproduction of the book or other copyrighted material you requested. It was prepared on Friday, 25 May 2012 for the exclusive use of Dick van Zanten, whose email address is d.zanten@hccnet.nl

This reproduction was made by the Soil and Health Library only for the purpose of research and study. Any further distribution or reproduction of this copy in any form whatsoever constitutes a violation of copyrights.

FARMER'S PROGRESS

A Guide to Farming

by

GEORGE
HENDERSON

FABER AND FABER LIMITED
24 Russell Square
London

First published in mcml
by Faber and Faker Limited
24 Russell Square London W,C.1
Second impression September mcml
Printed in Great Britain by
Purnell and Sons Limited
Paulton (Somerset] and London
All rights reserved

THIS FARMING PHILOSOPHY
IS DEDICATED
TO ALL THOSE WHO FIND IT POSSIBLE

Contents

PREFACE 5

I. THE FIRST STEPS 8

II. THE PRACTICAL APPROACH 31

III. WAYS AND MEANS 54

IV. FARMING AS AN ART 93

V. FARMING AS A CRAFT 118

VI. FARMING AS A BUSINESS 151

VII. THE MANAGEMENT OF A FARM 189

VIII. THE MANAGEMENT OF LIVESTOCK 210

IX. THE TAKING OF A FARM 221

X. PEDIGREE STOCKBREEDING 233

XI. THE PHILOSOPHY IN PRACTICE 256

Preface

This book advocates the principle of self-help in farming—and in living. I believe a farmer can achieve more for himself, his country, and his fellow men, than all the direction, subsidies, inducements, coercion and panaceas ever put forward as the solution of the farmer's difficulties.

We are told that the days of sturdy independence and rugged individuality are over: the more people believe that, the greater the opportunity for those who can practise independence and individuality. While the majority are so busy thinking about creative leisure, or nothing at all, in which to escape from work, the individual can indulge in creative work to occupy his leisure, and, I believe, find more happiness and satisfaction in so doing. Farming offers more opportunity for doing this than almost any other occupation, trade or profession, which is restricted by trade and custom, for in farming a man can work all the hours that God sends him, and reap the rewards of his hard work, ability and good fortune.

That anyone should advocate a policy of Conservatism in these times will be a shock to many, but I write not only for the moment but for a not too distant future when our people will have tired of Socialistic experiments and will be craving security and stability, when

an empty stomach will no longer compensate for an empty head. The realization will come that a so-called social security is a hollow mockery in a country which does not produce its own food. For exhortations and threats from a tentacled and paralytic bureaucracy, in a country in which only officials and trade unionists count for anything, will never, in the words of Thomas Gray, 'Scatter plenty o'er a smiling land, and read their history in a nation's eyes.' However grim the prospect, however grey the skies, now is the time to reaffirm one's faith in the common man, in the ability of the individual to manage his own affairs and, while enjoying the inalienable rights of mankind, to contribute to the good of all humanity.

Given liberty, freedom and the peaceful occupation of the land we legally occupy, all natural and economic difficulties can be overcome by those who have faith in themselves and the land; then success, happiness and useful work will fill our lives. All the opportunities are there, they should be within the reach of everyone in farming, and open to those who would enter the industry—for this book is written by one who has enjoyed more than his fair share of these things, and would share his knowledge with others. My experience of life on the land has taught me that if I can only point the way to success in farming the happy and useful work must follow; for happiness comes from having something worth while to do, something to love, and something to hope for. A successful farmer has all these things in full measure, and

without them he cannot claim to be successful in the most important labour of man, the cultivation of the soil.

Success in farming comes very largely from the ability to take a long view, to think clearly, to plan carefully, and to grasp firmly certain elementary business and natural principles. Good health, strength, patience, industry, and the ability to live in harmony with nature and one's fellow men may also be necessary. Knowledge and capital have also to be acquired.

My object in writing this book is to show how all this may be achieved, by sharing the experience, happiness and responsibilities which I have enjoyed with those who come after me. This is the object of all philosophers—and explains the choice of the title.

This book is also the companion volume to *The Farming Ladder,* my first book; but this book I hope will serve a more useful purpose inasmuch as it seeks to advise others in the future, rather than describe what has been achieved in the past. The form in which it should be presented to the public has been difficult to decide, for the author makes no claim to literary merit, and writes, as always, in the simple terms of one who normally works with his hands, but nevertheless owes much to the great writers and thinkers who have gone before.

GEORGE HENDERSON

September 1949
Enstone, Oxford

CHAPTER I

The First Steps

‘Why do you want to be a farmer?’

I was asked that question many times in the days when I was seeking to enter the industry, for it was beyond the comprehension of many farmers—and even more farmers’ wives—that anyone whose education and talents would permit him to take up any other occupation should choose such a hard and exacting calling. I often use it now to test the natural aptitude of those who approach me on the same errand, and to determine how much thought has been given to a choice of a career. To ask, as well, what occupation would most appeal if agriculture were denied to them will also give an indication of their suitability for a life on the land. The final test is to enquire what they believe to be the greatest difficulties and hardships in a farmer’s life.

Every prospective farmer should ask himself those questions, with many heart-searchings, if he is to succeed as a farmer. They may save him many disappointments and a sad disillusionment. Every farmer, thinking of taking a pupil, will find them invaluable in winnowing the grain from the chaff. Even farmers’ sons who have drifted into their fathers’ occupation may find them useful in the reorientation of their ideas if they are to get anywhere in the industry.

In many young people, what they believe to be the call of the land is often nothing more than an aversion to the dull, monotonous routine of a city office as against the appeal of an active, outdoor life. The same applies to many who have served their country in the armed forces, and who little realize that the land has an even stricter discipline than that which has become anathema to them. There are those, also, to whom the appeal of country sports outweighs all other considerations, and who are therefore willing to work on a farm, though this can never compensate for, or be reconciled with, service to the land. Then there is the queer nostalgic feeling, associated with the beauty and freshness of the countryside, which affects people of all ages and classes, for a free and simple life more in harmony with nature and compared with which all the fruits of civilization have nothing to offer. The romance of farming, painted in roseate colours by many writers, makes an appeal to the intellectual and artistic temperament which must not be underestimated, but intellectuals and artists are unlikely to travel far along the dull hard road to find where the rainbow ends.

The truth is that none of these things is sufficient. First there must be the creative desire, common to nearly everyone in a greater or lesser degree, and without which nothing worth while can be achieved. But this can be satisfied in many other occupations, in working with other materials, and even in business building. In farming the creative desire must be linked with a desire to grow things, and to grow with them.

I have found this urge most common and clearly marked in those who have farming blood in their veins—and often brought out more strongly when one generation away from the land. The grandfather was a farmer; the son saw no prospects other than hard work and a poor return; yet the grandson has a burning desire to return to the land, often against the wishes and advice of his family. On the other hand, those whose people have long been divorced from the soil are the first to be disillusioned.

To find the good qualities necessary in a farmer, look for manual dexterity and adaptability, often clearly indicated by hobbies, or a good school report on practical subjects. This is a recommendation not to be overlooked, for farming is still a craft in spite of mechanization and the resources of science now placed at the disposal of the farmer.

Physical strength and fitness, which to many people appear to be of the first importance, and invaluable as they are if you happen to possess them, I relegate to a secondary place, for even one of indifferent physique, if there is no organic weakness, can be built up by a healthy outdoor life. The majority of farmers and farm, workers are undersized against the standards specified by the police or armed forces, yet find it no handicap in their work. In fact, the six-footer finds himself at a disadvantage, being too far off the ground for many farming operations, and a schoolgirl will leave him far behind in picking potatoes or planting out cabbages. Even the carrying of sacks of corn and the loading of farmyard manure, often considered to be among the hardest

of jobs on the farm, are more a matter of knack than physical strength, and are performed with effortless ease by those who have acquired the faculty for manual dexterity. Farming may even offer opportunities to those whose afflictions are thought to be too great a disability in other professions, for I have known many who have overcome serious handicaps by their indomitable will-power and carved out for themselves a niche in the industry.

This shows that it is the mental approach to farming which is all-important, for health, strength and knowledge alone can never make a farmer. Success in farming has been said to depend on the gift, inherited or acquired, of rapid and sympathetic interpretation of the changing needs of plants and animals, and, I would add, the harmony of heart, hand and mind which comes from a sense of vocation, the mastery of a craft, and working with living things.

Given these qualities, we still have to find the ways and means. Capital has to be acquired and the possession of a farm obtained. To many this is the greatest stumbling-block of all, but it is also the aim and goal, and the humble privilege of the author of this book is to show the way. Speaking from experience, I can only say it is not easy to become a farmer by your own efforts—but well worth while.

First you must learn your trade. Our country suffers sadly, and in many ways, from its amateur farmers, men who may have brought capital, but nothing else, into the industry. A whole mass of agricultural legislation could have been avoided by a simple Act requiring that

every prospective tenant or occupier of an agricultural holding should bring proof that he had served his time, in service or apprenticeship, under an experienced and capable farmer. We take it that no man may hold command of a vessel carrying goods to and from our shores without a master's ticket, which cannot be acquired in less than twelve years' service at sea. Why, then, do we let loose any ex-hairdresser or haberdasher, who may have money to burn, on our priceless heritage, the soil? But take heart from this, there is an opportunity in every difficulty. They are often the people to follow in farming. One shrewd farmer, born on the farm where I now live, had one golden rule, 'Always take over a farm from a gentleman farmer, always give up a farm to a gentleman farmer.' He had twenty-two farms in his time, started with practically nothing, and left over £40,000 in a time when that was a lot of money. You can often get in very cheaply when an amateur farmer is anxious to get out. You can sell out very well when the hobby farmer is keen to get in. It is such tips as this, scattered throughout the book, which give such excellent value for the modest sum my philanthropically-minded publishers charge for it!

It is typical of our country that there is no recognized standard or qualification for a farmer. Each individual must set his own. In my own case I resolved not to take a farm until I was conversant with the feeding, breeding and management of all classes of livestock; and could do every seasonal operation, from ploughing to stacking and thatching; and had mastered the scientific principles underlying all farming

practice. To this, I would recommend any prospective young farmer to add a good knowledge of agricultural machinery; for in my youth machines were simple and horses, which I loved so well, would carry me through: to-day mechanization holds the field. A special course in tact and diplomacy may also be desirable, for the time is coming when a farmer may no longer speak his mind. The right to 'hire and fire' will be no more.

There is only one way in which to learn to farm, and that is to apprentice yourself, in spirit if not by legal agreement, to some capable farmer willing and able to teach you.

That is the first difficulty to be overcome in taking up a farming career. To those outside the industry farming is something in the nature of a 'closed shop'. Farmers teach their sons, or let them slowly acquire knowledge over a period of years. A few long-sighted men arrange for their sons to go on other farms, preferably in another district, to gain wider experience than is possible at home. But this is all arranged within the industry where the farmers have the necessary contacts to know where their sons may be suitably trained. In the past, when farmers had big families, there were always sufficient young men coming forward, and many of them emigrated for a few years until a farm could be found; but now the position is different and there is, and should be, room for others, including those who are one generation away from the land, if suitable training can be found.

To attempt to obtain an introduction through an educational authority, the Ministry of Labour, or a County Agricultural Committee, is usually a waste of time—they can find you a farm on which to work, but that is a very different thing from learning to farm.

The best approach I know, failing a personal introduction, is the advertisement columns of the farming papers. I recommend answering advertisements, rather than advertising. In the first case a farmer is seeking a pupil; in the other, a farmer casually reading the paper may think he could do with a pupil without giving a thought as to whether he is temperamentally and academically fitted for the instruction of students, and the applicant will find he has many wasted journeys in interviewing such farmers. They invariably ask what the student is prepared to pay for his training, rather than stating their terms, as is usual in a farmer advertising for a pupil.

In a single issue of *The Farmer and Stockbreeder,* or *The Farmer's Weekly,* you may find half a dozen advertisements; but even then it is not easy to find a suitable place. When I was starting, I wrote over one hundred letters and interviewed fourteen farmers, over a period of eleven weeks, before I found what I wanted. I am told the position is no easier to-day. However, it is worth the effort; and quite valuable experience, if you know what you are looking for. The taking of a first place may be the most important and decisive action in your whole farming career, for on the experience you gain there, and the

recommendation you receive from that farmer, depends your further progress.

I am often asked, 'Is it necessary to pay to learn to farm, or should the services of the student recompense the farmer for the training he is giving?'

It depends entirely on the farmer and the student. There are some farms on which you would only learn to be an indifferent farm labourer, and others where the knowledge gained would make it possible to earn £1000 a year when you start farming. There are some students who would be a serious liability to any farm even if they paid £500 a year, and there are others who could earn or save the farmer that in their second year. I have had both sorts!

I think a fair basis is that if the farmer you approach has a full staff, and therefore does not need your labour, but is willing to take you, you should expect to pay for your board and lodging, and give your services in return for the instruction you receive. This would probably cost £100 to £200 a year, according to the social standard of the farmer concerned.

On the other hand, where you take the place of even an unskilled farm worker your labour should be worth your board and lodging; in which case you repay the farmer for the training by more thorough and conscientious service than he would get from an ordinary worker.

It should be made quite clear that there is a big difference between learning to be a farm worker and learning to be a farmer. Much of your

time will be spent in doing the same work, but in the first case you gain only the skill which will enable you to earn a living on the land as a tractor driver, cowman, or general worker, at perhaps £250 a year maximum; whereas, if you are a farm student, the farmer shares his knowledge and experience, so that you learn ‘the art and mystery’ specified in the old apprenticeship indentures, and there will be no limit to your earning capacity when you come to enjoy the mastership and sturdy independence of a farmer which a worker never knows.

It should be mentioned in passing that the Ministry of Labour take a very dim view of any private agreement. If a farm pupil pays a premium without their approval he can demand it back again and be entitled to the minimum agricultural wage for his age, and for the time he has put in. With their approval £1 a week can be deducted from the minimum wage as a premium for tuition in farming. Recently an apprenticeship system has been suggested, in which the National Farmers’ Union suggested a 25 per cent reduction on the standard wage, but this was brought to nothing by the National Union of Agricultural Workers, on the grounds that the people concerned would enter the industry in any case. Personally I would not expect a farmer, of the class and type with whom I would wish to apprentice my own sons, to accept anyone on those terms. When one considers the care, time, thought and patience it requires really to teach the craft and the business of farming, so that the pupil is a real credit to you when he takes a farm, it is difficult to assess the value of that training in terms of

money. This may be one of the reasons why it is so difficult to find suitable farms on which to learn in this country, and we find the utterly ridiculous state of affairs where young people go to Holland or Denmark to learn their trade, so that they shall be free to make their own arrangements. Officialdom even objects to their going as guests, paying or otherwise, and being free to do as little or as much as they wish on the farm, although common sense would indicate how much they would do under those circumstances. Authority is so afraid that someone might be exploited that hundreds find that without experience they cannot obtain a job at the minimum wage, although services freely given would fit them to earn far more than the specified amount. This position is beloved of bureaucrats all the world over, never realizing that the man who is a free agent has better protection than all the safeguards ever devised. When I was learning farming, the workers told me I was a fool to do the same work as they for nothing. Little did they realize the capital value of the experience on which I should cash in.

On my own farm we have overcome the problem, for the output of the worker-student is so high that he can receive an advance in the form of the minimum wage, providing he will honour a gentleman's agreement to stop long enough after he is trained, but it is, of course, beyond the comprehension of the official mind that there could be any form of agreement based on mutual trust, honesty of purpose, and fair dealing.

From this it will be seen how important it is to choose the right farm and farmer. He must be able and willing to teach, and in the branch of farming you desire to learn. If you are interested in dairying it is no good serving your time with an arable farmer, or vice versa. Being a great believer in a balanced system of farming, I naturally recommend a mixed farm, with all classes of stock and arable land, for a beginner, so that he may find where his interests lie.

There are some who make their approach to farming through the Government Scheme for Ex-servicemen, the Y.M.C.A.,'British Boys for British Farms', and other educational authorities. But it should be clearly understood that these schemes are designed for training in farm work, and not in farm management. I get many letters from disappointed trainees who find themselves in a blind alley when they thought their feet were being put upon the highway to success in farming.

I am often asked how long a training is necessary. Here again it depends on the individual. It is not unreasonable for a boy of sixteen, who can hope to spend forty or fifty years farming, to learn for four or five years. An older man, with intensive study, and backed with a wider knowledge of the world, could learn almost as much in half that time as far as the business of farming is concerned but is never likely to acquire the skill or find the same pleasure in the actual work as a young man can and should.

Should all the training be received on one farm, or should wider experience be sought? If it is possible to gain the knowledge you require on one farm, and you intend to farm in that district, there is no object in changing. The guidance and help you will receive from your master, and the introductions he can give you to the farming community, will be invaluable. If wider knowledge is thought necessary, spend at least a year in each branch of farming.

When a man is learning on a farm under a capable master, not only are the daily routine work and seasonal operations more easily grasped, but valuable habits are formed which may serve him admirably throughout his life.

At the same time, it must always be remembered that a very great personal effort is required from the student if he is to take full advantage of his training. He must study the farmer under whom he is training, the labour, cropping, stocking and management of the farm, in addition to the scientific principles underlying all that he sees being practised. This is no light undertaking for one who will also be doing a full day's work so that he may acquire the skill of the farm worker and be able in due course to set the pace, with all seasonal and other work, on his own farm. Without that ability, few make any success in farming, and many lose half the joys which may be derived from a life on the land.

There is one consolation: you need no money, having no time, for outside recreations or amusements. No expensive habits, for no farm

pupil can afford to run a car, smoke or drink, needing, as he will, every penny for the time when he can take a farm. A few textbooks have to be bought, and essential clothes.

A broadcasting reviewer of my earlier book, Mr. A. G. Street, took me severely to task for admitting that under similar conditions I spent 4d. a month on haircutting, when surely, he protested, I could have cut it myself? I can only plead that there were extenuating circumstances—it was cut only on market days, when for an hour or more, as I waited my turn, I could hear practical farmers discussing the crops, trade and the weather, and seldom failed to get good value for my money. In fact, there was ‘a chiel amang them taking notes’, and as a budding agricultural journalist I probably cashed in rather more heavily than the barber in the same time. The ordinary reader may be appalled at this striving, but those who have made their own way in farming will smile indulgently, if they are still able to do so!

Hard as it may seem, this is all part of the training, for throughout his life a farmer is always having to forgo his personal pleasures for the sake of his farm. If you are well suited to the life you will seldom miss them; for the enjoyment of living comes from having a purpose in life, and amusements and so-called pleasure are merely the means by which many people escape for a few hours from the fact that they have no aim or purpose in life. It is true that some farmers play golf, hunt and shoot, but it is very seldom done by men who have made their own way in the

industry. They are too happy and absorbed in their work—they live to farm, while the others farm to live.

But even in farming you need not make a martyr of yourself. Work is sometimes to be enjoyed; and all around you are the wonders of nature, ready to make the world a perpetual source of interest and delight. If you study them, the time will come when you can share your knowledge, to the surprise and gratification of others. The greatest pleasures come from sharing, and never forget that in working for yourself you are also working for others. An efficient farmer is not only producing more food, he is also showing others how it may be produced.

Nothing you do is hidden from your neighbours in farming. If you can introduce a better practice in any branch in farming, leaving it to others to copy if they will, you will have established your reputation as a farmer, and your advice will be sought. Remember always that the good of human life cannot lie in the possession of things which for one to possess is for the rest to lose; but rather in things which all can possess alike, and where our wealth promotes that of our friends.

The standards you set yourself will be the example which others will follow. In no occupation is this more true than in farming. As a farm pupil I got up at 4.30 a.m. to be sure that I was out at work ten minutes before I was expected to start. The habit has remained with me all my life; but, what is more interesting, those who have learned farming under me do the same now that they have farms of their own.

There is no virtue in getting up early unless you make good use of the time it puts at your disposal. How often you hear a farmer say that it is no use his getting up early because his men do not start until seven o'clock. One presumes he has to stop at 5 p.m. for the same reason. Yet it is before and after normal working hours that a farmer can often make the best use of his time; if it is only in filling up tractors so that his men go out to work as soon as they arrive. If all the book-keeping, planning and organizing is done, then you can give your whole mind to the work in hand and enjoy a happy day on the land.

While you are a student you may not have the planning and organizing to do, but you can devote that time to the theory and science of farming. Be it early or late, something should be learned each day. It's a good plan to read all you can on the particular farming operation that has been done during the day, drilling oats, lifting potatoes or whatever it may be. Take careful note of the man-hours required for each job, and book it down; for it will be invaluable when you come to plan the work on your own farm.

I said earlier, you must study the farmer. Find out to what he attributes his success, and also form your own judgement on this. Listen patiently to all he has to say, even if he often repeats himself, and most farmers do, and gather those pearls of wisdom which are handed on from generation to generation.

Listen also to the farm workers. You will find they have three main topics of conversation—beer, women, and the Boss. You need not pay

much attention to the first two, that is usually dull repetition, but their constant criticisms of the management will bear careful study. They are often ill-informed, but it is to their credit that they do look for higher standards in farming than those which are to be found on many farms. The most important thing to remember is never to make criticism in their hearing, for anything you say may get back in a distorted form to your employer; and whatever else you may lack, see that he always has your loyalty. If you can go further, and defend him before the men, you will find they respect you also, and associate you with the management. You can also learn a great deal from them in regard to the practical work; they often try to hide what little knowledge they have, for there are only about six simple rules to be observed in stacking, thatching, hedge-laying, and the like, to make a very fair job, although it takes a lot of practice to be both quick and good at it. Occasionally you find a really first-class man who might well have been a farmer, but lacked the ambition to attain it. He is happy and contented in his work, asking nothing more than to look after cows, sheep, or pigs; and from him you may learn much of value.

In living and working on a farm it is very necessary to get on well with the womenfolk. They can add a lot to your comfort, and often influence the farmer far more than one might think.

I am often asked, should an aspiring farmer arrange to spend some time at a Farm Institute or Agricultural College? If he has to make his own way in the world, I consider them to be a waste of time and

money; his time is far better spent in learning practical farming or earning money. If he really masters half a dozen good textbooks on farming, he will know more than the average university graduate with a degree, who is supposed to have read some three hundred books on the subject, only one of which has been written by a working farmer. I remember interviewing a young man, seeking a vacancy as a pupil to learn practical farming, who claimed a Bachelor of Science degree in Agriculture. I asked what his best subject was. He said, 'Veterinary science.' The question 'What are the signs of health in a cow?' caused him to admit his ignorance.

Out of curiosity, I invited him to ask me, as a poor ignorant farmer, any question he liked on his favourite subject. He asked where I would expect to find the antea spinatus. This is the sort of trick question which might be tried out at an Agricultural Quiz at a Farming Club, among a list of plants. Yet I knew my *Thompson's Elementary Veterinary Science* too well to fail to say 'under a horse's collar'.

This only serves to illustrate the academic approach to farming by our universities and other teaching institutions. Their other great handicap is their inability to reward adequately those who teach in them. If they have a vacancy, Cambridge University may appoint an exceptionally brilliant student, with three 'Firsts', to a junior lectureship on the University Farm at £225 per annum—rather less than an ordinary cowman would expect to earn. I saw recently in *The Times* an advertisement offering the post of Principal at a County Farm

Institute, at £800, including emoluments. They required a degree in a British university, and the applicant was to have a wide knowledge of farming and the control of staff. A moment's thought would have shown those responsible for the appointment that no one with a wide knowledge of farming would need to consider a position at that money. Yet a man thus appointed is considered capable of teaching those who intend to farm.

For farmers' sons, who have learned to work hard at home and will, in due course, inherit their father's farms, Agricultural Colleges serve a useful purpose inasmuch as they provide a little social relaxation; and the students, being born and bred to farming, will not be misled by the cheap sneers of their teachers at well-established farming practice, pedigree stockbreeding and the rest. It's the proud boast of the Principal of one leading Agricultural College that it has turned out more M.F.H.s than any other. Good luck to them, while they concentrate on that. The great tragedy of this educational system is that nearly all our officials, and so-called advisers, have been trained in these Colleges, and thereby lost the confidence of practical farmers. It is sadder still that there are some good men who, given the right training, might have been capable and useful farmers, but who spend their time in the National Agricultural Advisory Service sitting in offices waiting in vain for farmers to come and ask them something. The vast sum of money which the British taxpayer has to find to support this service might be better spent in setting some of them up in

farming—on condition they taught by example. It has been my pleasure and privilege to snatch a few ‘brands from the burning’, and recently I had a letter from one of them telling me that in farming he is getting a kick out of life which he never had before.

However, the farmer making his own way in the industry can take notice and pass by. Books are useful, they are sometimes our only contact with great minds, but make them your servants and not your masters. To many reading is a drug. This book is of no use whatever unless you put into practice something you learn from it. What an insult it is to the intelligence and general education of British farmers to appoint eighteen hundred officials under the N.A.A.S., to pass on only that knowledge which is contained in books. An hour spent in serious reading, each night, will give you all the scientific knowledge you require, and is probably as much as the human brain can carry. My advice to anyone who had the money and time to spare for agricultural education would be to use it in travel, after learning the practical work on a good farm and the theory from books. Thus he would see how all the Continental farmers manage with primitive implements, hand work, and loving care; or the North American farmer’s judicious use of scientific and mechanical aids, and his willingness to try any new method to simplify operations, to raise yields or reduce costs; at the same time, he might see where the best English practices are superior. How seldom do we see the college-trained man applying his knowledge! Every student is taught that liquid manure contains the

most valuable plant foods, yet how many store and use it to the best advantage when they start farming? Probably not one in a hundred; yet ninety-nine out of a hundred French or German peasants make provision to return every drop to the land. My first experience of a County Organizer was a man walking round the farm with the owner, enquiring how each field had been cropped and recommending two or three hundredweight of this or that. Yet my advice, then or now, would have been: do not spend a penny on artificials until you have made proper provision to store and use the manure from your farm stock; then perhaps its use might be justified, if in due course it would mean a bigger and better muck heap, easier and finer working land, with the soil able to use the little extra, and not dependent on it like a drug.

The general impression one receives in reading the lay Press is that British agriculture depends on scientific knowledge trickling down from research stations and the like. It never seems to be realized that the scientist can make no allowance for what he does not know, and that it is the cautious practical farmer who saves the industry from the colossal blunders which would otherwise be made. It is the farmer's money carefully spent, after having first been earned in actual production, which enables progress to be made. The superior air of the research worker, when he does condescend to address a meeting of farmers, or hold an open day for a demonstration, does little to oil the wheels, and the papers may well complain of a time lag of twenty years between the laboratory and the field.

However, this is by the way. Scientific knowledge has its value, but to go far in farming you must train your mind and body to be the servant of your will. It is one of the few occupations in which you can have the perfect balance between physical and mental effort. You do not have to spend the time in physical exercise which most people in sedentary occupations find necessary, while your mind is fresh for study after a good day's work in the open air. As your muscles relax, perhaps before a warm fire, that is the time for reading, and even if you drop off to sleep your subconscious mind will store that which you have been reading.

On the subject of sleep, it is well to remember that it is the quality and not the quantity that matters. If you are completely happy and absorbed in your work and study you can do with very little. If you wake up feeling tired, you may be certain you have slept too long, and try getting up an hour earlier. You will soon find you can enjoy the hours you allot yourself and you wake refreshed and ready for work. In some of the happiest years of my life I went to bed at 10 p.m. and got up at 3.30 a.m., seven days a week. Others may manage on less, but I found a tendency to lose weight if I cut my sleep down too far when working sixteen hours a day.

One of the great secrets of success in farming is to train yourself to work long hours, with a high output, and without physical strain. If your back aches when hoeing, if your arms ache when pitching sheaves, if you find it difficult to carry a sack of wheat, it means you

have not studied that wonderful piece of mechanism the human body, or acquired the rhythm necessary in repetition work. We are told that a man cannot add a cubit to his height by taking thought, but he can add materially to his output of useful work.

Above all, be happy and cheerful about it. There can be no doubt that a spirit of intensity is necessary, but a care that brings burdens, that takes away light, that deprives us of happiness in our daily work, has passed beyond the wholesome line. To shape the whole future is not our problem; but only to shape faithfully a small part of it, according to rules already known. Well-arranged time is the mark of a well-arranged mind. In farming you have to plan your work, day by day and week by week, with an alternative plan in case you should be frustrated by weather or circumstances; it's the same with life, you must make the best use of all your time, and remember you have all there is! Great works are performed, not by strength but by perseverance. Did you ever hear of a man who had striven all his life faithfully and singly towards an object and in no measure obtained it? In no walk of life is that less likely than in farming. If a man has the eyes to see, the will to plan, and the courage to take the years of toil and strain, there can be no doubt that he will succeed.

Those who have to make their own way on the land are sometimes a little discouraged when they see others wasting their time, hunting, racing, shooting and drinking—and apparently getting away with it. But in no walk of life is it more true than in farming that

Though the mills of God grind slowly, yet they
grind exceeding small;
As with patience he stands waiting, with
exactness grinds he all.

Finally, do not neglect the spiritual side. Tennyson tells us ‘More things are wrought by prayer than this world dreams of. A sceptic will sneer that it is no use praying for fine weather when the B.B.C. have announced a deep depression passing north-east across the country; but you can pray for such circumstances that you can make the best use of what weather there is. Rightly or wrongly, I used to pray, when I was young, that I would become a capable and successful farmer. Those who have visited Oathill Farm may judge to what extent that prayer has been answered. Even if you cannot pray, remember the words of a great Archbishop, William Temple, in his book, *The Hope of a New World.* ‘The farmer who cares for his land and neglects his prayers is, as a farmer, co-operating with God; and the farmer who says his prayers and neglects his land is failing, as a farmer, to co-operate with God. It is a great mistake to suppose that God is only, or even chiefly, concerned with religion.’

CHAPTER II

The Practical Approach

In the first chapter I dealt with the general principles of becoming a farmer by your own efforts. We now have to consider the practical considerations.

When applying for a position as a farm pupil, through an advertisement, you will be in competition with others; it is quite common for a farmer to receive twenty, thirty or more applications. It is therefore necessary to write a clear, concise letter, in which it is permissible to ask for further particulars, but you should also give details of your age, height, weight, education, any farming experience on holiday or in spare time; and also your reasons for wishing to take up a farming career. An offer to call for a personal interview at any time which will be convenient for the farmer always makes a good impression. It is far better for a boy to make his own application rather than to get his parent to write for him. I need not emphasize the importance of writing directly an advertisement appears. One should also reply to as many as possible. As the farmer chooses from a number of applicants, so may you select the most suitable place which is offered you. But once you have agreed to go with a farmer, you must not withdraw because a better offer occurs. A farmer is a man of his

word, and when you have made a bargain, for better or worse, stand by it. This is a rule you will have to observe throughout your farming life.

An interview with a farmer need hold no terrors. I believe it is better for a boy to go on his own; if he takes his parents there is a great risk they will do most of the talking, and the farmer may find it difficult to form any opinion of the applicant's character. If he is accepted, he can, of course, arrange for his people to approve before taking the place.

A farmer usually asks a few questions, which will not be difficult to answer if you have given thought to your choice of a career. He may point out how difficult and hard it will be to achieve your ambition, especially if you have no prospects of capital. Listen respectfully, but tell him you have counted the cost and are still prepared to go on.

The farmer will then probably start to talk about his farm, or, better still, take you for a walk round it. If it is winter time he may not take you farther than the buildings, for there is little of interest in the fields. Look to see if there is anything better than the usual run of farms. Are the buildings in good repair, the implements in good condition, the stock well cared for? Think, is this a farm I would be proud to own? Is this the man I would like to follow? It is very important that you should start with a good farmer, a man who will set you high standards throughout your life.

Notice especially the attitude of any workers on the farm to whom the farmer may happen to speak as he goes round. Are they respectful?

Do they listen with careful attention to anything he says? On the other hand, does the farmer smoke, or permit his men to smoke, in the buildings or stackyard? All these little things go to show the master-man, or one who is slack and careless.

Remember that the farmer is also summing you up, he is noticing how keenly you are looking at the stock and the attention you are giving to anything he may say.

If you are short of time, do not let it be suspected; it is far better to lose a train than a job, and some farmers take quite a time to make up their minds.

Finally, he will ask if you have any questions. This is the opportunity to make sure you are quite clear as to the terms and conditions on which he is taking you. Whether it is for one year or a longer period. If he will teach you the business, in addition to the practical side of farming. Will you be working with him, at least some of the time, or only with the men? May you come for a month on trial, to see if you are mutually suited? Will you live in, as a member of his family, or otherwise?

All these things are of the utmost importance, and a clear understanding will save you disappointments later. It is not always possible to have all you might desire, but I do regard it as essential to live in, for farming is a way of life, and you only learn it in a farmer's household. To lodge with a farm labourer is to lose more than half your

training, to live in a hostel with other trainees is worst of all. There you will only acquire bad habits and hear much misinformed criticism.

If it is the place you want, but you cannot afford the farmer's terms, do not attempt to drive a bargain, but tell him so regretfully, and he may meet you in some way. I once succeeded in doing this, in spite of being only one of eighty applicants for a vacancy with a first-class farmer.

It may not be possible for a farmer to tell you at the time of the interview if he can accept you, for he may have promised to see other applicants, and will advise you in due course. But do not waste time in the interim, continue to search for a suitable place in case you should have been unsuccessful.

If you try long enough, and hard enough, sooner or later you will find a suitable place. But even then you will be something in the nature of a square peg in a round hole. You have got to adapt yourself to the farm and perhaps a new way of life.

If there are difficulties in the way, it is the facing up to life and the overcoming of difficulties which best fits you to be a farmer. I remember thinking while I was still at school that a knowledge of natural science would give me the fuller understanding necessary for the growth of crop and animals, and I might acquire it in the school library. But I soon found that place was not for such as I, it was the preserve of those who could climb the academic heights to the sixth form and who intended to go on to a university. But I got the scientific

knowledge I required from a correspondence course, which I paid for by walking to and from, school and saving the money given me for railway fares and school meals. To fill in the hours of walking through the dreary suburbs of London, and the hungry mealtimes, I committed it to memory—something like 100,000 words—thereby developing what the school psychologist told me later 'were merely the secondary mental processes of the encyclopaedic brain and in which even a mental defective might excel'. Be that as it may, the physical exercise and endurance at least fitted me for an occupation in which the old farmers used to say 'A man is as good as his feet'. And it is quite certain that I would have been of little use to the farmers for whom I worked if I had not been able to drive a team of horses, perhaps seventeen or eighteen miles a day, over a rough fallow and under a hot sun; or to travel over snow-swept mountains in a northern winter. Nearly everyone discouraged me, but the sense of vocation was too strong, for I believed that in farming I might develop my one poor talent, a love and understanding of the lower animals brought out by my backyard hobby of poultry keeping when I had nothing else on which to lavish my affection.

A farm is very different from a school, and schoolmasters and farmers have little in common. A schoolmaster tends to become childish through constantly associating with children—every schoolboy is familiar with the feeble jokes at which he is expected to laugh, for example; but a farmer's life is too hard for childishness, and he expects

a sense of responsibility to be rapidly developed, as indeed it must, when you will soon be working with valuable animals and machinery.

If you find life harder on a farm than you did at school, it will be due to changing methods of education. When I was at school, life was made difficult and miserable to fit us, so I have since thought, for a life of comparative freedom and self-determination; as a result, I have found the farming and commercial world far kinder and more helpful than the scholastic ever was. Nowadays, on the contrary, life is made so pleasant and easy in schools that many a boy finds it difficult to accept the responsibility of being himself; a great many of them never seem to grow up, and you will even find the parents of a man with six years' soldiering experience writing to a farmer to see if he will take 'their boy' as a farm pupil.

A farmer seldom has any idea of formal instruction, but he does expect you to remember anything he tells you. It may not be much day by day, but it does build up a considerable knowledge over a period, providing you take it all in. I consider it very important to keep a diary and notebook, in which everything you do and learn is recorded.

In living with a farmer you must never forget that all you hear in the house, or learn of his business affairs, must never be repeated outside. Never gossip about the farmer or his family. You will be living in a very small world in which anything you say may be distorted; and above all else, you do want to retain the farmer's confidence in your discretion, respect and fidelity.

One last point: farmers have rather old-fashioned standards in conduct and manners, and there is ample scope for exercising tact at a farmer's table in expressing opinions on any subject in which you are not too well informed.

One of the first and most important things we learn in farming is that no matter what goes wrong the farm has to go on. If the farmer dies, if war is declared, or the buildings burned down, the cows still have to be milked, the poultry shut up to protect them from foxes, and the hundred and one routine jobs to go on day in and day out.

It is therefore necessary to train yourself to be fit, well, and able to work at all times. It is said in rock-climbing that it does not matter who falls or fails if the leader never does. It is the same with farming.

A doctor once told me that for the type of accident or illness for which he would sign off an ordinary worker for a week a farmer never comes near the surgery. For something which would lay up an average patient for a month the farmer often dashes in for a bottle of medicine, underestimates his disability, and says he is in a hurry to get back to milking. There was a time, this doctor said, when farm workers prided themselves on their toughness and could not afford a doctor; but now some of them tend to take advantage of the National Health Insurance Act to have a few days off. Farmers never! When he told one old man he was dying, he got the reply—it would have to wait until after harvest, as he could not spare a wagon, or give the men the time off, to take him to the churchyard while the fine weather lasted. Such farmers

never die before their time, even a feeble old heart beats in harmony with the land and the seasons.

We have one consolation: in spite of the risks and dangers of our calling, the death rate among young clerks is twice as high as in young farmers. A farmer's expectation of life is ten years longer than the average city dweller's—and what worth-while years they are!

I remember two old farmers standing in a barn one wet day after threshing and claiming they could still carry a sack of wheat, 18 stone, at the age of eighty odd, and this they proceeded to demonstrate, it is true in rather a staggering walk, across the barn. Then, looking out again at the rain, they saw a pretty girl passing down the village street. One of them looked after her a moment too long, and earned the reproof from the other, 'No, Charles, even you are too old for that sort of thing.' 'Maybe,' he replied. 'But if only I was sixty again!'

To retain one's sense of humour throughout the years is to show a keen and lasting interest in life, and one which is often inseparable from an abiding faith in providence; while there is probably no defence against misfortune which is, on the whole, so effective as an habitual sense of humour. How often I have noticed that the best-tempered men are the best workers, that the busy people are the happy ones, because they are going somewhere. A man who is able to employ himself innocently and usefully is never miserable. A carter who white-washes the stable or cleans the harness in his spare time, if there are any such to-day, is happier than the tractor driver who tells you that his

responsibility ends with a half-turn of the ignition switch—and you will find him on nearly every farm, in these days of the mechanization which has taken away half the pride and pleasure in farming along with nearly all the hard work, and the time to think. It is an undoubted truth that the less one has to do the less time one has to do it in, and the less joy one finds in doing it. Those who have a great deal to do must buckle to, and usually make time in which to do it. People who have seen a lot of life will tell you that success is due less to ability, talent and opportunity than to zeal, concentration and perseverance. Those who achieve happiness through work do at least deserve it. Pride in work and reason's whole pleasure lie in three words: contentment, competence and health.

The basis of health is a contented mind, sound nutrition and regular habits. I know of no place where they may be more easily obtained than on a well-managed farm. Any deficiency in our national diet may be made good by wholemeal bread, fresh vegetables, potatoes, cheese, and honey. These necessaries of life are within the reach of any farmer, and quite a few of the luxuries as well, and among these I would include bacon and eggs for breakfast. If you ever feel overtired it is probably due to error in diet rather than to hard work or long hours.

Better to hunt in fields, for health unbought,
Than fee the doctor for a nauseous draught.
The wise, for cure, on exercise depend.
God never made his work, for man to mend.

A useful verse to bear in mind when you are searching for the cows in a forty-acre field on some dark, cold, February morning. The attitude of mind does help. It makes all the difference in the world whether you think, 'My poor fingers, they are going to drop off!' or, 'This is the weather to make you fit and hardy,' and start to run round the field.

It is the same with getting up in the morning. If, as you go to sleep, you think, I must jump out fit and ready for work the moment the alarm-clock rings,' you find that you do so. Your subconscious takes charge of this, and it can accurately keep time within minutes. Out of curiosity, to test this, I have often gone to sleep telling myself to look at the clock at, say, 4.22 a.m., and I find that I do so within a couple of minutes. Furthermore, I have sometimes had a cow due to calve, and when I have looked at her last thing at night have been unable to say how many hours she will be; but if I go to sleep thinking I must be out if she starts to calve, I invariably wake up in time. Here again the subconscious mind has stored up the impressions I have gained in calving hundreds, and comes to a conclusion my conscious mind is not able to reach. This is similar to the extra-sensory perception which a first-class judge develops in judging stock. But remember that there is a

big difference between the subconscious and the semi-conscious! There are a great many people working on farms in the latter state!

Having got up early, the next thing is to make the best use of your time. On most farms you are set to do certain routine jobs, feeding cattle, milking, grooming horses, or whatever it may be. Now very few sets of farm buildings were designed for economy of labour; if anything, they studied the comfort of the stock, but mostly were added to according to the requirements of the particular farmer and the whims of some bygone landlord. Therefore there is a great deal of unnecessary walking about, but you can reduce this to a minimum by giving thought to your work. When you are going to water and litter down an animal in a loose-box, it may be that you can take your fork with you, collect the bucket of water on the way, and take both at the same time, instead of making two journeys. By studying these points, you give yourself more time for the work in hand and leave yourself free for another job, which the farmer will set you, and thereby you add to your experience and your value to him. If you are allowed an hour to clean out a cowshed, set yourself to do it, thoroughly and well, in less than that time, and then find some other little job to do.

You will then find that the farmer soon leaves you to plan your own work and fit it all in to the best advantage. If you are on top of your tasks, you will always have time to fit in those little extra jobs—a dressing for a calf which has developed an odd spot of ringworm, a cow with a piece of chaff in its eye, or a horse with a loose shoe. Above

all, it gives you time to *look at the stock.* I mentioned earlier the Agricultural College student who did not know the signs of health in a cow; you must know them. Every time you look at a beast, notice the dewy nose, the lick marks on its coat, and the way it stretches itself when it gets up unhurriedly. If any of these are missing, something is wrong and must be reported. If you always look at cattle like this, the time will come when you will see if they are improving or going back in condition. You will detect a shine on their coats, unnoticed by other people, within a few days of starting to feed, say, linseed cake or silage. You will notice cattle going back in condition if you change their food from kale to mangels, unless they have something else to compensate for the difference in feeding value.

I remember, a few years ago, receiving a note from the [local W.A.E.C. offering to send an expert to advise on the feeding of silage. It apparently never occurred to them that we had some fifty experts on the farm—the cattle. We start feeding a small quantity and notice the results. I learned this nearly thirty years ago as a farm pupil.

Every class of stock has its own signs of health. In horses and sheep the signs are not quite so obvious, as they depend partly on behaviour, but you will soon know them if you watch them carefully. Now pigs have a damp nose, a silky coat, and a curly tail. You have seen this? Then which way does a pig curl his tail? Is it to the right, or the left? I have asked many farmers this, and some are quite dogmatic about it.

The truth is, the individual pig sometimes curls it one way and sometimes the other!

Learning to be a farmer is sometimes hard, but it is never dull, there are always fresh worlds of knowledge to conquer. Adventure is not a matter of penetrating unknown lands, it's an attitude of mind. I remember reading a story, when I was very young, of two men, one of whom was rich and started on a tour round the world, while his poor friend explored his own garden. When the first returned satiated with travel, the other was not even half round his garden, for he had found so much of interest. It is the same with farming.

Now the greatest natural force which is going to affect your farming life is the weather, so observe it carefully, first thing in the morning and the last thing at night. Learn all you can about it, and try to understand how it works, for nearly all your farming decisions will be affected by it. Even your personal comfort depends on it, and most farm pupils get soaked a few times, or carry a coat when it is unnecessary for lack of this knowledge. You will find that the farmer who understands the weather never grumbles about it, and is very seldom caught napping.

There are a few simple rules on which you can build. There is the familiar red sky at night and red sky in the morning, which is right, subject to certain limitations, seven out of ten times, for fine or wet weather. The wind backing towards the sun means a deterioration, going round with the sun an improvement. A sudden rise in

temperature, in cold weather, is nearly always followed by strong south-westerly winds. Fog rising to the hills means fine weather, and rolling down to the valleys or the sea is a sign of rain. Your animals, too, are very weather conscious, especially sheep, so notice them carefully. One weather sign may mean little, two will leave little doubt, three will establish your reputation as a local weather forecaster. 'Those that be weatherwise—seldom be otherwise.' A minute a day and a dozen simple signs in your diary, B for blue sky, C for cloud, S for stormy, etc., will give you invaluable data over the years. My own diary shows that in a comparatively wet cycle of ten years red clouds in the morning was a true indication nine out of ten times, rain falling on fourteen out of twenty days before midday, and on the other four before sunset. Red sky at night foretold fine weather on seven out of ten occasions. In a dry-weather cycle, red dawn indicated heat, red morning clouds were the fore-runners of rain on only six out of ten days, while the red sky at night heralded a fine day eight out of ten times.

If two weather factors are taken into consideration, they prove to be much more reliable.

Evening red and morning grey,
Sets the traveller on his way.
Evening grey and morning red,
Brings the rain upon his head.

The first couplet was correct nineteen out of twenty times, while the second failed only once in twenty-four times, though often it was no more than misty rain.

The Author

The most trustworthy and long-distance forecast, for my district, would appear to be that phenomenon which country people call 'the Eyes of God'—the sun shining like searchlights through broken cloud, not to be confused with the sun shining through rain as streamers of light. My record shows that ten days of reasonably fine weather can be expected, though sometimes broken by stormy weather and even heavy showers on the fourth or fifth day; but in no period during the last twenty-five years has a really wet day been experienced within ten days of the sign being observed. In 1948, notorious for its unsettled weather, we had only one period of thirteen days without rain, and this spell was clearly indicated on the evening of July 19th. It is sometimes worth a lot of money to a farmer to be able to gamble, or better still back his judgement, for ten days of fine weather, as in cutting clover for seed; the opposite applies on planting turnip or kale, or in direct re-seeding of grassland when plenty of rain is desirable.

I have emphasized the importance of studying the weather; you also have to give very close attention to the principal raw material on which you work—the soil. First of all, who owns it? In it remain the labours of all those who have gone before; it will be your first duty as a farmer to pass it on unimpaired to the generations to come. When you buy a farm you pay only for the labour, thought and capital which has been put into it, for it would often cost as much to clear and equip virgin land as you will have to pay for a farm even at the inflated prices of the present time. If and when the land is nationalized, the farmers will be

robbed of at least part of their invested savings, in the same way as if the Government seized the savings of the small investors in Post Office accounts and similar reserves of capital, for they would never pay the real value in compensation. The gold in a sovereign is said to be worth about £3, but Jewish poultry buyers calling on farms will willingly pay £7 each for them. What race could know better the real value of money? It is the same with farms: no Government script could compensate for the ownership of the land a man has loved and farmed.

In the actual cultivation of the soil you will find a great diversity of opinion. There are some farmers who believe in shallow ploughing, others in ploughing deep. Some believe in few cultivations and others insist on many. Listen carefully to them all, study the methods on the farm in which you work, and also those of the neighbours; you will learn from them all.

Except on the biggest farms, you will find that you spend some time every morning and night on routine stock work, and some hours during the day on the seasonal work, according to the time of the year. But if it so happens that you do not see a field drilled, rolled, harrowed, or whatever it may be, because you are doing some other work, then be sure to go and see it after your day's work is done, even if you have to take a lamp. Walk on the field, see how firm it is. Kick up the soil, watch how it flies. Take a handful of soil, squeeze it and notice how it feels, rub a little ball between thumb and finger. Then later, when you see the crops growing, recall all that you observed. Time must be spent

in the fields, and not an opportunity lost, if you are to become a master of cultivating them. The tractor has very largely taken the sweat out of arable work, and people are apt to substitute mechanical force for the art of cultivation but the land does not respond so well to that.

As you progress in your training, and apply the knowledge you have gained, you will find that your services are valued, and the farmer gives you more work and responsibility. Save the farmer all you can. If he goes away for a day, and something goes wrong, as it always does, put it right and say nothing. No farmer wants to be met with a catalogue of troubles, the milking machine broke down, the cattle got out, a tractor would not start; he will find out quite soon enough; all you need to show is, as unobtrusively as possible, that you were equal to the occasion. By this method and nothing more I have known capable young men climb the farming ladder—foreman, manager, tenant farmer, and finally owner-occupier on the farm on which they originally learned their business. If you are not a farmer's son, you sometimes find a farmer who will stand *in loco parentis,* and give you the same help and assistance, but you must first prove yourself worthy of it.

Now there are some who may read this book, who are only working on the land and cannot hope to have the advantages of a farm pupilship, but nevertheless are determined, in due course, to farm on their own account. Nothing need stop them. There is one great advantage in farming: one person in three is a master man, and therefore the

competition is not so keen as in an industry where it may be only one in forty. The way may be harder, but the incentive is greater. Those young men will be discouraged by their friends; and by some farmers if they disclose their ambition; and even more by land agents when the time comes to take a farm, for the latter are often very snobbish people and know little of practical farming. The same applies to many County Agricultural Committee officials, some of whom have failed in farming, and who, lacking the character and ability to become farmers, hate to see others achieve it.

The ambitious farmworker should try to obtain a job on the best farm in the district, and then set out to make himself the best and most conscientious worker on that farm. He should seize every opportunity of earning overtime money, and save every penny that is possible. He should try to improve his general education; join a Young Farmers' Club, or Farming Club, in his district, attend their meetings and demonstrations, and seize any opportunity for public speaking, for it leads to self-confidence. To think clearly is to speak clearly. In this country, in spite of Cabinet ministers who drop their aitches, social division lies very largely in the mode of speech. You hear one man say, 'This is too ludicrous for words!' Another will say, under similar circumstances, 'Cor! I could laugh me blooming 'ead off!' It may mean the same thing, but the impression it gives is very different.

To develop any skill to the point of competence gives a sense of mastership and marks you as a leader of men.

Learn to study stock

The farmworker must also train himself to think like a farmer, and to see the farmer's point of view. Remember that wages are not

something to which you are entitled by putting in your time under the Agricultural Wages Act, but an advance against goods to be produced; unless you are a really profitable producer for your employer, you will never be for yourself. The business side is more difficult to learn, but later chapters in this book will make that easier for you.

Hundreds of workers have become farmers, by getting a little land, keeping a few pigs or poultry, and reinvesting the profits in more stock, while continuing to work for another. It may require a special effort to do this before and after a full day's work elsewhere, but the knowledge and experience thus gained will better equip a man to be a farmer than a degree in agriculture, however well merited. I knew a young man who had saved £200 by the time he was twenty-one by this method, in a time of low wages. He then took an eighteen-acre holding, working it in his own time, before and after his regular work. In five years he had the capital and stock to take a hundred-acre farm, when he gave up his employment and became a master man; the same habits of life, thrift and work enabled him to own the freehold of his property at the age of thirty, and to be respected as one of the leading farmers in his parish.

Then in this country we have many who wish to enter the farming industry later in life. They come either from the Services or other walks of life. Their way is difficult indeed. If they bring capital, they often spend a lot in bitter experience, for lack of knowledge. Without capital they often find the way too hard, with their preconceived notions of farming and high standards of living. They often think they cannot

afford to spend the time to learn the trade; for them there comes a rude awakening when it is too late. Yet a middle-aged man, who is still fit and strong, who has earned his capital in some other occupation, and is prepared to spend at least a year on a well-managed farm, can still make a fair success of farming. Many do so, their business acumen compensating to a certain extent for their lack of knowledge and experience.

Finally, I am often asked, can a girl or woman achieve independence in farming? It has been done, but only by people of exceptional character and ability. It is more difficult to obtain the necessary training, and to get a start in farming. But if they can overcome this they do well. On the face of it, it would seem a hard and lonely life, but those I know seem happy and contented in it.

Women often have a great natural aptitude for the care of stock, and if they can commercialize this asset they are assured of a comfortable living. I believe they do best on small farms, where mechanization and the control of staff do not largely enter into their work, for here women seem less successful; although I must admit I know one or two exceptions to this rule.

But for all who would enter farming, and I know of no easy way, it is necessary to be sure in their own minds what they want to achieve, to be prepared to pay the price in time, labour and study to achieve it, and to be satisfied with it as their ultimate aim and goal. To me, who have travelled all the way, it has been worth while, and I write this book in

the hope that others will find that harmony of heart, hand and mind which I have enjoyed on the land.

CHAPTER III

Ways and Means

How long it takes to learn to be a farmer I cannot say, for it varies so much with the individual. I think a fair test of capability would be: when you can do every job on the farm; when the farmer can leave you in perfect confidence to take charge of the farm when he goes away for a few days; and when you can make clear and careful plans for the stocking and cropping of the area of land you have in view, on the capital you have available, be it great or small.

Those who go straight into farming when they leave school would not normally expect to start farming on their own account much before they were twenty-one; a fairly long apprenticeship, but one in which they should have mastered their trade.

Looking back and studying my diaries, I should say that I knew sufficient to earn a living in farming, if given the opportunity, after two years; at that stage, my love of animals tempted me to think I could be a pastoral farmer, but with increasing knowledge and experience I realized that a percentage of arable is necessary for even a stock farmer to make the best of his opportunities; until finally I came to the conclusion that a completely balanced system of crop and animal husbandry is essential for agricultural prosperity. This conclusion was

arrived at in my third year of training, and the years have proved it, for in good times and bad, in peace and war, no drastic change has been found necessary on the farm with which I am associated.

At that time, which was early in 1923, I attended a branch meeting of the National Farmers' Union, and listened to the speakers; all spoke of losing money as the result of agricultural depression, and threatened to tumble their land down to grass and farm with a sheep-dog and a roll of netting, unless the Government did something about it. In my diary, the same evening, I commented on the meeting, and added, 'If these people can make a living in farming, I can make a fortune, providing the Government do nothing about it!' Very egoistical perhaps, in an eighteen-year-old youth, but it did indicate that I had seen the possibilities in farming. It took another year to find a farm in a sufficient state of dereliction, to take on the limited capital available, in order to try out the theories which I had formulated, and which my brother and I have since proved in twenty-five years of farming.

How much capital does it require to become a farmer? If you consult the textbooks on the subject, or write to the Ministry of Agriculture, you will learn that £20-30 an acre is required to stock and crop a farm, as a tenant farmer and with ordinary commercial farming, and anything from £40 to £100 an acre to buy the freehold of agricultural land. On this basis it would take something like £10,000 to take an average English farm of 80-100 acres. No wonder the ex-

bookmakers, butchers and bakers think they can buy their way into farming!

Yet in every country you will see quite small farmers setting their sons up in farming; surely they have not £10,000 to spare to put into another farm? I know one farmer who has never farmed more than 100 acres, yet his four sons, between them, have taken over 1000 acres in recent years, and are all farming successfully. I asked one of them how much capital he had to start, and he said, ‘Quite a bit! You see, the old man always let us have half a crown pocket-money a week while we were working at home.’

That was his joke, but it means that those four young men were doing at least a £1000 worth of work a year for little more than their keep. The home farm was heavily stocked, so that when another farm was taken a whole generation of pigs, calves and lambs could be spared. The young farmer would live cheaply, possibly still at home; he would be helped by his brothers, so that there would be no heavy outgoings on labour. Implements would be shared, and in a comparatively short time the new farm would be well established, and yet another son could be started off.

If you look around, you will see that the only farms which are really doing well, over a long period of years, are the family farms. It is the reinvestment of their earnings that makes this possible. It is on this basis that the individual farmer can take a farm on limited capital and establish himself out of earnings. I described in my earlier book how

my brother and I did it, by being prepared to work twice as hard as ordinary labourers and live on half a labourer's income. It has since been our pleasure and privilege to help others to get a start in farming by similar methods and they have found it worth while.

If at the present time you can get possession of a farm, by hook or by crook, and can earn £500 a year, while living on £125, your capital will accumulate at the rate of £375 per annum. But that sum left in livestock will grow into money, so that at a modest estimate seven years' hard work and simple living will see you well established as a tenant farmer, and another seven years, in which your earnings should be doubled, will make you the owner-occupier of the freehold. My brother and I managed to save four years of the fourteen we allowed ourselves, even in a time of acute agricultural depression. Those who have started in recent years have often halved the time necessary to achieve the same result.

Is it worth it? Perhaps fourteen years' hard labour! Only you can decide. If it is not, then take a job under the N.A.A.S. or under some A.E.C., and sneer at those who think it is.

If I seem bitter or critical of the newly found masters of our industry, could it be otherwise? I have never asked more of life than the opportunity to take some land, to buy it freehold by my own labours, and to farm it in such a way that it will provide me, and those dependent on me, with a reasonable standard of living, comfort and financial security. Pride and interest in the work will ensure that my

land is well farmed. I am prepared to produce in fair competition with any farmer in the world; I need no guaranteed prices or subsidies, agricultural relief funds in times of difficulty, or crocodile tears from politicians; only the security of tenure, which the Agricultural Act has now taken away from freeholders, and protection from officials who have neither the character nor the knowledge to farm for themselves. I believe that 90 per cent of our farmers feel the same, and the troubles and difficulties which beset the industry are due to the tiny minority who can neither work nor farm.

At the same time it is difficult to hate those you know. Cross as I often am with the ignorance and crass stupidity of the official mind, I cannot help feeling sorry for the lesser grades among them, for they often get a very raw deal from those above. The State was never a generous employer, and there is no market for brains in agriculture — except when a man works for himself. After thirty years of steady work, perhaps one in a thousand might become head of the National Agricultural Advisory Service, and as such would draw £1640 a year for directing the labours of eighteen hundred officials—rather less than an efficient farmer would earn in directing the labours of eighteen hundred old hens, and that would not necessarily be a full-time job. The antagonism and bitterness between the officials and farmers probably arises from envy and jealousy, for a jealous man always finds more than he looks for, and a bull licensing officer will see faults where none exist, while a cultivations officer only looks for the weeds, qualifying

for Dr. Johnson's celebrated reproach to the lady who congratulated him on the fact that there were no swear words in his dictionary, 'Madam, I see you have been looking for them.' If only they could see their way to becoming farmers in due course, we should have the happy co-operation which distinguishes the advisory services in the Scandinavian countries, and which is so sadly lacking here. The man in agriculture who tells you he does not want to farm is like the child who says he does not want to play; he is either sick or bitter against the others who do. It is easy to dismiss the officials with a shrug of the shoulders, as many farmers do; but I at least do care, and would rather see them happily and usefully employed in farming.

To achieve success in farming, sacrifices have to be made, both in time and effort, as indeed they do to gain anything worth while in this world; but the reward is there for anyone who has the spirit to try.

Natural desires may have to be sublimated, although this is not difficult when you are doing hard physical work and your mind is fully occupied; but a man may have to deny himself marriage and a family, at least for some years, although a good wife is almost an economic necessity for a farmer making his own way in the industry.

My advice on this point is always the same—when you find the right farm, take it. When you find the right girl, marry her. Unfortunately, when a man is completely absorbed in work his opportunities for bringing about the meeting are limited; while a sense of duty and responsibility may cause him to hesitate until he is in a

position to make reasonable provision for the security of his wife and children. On the other hand, the great purpose which seems to direct our lives does bring these things about; and if he has patience a farmer is more likely to find a suitable mate within the circle where his interests lie, than in seeking her elsewhere.

If any curious readers should wonder if I acted upon my own precept, I can assure them that I did. My experience of life has taught me that if you dedicate yourself to some worth-while objective, however humble, the Almighty, in His infinite wisdom and in His own good time, provides all that is requisite and necessary for the fulfilment of that purpose. If a man has faith in the land and himself, he will appeal to some good woman, able to share his ideals and be the mother of his children; and there is probably no greater pleasure on a farm than in rearing fine, healthy children. And what better place could you find in which to rear them?

In farming, as in life, if you have counted the cost and are prepared to pay it, standing or falling by your own efforts, you will find that you are noticed in the industry, and offers of good positions, partnerships, and other opportunities, such as being backed financially by a landlord who is tired of indifferent tenants, will come your way. For that was our experience, although we refused all such offers, as my brother and I travelled all the way from making our own start in farming to being agricultural landlords, with tenants of our own, in little over fourteen years of hard work, simple living, and careful planning.

Yet apart from any material success, no one who has not experienced it can imagine how deep is the satisfaction of simple living on a farm. The balance between mental and physical effort! How often have I walked home at night, hungry, tired, but utterly content after a good day's work, and the words of the Church catechism have come into my mind, 'to work and labour truly in that station of life to which it has pleased Almighty God to call me'. It is because I want others to feel the same that I write these lines on a winter evening after many hours of hard physical toil in the fields, yet knowing how much better it has all been than lounging in too great comfort, and utter boredom, in some city office.

Hard work—and liking it—is said to be an old-fashioned recipe for happiness, and I do not doubt that it is true. But hard work alone will not bring material success. Many of us in farming know that some of the best and hardest workers, the old-time farm labourers, finished in the workhouses and paupers' graves. There must also be direction and inspiration behind our labours. It is sometimes said that man is the creature of circumstances; more often he is the architect. Bricks may only be baked clay, but you build either a hovel or a palace with them. So it is with circumstances; you must turn everything that comes your way to advantage and see that nothing is wasted.

When I was learning farming, I admired a young, half-broken hunter in a neighbour's field. My master noticed my interest, and said that if I would like to school it in my spare time, he would, as a very

great personal favour to me, approach the owner and see if it could be arranged. I jumped at the opportunity. I learned afterwards that he approached the owner from a different angle—he would have it schooled for £5 and then sell it on commission! I gave my time, had my fun, and gained some experience. He used his brains, and knowledge of human nature, to make some money.

Good luck to him! He started life as a jobbing gardener and casual farm labourer at a time when there was no regular work to be had. After twenty years of unremitting toil and thrift, he married and took a small farm. Six years later, when he was nicely established, a disastrous fire, when he was away from home, robbed him of everything, including his wife and two small children. He started again at the age of forty with nothing, took a farm after seven years, remarried and reared a family.

To work with such a man was an education in itself, although he was reluctant to share his knowledge, much of it having been too hardly acquired in the school of bitter experience. It was interesting to know that once he had been a farmer he could start again and achieve his goal in a third of the time. When I knew him he was owner-occupier of a small and prosperous farm which yielded him a good living. He was a highly skilled craftsman with a high output of work, who could turn his hand to anything on the land, yet had no illusions about farming, found little pleasure in it, and was determined that his children should not follow him. Life had been too hard; he could only take a grim satisfaction in beating it, and had not the confidence which begins with

hope and is strengthened with experience, and which I believe to be the true farming philosophy.

Since I wrote my first book, more than a hundred old and experienced farmers have written long letters to me, telling how they, too, climbed ‘the farming ladder’. They fall into two classes: those who triumphed in spite of every difficulty, and those who made steady progress over many years, and in whom patience would appear to be the main virtue. On the whole it would seem that it is patience which makes the final difference between those who succeed and those who fail, for it provides the conditions in which good work may lead to excellence. Has not history shown us in recent years how the patient weak conquered the impatient strong? It is the same in farming. When I was starting I was often a little jealous of those who had ample capital; they tell me it is they who envy me now. For where they have lost money in farming, those who had none to lose have gained it, and with it confidence in themselves.

There comes a time in every man’s education when he realizes that envy is ignorance; that imitation is suicide; and that he must launch out, using those powers that are within him, for better, for worse, and achieve something worth while. And if he has nothing more than the courage to change the things which can be changed, the serenity to accept the things that cannot be changed, and the wisdom to know the difference between them, he will go far in farming.

On the other hand, let us have every respect, and learn all we can from those who made their mistakes and failures the stepping-stones to success. It is a great mistake to suppose that men succeed only by success. It is more often through their remembered failures, or known limitations, that prosperity comes.

Mistakes are expensive, though you often learn most from them. The serving of an apprenticeship has the advantage that you make many of them at someone else's expense, or learn from him how they should be avoided. People often tell me that they cannot afford the time to learn; then I am afraid they can never afford to farm. Benjamin Franklin said, when speaking of learning his trade, 'A man who teaches himself has a fool for a teacher.' It is very true in farming.

Those who start with knowledge but with little capital know their limitations, and therefore take every care in spending every penny; while those with what appear to be ample financial resources often make irrecoverable losses before they learn the error of their ways. I remember the directors of a very large business organization asking the opinion of my brother on a large-scale poultry farm they were setting up. 'Gentlemen,' he said, 'if you continue with your plan you will lose £10,000.' They ignored his advice, and lost £120,000 in under three years. On another occasion we were invited to inspect what was to be 'The Biggest Pig Farm in England'. We predicted the biggest outbreak of disease on any farm in England within twelve months. Were we too pessimistic? Farmers often are gloomy people, but within a month they

started burning pigs, and were still hard at it the following Christmas. On the other hand, we have often helped people to get a start in farming who had only their character and ability to recommend them.

One old farmer told me how he got his start (while working as a roadman) by taking three small fields, each six miles apart; he bought a small flock of sheep and hired a boy to drive them to and from each field on alternate days, grazing the verges of the lanes and byways, or, as he called it, 'the long meadow'. Each field in turn he ploughed and cropped with turnips, and on this the sheep were night-folded until it was black with dung; then he grew heavy crops of grain which enabled him to buy the freehold within a couple of years. This might not be possible to-day, with so much motor traffic; but it would not be difficult to find a large-scale farmer willing to let a really capable and experienced man run a folded poultry section on his farm for the sake of the fertility it leaves behind.

Another got his start by begging orphaned lambs and piglets, when he was a boy, and rearing them on goat's milk. Then when he started work he bought a calf and reared it in the same way. From this he started to build up a milk round three years later. Then he married and took a smallholding. In a few years he had ten cows, which he milked night and morning while earning a day labourer's wage on piece-work for other farmers, until he had the capital and confidence to take a hundred-acre farm. In recent years many of our most successful farmers started by buying cows on hire-purchase, or keeping a flock of sheep on

the 'half increase' system. But it should be noted that these methods, and many others, are only open to men who have learned their trade; the amateur farmer would bungle them all.

Our most outstanding example in recent years was the case of a young farmer who borrowed £2000 on which to start farming in 1942. He then bought a derelict farm for that sum, leaving £1400 on mortgage to be his working capital. He bought forty pedigree Jersey heifer calves, over a period of twelve months, at an average of £10 each. He reared them on ten nurse cows, which were sold out fat for no less than he gave for them. He cleared and cleaned his land while the stock were growing up, growing very fair crops meanwhile. Then when his heifers calved at two years old, he sold the twenty worst at an average of £100 apiece, and repaid his loan. Two years later, when the calves from his original stock came into milk, he sold eight of his worst cows to pay off the mortgage. He was, of course, lucky that there had been considerable appreciation in the value of pedigree stock over the period, but it was sound judgement which decided his choice of breed, with its early maturity and high economic conversion of food into milk, while he proclaimed his faith in the future, at a particularly grim moment in our country's history, by buying pedigree registered stock, and at a time when more short-sighted farmers thought there was more money in corn-growing.

Another young man, reading my book, *The Farming Ladder,* in 1944, noted that we intended to maintain our stock of pigs ready for the

post-war boom in this class of stock, and thought he, too, might share any money which was going to be thrown about. He bought half a dozen pedigree Large White Gilts, at eight weeks old, out of an exceptionally good sow, for £5 each. Later he was selling litters of pigs to clear £100, and has sold individual boars for export at a price which only UNRRA could afford.

Nearly every farmer who goes far in the industry has his special line, which makes all the difference between

Oh, the little more, and how much it is!
And the little less, and what worlds away!

of the poet. For ordinary farming is seldom more than bread-and-butter occupation, and a farmer needs something extra to provide the jam. It may be seed-growing, a retail milk round, pedigree stockbreeding, or even something quite outside his business, such as keeping books for other people who lack the ability to keep their own. If a man is only earning another £100 a year and wisely reinvests it in his farming, the cumulative effect is very great after a few years. If this is coupled with simple living, the combination is invincible. I read somewhere that a man who became a great industrialist still lived in the same house and maintained the same standard of living when he was earning £10,000 a year as he had on £250. While the sum available for reinvestment may never be so great as that, the principle is the same. One farmer I knew

well never farmed more than 120 acres, but left his widow £58,500. He was happy and contented in his work, had no outside pleasures, but must have had a genius for reinvestment of his profits over a long period. In farming, of course, the best long-term investment is the ownership of the land itself. There are farmers who say, 'Never buy bricks and mortar,' but they never go far in farming. The most valuable land is that which a farmer occupies himself, but few farmers who have bought land over the last five or even fifty years could fail to sell out at a substantial profit to-day. A lot of sympathy was given farmers who had to buy their farms at inflated prices after the first world war; if they held on, those farms became even more valuable in recent years. On the other hand, many tenant farmers have paid away far more than freehold value of their farms in rent, and are no nearer owning them, while they have never had the incentive of the owner-occupier to bring about improvements which increase the earning capacity of the farm.

The point I wish to make is that the man who is able and prepared to do something extra is the one who goes ahead. All efforts, if directed by thought, are successes, for you are training a character to build to that end. To build, you must have faith in yourself, the land, your country and the future. Remember always that the future is not something that comes rushing towards us from some dark tunnel, but a road on which we travel, in a motor car built of our own thoughts, day by day and year by year. If we have built wisely, carefully and well, it will carry us safely to the end of our journey. But on our way we must

scrupulously observe the rights of others, never drive on the wrong side of the road or overtake on a corner. The simple test of any human action is to ask yourself, ‘What if everyone did it?’ You have got to set yourself high standards, in work, application and study to become a worthy farmer, but that does not prevent your ripening into a wiser, finer and kindlier man at the same time. In writing this advice, I am only too conscious of my own shortcomings in the past, and hope to do better in the future.

In good times and in bad, these few English acres have given a good return for capital, management and labour

The acid test of human conduct is not what we ourselves achieve, but what we enable others to accomplish. The success of this book depends not so much on the kind or unkind things the reviewers say about it, or the copies which are sold, but only on the number of farmers it helps to get a start, or leads a little farther along the road which I have travelled, and on which I hope it can be said I never hindered another who was going the same way.

Coppice and osier bed incorporated in the scheme of things

But all the philosophy in the world will not make you a farmer. Sooner or later, the time must come when you make that decision on your own account.

When is it best to start farming, in a slump or a boom? When things are cheap and people are anxious to get out, but when it is difficult to earn a living; or when inflation holds sway, when farms, stock and implements are in demand and on the face of it farming should be profitable?

The answer is to start when the opportunity occurs and you are qualified to do so, both by experience and capital. You cannot wait for trade cycles, and you do not wish to profit by other people's misfortunes. In a normal farming lifetime you must expect to meet good times and bad. If you have laid your plans carefully and well, you will go steadily on, making money in prosperity, consolidating your position when depression threatens the industry. It may be of interest to note in passing that I have never known a skilful farmworker to be long out of employment, or a farmer who was master of his job, with a long-term policy of progressive farming, to fail to pay his way. Even in the depths of depression in the early 1930's there were farmers who were going ahead by sheer technical efficiency. If corn prices were bad, feeding-stuffs were cheap. If milk was 4d. a gallon, pedigree cows were cheap and a foundation of a good herd could be acquired. If others were tumbling land down to grass, straw was in demand, if only for thatching and packing, and the by-product might be worth almost as

much as the corn it grew in some districts. It was only a matter of looking for the opportunity in every difficulty, instead of the difficulty in every opportunity. It was necessary to foresee your market, to have something to sell, or, failing that, to sell nothing you were not compelled to sell by economic necessity, and to buy nothing you could manage without; in other words, to become self-sufficient on a self-supporting farm. Many farmers weathered the depression by this method, bred their own stock, consumed the crops grown on the holding, and built up fertility ready for the better times ahead; while others flogged their land in an effort to maintain a higher standard of living than the times warranted, with the result that they had lost hope and had no reserves when prosperity once more smiled upon the industry.

How are you to start farming? If you have served your apprenticeship with some good farmer, he can give you a lot of valuable help and guidance on this point, especially if you want to take a farm in the same district. You should make enquiries among the estate agents and inspect all the farms you can; some of them may be far beyond your means, but that does not matter providing you plan how you would stock and crop each particular farm if you had the opportunity to take it. I have often been complimented on the long-sighted policy on which Oathill Farm was planned, so that a completely balanced system of intensive farming has been maintained over so long a period. Few could know that I had already planned fifty or sixty

farms down to the last detail, in my mind's eye, while I was still learning farming. The farms on which I worked, the farms I saw for sale, were all grist to my mill, to be ground and reground on the assumption I might farm them.

I doubt if you ever find the perfect farm: all have some advantages and disadvantages. What is an asset to one man might be considered a liability to another. To be close to a village may be an advantage for casual labour or social intercourse, but a nuisance on account of dogs worrying your sheep or people wanting to borrow something. A good water supply is essential for stock, while nice square level fields are desirable for tractor work. It may be easier to square up fields in some districts than to put in a good water supply, in others vice versa. A dozen examples might be given; but in actual fact one does not normally get a large selection in choosing a farm, especially if capital is limited. The opportunity usually comes, sooner or later, of taking one particular farm, with all its faults and failings, and it will take all your skill, strength, knowledge and experience to make the best of it. It is a mistake to think, 'If only I had a better set of buildings or more fertile land, how much better I could do.' It is for you to make the best of the opportunities which present themselves. At the same time you do want a farm on which you can visualize spending your whole life; for if as a young man or woman you are going to spend the best years of your strength on it, you will need to plan and organize it in such a way that it will provide for you, if necessary, when you are no longer physically

able to achieve results in a way that was possible in earlier years. A mountain sheep farm, for example, calls for more physical energy and endurance but never offers the same rewards for labour as more intensive types of farming. In any case, you want to leave a farm far better than you found it, so that others can build on where you left off.

If you think, plan and dream about the farm you want, you will find it—so be quite sure you know what you want. Remember the poet tells us, 'Beware of that on which you set your heart, for you will surely achieve it!' This is as true in farming as in other walks of life.

First of all, should the farm be large, medium or small? I am often asked, what is the economic unit of production in British agriculture? I believe it to be an area of land sufficient to support a balanced system of farming, and to provide a farming family with a reasonable standard of comfort and financial security. This area varies with the nature of the soil and locality, while even more depends on the character and ability of the farmer. The test is whether you are able and willing to do manual work, or prepared to take the risk and responsibility of directing the labours of others. Some men can make a good living, on a suitable soil, with intensive market gardening and fruit-growing, with only 10 or 15 acres; others, with extensive arable farming on poor chalk, may need 100 or 1500 acres and make no better living.

It is not how much you farm, but how well you farm it, that makes the difference between success and failure. Other things being equal, it is well to remember the old adage, 'More a-c-r-e-s—more c-a-r-e-s, the

same letters in a different order.' In my experience many farmers fail, or fail to prosper, by taking too large a farm. In this opinion I am not original, for a greater philosopher than I, the great Dr. Johnson, was reported by his faithful Boswell, in 1773, as saying, 'A man cannot make by his land but according to the cattle and corn which he has. Suppose you give him twice as much land as he has, it does him no good, unless he gets also more stock.'

How often do we see a man adding farm to farm without increasing his stock in proportion? That is why the large-scale farmer is too often an exploiter of the soil, taking too much out with mechanization and the use of artificial manures. Though injustice it must be admitted that there are some farmers, in a big way of business, who do realize the value of the small unit and subdivide their vast holdings accordingly.

During the last few years I have often been invited to take part in debates at Farming Clubs on various aspects of 'The Small versus the Large Farms', and although I have been pitted against far more talented and gifted speakers, I have rarely failed to get the support I needed from the audience. Only twice in eighteen of these contests, where it has been put to the vote, have I failed to carry the motion by a large majority.

Nearly all farmers I have met on these occasions, and they include many of the leading large-scale farmers in this country, make no claim for the big unit centrally controlled, freely admitting that a large farm loses as much in the difficulty of labour control and transport as it gains

from the use of larger machinery or better buying and selling; but they contend that their aim is to find how small a unit can function economically by splitting up their large holdings into self-contained units, and their ultimate purpose is to provide an opportunity for the best of their workers to acquire an interest in the holding or to farm the land themselves in independent units if they so desire. It may be of interest to note in passing that my brother and I have attempted to short-circuit this policy by being content to farm a small area, and helping others, who have proved their worth, to take a farm in the shortest possible time. In promoting this we have found student labour to be the best there is. Students have found the means of overcoming the greater handicaps in the way of those desirous of farming—access to knowledge, capital, and introductions to those who have land to let or sell.

I think the main considerations are clear, and well known to farmers, for we know that there is room for all in the industry, but we do have to guard against the common superstitions, fallacies, misconceptions, and often, I fear, political prejudices of some academic theorists from the Agricultural Economic Research Departments of our universities, and elsewhere, who would replan our farming into large, neat, rectangular holdings, socialized and nationalized.

Personally, as a working farmer who has made his own way in the industry, I have never asked more of any Government than that it should assure me the peaceful occupation of the land I legally occupy. I

do not covet my neighbour's fields, nor do I want my holding absorbed. In good times and bad, these few English acres, into which has been put nothing more than hard work and reinvested profits, have given a good return for capital, management and labour. It is not the shape or the size of a farm which determines its success, although it may contribute to convenience and economy in working it, but the effort of the farmer in making the best of that which he has.

For better or worse, we have inherited a system of farming which by the fruit of human experience has been evolved and built up over the centuries. The boundaries of our farms as we know them to-day are, with but few exceptions, as they were agreed at the time of the enclosures. Our business is to utilize our principal raw material as and where we find it. We cannot change climatic conditions, or the geographical position or topography of our farms, and only within narrow limits the chemical properties of the soil. But we can so plan and organize within those limits as to live a happy, useful and productive life, on a basis of financial and agricultural security.

I am not one to harp on the good old times—they must often have been hard and difficult—but they did produce shrewd, capable and experienced farmers, born and bred in the districts in which they lived. Without any form of bureaucratic interference such as we know to-day, they planned wisely and well in fitting their farming to the countryside and local conditions. They realized the evils of extensive farming, for they had seen it under the old open-field system, and how wasteful it

was for men and implements to travel half-way across a parish. Those farmers knew how necessary it was for livestock to be confined in small units if any progress was to be made. Above all, they were determined to have a really balanced system of farming which would enable them to make the best use of the land, labour and opportunities, and in which the waste products of the crops and animals could be utilized to build up fertility and to bring about that intensity of production on which agricultural prosperity and financial security depend.

As a result of this, we see the small farms and fields of the west, well suited to grassland husbandry and with only a small area of vulnerable arable crops to be harvested in the rainy summer which is normal in that part of the country. In the east, we find larger fields better suited for cultivation, under drier climatic conditions, but still with provision made for the keeping of livestock. We see also how it had been arranged that the farmers should live as close to their work as possible and have access to roads and water as far as it could be arranged. The diversity of the size of the holdings in every locality means that all capabilities are catered for; and it should be possible for any farmer to choose a farm, suited by soil, climate, situation, and acreage to his special requirements. Given these things, and reasonable security of tenure, it is only a matter of time, money and patience to reorganize the layout of the buildings and plan a rotation of crops fitting in with the size and position of the fields. If a man takes a farm

with a definite long-term policy in view he seldom goes wrong, for he has already seen the possibilities and weighed up the disadvantages.

Rightly or wrongly, I believe that the future of British farming lies with the small farm and intensive farming. It is well known that, if the standards of production maintained on our best small farms were common throughout the industry, Britain could be self-supporting in food, except for citrus fruits and a few luxuries. The day has gone by when anyone could afford to farm for a hobby, sport, or social and political prestige. No longer can we live on world trade and foreign investments, we are beaten to it by others who are prepared to work harder and live cheaper. There was a time when other countries looked to us to lead the way in farming; now it is our turn to learn from them. We pride ourselves on our high standard of technical efficiency and output per man, the highest in Europe, but they were gained at the expense of output per acre, in which we were below all the principal continental countries. Now with the swing of the pendulum we must make the best of our acres, for we are no longer in a position to buy from abroad.

It is interesting to know that in Denmark, a country similar in many respects to our own, and which has had the same economic problems in the past as we have to face at the present time, the output per acre has been doubled during a period of time in which the average size of their farms has been reduced by half—and so successful has that policy been

that before the war they were still creating a thousand new farms a year by splitting up larger holdings and estates as they came into the market.

In Holland, where the average farm is less than half the size of our farming unit, output per acre was more than double that in England.

Switzerland, with an average farm of 27 acres, had the highest output of all, in spite of many natural difficulties.

As I see it, the people of those countries had to make the best of all they had in order to live; while our farmers have made a living from the best, while failing to make the best of all they have. The elimination of waste alone, on the average English farm, would bring about a very substantial increase in production. If Denmark can support two people to the acre, why should we need three acres to achieve the same object? If Holland can profitably employ one worker to 9 acres, why should we need 33 acres per worker at approximately the same wage rate? It can only be because we are not making the best use of our acres.

The small farmer with his limitations of acreage has to make the best of his land; he cannot afford to leave even the site of an old potato clamp uncropped; while his large-scale neighbour, having so much land to cultivate, attaches less importance to output per acre and tends to neglect those odd corners which nevertheless total up. The roadside wastes alone, in this country, represent over five thousand average English farms. In many districts of China the people live in junks on the rivers so that every inch may be cultivated. It is not through lack of land or opportunity that anyone need fail to become a farmer in Britain.

It is the small unit which saves our industry from strikes and other labour difficulties. With 100 acres or less, the farmer not only directs and controls the enterprise, but he can be an example and source of inspiration to all who work thereon. Was not this very clearly illustrated when early in the war a young member of the Women's Land Army approached me for a job? I pointed out all the advantages she had on the large farm where she was working, but she could not see it. There no one seemed to care whether the work was done or not; while her employer was merely a face that peered at her occasionally from the closed window of a passing motor car, which honked at her to get out of the road as she plodded home to her dull and cheerless lodgings. It is thought that people work for money; they will also work better for recognition of their hopes and aspirations; and where better could you prove your worth than on a small farm? There is less competition and more opportunity. What chance had that girl of progress on a farm where she was one of a dozen working in a potato-lifting gang, and there were about thirty regular male workers? Yet to-day she has a farm of her own. With character and ability, access to a little capital and the opportunity to study the management of a small well-managed farm was all she needed to launch out on her own.

It must be nearly thirty years since, as a schoolboy, I heard a famous economist give a lecture on the reorganization of British farming into larger units. I thought he was wrong then, I know he was wrong now. How angry I was when he spoke of the ignorant and

backward farmers on their small acreages, their inability to make use of the resources of science, their lack of education and opportunities, and his audience nodded their approval. I thought of a little farm in Scotland where my father was born and his family had lived for generations. It had, perhaps, all the superficial faults which the lecturer would see in it. The isolated life, the lack of social intercourse, the long distances from school and market town. Yet my grandfather and great-grandfather wrote a better hand than many a university professor does to-day. After more than a hundred years their letters are clear and legible, and the advice they gave their sons would carry any man far in the world even now. They knew the value of work and study, of honesty and fair dealing. Their lives were hard, and sometimes bitter, but they had faith, trust, and spiritual values which are often sadly lacking now. The sons, for whom no living could be found at home, went far in the professions or helped to build our Empire overseas. I have only to think of that farm and the men who worked it to know how pleasant and easy my life has been, in comparison, on the same acreage in England. I have never had to stick a living beast to get sufficient blood, and mix it with oatmeal, to keep my wife alive after a confinement. Nor, as my father did at the age of eleven or twelve, drive cattle through a winter's night to sell at market when his father was too ill to go and debts had to be paid under the Scottish tradition that nothing must be owing on the first day of January.

The great weakness of large-scale farming lies in its failure to make the best use of acres. Its greatest reproach is that one-sixth of the farmers occupy rather more than one-half the land, and produce rather less than one-half the produce, at a time when nearly all our economic and political planning centres round the problem of—Can Britain feed herself? It has always been deemed a worthy aim to grow two blades of grass and two ears of corn where only one grew before, and that will be achieved if two farmers flourish where only one lived before. In the past it may have been a business proposition for a few exceptional individuals, with great organizing ability, to overcome the inherent weakness of the system, which is exposed by its lack of continuity, for how rare it is for the son of a large-scale farmer to build on his father's success. At the present time the multiple holdings are being taxed out of existence. If a farmer had been earning £10,000 a year since 1940 on a two-thousand-acre holding, he would not have been permitted to retain sufficient of his earnings to capitalize his business at present prices. Apart from this, from the national, agricultural, financial, social and cultural aspects large-scale farming is undesirable, and until this is generally recognized we will fail to have a prosperous industry, with all its repercussions on national and social life. When it *is* realized that there are only two kinds of large-scale farms—those that have failed, and those that will fail—shall we be able to replan our agriculture?

The biggest problem, in British agriculture is said to be that of manpower; and the solution only to be found in attracting and retaining

the right type. A well-known authority on farming once said, ‘To-day only two kinds of people settle happily in the country—those that know no better and those that know best. Only the latter will remain. . . .’ Farm work, as such, is unpopular. Sixty per cent of the workers are over forty years of age. In sixty years their numbers have declined by 50 per cent. Between the wars, in spite of a tendency for the work to be directed by older and older men with the labour of younger and younger boys, one-fifth of those directly employed in agriculture were lost to the land. At the rate of one thousand a month, year in and year out, those who had a guaranteed wage and hours deserted the industry; while the farmers, and especially the small farmers, who had to stand the full brunt of the depression and economic blizzard, stood firm. We were told that the farmer earned less than his workers for longer hours and more responsibility; he had little or no interest on his capital; his produce was not wanted; he was inefficient and behind the times; and yet he had character and ability to weather the storm, for the whole story of farming is not told in agricultural economics.

To-day the position is unchanged. If we were to advertise for a cowman to take sole charge of a dairy herd on an isolated farm, the response would be very disappointing. On the other hand, if we advertised the tenancy of the same farm we would be overwhelmed with applicants. It is only natural that we should find this same contrast in farming as in human nature. If you offer a man £5 a week for fifty hours—that is farm work, and he soon becomes critical, discontented

and dissatisfied. But if you let him a few barren acres, on which he has to work long hours to earn a bare living—that is sturdy independence, and he is as happy as the day is long. In the same way, if you want a woman to look after your house, in which are provided all the labour-saving devices, and arrange for short hours, light work, regular holidays and good pay—that is domestic service, and no one will do it. On the other hand, if you ask some woman to share your life, in an awkward and inconvenient old farmhouse, in which there will be no labour-saving devices, and you will also want her to look after the poultry, help milk the cows, do the farm books, breed and rear your children, and perhaps manage on very little money—then, by the alchemy of love, that which would be drudgery anywhere else becomes fulfilment. Who can doubt that it is the sense of responsibility and pride in ownership in the small farmer which turns sand into gold, so that in due season both farmer and wife reap that which they have sown?

But the real test is to ask them, what would they rather see? Their sons and daughters in sturdy independent mastership of the soil, proud of their ability to do any job on the farm, and having those rewards and consolations which only the true farmer knows, or these same sons and daughters working as mere economic units of labour on some large-scale farm? Or if they had a very clever and intelligent child, who could aspire to a university education and a degree in agriculture, would they like to see him putting in his time as a Grade III civil servant under the

National Agricultural Advisory Service, virtually ignored by the agricultural community?

Socially and culturally, it has always been considered the highest form of human endeavour to direct one's own labours in productive and creative work. To do what you like, when you like, how you like, in harmony with the land, the weather and the seasons, is to develop an individual personality and character so often lacking in our over-urbanized and machine-made civilization. Which would bring out the best in a man: to spend his life driving an artificial manure distributor and bagging grain off the dryer, according to season, on some large-scale farm; or to plan and work his own holding, perhaps gained by his own strength of character and tenacity of purpose? To say, as it is often said, that a man can earn more for less effort working on a large farm is to deny not only the true pathos and sublimity of human life but to ignore one of the greatest and fundamental strivings of the human heart, the desire for independence, which, once achieved, more than compensates for the hard and exacting life of the small farmer.

Why need anyone be appalled that a farmer may work a few more hours than other members of the community; that he may not earn quite so much per hour as others in dull monotonous work often performed in uncongenial surroundings? The life has its compensations, or so many would not be anxious to take it up. In an age when comfort and security are too often put first, we need one section of the community for whom God may answer Robert Burns's prayer:

For whom my warmest wish to Heaven is sent.
Long may thy hardy sons of rustic toil
Be blest with health, and peace, and sweet content!
And, oh! may Heaven their simple lives prevent
From Luxury's contagion, weak and vile!
That however crown and coronets be rent,
A virtuous populace may arise the while,
And stand a wall of fire around their much-loved isle.

Our town-bred population has to work hard at its games, sports and pastimes to keep itself fit for work, and at the same time suffers from industrial neurosis. Why not have work which keeps you fit for life? I remember meeting a party at a Scottish Youth Hostel who were priding themselves on their endurance in having travelled seventeen miles through the Larig Ghru Pass on a bad day. I, in the same time, had come through the Larig-an-Laoigh and the Larig Ghru, more than twice the distance, without a thought to the physical effort involved, and for which my life and work fitted me. One of the great consolations of being a working farmer is that one's body becomes the servant of the mind and will.

Who is the ordinary reader to believe? The farmer or the economist?

Two men look out through the same bars,
One sees the mud and one the stars.

How true that is. I have toiled in the mud, but I have seen the stars. The economist with his dusty columns of figures would look for the Government to pull the farmer out of the mire. I was taught, 'Where there is mud—there is money.' It's up to the farmer to extract it, and he will derive more satisfaction from doing so than from filling in all the forms for subsidies and doles ever invented by the bureaucratic state.

I suppose few writers have written more than Dr. C. S. Orwin, for twenty-five years head of the Oxford Agricultural Research Institute, on the economic, social and industrial aspect of the size of farms. Many readers will have read his book, *Problems of the Countryside,* or seen the film, *Twenty-four Square Miles,* based on a survey made by his department. He seems to have every sympathy with the worker on the land (who leaves it at the first opportunity), yet advocates a new enclosure movement, under which the land would be farmed in larger units, which, as I see it, would only reduce the chances of the worker becoming a master man. Dr. Orwin, in his book, tells us: '. . . The smallness of the farming units contributes in another way to the discontent of the workers. It offers no advancement to the skilled and ambitious man.' He goes on to say: '. . . a young worker of twenty is entitled to a man's wage, as fixed by the Agricultural Wages Board, and he has nothing further to hope for until he qualifies for his old-age

pension.' Personally, I should have suggested that a reduction in the average size of our farming units would have given an ambitious worker a better chance to become a farmer.

The small farm is regarded as an anachronism. On the other hand, my offer made some years ago, of a substantial sum to charity, if any large-scale farmer, on similar land, could produce properly analysed accounts to show a greater output per acre, per person employed, and capital involved, over a longer period, than it has been possible to achieve here, at Oathill Farm, has never been seriously challenged. The nearest approach was an 850-acre farmer with less than half the relative efficiency and three and a half times the capital involved. Every practical farmer knows, and economists' figures prove, that the economy of the small farm intensively stocked and cultivated can beat, and always will beat, the large mechanized farm in output per acre and per person employed; for any advantage gained in organization and mechanization is outweighed by the difficulties of labour control, transport of machines and produce, and adapting production to changing demands.

The same applies to scientific knowledge and direction. The Royal Agricultural College uses a system of efficiency indices by dividing costs into net output. They make a comparison of their own figures in a recent publication with those of other Cotswold farms. As we occupy similar land, the figures are of great interest to us as an indication of the value of the family type of farm.

	Cotswold Farm	*R.A.C. Farms*	*Oathill Farm*
Land use	10.3	16.4	61.3
Labour	1.7	3.8	5.49
Capital	0.66	0.8	1.6

However, this is all by the way; we as practical farmers are only concerned with the land as it is, for in neither Dr. Orwin's time nor ours will the land be re-distributed, re-equipped and re-organized. Obviously it would bring injustice and oppression such as was experienced at the time of the earlier enclosures, and which we hope democratic sentiment would not permit. It is true that we have seen hundreds of honest, hard-working people robbed of their businesses, with totally inadequate compensation, in the nationalization of road transport; we read of bakers who were threatened with seven years' penal servitude when it was suggested that they might not work a totally unnecessary rationing scheme; but even a Government responsible for so much vicious class legislation hesitated to destroy the greatest incentive a farmer can have—to own the land he has loved and farmed, and pass it on to his children. If there should be any redistribution of the land it should be on a basis of one farmer, one farm, or the splitting up of large farms, leaving the present occupier with the house and buildings, first choice of sufficient land to ensure an adequate living, and of course proper compensation for the land he had lost. For no man needs two farms any more than he needs two dinners; and a man who can earn a living on a

large area of extensive farming can do even better by intensifying his effort on a smaller acreage.

This book is written on the assumption that owner-occupation of the land will always be possible; for without the rewards it offers there are easier ways of earning a living than in farming. It is intended to show others, by my writing, as I can by my practical experience, how to achieve sturdy independence on the land, however abhorrent the idea may be to those who feel that agriculture can only be organized on a basis of slaves and slave-drivers. If agricultural authors tend to lay themselves open to criticism, being more prone to theory than to practice, I, at least, have shown and demonstrated, in our farming practice over a period of twenty-five years, the pattern on which we should like to see our agriculture based.—An industry so productive as to be independent of Government doles, subsidies and interference.—A profession in which every farmer should be his own landlord, architect, builder, critic and mentor, making Agricultural Advisory Services and County Committees unnecessary, and removing the blot on the farming escutcheon.—And above all, an occupation in which there should be no labourers, only those working, studying, planning and saving for the day when they, too, might enjoy an independent mastership, in the most worth-while of all occupations, the cultivation of the soil and all that goes with it.

This is no vain dream, it is the basis of Scandinavian agriculture. It is the principle of the American way of life to elevate the mass of

mankind, by education and the diffusion of knowledge, to act a part in the great duty of self-government, and this is the only system worthy of a great nation.

I have demonstrated these principles in practice to nearly five thousand people, in organized visits from Farming, and Young Farmers' Clubs, in parties from the universities, and including many foreign visitors. Although criticism has always been sought and welcomed, belief has been unanimously expressed in the value of our system and teaching, which ensures full utilization of the land, in good times and in bad, and enables others to enjoy the things we have enjoyed, even in the lowliest of all occupations as humble cultivators of the soil, working to the glory of God, in service to their fellow men, and as an example to others.

CHAPTER IV

Farming as an Art

Now a farming philosopher has a great advantage over the professional moral philosopher, for he is not concerned with the tabulating of theories in a spirit of ethical and sceptical detachment, but only with a life to be lived.

To seek to discover the principles on which life should be lived, and the rules which should govern human behaviour, is a quest as old as mankind; but farmers are fortunate in having the tenets of a strongly held and well-tested faith that all that is required of them is that *they should leave the land for which they are responsible far better than they found it.* On a material level, those who succeed in doing this must have prospered, and in a higher sphere, whether they realize it or not, they have lived in the glad service of humanity. Life becomes an adventure and worth while, and the sense of frustration and lack of incentive so common in nearly all walks of life does not apply when dealing with the land and living things. There will still be toil and disappointment, perhaps suffering and grief, but there will have been an object and purpose in a farmer's life which numbers him among the supremely happy people on the earth; for in working with the forces of creation he will be helping with the work of the Creator Himself, and

not only in some tiny fragment of evolution, but by ensuring the future well-being of the human race.

The first aim of the farmer must be to live in harmony with nature and his surroundings and to be master of his circumstances. Probably in no occupation is this easier, for in farming one is concerned with natural, wholesome things. Stocks and shares may pass away, but the land never does. It caters for man's sense of personal property, it binds him with innumerable ties, the memories of past harvests, hopes and dreams. What farmer, worthy of the name, does not identify himself with his land? Where a man's heart is, there is his home, and is not a farmer's home usually set among his fields?

To live in harmony with the land the farmer must first understand it, not only as a practical business but as a way of life. The scientists will tell us that farming is a constant fight against nature, for left to itself any farm would revert to primeval forest, but that comes from being concerned with pulling it apart and studying some small detail, which makes his conception of the whole no more satisfying than a wireless comedian's description of married life. Just as marriage is a partnership in the business of living, so is farming a unison between man's labour and the soil. Quite rightly, it is called husbandry, which implies loving care. Science, of course, has its place in farming; but while the scientist should stick to science, the farmer should concentrate on the art of farming, for science merely explains the ancient methods and proves their efficiency.

Now the land is a good partner but a poor creditor. It is often likened to a banking account which will stand heavy withdrawals if substantial deposits are being made, and providing a satisfactory balance is maintained there will be no 'bank charges'.

Management must therefore play an important part in the art of farming, for all the theory in the textbooks, all the hopes and dreams, can lead nowhere unless the day-to-day routine goes on. Many people can plan the stocking and cropping of a farm, but it is in management that they fail. How often we see the most elaborate plans being drawn up in the amateur farmer's office, and two or three men idly standing about under the cartshed. On the other hand, only a definite long-term policy enables a farmer to make a real success; it is not sufficient to plan from year to year, there should be a definite aim and goal. What scope there is for a long-sighted farmer, how much can be achieved, even from the most humble beginnings, if one keeps steadily on. If a man has faith in himself and the land there are rewards and satisfactions which those in other walks of life may never know. It is true that the most worth-while things are not easy, or may take a long time to achieve, but that may give them a value that can only be measured by the effort involved. How elusive are the qualities at which a farmer may aim in pedigree stock-breeding, how slowly is fertility built up in a naturally poor soil, but how quickly the seasons and year slip by, showing we are happy and contented in our work, seeing our plans mature and our dreams come true.

On the practical side the art and practice lies in maintaining a balanced system of farming. The war years must have driven this home to nearly all our farmers, as indeed it has been proved through all the changing fortunes of British agriculture. The introduction of the Norfolk four-course rotation in this country two hundred years ago, with its emphasis on corn, roots, beef and mutton raised the standards of farming from a mere subsistence level to a golden age in farming, in which Britain led the world; for not only was the yield of grain doubled, but the production of fine stock was made possible on a scale hitherto undreamed of, and its progeny has spread to the four corners of the earth.

In the great upheaval of 1939 the farmer with a balanced system of farming found himself best equipped for wartime production, when corn, milk and potatoes became the first priority—for land in regular rotation can be relied upon for more consistent production than freshly ploughed pasture, where the stored-up fertility is often offset by wireworm infestation. The skill, implements and knowledge were available, while the full utilization of the waste products of farming was also possible. Then towards the end of hostilities the official policy was to encourage the production of milk, fats, wool and vegetables, involving no drastic change in a balanced system of farming, for instead of thinking of the cereals as a cash crop the mixed farmer knew that there is no better way of selling home-produced corn than in the form of livestock products, at the same time building up the depleted

stores of fertility in the soil, inevitable when so much corn, sugar beet and potatoes had been required for direct human consumption.

Over the years, how clearly has any highly specialized form of farming proved inconsistent with the best traditions of British agriculture, and unreliable as a source of economic investment. The specialized pig, poultry or dairy farm, with its high capital costs, unbalanced labour demands, its divorce from nature, the risks of disease, and waste of by-products, found almost insurmountable difficulties in adaptation to full wartime production; while in the same way the large-scale mechanized grain-growing farm is faced with even greater problems in changing back to normal demands. On the other hand, where the balance between cropping and stocking has been carefully maintained only minor adjustments have to be made in general farming policy.

The farmer's ultimate aim is to make the best possible use of land, labour and capital, not only in the monetary sense, but, as I have indicated, from the equal satisfaction which only comes from creative work. This is only possible when a long-term plan is adopted, based on experience, leaving room for expansion, suited to the farm, and for which there are certain guiding principles which have been proved by time.

Now if we look at British agriculture as a whole, we will see from the Agricultural Returns that our 14,000,000 acres of arable are farmed on the same basis as the old Norfolk four-course rotation—that is, one-

half the area in corn and one-quarter each to temporary grasses and root crops. But the individual farmer has long since fallen from grace, for it is rare to find the rotation still followed, many farmers in the eastern counties growing more than their share of roots, in the midlands and south too much corn, in the west less than they should of either. It is often contended that a farmer should farm to the climate, and with this principle no fault could be found if better use were being made of grass in the districts best suited to it by heavy rainfall, if in the areas naturally adapted to corn and potatoes, pests and diseases were not working havoc, when the farmer could easily reap the benefits of rotational cropping and a balanced system of farming.

Generally speaking, heavy land, which is often more productive though expensive to work, can be farmed to the best advantage on one-third arable to two-thirds grass, either permanent or leys. Light land, while less productive, is cheaper to work, and can be stocked and cropped on a basis of two-thirds arable to one-third grass. On medium soils, and with average rainfall, where production and costs are better balanced, the percentage could be half and half.

Not only is the proportion of arable to grass important in planning a balanced system of farming, but the actual rotation of crops on the arable has to be taken into consideration, as also has the percentage of grass to be mown, for hay, dried grass or silage, whether on leys or on permanent grass. The greater productivity of meadow and pasture plants on heavy and retentive soils enables a heavier concentration of

stock on the grazing area during the summer, so that a larger area may be devoted to the hay crop, which in turn offsets the smaller percentage of arable land available. With the lighter, easier-working land which lends itself more readily to cultivation and catch-cropping, greater reliance must be placed on arable crops for the production of winter feed. The yield of hay is often uncertain, but where the land will stand treading, and may even benefit from it, the farmer is in a very strong position in regard to winter keep if full use is made of undersowing with trefoil and rye grass for stubble grazing, and with trefolium, rye, rape and kale in their proper place.

It will be seen, therefore, that once the proper balance between arable and grass has been established either class of land can carry approximately the same stock. This is a very important point to bear in mind when taking a farm, for light land is usually far cheaper to buy and easier to cultivate, and certainly more agreeable to live and work on.

A sound rule in planning the cropping of a farm is that the greater the percentage of arable the longer should be the rotation. Where the proportion of arable to grass is small a shorter rotation is desirable, unless the area of pasture and hay is incorporated by means of long-term leys. A four-course rotation, with roots occupying one-quarter of the land, would be suitable on the farm which had one-third arable, while an eight-course run, in which roots and a forage crop, either for

hay, silage or soiling, each take up one-eighth of the rotation, could be recommended for lighter land with its higher proportion of arable.

In planning such a system, the balance of labour is also maintained, the area of roots to be hoed and harvested is the same, a lighter yield of hay is gathered from a greater area on the light land, and the higher yield of grain and straw will take longer to thresh from the small acreage of heavy land. Where stock has to be housed in winter to avoid puddling the land, more manure will have to be carted out; on light land, which will stand treading, much of the manure can be deposited direct by the stock for the greater part of the winter, except perhaps in very exposed situations. But even then easier carting conditions will justify the difference.

Unless special circumstances dictate that only a certain class of stock should be kept on any particular farm, many benefits may be derived from maintaining a balance between the different branches of livestock husbandry.

A hundred-acre farm, with a proper proportion of arable as indicated, would carry and be nearly self-supporting for twenty-four cows and their followers. The same land could carry half the number of cattle, forty breeding ewes, a dozen sows, and three or four hundred head of poultry. This would yield a far greater financial return, spread over the peak of labour which pure dairy farming involves night and morning, and divide the risks inevitable in more specialized production. At the same time this would give far greater scope for expansion, for

with the building up of fertility by pigs and poultry, which also within reasonable limits can increase, the time would come when the full stock of dairy cattle normal to the size of the farm would be carried. In other words, the farmer would have a pig, poultry, and dairy farm on the same acreage.

With diversity of interest and intensive farming, the farmer does not feel himself tied to any particular branch and other possibilities present themselves, such as a small area devoted to seed production, for which it would appear there is an ever-growing market for the highest quality. In the past this seed was produced on small farms on the Continent, but the war has taught us that the English farmer is equally well able to produce it. In a few favourable areas a small acreage of market-garden crops may not be out of place, for if there is no demand in the markets in a glut season the produce can be consumed on the mixed farm with little loss to the farmer and with benefit to his land. However, as a general rule, and in fairness to a very hard-working section of the community, market gardening should be left to those who specialize in it, for they produce a better-quality article in abundance at the right time, and there is no need for the farmer to spoil their market when he is better employed in and equipped for livestock production. I have said there is a good living in farming if only by the elimination of waste, for when this becomes second nature you will see orchard coppice or osier bed, according to the nature of the soil and locality, incorporated in the scheme of things, and a farmer worthy of England's green and pleasant

land. For in working and using a really sound system of balanced mixed farming, based on the reinvestment of capital, the building of fertility, and a long-term policy of progressive farming, not only is the farmer ensuring his future well-being and peace of mind, but providing useful employment, realizing natural assets, helping to maintain the link between farming and its associated industries, setting an example to others, and preserving the traditional skill of the country people, without which no system of agriculture can survive.

To have a farm and system of which you can be proud is almost a guarantee of success. You have standards to maintain, and from which you will not readily depart, at a scare of war or a change of Government. The latest novelty in machinery or theory in farming practice will not tempt you to discard well-tried methods. An American author condemning the plough will not cause you to dump a useful implement in the nearest quarry, nor the latest discovery in selective weed-killers spoil your crops or ruin your land because the scientists made no allowance for what they did not know.

The great safeguard for the land and the farmer's fortune is therefore a definite long-term policy of progressive farming. It is not sufficient to farm as your father and grandfather farmed; many have failed through trying to do that; the aim and object must be to increase production steadily. In all my experience I have never known a farmer to fail who planned and carried out a programme of a steadily expanding production. Any farmer who studies what he has produced

in the last year, or five years, and determines to build on that, is assuring his future.

Times may be bad, the prospect grim: all the more reason for demonstrating confidence. Living, as we are, in the ruins of what was the greatest Empire in the world, liquidated by the folly of politicians, each one of us can lay the foundations of a new and better order, by seeing that in the tiny piece for which we are responsible a seed is sown which may blossom in the fullness of time.

I remember when I first went to school there was a craze for gardening, and little plots about a yard square had been marked out in the centre of a large shrubbery for the children who cared to have them. Most of the children planted expensive bulbs, or even flowering plants, by burying pots in the soil; but I took along a little seedling oak tree, which as a town-bred child I had taken home from the country the previous year and grown in a window-box. The teacher laughed at my little tree, for she said it would be as dull and as slow as I was myself. And she asked me why I had planted it. I said it was because it was all that I had. Now since that day I have read the works of some of the world's greatest philosophers and agricultural economists, but I have never been able to think of a better answer. Even to-day that oak tree is not a very big or a very good one, but it does fill a place in the school garden, and it has always served to remind me that you need not be clever, wealthy, or intelligent in this world, and especially in farming, provided you are doing the right thing, in the right place, and at the

right time. For if you can plant an oak tree with enthusiasm at the age of seven you may at least be providing for other children to work or play in its shade. And to me it has always been a happy omen for an occupation in which we say, 'You should farm as if you would farm for ever, and live as if you die to-morrow.'

In the worst years of agricultural depression, people often asked why my brother and I kept on working when there was nothing to work for. We always told them, for the good time which lay ahead. Now they ask us why we took the years of toil and sweat and strain to build a farm up to a producing and efficient unit again, when the rewards to which we might legitimately aspire are taken away in taxation, overshadowed by inflation, and threatened by the future nationalization of the land. The reason is, if I am able to judge, that it has become a habit, the striving after perfection in an imperfect world. We will never attain it, but we have enjoyed the golden years, in health and strength and simple happiness, with something to do, something to love, and something to hope for. And we do know that, had the underlying principles which have been applied here for the last twenty-five years been generally applied in British agriculture, this country would now be practically independent of imported food, and the major political problem of our times, how to feed the people, would never have arisen. For others the theories of what should be done; we have had the satisfaction of demonstrating it to many of the world's leading scientists and agricultural economists, Empire statesmen, Cabinet

ministers, and many, many hundreds of ordinary farmers who have deemed this place worthy of a visit. What was perhaps equally important was summed up in a little speech of thanks by the Chairman of the Aylesbury Young Farmers' Club, at the end of an afternoon when we had had the pleasure of entertaining several clubs, when he said, 'Not only have you taught us a great deal about farming which is new to us, but something which many of us have never realized, that it is possible to combine hard work with happiness.' That, once again, is the object of this book.

But from the practical point of view, what can be achieved in this direction? In 1947 the Minister of Agriculture appealed for a 20 per cent increase in production within five years, that is a 5 per cent increase per annum between 1948 and 1952, when what is now called Marshall Aid would finish. Such an appeal is, of course, totally inadequate, but fears have already been expressed that it will not be achieved. I wrote at that time an article in *The Farmer and Stockbreeder* pointing out that it would be too little and too late, that nothing short of 100 per cent increase could save this country from starvation, bankruptcy and despair, and that the desired result could be achieved by self-help towards efficiency, for the Government did not envisage an overall increase in production in their £100,000,000 target. The emphasis was no longer placed on shipping space, as during the war when all our cereal production was called for, but on dollars. A ton of corn turned into eggs was of greater value than an extra 20 cwt. of

grain. When the limit of production compatible with a balanced system of farming is reached the farmer turns to the sale of livestock, but the keeping of livestock, if the manurial residues are properly utilized, steadily builds fertility and the inherent capacity of the land to produce.

Is it practicable? My experience has taught me that it is, providing our farmers are prepared to work, to think and to plan. I have always believed that the solution of the individual farmer's difficulties, in good times and in bad, was to be found in increased production. Circumstances were making it possible for all British farmers to participate without risk of competition and over-production.

To be short of labour, machinery, and feeding-stuffs was no new experience to my brother and me. When we started farming we were short of all these things—due to lack of capital. In spite of this, on a starved and semi-derelict farm the output per acre in the first year was equal to the average of British agriculture as a whole at that time. Then by nothing more than hard work and the elimination of waste our output was doubled within five years to twice the original gross output per acre.

With increasing stock, natural increase alone, less what we had to sell in order to live, and the restoration of fertility, output was again doubled within the next five years, by the economic conversion of the primary products of the soil into the more valuable livestock products. And so it has gone on until it was possible to show a twentyfold increase in gross production from the original gross output per acre of

£7 in 1924 to £150 per acre in 1946: a substantial increase per annum over a period of twenty-three years. There is every indication and reason to hope that this orderly progression will be maintained for at least another five years.

It has been achieved by what I regard as the most important factors in the art of farming: taking a long view and careful planning, not only over the years, which calls for steady development, but day by day and week by week, to make the very best use of everything, time, labour and materials; and by being prepared to work very long hours at seasonal work, such as hoeing, when an hour's work at the early stages will be worth a day's hoeing later.

Feeding-stuffs are used on the stock which will give the highest and quickest rate of conversion; pigs and poultry get the cereals, while sheep and cattle make do on roots, hay and silage, produced in abundance by the manure from the pigs and poultry, but also return to the soil that which is necessary for the heavy production of cereals. In other words, we use the balanced system of farming.

Careful records are kept on every department of the farm, so that progress can be measured, and any falling off in production corrected. Above all, we try to use everything to the best advantage, every handful of chaff, every armful of straw, and every forkful of muck, so that nothing will be wasted and all contribute to the whole.

The cumulative effect of studying every detail and maintaining a balance between every department of the farm has contributed to the

steady increasing output; but the prosperity and confidence which come from a reasonable standard of efficiency mean that the farm can be equipped for a high level of production.

The greatest contribution in recent years has been the full mechanization and the installation of electricity. On this small farm of 85 acres, the average-size holding in British agriculture, there are no less than thirty-four electric motors, every one ready to do some essential job, saving time and manual labour, leaving us free for other work. For a mechanization which only saves labour, without increasing production, is a too common fault in this country, wasting capital without any return, and undermining the morale of the workers, for a busy man is a happy one. In the same way, electric fencing has made possible the efficient utilization of grass, the most valuable of crops, in a way which would not be possible without it, for the animals no longer range but are folded instead.

The practice of taking a silage crop, of oats, peas and vetches, in the same year before the root crop, nearly doubles the winter keep from a given acreage, in turn contributing to the full utilization of grass in the flush periods by maintaining the stock necessary for that purpose in the months of scarcity. The undersowing of corn with trefoil or rape makes yet another contribution to the stock-carrying capacity of the farm.

Even propaganda has its place. We tell those who work with us that one sheaf of corn will make a loaf of bread; and one more fat pig would

provide the bacon ration for one man for sixty-two years and ten months at the then rate of 1 oz. per week!

Intensive stocking with cattle, sheep and poultry

How many farms in this country are in a stage of development through which this farm has passed, from backwardness to a fair standard of efficiency? Any farmer can add up his total sales for the year, if only by consulting his bank book if everything was paid for by cheque, divide the total by the acres he occupies, and find the output

From this—

—to that with an outlay of £1,000 over twenty years

per acre. The average for the country is about £12 10*s*. per acre; to achieve the ministerial target it must be increased by 50*s*.

If the farmer finds he is well above the average, it means he has an efficient farm and system on which to build. If below, then there is ample scope for improvement, but well within his power, for the increased output per acre is comparatively small.

An overall increase need not be envisaged, from the Government point of view, for the emphasis is now laid on dollar-saving commodities, and the improvement brought about by more economic conversion. The corn which all farmers are allowed to keep back can be converted into three times its marketable value if skilfully fed to pigs and poultry, while the careful use of their manure will step up production while saving money which would otherwise be spent on artificial manures. The farmer can always rely on the cumulative spiral, if he avoids the vicious circle. From the national point of view the target could be easily met, for the extra output required from each farm is comparatively small, a little more milk, slightly more eggs and bacon, beef and mutton, but it adds up to big totals. A little more thought, a little more work, a little more care will give it us, but only by the individual effort of the individual farmer. But to a progressive farmer 5 per cent increases are mere chicken-feed; there is hardly a farm in the country which cannot double its output in five years if a long-term policy of intensive farming is planned. When one considers the agricultural output of this country in, say, 1870 when everything

was done by hand or horse-power, what could be achieved if we were all prepared to work as our grandfathers did, if we put in the man-hours with the machinery now at our disposal! Drive through the country on a lovely Saturday afternoon in autumn, and you will see field after field of potatoes half lifted, the work being left for a holiday, even if the weather changes, the crop rots, and the country starves. In a recent copy of *The Farmer and Stockbreeder,* on one page Professor Scott Watson was warning the country that with the end of Marshall Aid we might have to return to bread rationing, and on another the Minister of Agriculture was weakly admitting that nine chairmen of County Agricultural Committees had warned him that if the Government supported the Anti-Blood Sports Bill he could say good-bye to production targets—indicating, to my mind, that our vociferous farmers value their amusements more highly than the well-being of their industry or the welfare of their fellow men. What farmer, worthy of the name, if it means a husbandman, could bear to see a beautiful field of wheat galloped over; what stockman, with a constructive breeding policy, could watch the daughters of a proven sire abort through being run round a field, and all his work undone? What poultry farmer could tolerate a fox in his vicinity for the amusement of the idle few? We may need a change of Government, but we also need a change of heart, a moral rearmament of our farmers, a rekindling of a sense of responsibility towards the land, and until those things are achieved we continue on the downward grade. To speak of the Anti-Blood Sports

Bill as an encroachment on the liberty of the subject is a hollow mockery as far as the ordinary working farmer is concerned, as long as the Agricultural Act stands on the Statute Book, meekly accepted and even welcomed by the farmers' leaders, with its denial of the promise made by the great leader of the National Government; 'The emergency measures which restrict the liberty of the subject shall disappear with the passing of the emergency, and the extraordinary powers granted to the executive shall vanish with the advent of victory and of peace.' This Act perpetuates the evil and corrupt system which had been tried for seven years and found so sadly lacking in British justice, Christian charity, and human decency. It was said that good farmers had nothing to fear from the Act. Believe me, they had nothing to fear without it, for no section of the community are so well able to look after their own interests as successful farmers. Those of us who have made our money in farming could retire. Those of us who are used to hard work and simple living could emigrate to the Dominions, where they still have some regard for human liberty and personal responsibility. But it is for our weaker brethren that I am more anxiously concerned, those just starting in farming, and those who, through force of circumstances beyond their control, may fall under the displeasure of these County Agricultural Committees and be robbed of what little they have. Any young man starting in farming to-day must expect to be hampered and frustrated by officials and officialdom, and especially if he has a definite long-term policy of progressive farming or constructive

stockbreeding, not apparent to casual inspection, beyond the comprehension of little minds and the paltry expedients of politicians. But if he can resist them long enough and go steadily on, the time will come when he will receive a recognition, if only in the envy of those who sought security among the arid wastes of Whitehall or the strife and petty jealousies of the Committee offices. After ten years of unlimited powers, often abused, the advocates of this system can only claim a certain percentage of Grade A farms, low as that standard is, yet I know of no farmer who, given proper guidance and encouragement, would not have happily co-operated in reaching targets far beyond those envisaged by any political party. My own farm has been cited in a number of official publications as a model of production and efficiency, with a gross output, on naturally poor land, of many times the average of British agriculture as a whole, yet I was always depressed and angry whenever I was visited by the local member of the Committee in the early days of the war. What must have been the state of mind of farmers whose farms were not equipped and organized for an all-out production drive based on a balanced system of farming? Countries are well cultivated, not as they are fertile, but as they are free. Holland, Denmark and Switzerland are shining examples of this, and only in countries free from control can you eat well to-day. To invoke Government assistance is like tying a brick to a cow's tail when she has flicked you in the face. The next time she swings her tail you will be hit on the head with the brick. Not only will it knock you out,

but the dirt which adheres to it will probably give you blood-poisoning through the abrasions it causes. To have freedom is only to have that which is absolutely necessary to enable us to be what we ought to be, to do what we ought to do, and to possess what we ought to possess, and among these things I include freedom to stock and crop a farm as it should be stocked and cropped, for here the national and the farmer's interests are identical. The more we produce the better it will pay us, and if our farms are self-supporting we shall have less need to buy.

But what we cannot change must be endured, so let us forget the political aspect, for more than half the joy in farming lies in the actual work. That the farmer finds satisfaction in his surroundings there can be no doubt, for he usually has everything around him that leads to happiness. He eats, sleeps and finds his pleasures in that one spot he calls his own, but it is only in the exercising of a craft that the other things become possible. You cannot enjoy your food if you look out of the window at a field smothered in charlock; the glory of a summer night will be spoiled as you go to bed if you smell a hayrick getting hot; nor will a row of corn-stacks leaning on their props at half a dozen different angles fill your heart with joy, even if all is 'safely gathered in'.

Every day the farmer has his problems to solve, even on the best-managed farm, and often the best way of solving them is found while steadily working at something in which long practice and muscular rhythm leave his mind free to deal with some business difficulty. Some

farmers tell me that their most profitable time is spent leaning on a gate; they are seldom agricultural craftsmen. When a man is master of his trade he can thatch a rick, or neatly turn his furrows, and plan his work for a week ahead. That is where the small farmer scores; all the planning that goes on in a large estate office will never compare with the shrewd glance at the rising sun as the cows come in from the fields, and the changes of plan which are made as the milk purrs into the bucket, and the men get their orders down to the last detail at seven o'clock, including the reminder to take their coats with them as it will be wet before midday. The farmer does nearly all the thinking for everyone on the farm, and a great deal for all humanity, for the greater part of it would have long since starved to death but for the foresight of those who plan a rotation, plant potatoes after a year in which their unwanted stocks would have rotted in the clamps had they not utilized them for stockfeeding; the stock to consume them only being available through defying the edicts of shortsighted politicians and technical advisers in their recommendations to scrap pigs and poultry at the outbreak of war. This country owes a lot to those who go steadily on in good times and in bad, showing they have faith in themselves and the land. All good works, all the future of mankind come from faith, and nowhere can it be better expressed than in farming; and that means pride in craftsmanship, setting a good example, doing a good day's work, and kindly and firmly exacting a full day's work from those who work for us, strict honesty in dealing, lending a helping hand to those in

need and worthy of it, and above all a belief that in doing our work we are doing God's will.

CHAPTER V

Farming as a Craft

If you search the library shelves, or the columns of the agricultural papers, you will find very little on the practical aspects of farm work—how to make the best use of your time and energy, and enjoy that which is the mainspring of creative work, the actual doing of the task. Skill is scarcer than scientific knowledge to-day, for there is a greater reluctance to do manual work and to master its finer points, and with it a decline in pride and craftsmanship. Yet properly approached, it is one of the most satisfying of all human endeavours. And I write this, not as a long-haired, green-corduroyed, academic theorist, but as a practical working farmer, who for thirty years has been out of the house before five o'clock in the morning, and has gone steadily on, apart from mealtimes until seven at night, as a normal routine, and later, of course, in summer, when poultry have to be shut up at dark. No Saturday afternoons off, four or five hours' work on a Sunday, and perhaps only the evening for agricultural journalism or authorship. Just think of it! This has given me nearly another fifteen years of life, compared with the 'seven to five' type of farmer. Farming, they tell me, is a hard and exacting life, but I have always enjoyed the work, simply because I have mastered it, and time tends to hallow the memories in the passing

years. At the same time, the life is not too narrow or restricted; once our farm was established, I allowed myself ten days' holiday every year, in which I travelled as far as possible, only having to forgo this pleasure during the war years; in the last five years I have addressed more than a hundred Farming Clubs and similar organizations on winter evenings; interesting and widely travelled people have stayed here and I have enjoyed their company at mealtimes, or if they cared to talk to me as I worked; and of course in steadily reading over the years I have acquired a measure of general knowledge which I trust saves me from boring my friends, as a man solely preoccupied with his work. It is true I never play cards or games or gossip in the pubs and markets, but life is too short for that. But I can take my gun or ride a horse when I go to see the sheep, while others pay a lot of money for the same privilege. In my case the gun provides a meal, while the horse is growing into money. Occupation, we are told, is the necessary basis of all enjoyment; every moment of time, like a thread of gold, is of value; nature has made work a necessity, society makes it a duty, habit makes it a pleasure; and there is no truer and more abiding happiness than the knowledge that one is free to go on doing, day by day, the work one loves best, that there is a steady market for all one can produce, and this also supports our own way of life. Perfect freedom is enjoyed by the man who lives by his own work and in that work does what he wants to do.

The secret of work is well-arranged time and the saving of unnecessary effort. Watch the amateur farmer fetching a barrow-load of mangels from the camp; he loads it up, and then turns it round loaded—extra effort for no purpose. Note the stark simplicity of the experienced farm worker; he walks up the field, and a chain before he reaches the sheepfold he takes off his coat and hangs it on the hedge. He then carries his hurdles, sets the new pen, twenty-two yards down the field, stretches out his hand and picks up his coat. A lesser man would have taken off his coat where he started working and then have to walk back to where he left it. A small point, but simplicity is the hardest of all things to copy, and the most valuable lesson which may be learned from the best and ablest of all the old farm workers. In no manual operation have I been able to improve on the technique of my early teachers, some so illiterate that they could barely sign their own names, but who in their work had the supreme excellence of simplicity, none the less perfect for being unconscious, for perfection consists in doing quite ordinary things extraordinarily well. But a knowledge of the human frame will give an appreciation of the guiding principles of that which is only normally acquired after many years of practice. Why does the experienced worker carry a sack of corn across his shoulders instead of down his back? He is using his bony framework instead of his muscles. A man is a triangle, broad shoulders, narrow hips, with heels close together; quite different from a woman, whose wide hips make her egg-shaped; and for that reason she should not carry sacks in

that manner; her limit is about half the 18 stone a nine-stone man can carry, and qualify under the old farmers' definition, 'you can call yourself a man when you can carry a sack of wheat up the granary steps'.

Another illustration is the use of a yoke for carrying buckets, suspended on the shoulders instead of the arm muscles; twice the weight can be carried with half the effort.

The human being is the most wonderful machine in the world, capable of the most intricate work ever devised by the brain of man. He is far superior to the farm animals, for they cannot stoop and lift a heavy weight. He is equipped for lateral action also, as in throwing a sack of corn sideways by a jerk of the hips and shoulders.

With hinges at many points there is linked action for pitching sheaves or swinging an axe. Leverage from tendons and muscles enables a very heavy weight to be moved by bracing the body, using feet and shoulders, between the object and a wall. I have seen a fifteen-hundredweight horse, lying unconscious on the floor, gently moved over by this method.

Knowledge in the use of the body makes physical strength of secondary importance. Leverage, balance, rhythm and relaxation of the muscles will bring about a proper sequence of actions, and the skilled worker can be recognized at a distance by the way he keeps time with himself, and of course works without any stress and strain. Strength is further projected through the tools he uses by leverage and balance. In

pitching sheaves on to a wagon, a pair are skewered with the points of the tines upwards, they are raised by leverage between the arms and come to rest neatly with the corn towards the centre of the load. But in pitching sheaves from the wagon to the rick, or from the rick to the threshing machine, the tines are inserted again in the centre but the other way round, so that with a flick of the wrist the sheaf travels through an arc, with the corn at the bottom, being the heavy part, and comes to rest once again pointing towards the centre of the rick or machine. To pitch the other way round involves the heavy part of the sheaf being thrown an extra two feet into the air—a considerable muscular effort when you are unloading at the normal rate of ten sheaves a minute. At all costs you should avoid poking the sheaves straight up by use of the arm muscles. Above all, never push a sheaf with the fork once it comes to rest on the load, or you may impale the loader's hand as he reaches after the badly pitched sheaf.

The most tedious work, involving bending and stooping, can become pleasant and easy if we adopt the balanced crouch. It doubles the range of the arms, saves the pain in the back, and the momentary blackout from which some people suffer when raising their head after working with it below the level of their shoulders. People have been known to plant two thousand cabbage plants an hour by adopting this method and even to enjoy potato picking. What a lot of thought and practice is given to kicking or heading a football, to becoming proficient with a tennis racket, yet equal pleasure can be found in useful

and productive work, which is more worthy of admiration than the efforts of those who are simply artisans in an unproductive calling.

One of the most wonderfully designed tools in relation to human effort is the scythe, and properly set to the individual it makes work a pleasure, which nevertheless can be found with all the tools on the farm if they are but studied. They have evolved over the centuries, but with little change for a very long time, and are adapted to the build and carriage of the racial type that uses them. Have you noticed the pointed shovel-cum-spade of the Celt, in Cornwall, Wales, Ireland and the west of Scotland, which he uses for everything; and the square spade or shovel of our Nordic, Saxon and Teutonic ancestors commonly used over the rest of the country? Celtic guile depends on leverage, with that long handle to overcome the lack of strength and weight, while the others use their broad shoulders and deep chests to gain the same effect. In the same way you will find peoples adapted to the materials that come to their hand; what one will make in wood the other will fashion in stone. How gracefully the Norwegian swings his axe from his long arms and above his long legs; the little Welshman can beat him in carrying a log, which he props up like a stone on his native hillside, crawls underneath it, and away he goes. We can learn a lot from them all, especially if we study the why and the how, and learn to use the physical gifts the Almighty has seen fit to give us to the best advantage. There is always something in which we can excel. If you are a tall man,

you have an advantage in stocking long sheaves. If you are a short girl you can be the best hand at picking potatoes on the farm.

Train yourself to do one job supremely well, and from that build on. Nothing is denied to well-directed labour, nothing worth while is ever attained without it. A great philosopher once said, 'What man wants is not talent, it is purpose; in other words, not the power to achieve, but the will to labour. I believe that labour judiciously and continually applied becomes genius, there is no secret in success but hard work.' How true I have found this in my own humble efforts! If you go steadily on, year in and year out, with simple tenacity of purpose, there is nothing worth while that you cannot achieve.

Another point I would like to make is not to despise a tool because it is old-fashioned. There may come a time when you will be glad to clear the corn around your latest combined-harvester with a reaping hook or scythe, for even these wonderful machines sometimes get bogged down in a wet harvest. Visitors to this farm often express surprise to see a flail hanging in the barn, and the old threshing-floor, on a farm so up-to-date that there are over thirty separate electric motors. This is for thatching straw. Why spoil good stuff by putting it through the threshing drum, and then have to shake it all up, wet it, and draw it all out again before it can be used for thatching? In a day a good man can knock out a load of wheat—which, needless to say, consists of specially selected six-foot sheaves—and have perfect material for thatching sixteen square in a day, which for labour alone would cost

him nearly £5 at the current rate for thatching by our County Agricultural Committee. Incidentally, he would also knock a loaf of bread out of every sheaf, which is not to be despised in these Hungry 'forties, for if you have never tasted home-baked bread from freshly threshed home-grown grain you are half starved anyway!

Observation and application are the guiding principles. Did you ever see a roadman pulling his broom? He pushes it; it was designed to work that way. He is so dull and ignorant that he can only earn his living in a menial task, but watch a university professor with the same tool—did you ever see such a ham-handed effort? On the other hand, let us freely admit that the same learned gentleman would be appalled by my literary efforts in the realms of philosophy, and would probably use it as a horrible example, to his students, of the misuse of the English language!

However, that is by the way. I quoted a saying earlier in this book, 'A man is as good as his feet,' and this still is true to-day, in spite of an old worker who told me, patting his tractor lovingly, 'Ah, Master, I'm twice the man on me seat I ever was on me feet!' You still have to travel on a farm. The army teaches a guardsman to walk with his shoulders back and on his heels, and it looks very smart; but the hill shepherd—and no man can move so fast and so easily—leans slightly forward and walks on the balls of his feet. If you ever stop in his cottage, look at his boots behind the door (for he does not dry them before the fire); the soles are worn, but not the heels. You will find this

true of nearly every really good farm worker; those who naturally walk on their heels become tractor drivers, or leave the industry. Other things being equal, engage the man who walks with his feet straight ahead; he who turns them out loses a little distance with every pace. But remember that a good walker then proceeds to save his feet by using his head.

The next most important thing to walking is eating. We study the dietary of our farm animals most scientifically for health and production, but the man who looks after them often suffers sadly for lack of sufficient knowledge to keep himself ready and fit for work. As in animals, the basis of health in man is sound diet. The decline in physical energy has coincided with the introduction of white flour; if only all farming folk would eat wholemeal home-baked bread, from freshly ground, home-grown wheat, they could work like our ancestors, and if helped by modern machinery and scientific research, could double the bread-corn acreage, while supporting the sheep, pigs and poultry of byegone days, which in their turn produce the muck to grow the corn.

We have now studied the guiding principles. The problem in one short chapter is to cover as wide a field as possible in the actual application. No one, of course could hope to teach practical work by the written word, any more than it would be possible to learn to swim by the same method; but to know what is actually done, apparently subconsciously, is very important, and indicates what to look for in

watching and learning from an experienced worker. Let us take, for example, the milking of a cow. It is done on nearly every farm twice a day. You will say the man picks up the stool and bucket, sits down to the cow, and milks it. But there is more in it than that, if he is a really efficient milker. First, you will notice that he picks up the stool with his left hand by one leg just below the seat, the leg being parallel with the ground, with fingers underneath, thumb on top. The bucket is held in the right hand. The milker steps up to the cow, moves her over a little towards the stall division, if necessary, with his right arm. If this were neglected, the cow might step away and necessitate another move once the man was settled. In moving her over he also places his right knee in front of the cow's hock, if it was necessary for her to move her leg to give him free access to the udder. The man then sits down, with his left knee close to the cow's hock, and with his toes directly underneath his knee, which effectively prevents them being trodden on. The leg by which the stool was held is placed under his left buttock, so that two legs are behind, and one leg central in front. The man has now five-point suspension, two stool legs at each quarter, one leg under his body in front, and his two feet beyond that. The top of the bucket is held in the groove a couple of inches below the top level of his thighs, his heels are closed against the bottom of the bucket, and the bottom rim is almost touching the front leg of the stool. He is now absolutely set, and can, if necessary, further control the cow by placing his head against her flank. This is sometimes discouraged in the interests of clean milk

production, but we are not concerned with that aspect at the moment. Now in this milking position it is practically impossible to upset the bucket; even if the cow kicks, or steps on the further edge of the bucket, or even falls on it, the milk will still be saved, and no harm will come to the milker. If the cow is irritated by flies and threshes her tail, the man turns his head slightly to the right and takes all the blows on his shoulders or head, thus safeguarding his face and eyes. Simple, is it not? Yet he has done nearly twenty things before starting to milk. What if he ignored these things? After all, a great many farm, workers do. He could pick up his stool by the edge of the seat, having less control than by a leg, and drop it two or three times a week or even in milking a few cows. The stool is damaged, and perhaps contaminated. Holding it thus, he must then either sit down on his thumb—still holding the stool—or place it first, and then, when he sits down, find it is too far from the cow. And so it goes on: he sticks his toes out beyond his knee, and the cow may then step on them, and another worker is off for a few weeks with broken bones in his foot, if he has not already been flicked in the eye, or swallowed his cigarette when he opened his mouth to swear at the cow. This brings us to another very important point. Unless the milker is comfortable and completely master of the situation, he is very liable to lose his temper with the cow, which is very bad for the milk supply. When you have a bad-tempered man, or lose your own equanimity with an animal, just stop and think what is being done wrong. The remedy is always to be found, and usually within your own

mind. An observant farmer will tell you that he can recognize an experienced milker by the way he picks up his stool. The man has either been taught or has learned by experience. Although, of course, the hallmark of the first-class milker is the foam on the top of the bucket from every cow he milks. There is a great satisfaction in milking a really good cow, so do try and master the details. The old standard is to be able to milk any eight cows as they come in an hour; if you can manage ten, and keep it up, you are in the first flight and worthy of a great tradition.

Soon there will be no horsemen left, so let us see why at Land's End or John o'Groat's—I mean that literally—they harness a horse and put him in a cart in the same way. The animal is approached on the left, as he stands in his stall, with the collar in the man's hands. It was hanging, you will have observed, on the wide end, which is upside down, on its hook. The man removes the headstall or halter, lifts the collar over the ears, turns it over on the neck and gently lets it down on to the shoulders. He replaces the headstall, unless the animal is very quiet; next the hames are fitted, he fetches the saddle, then lifts it over the animal's back, slightly forward over the withers, and slides it down into the usual place, and buckles the girth, not too tight. Then he again removes the headstall, puts on the bridle, having first warmed the bit in his hand if the weather is very cold, and leads the horse out, being careful to see that the quarters are past the doorposts before turning. The horse is backed between the shafts, or, better still, they are lowered

over his back. The back-chain is fastened at a level to ensure a straight draught by the traces, which are then fastened, and finally the breeching and the belly-band. In taking the horse out the process is reversed. First the breeching is undone, then the traces or shoulder chains, then the shafts are lifted and the horse led away. In the stable his bridle is removed, then the saddle, and finally the collar. The reasons behind all this are simple. If the man put the saddle on before removing the headstall, with the intention of putting on the collar, and the horse dodged out of the stable, he would take with him a valuable piece of harness, which would probably be ruined before the animal was caught again. If he goes while his collar is being put on, he will be away without any harness, and little harm will be done. The object in putting on the bridle last and taking it off first is to enable the horse to see what you are doing. Again, when he is being attached to the cart, if the breeching was done up first, and at that moment the horse started away, you would have a nasty accident and some broken harness. If the trace is fixed, and he moves forward, the vehicle will move with him and no harm will be done. The same rule applies in taking him out, and the trace is released after the breeching.

Many other examples could be given: in catching a sheep, shearing it, and winding the fleeces; in killing and plucking a fowl; and a dozen other simple jobs, which so many of us do without a thought, unless we have to explain it to others. But all I need to emphasize here is the importance of close observation of the experienced worker. There is

sometimes more than one way of doing a job, and what may not succeed in one case will in another; but, generally speaking, if a thing looks right, it is right, and that is sometimes discernible even to the man not trained in the job. I remember once stopping at an hotel abroad, and outside a man was ploughing with a team of oxen. The opportunity for a new experience was too good to miss, so I went across, introduced myself as a farmer from another country, and asked if I might try the plough. The request was readily granted, and I did a few bouts. Then another guest strolled out from the hotel and watched me come up the field, turn the team and set the plough in neatly again before stopping the oxen. Now this man was town born and bred, an engineer by profession, and did not then know my trade, but remarked, 'You know, Henderson, you look absolutely natural doing that, while I would make a proper muck of it.' It is said that any man of some education could pretend to be a solicitor or a doctor and get away with it for some hours, but anyone claiming to be a farmer would be caught out immediately he opened his mouth on the subject.

In the industry we recognize the amateur by his waste of effort. How often have I thought how quickly I should be worn out if I had to put in as much energy to get so little work done as that achieved by the unskilled worker; and, generally speaking, it is only the man in poor health, or one who has never been trained, who finds it so tiring. How often when I was learning farming did I hear the old workers say, 'There is nothing wrong with the work' It was the poor financial

reward that worried them. Today the problem is how a man is to do sufficient work to justify his wages, which steadily rise over the years. Mechanization alone will not solve all the difficulties. There is still so much which has to be done by hand, and unless people learn to take pride and pleasure in it, working easily and well, it is never more than half done. Nowadays, if there is any hard work to be done on many a farm, the younger workers say, 'Let Grandad do it!', thus admitting that some frail old man has something which they lack, either in skill or application. But will it be said of them in fifty years' time? It has been a strange comment on farming, for many years now, that the good all-round worker, who could turn his hand to anything, was the worst paid, while the specialist, who cannot be profitably employed all round the year, obtained more money. In the same way, the workers in any highly skilled and necessary occupation are paid less than those in the luxury and unnecessary trades. It costs more to have a punctured tyre mended than a shoe put on a horse. A watchmaker charges less for an equal amount of more highly skilled work than a radio engineer puts in on your set. But let others earn what they will, or even laze in indolence and sloth, the man who is master of his craft in farming, come what may, will never lack food, fire or shelter while he has occupation of the land.

The horse is growing into money

Using the bony framework to carry eighteen stone

It has always been a great consolation to me that farming is the one occupation or profession in which, so at least I have often been told,

you do not need any brains or intelligence, for there is no scope for the former, nor occupation for the latter. This may be true, for there can be no doubt that observation and the application of a little common sense will carry you far in mastering every job on the farm. An Oxford graduate once told me that no intelligent man was moral, to which I could only reply, ‘Thank God, I am not intelligent.’ For to me the moral code is simply the accumulated experience of the ages, and, in the same way, observation of the countryman and his methods will give you an insight and appreciation of how the skill and knowledge exhibited in every simple task has been built up by trial and error over the centuries. It is all there for us to copy. Remember that science has never disproved any well-established practice in farming. Thirty years ago the farmers told me, ‘There is nothing like muck.’ I have since come to the same conclusion, although at one time I was misled into believing otherwise by people who should have known better. At the same time there is a wide margin for improvement, and all our lives we can learn from others. In this country we have always suffered from having too much land and too much money compared with our continental neighbours, for our rural population is small and industry has brought a lot of money into the countryside from time to time. One great weakness lies in the neglect of proper care of tools and machinery. On how many farms do you find every hand tool in its appointed place, every mould-board oiled, and every wagon and machine under cover? How can a man take pride and interest in his

work with broken, worn-out tools? Not only should the right tools be provided for each man, but they should be chosen for his weight and height. An ordinary long-handled, four-tined, Oxfordshire muck fork weighs 4¾ lb.; the one I have used for a quarter of a century, imported from the north, weighs just under 3 lb. A really good man can load 3 tons of muck an hour, but in loading against me, the other man will actually lift another ton of wood and metal in those twelve hundred strokes with his fork. The same with spades, shovels and scythes. Did you know you should always choose a scythe blade made on a Thursday, Friday or Saturday? It's better metal to sharpen than those made early in the week before the fires have really warmed up after the week-end. In the same way, a second-hand scythe blade is thinner and better than a new one, if someone else has put in a lot of good work on it. So it goes on. If you want a really good knife for cutting 'bonds' at threshing, or for castrating lambs or pigs, make it out of an old scythe blade, and you have something better than a surgeon's knife at a fraction of the cost. For metal, like men, improves with work, and as the blacksmith, requiring a special piece of iron, takes an old horseshoe which he knows has been hammered ten thousand times on a hard road, so will good work fit the tools to your hand and body and you will work with the joy and pleasure of the craftsman, but only providing those tools have been rightly chosen in the first place. Why do our farmers take such great care in training a hunter, noticing the movement of every muscle in its body, yet curse, or, what is worse,

ignore, the farm boy struggling with a pitchfork a foot too long for him? Poor work and lack of interest usually exist for want of proper training; people are what you train them to be. Two sayings, common in my youth, we never hear to-day. The first, ‘It’s a free country, isn’t it?’ has disappeared under the impact of Socialism; while the other, the boast of every second youth on a farm, ‘I can do a day’s work against anyone’, is felt to be unnecessary when a guaranteed wage will see a man from the elementary school to the grave; but with this boast has been lost something worth striving after—to prove your manhood in competition with others, in productive and useful work. What a pity it is that farming has no recognized standards and everyone is assumed to be just an unskilled labourer!

Other trades, other ways. But what a pleasure it is to teach, say, an ex-boatbuilder farm work, for he has acquired a degree of accuracy and precision which has become second nature. In the same way an ex-ballet dancer has balance, rhythm and muscular control which, properly directed, will make her work a pleasure to behold. Even such an unproductive worker as a beauty specialist improved on our technique when we showed her how to prepare a cow for show or sale. A girl who can make an ugly woman beautiful should be able to do great things with a lovely little heifer, and has a good basis for training in more useful things.

I remember, early in the war, having some land girls threshing. We had a full staff, and so I worked with each in turn, showing her exactly

how the job was to be done. I went back time after time, and showed them again. Later in the day it occurred to me that they would only complain when they got back to their hostel of a farmer who was so fussy and particular, and we would not get them again. So just before they went I fetched a few eggs and fruit for them to take home for their tea, in the hope it would lessen or abate their annoyance with such a difficult old man. But while I was gone they told a regular member of our staff that they did hope they could come again, for it was the first time they had been really shown how to work easily and well, and they asked what were the prospects of getting a regular job here. In their home towns, in the north of England, they received proper and careful instruction if they were to do only one simple job in factory or mill; but usually when they arrived at a farm they were told to go 'shocking in the Lanket', which means, of course, setting up the sheaves in the long field, but to them this was double Dutch, and in any case no one had the time to show them how, or even where the field was. There is a moral in this story somewhere. If only every farmer had set out to make the best of these happy volunteers, or even of the German and Italian prisoners of war; but of these I must admit I have no first-hand experience, for we resolved, come what may, that no slave labour should work at Oathill, and it never did. In the same way I would not knowingly employ a member of the National Union of Farm Workers, however skilled; for ever since the day when I, too, worked on a farm I have had no use for the man who cannot feel any loyalty to his

employers; and in my case there has been no need to employ them while there have been those who can bring nothing more than willing hearts and hands to be trained. On the other hand, no one could have a higher opinion of the best type of farm worker, whom I regard as the salt of the earth, and whom I would like to see farming the land of those who are not, and never will be, farmers worthy of the land they occupy. But do not let me mislead the reader into thinking that farm work is only systematic and careful handwork, necessary as that is, for we are also working with living creatures which have their feelings and individual idiosyncrasies, and to make the best of them we must have sympathy and understanding at least equal to the manual dexterity required in other departments. Here again the simple-natured person, so common in farming, often excels. He feels an affinity with the animals, for, like children, they are creatures of strong instincts but poor reasoning powers. Dependent as they are on human beings they never fail to respond to firm, kind and good management, which must not be confused with the silly sentimentality towards animals which one finds in other walks of life.

I understand our intellectuals are now making a science of the study of animal behaviour, something on a par, we must assume, with psychology, but I doubt whether they will find anything which is not already known to observant farmers and farm workers. We know, when mixing a number of strange animals together, that in a few hours they will establish their own social order, ranging down from the most

aggressive to the weakest in the bunch; but if that weakling is taken out and put with younger cattle, then she, too, becomes the bully and drives the others around. We know that cattle fear each other's horns more than the men who tend them, and prefer to be hit with a stick rather than get up against another well equipped by nature with weapons of offence. If they are de-horned, it does not change their nature: the bully is still the master, but is less feared, and you can keep five times the cattle in the same collecting yard without fear of injury.

In regard to grazing, the scientists tell us that a cow grazes for eight hours, walks about for a similar period, and rests for the balance of the twenty-four hours. In actual fact this is not true, as every farmer knows. If there is nothing to eat the cow wastes very little energy in searching for food, and if she is turned into a productive ley for only two periods of forty minutes twice in a day, she will find all she needs. We also know that with unrestricted grazing it is our heavy milking cow at any particular season who is the first to get up, the last to lie down, and the most liable to bloat. We know too, that this distressing condition is most likely to occur after rain which is followed by hot sunshine; and that provision of dry fodder, such as oat straw, appears to work a kind of trip mechanism which enables the affected animal to belch the gas generated by the undigested grass, while in bad cases linseed oil and turpentine may be necessary.

We are also told that a cow takes so many bites to the minute. Here again, a summer evening spent in observation will show that there is

great variation according to the individual and the quality of the food available.

Large-scale experiments have been laid down in various parts of the country to test the palatability of the different grasses by planting strips across the fields and observing the time spent by the herd on each. Here again the practical farmer already knows the answer. The animals will graze any species of grass at certain stages of growth. They would sooner eat young brome grass than old cocksfoot, though by most calculations the latter must be by far the more valuable. It is surely one of the most precious provisions of nature that even on a bleak, Scottish hillside there is a succession of herbage for the grazing animals, while they in their turn bite back the growth which would hamper another species coming to maturity. We also know that mixed grazing is of value to the sward no less than to the animals that browse upon it.

These are all fundamental things, the knowledge of which is passed on from generation to generation, and remember that the oral wisdom of the countryside is of no less value than that which is found within the covers of a book, or told so glibly from the platform of the lecture hall. Wisdom will carry a man farther than knowledge; opinion may be formed without a grasp of the facts, while propaganda is the language of the devil, when it is applied to farming.

But, on the other hand, do not let us forget that there is ample scope for better management of livestock on nearly every farm, and that is

within the reach of even the humblest worker if he will but give his mind to it.

The thing which must strike one most is the unnecessary brutality which one sees in our midland markets in thrashing cattle about. Do our farmers realize how easy it is to teach cattle to lead? How convenient it is for loading them into trucks, and how much safer than stampeding them up the ramp of a lorry! If you put leather halters on calves when they are young, so that they get used to wearing something on their head, and then when turning them out in a bunch into the fields one each in turn is led, a lesson will have been learned which enables the animal to be quietly handled for the rest of its life, either for TT testing or anything else which may be necessary. Other things being equal, a cow that will lead will give an extra 100 gallons per annum, even if she is not led. That is practical animal psychology in which our farmers should have been at least a hundred years ahead of the scientists; it is really something which has been lost, for a hundred years ago, when cattle were used for draught purposes, nearly every one would lead, as they will on the Continent to-day.

Even in the realm of veterinary science there are many opportunities open to us on the farms; diagnosis may be the veterinary surgeon’s province, but prevention is better than cure, and skilful nursing hastens recovery. The principal diseases can be controlled by good management, and may never reach a serious stage if detected at the first possible moment. Mastitis, for example, may be caused by one

of many organisms, in four great groups, which respond to modern drugs; but if, at the first suspicion, the cow is milked out every quarter of an hour, day and night if necessary, until the veterinary surgeon comes, the germs will have had little opportunity to breed and multiply, and a rapid cure under proper treatment is assured.

When the resources of science fail, and they sometimes do, then the old-fashioned remedies come into their own. I once asked a veterinary surgeon for a mixture containing nux vomica to bring some gilts into season. It so happened that he was at a meeting of his confrères shortly afterwards, and someone asked him what they should do for sterility when all the anterior pituitary extracts had failed. He quoted my request for this old-fashioned remedy. ‘What was the result?’ asked the other veterinary surgeon contemptuously. ‘They all came into season within a week!’ replied my good friend, who has been a veterinary surgeon long enough to know that even farmers sometimes profit from the experience of others, and a profession, however respected and well organized, does not hold a monopoly in the art of healing, and would be the last to claim it in the management of stock.

I myself have a warm place in my heart for veterinary surgeons, perhaps if only because my Scottish blood and early experiences never permit me to forget a kindness or an injury. When I first came to work in Oxfordshire my employer told the local veterinary surgeon that I had taken a correspondence course in veterinary science; and that worthy gentleman, who was a bit of a wag, proceeded to pull my leg and insist

that I should diagnose the disorders from which the animals suffered. But when he found that I had tried so pathetically hard to master the subject, and had even committed my lectures to memory as the only means by which my poor dull brain could retain the knowledge, he never missed an opportunity to teach me all he could, and even invited me into his surgery to see him perform major operations. So that, to this day, I regard even veterinary surgeons who have taken an appointment in the Government service as being of a much lighter shade than the ordinary run of civil servants, and I think the majority of farmers will agree that they have a sympathy and understanding of the farmers' problems and difficulties never found in the other grades of the Civil Service; for beyond anything else they can do a day's work which must command the respect of those who know what work is.

Apart from the knowledge which comes from experience, everyone should on a farm learn elementary first-aid, not only for the animals, but for human beings as well, for you are often far from professional aid, and anyone, animal or human, can bleed to death from a severed artery before you can run across a field. The animals carry with them the means of stopping arterial bleeding, for an artery can be tied with a horse hair, or even a twist of wool; while in human beings, who carry their arteries so much closer to the surface, the pressure points are not difficult to learn.

And another very important thing is to learn how to dispatch any animal quickly and painlessly should it be necessary, for how often is

needless suffering involved, for want of the knowledge or the will to put an animal out of its misery. A shot-gun fired an inch or two away from where two diagonal lines drawn from the ears to the eyes would cross, and at that exact point, causes instantaneous death to the large animals. Failing a gun or humane killer, it is not difficult to sever the artery which can be felt in the rectum, with a sharp knife. If a sheep has to be killed with a knife, then it is driven in, half-way down the neck, just in front of the vertebrae, and pulled outwards, thus severing the jugular vein and carotid artery with a single stroke. In the case of a pig, it is driven into the centre of the neck and right up through the pectoral arch. Fowls and rabbits are best killed by wringing their necks; no strength is required, for a child who knows how can do it, while a strong man will pull its head right off. The secret is to *take the bird's head in the palm of your hand,* while holding the legs against your chest in the other hand. Then turn back the head, straighten the arm which is holding it, and the bird is dead, with a two-inch cavity in the neck, into which the blood will drain. The man who pulls the bird's head off does not know how to do it, and probably causes suffering in the tearing of the skin before the neck is dislocated. Treat rabbits the same as hens, or strike a sharp blow behind the ears with the edge of the hand.

The restraint and control of animals is a subject worthy of careful attention. Good fences properly maintained are obviously required, for animals who have never broken out have no inclination to try to do so.

The importance of leading I have already emphasized; quiet handling is also important, and a heifer whose udder is gently massaged before calving is very unlikely to kick when she is milked for the first time. In the case of pigs, the most difficult of animals to restrain, the same thing applies. They like being rubbed, and will dop down and turn on their sides, even at the word of command, when they know what is coming. Very handy for inoculations and injections, or for assistance in farrowing. If you really want to make friends with a pig, tickle the roof of his mouth; it has an hypnotic effect, and you can do anything you like with him. If you have a bad-tempered boar to prepare for show or sale, spray him all over with a gallon of veterinary pig oil, to which has been added an ounce of aniseed, then turn in three or four sows with him, and by the time his companions have licked it all off, he will be schoolgirl complexion all over.

This is only one of the many tricks in the stockman's repertoire. Those beautifully polished horns you admire so much in the show-ring are the result of what? Strangely enough, metal polish and varnish; linseed and all the others are not so good. Yet how many things must have been tried before the best results were obtained!

I wish I had the space in which to tell all the tricks of faking a horse, feeling sure that no reader of mine would descend to such practices, but that they might detect them in the malpractice of others. But even to me they are the memories of bygone days, and the avowed object of this book is to enable others to do better in the future.

There is far more scope to-day in the care and management of machinery, for one of the most alarming features in the economic state of farming is the high cost of machinery upkeep. On few farms is it less than the rent, and this charge is really in addition to labour costs, for most machines are designed to save labour, and there is certainly no margin for neglect in this department. A simple thing like oiling all the threads on bolts when fitting new parts will mean the nut can be tightened up better, and undone again more easily should the necessity arise at some future time. Tyres are a costly item if not properly looked after, and when one has been taken off for repair or replacement it fits the wheel better if it is first inflated well above the working pressure and then the air let out until correct pressure is registered, for in this way the tyre is pressed tight into the wheel. These little tricks, or thoughtful care, distinguish the craftsman even in the modern branches of farming, and make him no less worthy of our regard than the man who cleans a horse for the pleasure of doing it.

Not least among the crafts of farming is keeping the farmstead neat and tidy, every tool in its place and the machines safe and under cover; in other words, an order and purpose which will lead to better work, pride and interest in the place, and the conservation of the resources at the disposal of the farmer. Even straw littered about is a potential danger from fire; some lorry driver, county agricultural official, or casual visitor to the farm may drop a cigarette or match without a thought on inflammable material which could cause a rick fire if

everything were not cleaned up. Once a farm is tidy it takes very little effort to keep it so, and adds a great deal to its efficiency. What a mess so many English farms are, with old machines standing in beds of nettles, broken-down wagons or heaps of wood scattered all over the place, stumps of old ricks and masses of old baling wire, which, added to tumbled-down or decaying buildings, put us so far behind our continental neighbours! You can travel across England and only see two or three tidy muckheaps. In the whole of France I doubt if you would find one which was not carefully built to preserve its contents.

All efforts are cumulative. Where there is pride and interest, there is soon skill and knowledge. Remember it is the best farmer who is never short-handed and can command the best labour in the district. Where a man can turn his hand to anything on the farm, simple building jobs present no difficulty, profitably employ spare time, and add considerably to the amenities of the farm. On the little farm with which I am associated we now have some 40,000 square feet of building and loft space, all provided by our own labour and that of those who work with us. Everything, including mangels and potatoes, can be found stored under cover. Corn can be thrashed in the dry, and full and profitable employment is ensured, under comfortable conditions, even in the worst weather. The total cost has been about £1000, spread over twenty years or more. Few farmers would grudge the annual interest on this capital sum, but in our case this has long since been paid off in the better use of time and the saving of waste.

The labour involved in keeping a farm tidy is more than offset by the increase in efficiency. On this farm the youngest recruit is responsible for keeping the food store and hand tools tidy and in their place. With empty sacks at a shilling each, not one must be left about for a rat to make a hole in. Every fork and spade must be in its place at night. In due course he is promoted to take charge of the implement shed, and so on. But how much work is involved? Practically none, for each person trained on this system puts his tools and machines away in their places without a thought, and the one responsible has only to glance round and see that all is in order. People expect a workshop or factory to be tidy; it is essential for efficiency. Why not a farm?

But there is more than this in farming, there are hopes, and plans, and dreams come true. It is no use whining, 'If only. . . . " The difficulties, hardships, trials, and the obstacles one encounters are positive blessings, for they leave one better equipped to deal with the problems in the future; and by facing up to life, mastering the tasks and going steadily on, success can be achieved, if only in following in the footsteps of those who have gone before, or are even now blazing the new trail, and fitting ourselves to be worthy craftsmen in a trade of which none need be ashamed. In an age of self-interest, cynicism, and despair, remember there are others who will be glad to learn from you; you need not hide your knowledge, for in sharing you will learn most, and above all:

There are loyal hearts, there are spirits brave,
There are souls which are pure and true.
So give the world the best you have,
And the world will give its best to you.
Give love, and love to your heart will flow,
A strength in your greatest need.
Have faith, and a score of hearts will show
Their faith in your word and deed.

CHAPTER VI

Farming as a Business

This is by far the most important chapter in this book, although, strangely enough, its subject is the one in which farmers take least interest. In all the invitations I have received to speak at Farming Clubs, etc., only once have I been asked to speak on farming as a business, and that was at the Oxford University Plough Club, the members of which study agriculture for a degree, but receive no instruction on such a mundane subject as earning money in farming.

So while students make the detached scientific approach, many of the farmers regard their occupation only as a means of earning a living in a certain way of life. Being concerned with the exercise of a calling rather than the management of a business, they tend to rely on a certain innate conservatism which saves them from making too many expensive mistakes; a cautious opportunism which insures at least one profitable line, and which, combined with a simple standard of living, largely derived from their own farm, and a few fundamental rules on thrift and economy, ensures a modest competence, when times are not too bad.

When the practical and the scientific meet, it still leaves much to be desired, either in the home or the field; for it is not until many a

farmer’s son goes to an Agricultural College or University that he realizes the colossal ignorance with which the money was earned to send him there; and when he returns, if it were not for the fact that the old man can consistently earn money in farming, the young one could not bear to see him about the place. On the other hand, the son’s desire to spend money on the latest novelty in farming may not meet with his father’s approval.

I can well imagine him saying, ‘Father, do you know the relative merits of di-nitro-ortho-cresol and methol-phenoxy-acetic acid as a selective weed-killer?’

His father replies, ‘No, my boy, I don’t. In any case that stuff costs fifty bob an acre, and I always rely on early planting, a strong thriving crop, and as many strokes with the harrows as may be necessary to kill the charlock when the barley is coming through.’

In other words, always being on top of his work makes him largely independent of the remedies so necessary to the modern farmer who has never learned to get up in the morning, or to observe the exact moment at which the barley should be harrowed.

If the farmer, secure in his traditional methods, appears sceptical of the scientific approach, which he often sees practised by the college-trained man on the estate farms of his district, or the organization of the businessman-cum-farmer, often bordering on the ludicrous, can we blame him? He has probably farmed through good times and bad, and knows that the lavish expenditure on implements and the wicked waste

of labour could never be justified against such a poor output per acre; and that all these farms would soon travel the rocky road to ruin if it were not for the fact that farm losses can be put against town profits for income tax purposes. If a man is making £40,000 a year in London and losing £10,000 on his farming, it is the Chancellor of the Exchequer, or rather our poor farming friend and the other tax-payers, who support these expensive hobbies, including the pheasant rearing, the servants and cars charged to the farm, which leave the net income of our businessman-cum-farmer practically the same, and available as pocket-money.

On the other hand, if our farmer applied all his accumulated knowledge and experience with the scientific approach and real business methods, he might tend to exploit the inherent capacity of his farm to produce, and at the same time become a prey to His Majesty's Commissioners of Inland Revenue, and pay away nearly all the extra he could earn, including all the doles and subsidies, designed, we must assume, to keep the inefficient farmer in business.

However, I do not imagine that this state of affairs will last for ever. Sooner or later we shall have to return to the rewards and penalties of competition and free enterprise, for which at the moment there is only scope in the black market, and then it will be the farmer who has mastered the business aspect of his undertaking who will be able to face the future with equanimity. The ability to look beyond the present is the greatest asset a farmer can have, for the man who chases the

times never catches up. How often have I seen that in my farming experience!

Most of us desire a farm in a certain way. I prefer a balanced system of farming with all its variety and interest; I do not wish to tumble the land down to grass in a bad time and hurriedly plough it up in a war, or to dispose of pigs and poultry, and then to be exhorted to take them up again a little later. A whole lifetime of security and continuity is necessary for the pedigree stockbreeder to achieve anything worth while, and for that reason it has always been necessary to understand the fundamental business principles which, when applied to farming, make achievement possible. There is certainly no other aspect of farming which is of greater importance to those who have to finance and make their own way in farming. There are quite enough worries and troubles in farming, and none that cramp your style so much as being too short of capital. But remember there is a big difference between being poor and feeling poor. If you have a definite long-term policy, a system of farming by which capital accumulates and builds up reserves in the soil and in stock, you have an interest which compensates for a lack of ready money, however desirable that may be.

In the business of farming you have to face and overcome three important factors. First, the high capitalization cost—four times that per person employed compared with other industries, even in pre-war days. Second, the slow turnover—a farmer may be laying out money for six

years from when he starts to fallow a field for roots or drills a field for hay, until he sells the fattened bullocks grown on the produce. This is in striking contrast with the butcher who buys them on Monday and has cashed them in by the end of the same week. Third, the poor rate of economic conversion of many of the primary products of the soil into the finished article. It takes 16 lb. of food, and the removal of many times that weight of manure, to produce 1lb. of beef. There is an old saying, and a very true one, which drives home this point. 'There are three means by which a farmer can lose money. Backing horses the quickest; wine and women the pleasantest; fattening cattle the surest.' At the moment, someone might contend that fattening cattle was very profitable, but that is a short-term view. By the time you have reared and fattened your bullocks the trade may not be so good, or rising costs will have overtaken the price which appears so attractive at the moment. The same applies to corn-growing, necessary as that may be; it must always be balanced with stock which can show a quick turnover and a very high rate of economic conversion.

The establishment of a profitable farm is dependent on three things. The gross annual output must be equal to the capital invested; and equal to at least twenty times the calculated or actual rent; while the total labour charge must not exceed one-quarter of the gross output. Go through the reports of the Agricultural Economic Research Departments, which are published from time to time, and without exception you will find that the profitable farm, or the margin which

was necessary to show a profit, measures up to this standard. British agriculture as a whole falls far short of it; on labour and calculated rent by nearly 50 per cent, and in capital invested by 25 per cent, the figures bearing out the old saying, ‘A few make a great success, the majority just struggle along, and the rest go broke.’ And yet, if they would but follow the few guiding principles, all our farmers could move into the first class, to the benefit of themselves, their country and their fellow men. But human nature being what it is, we know that few will bother, thus leaving a unique opportunity for those who read these words and can put these methods into practice.

In financing a farm you need either a lot of money or a lot of patience; of the two I prefer the latter. The method, and it has been tried a hundred times, is to live and pay your way on the income from stock; to use the natural increase from that stock for building up the capacity of the farm to produce—that, of course, is twofold: more animals and more manure—and finally to feed as much home-grown grain as is economically possible in stock feeding, using sales of grain for debt repayment, rebuilding, and perhaps the purchase of the farm. I defy anyone to produce any evidence that a farmer can fail to build a successful business, if he has maintained a reasonable standard of farming, and faithfully observed those rules over a period of years. It was the basis on which my brother and I made our start in a period of extreme agricultural depression. We have recommended it to many since, and we have never known it to fail. The cumulative effort is very

striking, with profits steadily mounting over the years, and sometimes as high as 50 per cent of the gross output; and that may be ten times the gross output per acre of British agriculture as a whole. Let there be no doubt, there is money in farming for the man who is master of his trade and a good manager of his business. All the gloom and pessimism in farming has its origin in lack of the knowledge contained in this one short paragraph, or in the will to achieve it.

A farm will, of course, have to be carefully planned and organized to achieve these results. The capital will have to be carefully laid out to give the very highest rate of return; nothing must be locked up in deadstock which could be growing in livestock. The stock with the very highest rate of economic conversion must play an important part, and must lend itself to the re-financing of other branches of the business, i.e. milk sold in the autumn would provide the money to buy day-old chickens in the spring; cockerels fattened early would pay for pullets reared later, and so it goes on.

Working on these principles, a capable and experienced young farmer took over a ninety-eight acre holding in September 1948, with a capital of only £1950. The tenant-right valuation was heavy at £1002, but included, by agreement, 2 7 acres of corn in the stack which the outgoer did not wish to thresh. This left the farmer with only just over £900 in cash by the time he had moved in and paid the incidental expenses involved.

He hire-purchased his tractor and implements under an agreement involving paying £200 and the balance spread over two years. He arranged six months' credit for his seed corn and artificial manure bills, but agreed to pay monthly for the 10 cwt. of feeding-stuffs to which he was entitled under his farm's allocation. This left him with £700 for the immediate stocking of the farm; wages and living expenses would be covered by the sale of potatoes and, he hoped, milk, although his buildings were unsuitable for milk production.

Weighing up the possibilities of the various kinds of stock, he bought first of all sixty store pigs at an average price of 85s., these to be fattened on the meal available, the corn to be threshed, and pig potatoes which were in plentiful supply; then fifty wether lambs at 90s. to stock the grass and consume the roots; and with the balance of the money he bought two old, but good, in-calf, Jersey cows.

At the end of the second month he had to sell a few pigs, to pay for the meal consumed in the first month, and his threshing expenses which he had not allowed for. But from then on the pigs improved rapidly in value, until they were sold out in March, the total sales being £770, the net profit being £330, plus the ten best gilts kept back for breeding. The original capital was reinvested in pigs, the profit and the cashing-in of some of the corn taken over, and, through the pigs, used to pay the outstanding seed corn and artificial manure bill, which entitled him to a further six months' credit for that he would require for spring planting; and to buy 1000 day-old chicks at £80, and the essential appliances and

materials necessary to rear them—assembled, of course, by his own labour.

Once again it was a tight squeeze to feed both the pigs and the chickens, but with the reserve of home-grown corn it was achieved. The cockerels realized a welcome £263 in late summer, the pigs coming in later with £890, owing to increased price per score, and finally wethers grading out to leave him a cheque for £457; and these, with their wool at £26, raised the gross receipts of the farm to £1949, or only a £1 short of his original capital, after deducting the original outlay on pigs and sheep and transport charges. But this year, 1950, with a very considerable increase in his valuation, he will be starting in a much stronger position, with 250 laying pullets, more corn in hand, and a big allocation of feeding-stuffs earned on the scorage of bacon pigs sent in; and he is now all set to breed his pig replacements at half the cost he had to pay in the previous year. This is a typical example of making use of every penny all the time. Had he been starting in the spring instead of the autumn, poultry rearing would have been even better than the pigs, but he chose quite rightly in view of the enormous quantities of pig potatoes available in the year he started, and the opportunity to earn an extra allocation of feeding-stuffs, which will balance out to a certain extent the lack of potatoes in 1949. A lesser man would have moved heaven and earth to get his buildings passed for milk production, or have depended on arable crops, losing precious months on the one, or getting a poor return on the other; while here we

have an example of making the best of the opportunity of the moment, but with an eye to the future, when the farm will no doubt be stocked up with dairy cattle; meanwhile fertility is being built up with pigs and poultry on the lines I have indicated in an earlier chapter. But even in the first year his business measures up to the required standards: gross output, less stock purchased, equal to capital invested, and twenty times calculated rent, while the labour charge of the farmer and the one youth he employed would not exceed one-quarter of the gross output.

A cautious farmer might well ask what margin of safety there was in this farm stocked to the last penny. The reserve was in the wether lambs; they could have been cashed in at a fortnight's notice if it had become necessary; whereas breeding ewes, which the farmer would have preferred, are not easily disposed of in an emergency without sustaining a considerable loss.

Not every farmer would be so favourably placed for home-grown feeding-stuffs, but there is ample scope even on a specialized dairy farm to feed the cattle on high-quality silage, diverting the food, allocated on the milk sent in, to feed pigs or poultry. I know one farmer, sending away 120 gallons a day all winter, who is building up to 1000 head of laying birds by this method, and who had never had so much grass behind the poultry folds for his cows to consume all summer. The ideal ratio is twenty hens to every cow, and then, with the building up and cashing in of fertility in the form of grain, a pig section can be built up on the same farm. To all intents and purposes, the

farmer then has three farms on the same acreage and rent charge—dairy, poultry, and pigs.

What of the arable farmer? He is in the strongest position of all commercial farmers with so much grain to cash through stock. You can fatten a pig to bacon weight on 4 cwt. of oats and beans and 1 ton of pig potatoes, and double the value of that arable produce, while the N.P.K.[1] value of the manure produced is equal to the cost of rearing the weaner. Poultry will give a return of at least three times the value of the corn consumed, while conferring considerable benefit on the land they are folded over, often increasing the yield of grain from a ploughed-up ley by half a ton to the acre. The only stock to be avoided is fattening cattle, for unless the farmer is paying away too much in income tax, and prefers to put some of it back in the land, they have little to recommend them.

Finally, we have the pedigree stockbreeder, the very long-sighted farmer. If his farm is organized on that threefold basis, all is well; his stock are giving proof of their inherent capacity to produce and pay their way. They are accumulating in numbers and value, and in due course sales of the surplus over and above the carrying capacity of the farm could go along with the sales of corn for investment elsewhere. The pedigree stock farm, which is a commercial proposition, is of great value in refuting the suggestion, so often made by ordinary farmers,

---

[1] Nitrogen potassium phosphorus.

that breeding high-quality stock is merely a rich man's hobby. If it could be generally recognized how valuable well-bred stock is, the pedigree stockbreeder could look for a golden future in supplying others with their foundation stock, while rendering a real service to the agricultural community.

While the test of business organization can be found in these three principles of gross output in relation to capital, labour, and rent, they are dependent on the agricultural trinity, soil, equipment, and labour.

The soil is the farmer's raw material, and as we cannot change climate, the geographical position, or the topography of our farms, and only within very narrow limits the chemical and physical properties of the soil, it is very important to study it, and all the possibilities of practical utilization. To farm a farm as it has been farmed before is to obtain nothing more than a bare living from it, for the great weakness in British agriculture lies in seeking a stable rather than a progressive industry, and a farm should always be planned on the assumption of steadily rising costs which will have to be met by greater efficiency and a higher output. In the same way, the value of a farm is not the market price or the rent you are asked for it, but what you intend to do with it. I remember looking round a farm for a young man. It had originally been rented at £100 per annum, and the landlord had spent £1000 on improving the buildings and was asking £150 rent, to cover interest on the capital outlay. Local advice was against taking it, contending that it was not the buildings but the land which earned the money. My advice

was to ask the landlord to spend another £1000, and to take a long lease at £200 per annum, with the option of purchase if the farm should come in the market. To earn an extra £100 a year, on a well-equipped farm, was not difficult. Even at that time, 1938, few farmers made such a good long-term investment. The farmer recently bought the farm freehold for less money that it would cost to erect those extra buildings to-day, after having had the very profitable use of them for ten years. After all, piped water, a good cowshed, dairy, piggery, and Dutch barn make all the difference between being compelled to depend on arable farming and having a fully balanced system building up stock and fertility.

Equipment covers not only the buildings but the mechanization of the farm. The question always arises, how much can the farmer afford, and how far can he go in relation to the capital available? No farmer should spend more than he is obliged on deadstock until the farm is fully stocked with livestock which grow into money. Depreciation is the bugbear of machinery, and while it is not working it is not earning; although there are some cases where the farmer can add considerably to his income by contract work, and it is quite a good method of acquiring extra capital for the man who is prepared to work early and late, providing he never neglects his own land in working for his neighbours. For the farmer who is not so happily placed I believe in hiring, if stock can earn the money to pay for it, and if the work can be done at the proper time. On the other hand, a farmer never wants to pay

out money for work he can do himself, and will always plan to have his own equipment as soon as possible. But it is not good business to tie up £1000 in machinery, to do £200 worth of work, if that capital invested in cows will bring in a similar sum from the Milk Marketing Board in the same period. When a farm is fully stocked and productive, full mechanization is justified.

In passing, I should like to lay the common fallacy, repeated time after time by the economists, that the provision and maintenance of a standard tractor and its implements is an unwarranted expense on a small farm. Actually no one is in such a strong position as the small farmer, because the actual depreciation, if it is carefully looked after, is much less than the amount written down in the valuation. On this farm we normally replace a tractor every seven years, and we have never dropped more than £10 per annum in the difference between cost price new and when sold, still in a good, serviceable, but second-hand condition; although on many of the bigger farms in this district the tractors are so badly maintained and driven that depreciation is often heavier than the amount written off and the machine is a wreck in two years. It is also often contended that the small farm is more economically worked with horses. I wish it were so, for I always loved working horses, but unfortunately nothing is further from the truth; the food two horses will consume, when properly maintained for work, will produce over £200 worth of milk if fed to good dairy cows, and that

will buy a lot of petrol, tyres and oil, and will stand quite a lot of depreciation, or hire-purchase if necessary.

The most important point in the mechanization of farming is not the saving of food normally consumed by working animals, or to save labour, but to increase production. A farmer can justify a large outlay on tractors and implements if the time saved on cultivation is actually used for tending more livestock, and the produce from that pays for the outlay on mechanization and the inevitable depreciation. The claim of one leading manufacturer, that they have evolved, over thirty years of research and trial, a tractor which can do everything performed by draught animals, and do it cheaper, is fully borne out by our experience and costings on our farm, and in relation to the principle I have outlined above.

The world owes a lot to Mr. Henry Ford, who made the farmers tractor conscious; it owes even more to the genius of Mr. Harry Ferguson, who has adapted the tractor to the land in the space of thirty years, as the human frame has become adapted to it over thirty centuries. For no longer is a tractor a unit of power hung in front of an agricultural machine; it becomes part of the machine itself, as the power flows from the tractor to raise and clear a set of harrows, or to tip a three-ton load of muck. We no longer hear of projects to scrap hedges and fit our fields to the tractor, for this machine can plough the corners of the fields, left neglected since the days before 1914, when a man could dig them out at 13s. a week. Mr. Ferguson was once kind

enough to tell me that I had proved in practice the theories he had held for thirty years. His tractor now makes it possible for nearly all farmers to put into practice all I have proved, for it is no use producing more unless you produce it cheaper; it is of no value to produce cheaper unless the labour you save is devoted to further production. The people of this world have either to reduce population, to increase production, or starve. Let us take the middle course—it is by far the most comfortable and interesting!

At the time of writing, a farmer can borrow, if necessary, under the Goods and Services Order made last year and based on the Agricultural Act of 1947. Nearly a third of a million pounds is available on application through the A.E.C., who can grant up to £300 without the sanction of the Ministry of Agriculture, whose approval they must seek for larger sums. This service only applies to the purchase of tractors and machinery. It has the advantage over ordinary hire-purchase that there is no initial outlay, though few independently minded farmers care to be beholden to a County Agricultural Committee for anything, and it is very improbable that the available sum will be taken up.

In our experience, the light two-wheeled tractor, excellent as it may be for market-garden and horticultural work, has nothing to recommend it for even the smaller general farms, and we believe the standard tractor is, in the long run, the better investment from every point of view.

In mechanizing a farm not only does the farmer have to consider the machinery necessary for working the holding but he must allow proper accommodation for housing it. Many machines, and especially wagons and trailers, depreciate more from exposure to weather than they do from work. It is a sound rule to make that nothing may stand out except on the expressed instructions of the master. An ordinary one-tractor unit may require a 60 ft. x 15 ft. implement shed to house all the equipment, although with the new standard tractors and their mounted implements considerable saving of space can be achieved by packing them in one behind the other, remembering always to put in first that which will be required last. At the same time there must be sufficient well-lighted space to overhaul and repaint the machinery—one of the best bad-weather jobs. As each machine is put away it should be looked over for any broken or damaged parts, and these ordered immediately. Put them with the machine when they arrive, and there is the 'wet day' job ready for someone! A good supply of paint and paintbrushes should be kept in stock, so that the machines can be cleaned down and repainted. There is a great loss of efficiency because manufacturers do not agree among themselves to use only one colour paint on all machines. To have three or four colours, and often 'lines' in other colours, is just a waste of time when it comes to repainting. If the farmer intends to keep the machines for the whole of their useful life he will do well to paint them all one colour. But in cleaning down it is essential that all the rust is brushed off with a wire brush, otherwise it

will only rust faster under its new paint than it would unpainted. All moving parts should be oiled and greased when the machines are put away, and then regreased when they are taken out for work again to start the new season; but surplus grease should be wiped off after greasing, as it collects dust and would in due course work into the bearings.

The further step in the mechanization of a farm is electrification. It offers great possibilities as an aid to efficiency; with only three years' experience on our farm, I can say that the considerable outlay, equivalent to over £10 an acre, has been more than justified, if considered on a basis of interest on the sum invested, or as an increase in production paying off the capital outlay. When installing electricity, one should plan it on a long-term basis, getting the company, or Board as it is now called, to run it to the buildings, and from there it can afterwards be tapped off where required.

The third point in the business organization of a farm is the management of labour, the most expensive commodity a farmer buys. No aspect requires greater thought and study, for the question is how to make the best use of your time and other people's. A farmer is a piece-worker, he is not paid according to the hours he puts in, but the quarters of corn or the gallons of milk he produces; although few give you that impression. The time he can save enables him to produce more. A minute a cow on each milking, on a twenty-cow dairy, saves nearly five weeks in the course of a year, 250 hours, the time necessary, with

proper organization and layout, to look after 250 hens, which can earn upwards of £250 in the year. It is not for lack of time that farmers do not earn good money in this country. Providing good lighting, or knocking a few doorways in old farm buildings, will save hours of walking about. Doorways in a new cowshed, wide enough to take a trailer or manure spreader, may halve the time necessary to clean out the building. Piped water is one of the greatest time-savers. Level pathways, easily kept clean, help a lot, for pleasant working conditions add a lot to efficiency. The effect is cumulative, since at least some of the time you save can be devoted to improving working conditions. There is many a set of farm buildings where they spend five or six hours a week scraping up mud, yet a few summer evenings spent laying concrete would save four-fifths of those hours.

The saving of human effort is also important, for we are not all built for heavy work, and nowadays, when some of the best and most conscientious workers are women, it is a pity to have to retain anyone whose only qualification is brute strength.

We say on our farm that the heaviest routine work in connection with stock anyone has to do is carrying a bucket of eggs; and as an example of organization, and the principles on which a farm can be worked, it may be of interest to describe this section of our farm. An ordinary standard tractor is fitted with two transport boxes, one in front and one behind the tractor. For anyone unfamiliar with this fitting, I should mention that it is simply a metal box, the size of a small trailer,

but mounted on the hydraulic lift, although also fitted with little wheels for moving it about when detached from the tractor, and it can be lowered to the ground or raised for travelling by a touch of the finger. In the front box we carry buckets of wet mash, straw and anything else which may be required; and in the rear box a 200-gallon water tank. With this arrangement, and flocks in units of 150, one person can feed and water up to 2000 birds in an hour, so that the birds will be fed early, the houses opened and the stock permitted to range early in the day. The tractor is then free for other farm work. In the houses grain is stored in rat-proof bins, dry mash in metal hoppers. At eleven o'clock the first egg collection is made and the dry mash hoppers opened for any birds who have not obtained sufficient from the first feed or on the range. This takes forty minutes, collecting perhaps 500 eggs from 360 nests. Then at four o'clock the birds receive their grain feed from the bins and the hoppers are closed, and the second collection of eggs is made, which takes fifty minutes. Finally the last round is made, the houses are shut for the night, any broodies on the nests being shut up in broody coops, arranged over the nests, and the final collection of eggs is made, taking half an hour; thus three hours' field work is involved in all. A further two hours is devoted to grinding meal, preparing wet mash, both by electricity, and egg grading, etc. The bins and mash hoppers hold three weeks' supply of grain and meal, but they are replenished any time after ten days which may be convenient for fitting in with other work, thus ensuring that each house has from ten days' to

three weeks' emergency supply of food should they be isolated by heavy snowdrifts. The delivery of meal and grain takes an hour, but when the circuit of the houses is completed the trailer turns round and the dropping-boards are cleaned on the way back, involving another hour. The litter in the houses is removed when necessary, the time varying a lot with the state of the weather.

The birds are culled once a month, through portable catching crates, which can be used inside the houses, and every bird is handled. A small box is kept for each house, in which are placed the leg rings, from culls or casualties, cut off, or left intact as the case may be, thus providing a record without the use of paper and pencil until the end of the year.

A calculation of the time over a whole year shows that one man-hour per bird per annum is involved—equal to the time taken on the most efficient American farms, and only one-eighth of that on a great many English poultry farms, yet the work is light, pleasant, and interesting, and can be done quite easily by a girl. In recent years we have taken to trapnesting, in connection with a progeny-testing scheme; this means more work, but with the other organization in the background the time and labour are available.

In our pig section, twelve sows and their progeny, which means anything up to 120 pigs at one time, can be fed, cleaned and littered in two hours daily; yet on many farms this number is nearly a full-time job for one man.

With cattle I have always said that we have twice the money for half the work, compared with other farms. But the better layout and organization does give us the time

to make the best of everything, and roots are still pulped and mixed with chaff (glumes) and fed to the best advantage, in the good old-fashioned way, although, of course, the root-pulper is driven by an electric motor.

Now I do not wish to give the impression of a farmer standing stop-watch in hand. It is more a matter of doing the work as it should be done, with thought and care, and noting the time taken, and studying it from the point of view of eliminating waste of time and effort. Apart from anything else, it makes life far more interesting. From the philosophical point of view, to save time is to make time—for work, if you love that best, for study, or even talking to your wife, for farmers' wives do like to see their husbands sometimes!

Which brings me to another point. The farmer may do some of his most useful work in the house, preferably, of course, when everyone else has gone home, for he should be out and doing while others are at work. I refer to bringing the whole organization together with an efficient system of book-keeping, without which no farm can be regarded as a business.

In this book I have constantly emphasized the importance of a balanced system of farming and a really high output over a period of years, and this is only achieved efficiently if the cost of producing

crops and stock in all the different branches of the farm is known. Without this knowledge you cannot plan for the full utilization of the land, or labour, or produce which will be available.

On how many farms do we find everything in its appointed place?

Agricultural economists sometimes contend that it may be good farming to have some branches of the farm actually losing money and that each section should not be considered as a unit, but the farm as a whole is the thing that matters. Here we have never accepted that view. If one section loses money over a period, then it should be reorganized

to show a profit; or, if that cannot be done, replaced by something else which will. For example, many farmers knew they were losing money by fattening cattle in the yards, but justified the loss by saying they must have farmyard manure for the land. A worthy sentiment. But they could have made even better manure by fattening pigs, and at the same time have shown a profit.

It will be noticed that I say 'loses money over a period', because it is very expensive to keep chopping and changing, and no change should be made on account of a bad season, or a temporary recession in prices, which may be offset by other things. Farming is a long-term business, and it is for that reason a farmer should know his costs, as he is usually committed to a plan which will not mature for several years, and of which the full results will not be seen for a considerable time.

It is very easy to think that a crop or a certain lot of stock must be losing money, just because a lot of extra work is being put in on account of bad weather, or some other reason beyond the farmer's control. But a costing system will show to what extent the particular difficulty is involving him in financial loss. In the wettest harvest on record, 1946, we had oats standing out for nine weeks; they were constantly reshocked every few days and the labour involved seemed very expensive, but at the end it only worked out at 3d. per cwt. on the 39 cwt. harvested per acre. Many farmers do not now reshock, thinking the labour charge is not justified, but we should certainly have lost far

The bull is led on his head-chain, only pulling on his nose if he puts his head down.

more on that occasion in sprouted corn had we been guided by common opinion.

Income tax has brought home to farmers the importance of book-keeping; but only from one particular angle. The figures required are of less importance than the records used as an aid to management, for without them there might be no profit on which to pay tax. At the same time it is no use having some complicated system, involving too much time, difficult to summarize, or out of date. But, on the other hand, if you have a system of book-keeping sufficiently comprehensive for the efficient management of a farm, the getting out of figures for income tax purposes will present no difficulty, and incidentally simplify and check the preparation of those returns.

I do not think it is an exaggeration to say that on this little farm of 83 acres of naturally poor stony land an efficient system of book-keeping, which really enables us to understand the economics of farming and to utilize everything to the best advantage, is worth at least £1000 a year as an aid to management. The system has been built up and organized entirely by my brother, to whom all credit is due.

Before explaining this system of costing I would like to make it quite clear that costings are only of value to the farm and the farmer concerned. To compare one farm with another for individual crop comparison is often misleading, as so much depends on management and the fertility of the soil, to say nothing of the quality of the seed and the place in the rotation of crops.

Assuming tractors are used exclusively for cultivation, we must first determine how much fuel is used, and for this it is only necessary to make a dipstick (a smooth piece of wood or metal notched in gallons) and book down job by job how much fuel is used. When we suggest this to farmer friends, they nearly always say, ‘Oh, my men would never bother to dip their tanks each morning before filling up.’ They can learn; it might even be worth while to offer a bonus on fuel saved, and it has surprised many farmers to see how interested drivers can get in fuel consumption. Valuable information will be gained, for some makes of tractor consume twice the fuel of others, and it is a reward to a good tractor driver to have an expensive tractor to drive, if farmer and man know that it is justifying its cost in fuel saved.

As each cultivation is done, the date is booked in column 1 (see illustration on opposite page). This also makes a useful diary of cultivations to be compared in years to come when measuring progress of seasonal work. The cultivation, or work done, is entered in column 2, fuel consumed and its cost is entered in column 3, and man hours at current rates in column 4. Both time and cost is important for comparison in other years when different rates apply. Then seeds and artificial manures are added, and sundry expenses to cover grease and oil, ploughshares, etc., which cannot be charged to each crop; but here the farmer must arrive at the correct figure over a period of time; to start with, 10 per cent would be a fair margin to allow.

FIELD NO.

Crop ....

1 Date	2 Work	3 Fuel galls. @ per gal.	4 Labour hrs. @ per hr.	5 Seeds	6 Artificials	7 Sundries
	Add depreciation....					
	Total of columns 3 to 7..					
	Add 10% overheads ..					
	COST OF CROP					

ANNUAL SUMMARY

Field No.	Crop	Fuel and depreciation	Labour	Seeds	Artificials	Sundries
	Amount spent on					
	Error + or —					

This may sound rather a lot of work, but in fact once the system is started, and the farmer gets into the habit of doing it, it only takes a few minutes a day even on a fairly large farm. Once established, interest alone will keep it going, for accurate recording compels observation, and that alone would justify the time spent.

At the end of the year the work is summarized, and it is a good check on the individual field costs to compare the fuel consumed with the fuel actually purchased, this figure being easily obtained from the analysis book of expenditure and receipts which is described later.

To get a true set of costs it is, of course, necessary to charge haulage of various foods, hay, straw, roots, etc., and the question arises to which department these should be charged. I feel the best way to deal with straw is to charge it to the stock which uses it, and then charge the cost of carting the manure out to the crop which is grown on the land where the manure is spread. If straw is burnt on the field—a wicked waste and a sign of unbalanced farming—then the labour involved would be charged to the crop which grew the straw.

In the case of hay the cost will be known from the crop costing of that crop, in which will also be charged the cost of baling, as it is quite impossible to use it properly, and ration it to the best advantage, without doing so. At least 25 per cent of the hay grown in this country is wasted through being fed in excess of the animals' requirements. Look at the Agricultural Returns, notice the area for mowing, calculate the yield from the ten-year average, divide it into the stock to be fed,

and you will see that there must be enormous reserves somewhere, or a lot wasted. Why do the Ministry never check up on these things? If 300,000 farmers waste only 1 ton of hay a year each, that represents a lot of land which might be more usefully employed. Why farmers go to the expense and trouble of making hay, and then have it trampled down into the straw of the yards, or the mud of the fields, has puzzled me for nearly thirty years.

Roots, which are carted off and camped, can have the cost of camping and pulping charged to the crop, and then the total cost can be charged, as in baled hay, to the stock which will consume it. In other words, the food is delivered ready to use. Many farmers tell me that you cannot expect the stock to pay for the total cost of the root crop, because it has another function in the rotation in cleaning land, which should be charged in part to the other crops grown after it. On this we do not agree, for if the stock cannot afford to pay for the roots they should be replaced with some that can, or other means should be found of cleaning the land and maintaining fertility. I may add, a good crop is cheap food, while a poor crop is very expensive, there being little difference in the cost whether the yield is 5 tons or 30 tons to the acre. The thin crop involves far more hoeing, if less carting, and shows a very good reason why fertility should be built up.

Then there are the odd carting jobs which are done for maintenance of the farm; these can be charged to a maintenance account, and it comes as a very great surprise to many farmers, with an unbalanced

system, to find how much must be charged to that account. On some farms, where we have examined the books, it has been as high as 52 per cent of the labour cost, clearly indicating very poor organization, when so [much time is spent on fencing, hanging gates, making up roads, cleaning ditches and the rest. But an investigation into those jobs usually shows a very poor improvement value for the time taken, indicating that quite a lot of that time was spent 'sweeping up the barn'. On our farm it now stands at 10 per cent, although I hope the place is more neat, tidy and well maintained than ever before.

The costing of stock, which is properly rationed, is not difficult, and the check is found in comparing the total consumed with the specified daily rations. We can rear a Jersey heifer to calving on 1 ton of hay, 1 ton of straw, 2 tons of roots, 2 tons of silage, and 5 cwt. of crushed grain; it is not difficult to calculate the actual cost, or check with the total food consumed. The same with pigs and poultry. It is a very sound rule to compare the weight of food consumed with the output of eggs or scores of bacon; and it is a fair test of efficient management if this steadily improves over the years.

For the financial side we require to have an analysis book—with as many columns as the type of farming requires—as shown on page 150, and as money is received the item and the amount is entered in the column under the particular heading to which it belongs.

From time to time the sums received will be paid into the bank, and the total paid in is entered in the column headed 'Bank'. Every sum,

INCOME

1950		Total to Bank	Pigs	Poultry	Cattle	Sheep	Crops
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Jan. 6	6 store pigs at 80s.		24 0 0				
22	120 doz. eggs at 3s.			18 0 0			
24	1 in-calf heifer				105 0 0		
26	To bank	147 0 0					

EXPENDITURE

1950		Total	Pigs	Poultry	Cattle	Sheep	Crops	Wages	Tractor Running	New Implements	Personal Expenses	Petty Cash	Sundries
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Jan. 2	Petty Cash												
4	200 galls. Petrol	18 15 0							18 15 0				
6	Smith & Smith. Cattle Cake	10 8 0			10 8 0								
10	Wages	26 3 4						26 3 4					
10	Self	20 0 0									20 0 0		
21	Jones, A. 10 Store cattle	210 0 0			210 0 0								
28	Green, E. 1 Boar	31 10 0	31 10 0										
30	Smash & Smash Ltd. Tractor (No. A.B.C. 110)	322 15 0								322 15 0			

whether by cheque or cash, must be paid in, and in this way total receipts can be checked with the bank passbook. On the expenditure side the total amount of cheques is entered in the first column and then split up under the various headings. At the end of the year the total spent will be the same as in the bank passbook, but, as there will always be some very small sums for which it is not worth writing a cheque, there is a ‘Petty cash’ column. The sum is also entered on the left-hand page of another analysis book, and on the right-hand side, under headings similar to those in the main book, are entered the

various small amounts. At the end of the year these small totals are added to the amounts in the main account, and on one side we will have the total amounts spent on each branch of farming, and on the other the receipts. The extent to which the farmer splits up the branches depends on how far he wants to analyse his accounts; some might wish to know the relative costs and returns of rearing chickens and their laying stock, in which case two headings for poultry instead of one would be necessary. The accounts from the merchants are easy to split into chick growers' or layers' mash, and if an equal weight of grain is known to be fed, on the usual basis, detailed information is acquired. It is essential for income tax purposes that certain items, such as new implements, can be easily picked out, but the accountant the farmer employs can advise on the minimum number of headings, if full details are not required.

If this book has been properly kept, with all the receipts filed in the same order as shown in the book, then all the accountant requires to prepare a balance sheet, and a profit and loss account, is the bank passbook, and the opening and closing valuations.

If it is also possible to arrange to come under the survey of an Agricultural Research Department for the area in which you farm, still further valuable information will be acquired by comparing your farm with the group and type under which you come.

What is equally as important as book-keeping is the business-like manner and approach in farming. Many farmers, still dreaming of the

golden age of the 1870's when their grandfathers lived like gentlemen, and hoping those days will come again, despise the tradesman; but there is a great deal they could learn from him. The ex-shopkeeper often does well in farming simply because he is used to thinking in terms of pennies as the profit on an article, and he will be quite happy to sell even a bale of straw retail if the opportunity occurs. But if you want to buy a few tons of hay or straw, or rent the grazing of a field off many farmers, you must never make the direct approach. Oh, no! They will *oblige* you with the hay or straw, as a special favour, and charge you the current market price. If you want that spare grass keep, which your farmer will probably waste anyway, you will have to pay a social visit and gently work up to the subject over a period of several hours. On the other hand, if he lends you some men for threshing, he only expects you to pay their wages, apparently requiring no profit on their work, unlike the builder or the garage proprietor who expects to double the wages to cover overheads and profit on the net labour charge. This, I suppose, originated in the hoary old tradition that farmers never make a profit anyway!

What a revelation it would be to many farmers' sons to spend a few months in a really efficient retail business, or well-organized factory, to know that every bag, box or bottle is booked in and out, to see the system by which the stocks are maintained, but at the same time no more money is tied up in any one commodity than is necessary; to learn how credit should be used, and the basis on which it is given, and the

service which is given to every individual customer, and how carefully that custom is retained.

A simple rule, which my brother introduced, and which we have practised here over a period of twenty-five years, and which I strongly recommend to everyone in farming, is never to drive a bargain. We are prepared to ask or offer what we believe to be a fair price; which means not only the current market price but that at which the customer could reasonably make a profit on the stock or the produce he is buying; or, on the other hand, that at which what we may be buying will leave a reasonable margin. Alternatively, the seller, or customer, may state his price, or make his offer, and we will either accept or refuse. What confidence this gives, when those with whom you do business know that you will neither advance nor retract on a deal. Business is not a matter of doing people down, it is mutual service for the reasonable profit of both. In giving good value for money you gain more than you give. Trust and confidence are the foundations on which all great businesses have been built. If you sometimes sell an animal for a little less than it is really worth, do not worry; it will be a good salesman for you in attracting more business. If you make a little more than the market price, it should be a high-quality product worthy of your farm, and the customer will still be pleased with it.

It is a sound rule to treat all men as honest until they are proved otherwise. On the other hand, no honest man objects to satisfying you as to his bona fides and financial security, if he has not done business

with you before. And in business between farmers it is customary to transact your dealing on a strictly cash basis; credit is only given by arrangement; for farmer cannot finance farmer, any more than dog can eat dog. If you must deal with rogues, remember there is nothing which so completely baffles them, however full of tricks and duplicity they may, as simple business integrity. It is said that a knave would rather quarrel with a brother-knave than a fool, but he would rather avoid a quarrel with one honest man than with either. He can beat a fool by management and address, he can get round a knave by further temptations, but an honest man can neither be bamboozled nor bribed.

The question might well be asked, how should a farmer deal with those to whom the ordinary standards of commercial honesty, or Christian integrity, which means the same thing, do not apply? If a shopkeeper sent you a bill for goods he had not supplied, or added up your account to show more than the amount due to him, he might be charged with attempting to obtain money by false pretences; but not so an Inspector of Income Tax. He can put in a claim for any amount he thinks fit, and it is for you to prove that the money is not payable. In the same way, it has been shown that money paid in error is not recoverable in law, but only to be refunded if the authorities are so disposed.

It is an unhappy state of affairs, but one we must face, for income tax involves one of the major problems of management, and no farm can be efficiently managed unless this aspect is constantly taken into

consideration. The individual farmer can do nothing to change the law, or the official heart or conscience, for indeed no such thing can function in bureaucracy; but he can so regulate his business as to keep income tax to a minimum. The minimum tax is the just one to pay. The Government by law, and its paid officials, takes great care that no farmer should pay less than he ought, but does nothing to save him from paying too much. It is even said that as much revenue is obtained from payments in error as is lost by evasion of payment. What a comment on the ethics of the Civil Service! In the great majority of cases a farmer must employ someone whose business it is to see that he does not pay too much. This service is a legitimate charge against profits. From the income tax point of view, it is often good business to spend money on things you do not need, or could manage without, if it will put the farm and equipment into better condition for future production, and if a reduction of income tax can be anticipated in the future.

One of the finest incentives to greater production any Government could find would be to calculate the sum obtained in income tax from the agricultural community, spread it equally over the 1939 schedule B valuation of the farms, and then reduce prices all round by 25 per cent. The farmers would have to start to work hard and farm well to earn a living, but would know that all they earned would be theirs, while, the country would have more food, and save about £100,000,000 per annum. At present the efficient and progressive farmer, growing wheat

and milk and wholesome things to the limit of the capacity of his land, pays away all he earns in doles and subsidies, while the inefficient need not bother; providing he devotes sufficient acreage to the production of fluid alcohol in the form of malting barley, all will be well, since the Government will draw their money from the tax on beer or spirits, an acre of barley producing £500 worth of liquor sold over the counter.

One is sorry to have to draw attention to these things, especially in a book which may be read all over the world, but they must be recorded in justice to British farmers, when visitors from abroad constantly comment on the poor use which is often made of our great heritage, climate and soil. The pity of it all! If only we could be governed wisely and well! If only our ministers could be farmers, with a love and understanding of the land, instead of politicians ruled by officials; or if only they could accept what common sense and morality require, what a wonderful country we should have. It would probably still be the centre of a great Empire—for others would be glad to associate and follow a good example, and it is on small things that great edifices are built.

CHAPTER VII

The Management of a Farm

I have emphasized in earlier chapters the importance of craftsmanship, knowledge and the business approach, and they now have to be brought together in the management of a farm.

The first rule is that you must have sufficient capital, land and stock to ensure you will be profitably and fully occupied. If you have not, then you must arrange to work for others part-time, as a contractor or otherwise. Do not be tempted to think you can supplement your earnings by literary efforts, at least not in the agricultural sphere, for, by the queer contrariness of this world, that is reserved for those who have already earned their money in farming, and who don't deserve any more! On the other hand, a few guineas from agricultural journalism are not to be despised, and this is open to all; but do not waste what should be productive farming hours on telling other people how to do it! Plenty of time for that when you retire.

The absolute minimum capital on which a man can start farming to-day is nothing at all. I have known it done, even within the last year, by a very clever and shrewd young farmer, who found people to trust him with sufficient credit, including a farmer willing for him to take over lock, stock and barrel, and repay capital and interest over a period of

years. He will make a success of it, because he knows his job, can work hard, and, strange as it may sound in these effete days, lives on the proverbial barrel of oatmeal and a few herrings like his Scottish ancestors.

These cases are few and far between, and generally speaking, it is far better to work for someone else, saving all you can over a period of years, rather than invest a tiny capital in a risky adventure, perhaps foredoomed to failure for want of sufficient knowledge or experience in managing a farming business.

But the actual capital required must be sufficient to pay the ingoing valuation, to pay for hay, straw, cultivations, etc., and to provide the machinery necessary for working the land, as well as seed corn and artificial manures. Livestock must be carefully bought, especially if it is the nucleus on which flocks and herds are to be built. And, finally, there must be sufficient in reserve for week-to-week expenditure on labour and living expenses, until the stock comes into production, or the produce of the arable is sold. But, under present conditions, anyone who intends to start and maintain a balanced system of farming cannot look for much income from the sale of corn, as he will wish to retain that, for anything up to twelve months, for the feeding of his stock, and cash it in to the best advantage through that stock.

Our advice, where capital is limited, is to keep as many poultry as the reserves of feeding-stuffs will maintain, and sufficient to enable the farmer to pay his way; for this is the stock with the quickest and the

very highest rate of economic conversion of food into money. The next best proposition is pigs, if there is food available for them. But, failing this, a small start should be made, gently building up for the time when it will be possible to feed larger numbers. Dairy cattle, the farmer's first choice for a regular income, are expensive to buy, except for the very knowledgeable man who can buy old cows in calf for no more than the value of the calves he will get from them; and for any given sum to be laid out I would prefer to buy calves or yearlings and live on the balance, if necessary, until they come into production. For the cumulative value of young stock growing into money is at least equal to the return from milk for a given outlay, involves less work, and is usually far more satisfactory. This method has the additional advantage that nine out of ten farms are taken over in a very neglected state; and if the farmer can get the hedges and ditches put in order, and the dangerous grassland, too common on so many farms from the disease-ridden stock they have carried, ploughed up and reseeded, he will have a flying start when his young stock come into production as autumn calvers at some predetermined date, with reserves of food in hand, and the rotation laid out to provide for them. The reserve of capital which I have mentioned for living expenses while rearing the cattle would not, of course, lie in the bank, but would grow into money by a temporary investment in sheep, sold out as required.

Sound as this system is, there is just one word of warning for farmers who raise part of their capital from a bank and render to it an

account of their stocking and cropping. Astute businessmen as bankers should be, they have very old-fashioned ideas on farming, and they seem to have a horror of money invested in poultry. This may be because the amateur farmer has often lost money in this class of stock, but there can be no doubt that for the general farmer they have been the one fool-proof branch of agriculture over a great many years. Comparing the average price of corn with the price of eggs and table poultry for every year back to 1891, there is no class of stock which could give the same return for the capital involved and the food consumed. Our farmers moaned and groaned in the 1890's about the price of grain, if the correspondence-columns of the agricultural papers can be believed, but on the next page bran, or what we now call wheatings, was quoted at 50*s.* a ton, 'eggs, in short supply, 2*s.* to 2*s.* 6*d.* a dozen'. What were the farmers thinking about?

Not only is the class of stock important but the quality, on which will depend whether you make a living or reap a fortune.

Is the breeding of pedigree livestock within the means of the small farmer, and is it a practical business undertaking? My brother and I made a modest start with £50 worth of pedigree cattle and have sold upwards of £60,000 worth in the last twenty-five years. The progeny of animals bought for three or four guineas have sold for as many hundreds.

What is the position to-day? So much of our pedigree livestock is in the hands of comparatively wealthy people that prices are far removed

from commercial values, and the small man finds it difficult to see his way, although at a time when it was never more necessary that the standards of stock should improve.

The first essential is not money but a love and understanding of good stock; and once you have set your heart on it, you will find the ways and means to buy that old cow, who can be the mother, suitably mated, of a great herd. A pedigree gilt, or a few registered ewes, may cost you little more than the commercial price, but you have the raw material. After all, it is not the buying of the paint and canvas that makes an artist, it is what he does with it. The small farmer who has the natural disposition is far better placed to make a success—however limited his financial and farming resources may be—than the wealthy, large-scale farmer, or country gentleman, who, lacking this flair or aptitude, goes into pedigree stockbreeding with money to burn.

Time and patience are also necessary, but these again are the qualities which anyone who has read so far in this book must have in full measure!

It is the modest start and the time it takes which develop the skill in eye and hand for the selection of stock, while one is also mastering the details of structure, breed and constitution. These, coupled with the knowledge of the habits and requirements of the animals concerned, are the basis of successful stockbreeding.

To have to feed and water for two or three years an animal which is developing some fault is to learn a lesson which may never be acquired

in a hundred visits to the show ring. On the other hand, to see a calf and foal, of no apparent merit beyond its breeding, grow into a prizewinner is an experience beyond price.

The day of the horse has gone by

The few scientific principles governing stockbreeding are easily learned; they are dealt with in a later chapter, and with them the man or woman with sound stock-sense is seldom liable to transgress in practic e.

Building construction with the aid of a tractor

In fact, a few guiding principles, an intelligent use of herd books and the information in sale catalogues, and incidentally a knowledge of human nature, will be of greater value than a complete mastery of Weismann theory, Mendel's law, or the contributions to knowledge of our modern scientists.

The golden rule of the early breeders, 'Breed close and cull hard', is an easy one for the small farmer to follow. He seldom has the money to spend on stock from the fashionable strains of the moment, which are seldom heard of again while the sale of an odd animal which does not come up to his expectations will be fully worth the commercial value of a similar animal, and useful income.

The method is slow, but progress is sure, if the foundations are truly laid, and nothing in farming pays such high dividends as patience. One advantage is that the stock is acclimatized to the farm, and the other is that one's experience is always equal to the herd or flock which has to be managed. I believe pedigree stockbreeding is especially suitable for the small, poor, and isolated farms, perhaps not suited to other systems of agriculture, for not only does it make such farms profitable but the farmer and his family have an abiding interest in a place where entertainment might otherwise be restricted to the passing of the seasons. We are eight miles from a cinema here, yet I believe any of us would miss Mr. Arthur Rank's greatest production to see Enstone Noble Viola calve, in whose pedigree one animal appears fifty-eight times, another forty-eight, and two forty-seven times respectively, and

who is line bred to Lady Viola, said to be the most perfect Jersey cow there has ever been, and in whose family every heifer is born good for 10,000 gallons in her lifetime, if given proper management.

We have only tried one method of rearing—it succeeded

For the farmer who has a reasonable amount of capital available pedigree stock is a very sound investment, providing he does not fall into the common error of buying animals of individually outstanding merit but having nothing else in common. I always recommend buying a herd, animals perhaps of only moderate quality, but of the same

blood, and mating them to a first-class bull, so that something better is bred from them. Failing this, the right bull, mated to two generations of almost any registered stock, will give a good foundation on which to build.

An ordinary metal scraper mat ensures clean litter

What will pedigree stock cost? It varies from about 25 per cent above similar commercial animals, if there can be any comparison, to as much as you like to pay. So, if you can be content with a few less animals to begin with, pedigree stock is within your reach, always

providing you select them with care and knowledge, as worthy of the thought and time you will give to them.

I remember once advising a friend on his selection of stock at a collective sale, and we bought ten animals at an average of 40 guineas apiece. At the same sale a famous theatrical producer was buying heifers at five times the money, and paid more for a bull than my friend's entire outlay on cattle. I commented at the time that the impresario's methods were more suited to the selection of chorus girls than pedigree stock, for he certainly chose them for their colour and good looks; but unfortunately the bull did not look like transmitting even those good qualities to his progeny, being rather like a great businessman who marries a lovely actress, the children inheriting their father's looks and their mother's brains; for whatever merits that bull may have had, he gave no indication of being homozygous for anything. A few years later my friend was selling stock at an average of 200 guineas each, and by chance and coincidence, for we recalled the famous name, the other man had nine animals go through the same ring, without reaching the upset price specified in the auction rules.

But when you have bought your stock, as the foundation of the herd, never be tempted to buy again. The only way to get good stock is to breed it; and if you cannot breed something worth while from that which you have, you should not throw more money away on it. The female stock must always stop, although it is sometimes necessary to change the sire, for malformation can appear at any time from the use

of a male animal with undesirable qualities. But apart from this, management is all-important, for nine-tenths of the improvement in livestock comes from this source, since nearly all reasonably well-bred stock has the inherent capacity to produce, and it is management which brings it out. If you get a bunch of heifers with fleshy udders, do not blame the bull; it is the result of doing them too well in the second half of their first year.

Three-quarters of the pedigree is said to go in at the mouth; in other words, feed your stock as they should be fed. Give them high-quality food at all times, and in sufficient quantity and variety, as the result of careful planning and cropping, efficient storage, and careful rationing. Remember that the pedigree stockbreeder is in a far more vulnerable position than the ordinary commercial farmer. He cannot sell off his stock in time of drought and buy again later without sacrificing years of work; he cannot take grass keep without exposing his stock to parasites and disease. How often has husk or hoose been brought home to sound pastures by this practice! So, to succeed in stock breeding, you must be an above-average, general good farmer. But this is not difficult, for the same thought and care given to the one can be applied to the other. The greatest security lies in a balanced system of farming, indicated in an earlier chapter, ensuring as it does a continuity of supplies, with summer and winter keep, and with hay, roots, silage, and corn; it would be a very bad season indeed in which more than one of these failed, and even then reserves from a previous year should carry the stock through.

I speak from experience. For on this farm, in proportion to our acreage and in comparison with the county as a whole, we carry three times the cattle, four times the sheep, ten times the pigs, and twenty-five times the poultry, but we have always had sufficient hay, silage and roots to carry us through, and usually keep a year's hay in reserve. Needless to say, it is very largely the manure from this stock which, carefully preserved and used to the best advantage, grows the crops necessary for the animals. Yet feeding 1lb. of hay per head, per day, all winter, over above the proper ration would run away with 4 tons of good fodder, and one-quarter of the reserve held back for a bad hay year. In loading mangels in the field we count in several average trailer loads, multiply by the number of loads, and divide by the number of days over which they will normally be fed, which indicates how many may be fed daily. To feed ten too many over a hundred days means you will be a hundred short for the last ten days, often the most crucial of the year when you are waiting for the grass to grow in a late April. What a lot of good young stock are ruined every year because farmers have to turn them out too soon for lack of food. And old rule, and a sound one, is to check your reserves of food to see that they are not more than half used on St. Valentine's Day, February 14th, for you will need them in that second half of the farmer's winter, however pleasant and mild the winter may be. If the grass is growing in January, as it did in 1949, shut down tight on the roots, warns an old adage. How true it

was! Mangels carried our ewes and lambs right through June, July and August, in the third dryest summer for sixty years.

For the reasonable margin of safety, you need to allow one-eighth of an acre of roots and seven-eighths of an acre of corn, including beans and peas, to provide for each cow on a self-supporting farm, or if the food allocated is diverted to other stock. Two young beasts are calculated to equal one cow, and two ewes of the heavier breeds to equal one animal. Grass sheep can manage on much less. Adult poultry need 1 cwt. of food per year, and ¼ cwt. to rear a pullet. In both cases one-quarter of that can be substituted with four times the weight of potatoes. A sow and her two litters will consume 1 ton of meal per annum, or potatoes in proportion of four to one. A pig can be fattened to bacon weight on 4 cwt. of meal and 1 ton of potatoes. Some of the new fodder beets also have a very high feeding value, and we can look to them for replacing potatoes for stock-feeding in the next few years; they should give a much higher yield per acre on land which is suitable for that crop, for at present we are dependent on waste potatoes not suitable for human consumption, or in surplus supply. In times of scarcity our arable farmers dump in the bad with the good, knowing the consumer cannot complain, with the result that each household wastes a few pounds which should have been consumed on the farms to increase the bacon and egg ration. It helps to show the figures quoted in Parliament to excuse inefficiency! Few farmers realize that pig potatoes carefully fed to stock give a better return than the best sold at the

controlled price. This does not mean you should feed ware potatoes to the pigs and poultry, that is morally wrong, and bad business when you can buy the chats at half-price. On the other hand, no one should be permitted to sell pig potatoes at the ware price by getting them accepted without grading, when they are urgently needed elsewhere, and of no use for human consumption.

However, this is by the way. Potatoes do constitute one of the best reserves of food; steamed and ensiled, they will keep for at least two years.

But, of all the crops the stockbreeder grows, grass is the most important and the one we know least about, and it is certainly the one which is most neglected and abused. To make the best of it, there seems little doubt it must be managed and cultivated in the best arable tradition. Ley farming is not cheap, and there are still many farmers who feel that skilfully managed permanent pasture has much to recommend it. It is less productive, we know, but it does stand drought better, and stock prefer a sward with a great variety of pasture plants growing in it. I prefer the middle course—to make use of leys on land that is well suited to arable farming, and to leave in permanent pasture land unsuitable by soil or situation to cultivation. Few pastures really pay for reseeding, and if they are worthy of the name of pasture they can be remade by management. Any one pasture plant can be encouraged or reduced by over- or understocking at certain seasons of the year. Hard spring grazing will encourage wild white clover, or if the

field is left at that time the grasses will flourish. Poultry are the greatest improvers of a permanent pasture that I know. Stock it evenly at the rate of a hundred birds to the acre, and if it is also regularly grazed by sheep and cattle it will improve out of all recognition. A field that was dead and brown for seven months of the year will soon be a winter-green pasture except in periods of hard frost. Moreover, folded poultry moving over the leys will confer a benefit on all the crops which follow in the rotation. It is manurial residues from the poultry, from 4-10 tons to the acre annually, spread day by day, which build up production, while the mechanical action in scratching out moss, old grass, and the droppings of the larger animals contributes to the improvement. By this method alone, without the addition of any artificial manures, the stock-carrying capacity of the permanent grass on this farm has been increased tenfold over a period of years, and is still building up.

But for the maximum production in a good season there is nothing to equal a ley. In 1948, cattle were folded by means of an electric fence, behind poultry folds, at the rate of one-hundredth part of an acre per beast, per day, and following them were the sheep, producing 5 cwt. of mutton to the acre. The field was then topped for a light crop of hay; and finally won second prize for a three-year ley in the local Farming Club crop competitions; losing the first prize, in the opinion of the judges, because too expensive a mixture had been used. I was quite happy to accept their judgement, but we do not have to save shillings on mixture when we are selling £100 worth of cattle annually off every

acre of grass. I quote this simply to show what can be done, even on naturally light, poor and stony land, with ley farming. I have been told that you need at least ten things for a successful ley—well-drained, well-watered, well-fenced land; clean and in good heart; the best mixture that skill can compound and money command; then sow it at the right time, on a good tilth, under the right nurse crop, and by the best means; then graze and top it, and stock it with care, and you will have late autumn grazing, early spring bite, and plenty of keep all summer, even in a dry year. Remember that a ley can provide grazing, hay and silage, which means keep all round the year; on the other hand, it is no good having leys you cannot stock, they are just a waste of land and money.

Of the arable crops, roots call for the greatest skill and management by the farmer. It is said you can judge a farmer by his roots. They certainly make a very great difference to a farm, for roots mean stock, and stock means manure, and the cumulative spiral starts round and round. Roots involve a lot of labour, but nothing provides such an abundant and cheap source of carbohydrates for stock-feeding as a good crop of roots; while kale, which comes under the same heading, can produce more protein to the acre at the right time of the year than any other crop. The three 'F's' are the essentials for starting a good crop: 'free, fine and firm'. Which means soil free from weeds, fine in texture, and firmly rolled down on the seeds. Even then you must have sufficient rain to start the seed, and if necessary you must protect the

seedlings from the turnip fly with a suitable dressing. Probably no crop causes the farmer more anxiety until it is well established and then nothing pleases him more if he can keep it clean. Roots crops are expensive per acre, but the produce is cheap per ton if the crop is good. They are often condemned as being from 95 to 97 per cent water, but most stockmen think differently, and all the cattle and sheep I have ever kept much prefer their water in that form. I wonder if our university professors would rate a few grains of barley and a jug of water as highly as the product made from the same materials? One pound of dried sugar-beet pulp is said to be equal to 7 lb. of fresh roots; it has certainly never given our stock the same satisfaction; and, as a great student of human nature once said, 'It's a little of what you fancy does you good!'

In corn-growing the soundest rule is never to grow more than two straw crops in succession, more than once in the rotation. With a balanced system of farming it is never necessary to do so. On land that will grow beans or peas, two of the most valuable sources of protein, the farmer can arrange his cropping to alternate between all the different farm crops, and it is quite certain his land will never suffer from 'take all' and all the similar diseases to which mismanaged arable is prone.

Noticing the great controversy which rages from time to time through the agricultural Press, 'Muck, Magic and Mystery', 'Chemicals, Humus and the Soil', the practical farmer building up a

balanced system of farming may wonder which he should adopt, or if he is likely to undermine the health of his stock by the use of artificial manures. He need have no fears, providing the extra arable produce that he grows is used to feed his livestock and in due course build up the humus content of the soil, which in turn enables the artificial manures to work to the best advantage. The time will come when the inorganic manures are unnecessary, but the nitrogen, potassium and phosphorus have got to be put into the land first, either through stock from brought-in feeding-stuffs or by direct application. The whole problem hinges on humus, and humus is the product of living matter and the source of it. The quicker you can build this up, the better your crop will withstand drought and disease, simply because it enables them to continue growing all the time.

Chemical analysis gives no indication of the capacity of the land to produce. Samples taken from this farm, which has been worked on the market-garden level of 10 tons of muck to the acre per annum for a long time, show no significant difference from adjoining fields which have not seen a muck cart for a hundred years, but we will grow a better crop, with no additional manuring, than the other will with the recommended dressing. Chemical analysis shows the chemicals lying in that soil, but the humus content is so deficient that it does not hold sufficient moisture to enable the plants to take it up. Here, on the contrary, almost anything will grow, including every weed seed that gets a chance! As yet there is no satisfactory method of determining the

humus content of the soil, for part of the loss on the ignition test may be due to carbonate of lime.

The balance of stock and crop not only enables the farmer to make the best use of his land but to organize his labour to the best advantage. Dark mornings can be used for grinding grain or poultry mash; wet days can be utilized for building poultry folds, hurdles, troughs, and all the other odds and ends needed on a farm. The farm that can keep everyone usefully and profitably employed day in and day out is the farm that is going ahead.

The planning of the work is very important, and the getting in hand of supplies necessary for the work in slack seasons: gravel for concreting, wood and nails, paint and spare machine parts. The most tiring job I know on a farm is trying to fill in time. I hated it so much when I was learning that it is very seldom that we have to think very long how to keep people busy and happy doing something useful and interesting, even in the worst weather. In fact, we often say that our regular work interferes with our odd jobs! Our experience would indicate that farmers can be very largely independent of builders, blacksmiths and the rest if necessary, and especially in the early days when money is tight and you have the health, strength and energy to work early and late.

With a well-balanced system of farming, and rotational cropping, a farmer soon establishes his traditional dates for sowing and harvesting, and knows whether he is early or late with his work, and how long each

task will take; while the man who wonders whether he can stick in a field another crop of barley (is this the third or fourth, he wonders) never knows where he is, and is badly caught by the seasons.

In planning his own time, except on the smaller farms, it is desirable that the farmer should keep himself free from routine work as far as possible, for it is he who has to take the place of a man who is ill, or deal with the unexpected job that turns up. But where the farmer does his full share of the work, then it is far better for him to concentrate on the stock, and to employ someone else to do the ploughing and cultivations, for that is work that can be easily checked and supervised. Nevertheless, the ideal is to have everyone trained to do every job on the farm, and in my experience this is well worth the effort.

I often think that farms are like ships; and as there are said to be happy ships and unhappy ships, so there are happy farms and unhappy farms. There are farms where all seems to go well, keeping time with the inevitable passage of the seasons, steadily going on, undisturbed by the distant mutterings of an unhappy world. Such farms are something to pray for, but are brought about chiefly by good organization, and are the product of the farmer's own initiative, good example, enterprise, grasp of essentials, and long-term policy.

CHAPTER VIII

The Management of Livestock

I have always emphasized the importance of livestock in a balanced system of farming, and my accumulated experience may be of value, if only in bare outline, for in stock I have always found my chief interest and pleasure, not only at home but in visiting other farms, or even in travelling through the countryside.

Personal attention and observation is by far the most important factor in the management of livestock, and then systematic attention to their requirements, and I suppose a natural flair for that kind of work. The man who never grudges the hours of his spare time just looking at stock handling and studying them has a natural aptitude which, combined with experience and knowledge, will equip him for their management.

Poultry is the most important stock on our farm, from the point of view both of finance and the maintenance of fertility, though it makes possible heavy stock with pigs, cattle and sheep, to such an extent that most farms carrying as many animals in one or other class might regard themselves as a pig, cattle, or sheep-breeding farm.

When visiting farms, people are often surprised that my brother and I can pick out poultry of our strain, even if the stock was not obtained

direct from us. We know our birds as truly as most people can recognize a cousin from abroad, whom they have never seen before, by a family likeness. This is not really surprising, because we have seen every generation since 1914, without a day in which one or other, or both of us, have not seen all our stock. We delegate some of our work, but one round of the stock is always done by us; and furthermore, all the birds are of common blood. With 1700 birds mated up, in a closed flock, it is probably one of the largest, purest, and oldest-established flocks of Light Sussex poultry in the country, for it can be traced back ten years before we started, to the time of the foundation of the Light Sussex Club in 1904. But any merit the strain may possess is only brought out by good management, and it is with that aspect that we are now concerned.

Many poultry breeders will tell how they have tried every system of chicken rearing, and at last they have found the best. You will hear the same story again from them in ten years' time. We have only tried one. It succeeded; and while it has been modified for human convenience, no alteration has been found necessary. Personally, we are inclined to think that the person in charge is of more importance than the system; a good man will rear good stock even under a poor system, while a poor hand with chickens will spoil anything you give him even under ideal conditions. Twenty generations have been reared under intensive conditions without having to 'return to nature'; we never saw any virtue in running chickens out in a biting wind and a few inches of mud early

in the year. They will survive, but it confers no lasting benefit when compared with the conditions of those reared in the more genial climate of a large brooder house, with plenty of fresh air and controlled humidity, and of course in equally small units. Later in the season they have a cool brooder house, with the whole front open, and these chickens happily scratching in peat moss, and with freshly cut turves to pick at, seem to do as well as any that have roamed on nature's bosom, probably full of parasitic infection. On one occasion, when all our rearing folds were full, we ran on, in the brooder house, all the cockerels in the last hatch of the season until they were four months old and detected no breakdown in health or lack of vigour when they were kept under what many breeders would consider unnatural conditions.

The young chicken requires warmth, fresh air, and sound, wholesome food; you can feed on a high or low plane of nutrition in proportion of starch and protein; the bird will grow quickly or slowly, but arrive at the same weight at a certain age. With 20 per cent protein it will double its weight in ten days; halve it, and this will take twice as long, but it all comes to the same thing at four months. On the other hand, when valuable protein is in short supply you can rear more chickens on a given quantity with a modest plane of nutrition.

From the age when young birds can derive full benefit from grass, folding on fresh leys would appear the ideal method. For in rearing many thousand under this system I cannot recall any that failed to thrive and do well. At this stage, limited mash feeding, say 1½ oz. per

bird per day, and satisfying them to the limit of their appetite last thing at night with sound grain, grows fine healthy birds coming into good production at the right time. Few people realize the strain of full production on a laying pullet; on a weight-for-weight basis, it is equal to an eight-stone woman having twins twice a week—a strain in the best-regulated families, if only on the husband!

With laying stock, large, well-littered houses seem to provide the best conditions for winter production, especially if the eggs are required for incubation. The so-called deep-litter system works well in a dry winter, but when the weather is mild and damp there seems little virtue in leaving the litter in; and as it has got to be cleaned out some time or other, it is well to take advantage of the opportunities when they occur.

This last ten years has proved the value of potatoes for laying birds, the lack of fibre being a great asset when so much poor-quality food has to be used. Up to 50 per cent can be fed in the rations, although it will take 4 oz. of potatoes, 1 of meal and 2 of grain as a minimum to keep a bird in full production, and the meal will need to be up to 20 per cent protein, unless the birds have access to short grass and insect life on free range.

In the selecting and culling of poultry fairly long experience is necessary, and the operator must be in constant touch with the flock, to see if they are improving or going back. A bird can be in full production one week, as shown by the trap-nest, and be an absolute screw the next, for they are creatures of very high metabolism and

catabolism, which means they build up and break down very quickly. Casual inspection of poultry flocks, beloved of Poultry Advisory Officers, means nothing. One man might have 5 per cent poor birds, but still left in, and go down in their estimation; another who has taken out 20 per cent the day before might pass with credit. The place to inspect a breeder's stock is not on his farm but on those of his customers. He may have 500 beautiful dark Rhode Island Reds at home, but there may be 1000 as light as Buff Rocks scattered round the countryside. Inspect the appliances, layout and general management, by all means; that may be a better indication of value in a breeding unit. Passing on to cattle, perhaps a more impressive stock and more pleasing to the eye, we have had some 600 pedigree Jerseys through our hands in the last twenty-five years, and we are never likely to forget so many lovely animals, or what they owe to the poultry, which have made the pastures and grown the food on which they thrive. In this respect I suppose few farms could have done more to refute the hoary old superstition that you cannot keep poultry on the same ground as cattle without risk of infection from tuberculosis. In common with other people, we sometimes have a doubtful reactor, but a positive has never been found on retesting.

We specialize in rearing calves, selling them when they have calved, and retaining their calves to carry on the herd; the stock being maintained by buying sufficient calves from other herds, bred very largely from our own stock, to replace our bull calves. In this way some nine generations have passed through our hands, and given us a wider

experience of cattle breeding in a comparatively shorter span of years than might have been possible under other circumstances. Here again, what the customers do with the stock supplied is often an indication of their breeding worth. In one year, of the seven leading Jersey herds in the county, as shown by the Milk Recording Society, the leading herd was composed entirely of our stock, and in four others it predominated. In a herd competition, based on a scale of points, for the best herd of under twenty cows, a valued customer came first, and we second, as indeed it should be. We sell our best if they have left their seed behind in the shape of a heifer calf.

In the numbers we have reared we have been more than fortunate in identical twin calves; three pairs have been reared on different planes of nutrition to compare management with breeding. There is every indication that once a certain level is reached the improvement which comes from breeding is never more than 10 per cent, while 90 may be due to good management. You can force a cow to give a high yield for a few lactations, or you can be content with a moderate yield over a period of years and of course many more calves. In the island of Jersey you will see ten-year-old cows looking like heifers; they have had practically no concentrates, being more valued for stockbreeding than for milk, though their progeny will milk as well as any when pressed for production.

As far as rearing is concerned, it would appear that a fairly high level is desirable in the first six months, and may add six years to the

animal's useful life. Only when substitutes have been used, although the animals appeared to thrive and do well, has there been that loss of long breeding life which is so desirable.

For many years now there has been a tendency to select cattle on their ability to convert concentrates into milk—the son of that 2000-galloner is the pride of the herd, and so it goes on. Our experience in the last ten years would indicate that the animal which can produce 600 gallons on silage, hay, roots, and perhaps a few oats, may be the more economic proposition in years to come; and what is more interesting is that we have some indication that it can be done on an average of one acre of intensively farmed land, by a small cow with a high rate of economic conversion. It has been done on one-third of an acre of grazing, by tethering; an equal area mowed for hay and then grazed; a quarter of an acre of oats and peas, under-sown with trefoil for autumn grazing; and one-twelfth of an acre of roots, kale and mangels, on which turnips were broadcast just before the row closed, and provided extra keep when the main crop was removed. The greater part of British dairy farming requires 5 acres to a cow, and even than a lot of concentrates, to produce an average of something under 500 gallons. If half that land were devoted to growing corn for pigs and poultry we should be self-supporting not only in potatoes and milk, as at present, but in bacon and eggs. But the manure from those pigs and poultry would grow enough corn, if properly stored and used, to grow

sufficient wheat to feed us all. The problem is how to set the cycle going.

With pigs we have learned many interesting things over the years, and they deserve a place on every farm. In our early days we ran pigs out whenever possible, but this last ten years they have been confined to a large, warm, and well-lighted pig-house, but with concrete yards attached; this method was forced on us, as on Danish farmers, because we could not spare valuable land for pig grazing. They do, of course, get kale, green oats, peas and vetches, and mangels in summer; and we have seen no deterioration whatever since they have been confined. This system has the advantage that every drop of liquid manure is stored and is available for top-dressing arable crops; it is mixed with old peat moss from the brooder house, 1 cwt. soaking up 70 gallons, which gives it a most convenient form for spreading with shovels from slowly moving trailers.

For economic conversion of concentrates into money pigs come second to poultry, but they can deal with very large quantities of potatoes, and some years we buy up to 100 tons, good stuff, but not suitable for human consumption, which might otherwise be wasted. A few waste eggs from the incubators, dead in shell mostly, from 1000 eggs hatching weekly, provide a little protein to balance potatoes; a dozen will save 2½ lb. of precious fish meal, and balance 1 cwt. of potatoes. That fish meal will feed a hen as far as protein is concerned for six months, and will help to produce perhaps eight dozen eggs, and

so once more it goes round and round. It is the old principle of the indestructibility of matter and the cumulative effect carefully built up over the years.

One improvement which electricity has conferred on the pigs is an industrial heater, consisting of a fan driving air over an element. We have it fixed into a board, which can be fitted over any farrowing pen by means of two bolts. This is for winter farrowing, so that when a sow farrows on a cold night warm air is gently wafted down on to her young family. Within half an hour of farrowing you will find them curled up together, in a predetermined spot, safe and warm. Even in the worst of weather, and we had forty degrees of frost here in 1947, they grow and thrive like summer litters.

And, last, the sheep. Many people wonder why we keep these when we sometimes sell a single heifer for more than our entire lamb crop. But they have a place on the intensively stocked and cropped farm, if only in clearing up behind the other stock and maintaining the balance in the grazing on pasture and ley. If every British farmer kept as many sheep in proportion to his acreage as we do, there would be no meat rationing in Britain, though I fear our people might be a little tired of mutton. Our normal stock is forty ewes and their followers, but the number is sometimes reduced to thirty when the cattle population is extra high. Five years ago we achieved our ambition to own a pedigree flock instead of the Border Leicesters, which had served us so well when crossed with Suffolk ram. We chose Clun Forest, and have never

made a wiser decision, for they combine all the virtues of a mountain breed with the docility of the Down sheep. They are not quite so prolific, and a little more care has to be taken of them for the first few days of their lives, but gross return has been even more satisfactory. Small, two-year-old ewes, brought from their native heath, improve out of all recognition on our winter-green pastures, due to the heavy stocking by poultry, and our original stock went out at more money after three lambings than they cost, while from them we have retained our own lambs to come into the flock. We have also had the pleasure of rearing a few ram lambs, a joy to the shepherd's heart, for all who have read my earlier book will know how much I love sheep. On a farm like this we can never spare any concentrates for sheep; up to Christmas they get nothing but grazing on grass, stubble and perhaps clearing up of kale after cattle; from the New Year, one mangel a day until lambing, when it is increased to two. No hay is fed before lambing, except in a period of extreme frost, and it never exceeds 1lb. per head per day. They come through in good order; the wether-lamb crop averaged £5 10*s.* apiece in August 1949, as store sheep, and should run on to make 12½ stone, or £10 each, for some lucky farmer with grazing to spare.

Many farmers reading this book will think I harp too much on pigs and poultry, but I give an equally wholehearted recommendation for well-bred cattle and as many sheep as a farm will carry. Surely no farmer's heart is so dead that he cannot take pride in well-kept stock,

and even on those dairy pastures which need grazing back in the autumn it is surely worth putting the hedges in order and keeping sheep where they did in bygone days. All the drive and propaganda of the National Agricultural Advisory Service is now being put into encouraging farmers to keep sheep; for once I am with them, as I was bitterly against the War Agricultural Committees, who dismissed sheep in the early days of the war when issuing ploughing-up orders. Had I been in charge, sheep would have been grazed on undersown stubbles, grass that went to waste on dairy farms, winter-proud corn in spring. They could have been managed in large flocks, if necessary, for the winter months, and lambed early. Then they could have been tethered on the roadside wastes and banks, as they are on the Continent, in charge of all the young typists from the Committee offices, while the officials typed their own letters. When the lambs were weaned, there they would have milked them, and the passing milk lorries picked up the produce. Shall I tell you how much cheese 10,000,000 sheep will produce in two months? The Government would never forgive me if they could not even ration cheese!

But, joking apart, it does sadden me a lot to see all the wonderful opportunities which are being lost to make our country once more the stockyard of the world. It could be done by each individual farmer making just one little effort to do a little better; and in writing these words I re-dedicate myself to do the same.

CHAPTER IX

The Taking of a Farm

This chapter deals with one of the most important aspects of a farmer's life, for one day, and perhaps one day only, he will make a decision of almost equal importance as a proposal of marriage, for it will determine very largely how and where he will spend his life. Just four words, 'I will take it,' or 'Will you marry me?', and the die is cast.

When looking for a suitable farm we already know the limits of our financial resources, the type of farming we wish to take up, and the size of the holding we feel capable of managing. Most people have also a leaning towards a certain district, because it is suitable for the farming they favour, or for personal reasons such as family connections, or friends already farming in the district. But it is best not to set too narrow a limit on the area in which to farm, especially if capital is not too plentiful, for to find the cheaper farms you often have to go farther afield. If you favour a farming system based on arable, you will be well advised to keep east of a line from Portland Bill to Berwick-on-Tweed; if you believe in grass and mild winters, keep west of it. If you want the best of both, then choose light land in the west, or heavy land in the east, or farm right on that line. Slope and elevation are also important. I would sooner have a farm open to the winds of heaven in a wet district

than one shut in by woods in an area of low rainfall, as far as drying corn is concerned; though for stock I would insist on shelter from the driving rain in the west and the bitter winds in the east. Strangely enough, some farms combine both, for they were laid out with care in bygone days, with that object in view.

The normal approach is to write to the leading auctioneers and estate agents in the districts you favour, and also to study the advertisement columns of the agricultural papers; for while the best farms are seldom advertised, there is sometimes one which offers great possibilities for the man who can see a little farther than the rest. Sometimes the same farm is offered by more than one agent; so that in the interests of the seller of the property or the landlord from whom we may rent, we should note the order in which the particulars are received, so that there can be no doubt from whom the introduction came. You might think, why bother? It is not your responsibility. But it is these little points which cement a friendship between landlord and tenant, or between buyer and seller. Why do people nearly always quarrel by the time a farm has changed hands? You may want to do business again in the future. The rule I have mentioned earlier, of simple honesty and fair dealing, in offering or paying a fair price for stock, goods or services, equally applies when taking a farm. If you can say, quite frankly, 'This is a good farm, possibly a little better than it looks, and it would suit me well, but unfortunately I cannot afford to put down more than £2000 of the £10,000 you are asking,' it might

result in an offer of a four-fifths mortgage at a lower rate than you could obtain elsewhere, for the seller, we presume, is going to invest his money somewhere, and where would it be safer than in land he knows and in an honest man whom he can trust?

If you cannot back your own judgement in the value of a farm, either to rent or buy, you should consult a local valuer of good standing, and you will find it well worth the few guineas he charges you, as far as current market prices are concerned; but even he cannot look into the future, or know your capabilities. But if you have a definite long-term policy of progressive farming in mind, a farm is one of the cheapest things you can buy at the present time, either as a source of wealth, food, or future happiness. I once met a previous owner of our farm, and he said to me, ‘I would not have sold that farm for twice the money, had I known what could be done with it.’ I replied, ‘It would not be sold for twenty times the money we gave for it, in view of what has been done to it!’

Whether to rent or buy is a difficult problem. The best of landlords cannot live for ever, and they are being taxed out of existence. If you rent, you will pay away the value of the farm over the next twenty or thirty years and be no nearer owning it. If you buy, and the land is nationalized, you will be robbed of a greater part of your capital, for Government script is not capital, and you will be reduced to the level of a tenant, but under an absentee landlord represented by officials, lacking the two inseparable virtues of the best type of private

landowner—love of the land, and wisdom in dealing with it. What a comment it is on farming and human nature that the Agricultural Holdings Act was passed many years ago to enable tenants to abuse their land; now the Agricultural Act has been passed, and a horde of officials employed, to enforce the standards of husbandry on which the landlords of bygone days insisted. ‘’Tis a mad world, my masters, and you have lost your way in it.’

However, philosophy apart, you have still got to live and farm. Remember there was only one church built in England in the whole of Oliver Cromwell’s reign. You can see the tombstone of the man who caused it to be built, at Taynton, Oxfordshire, and of whom it records: ‘He did good things in bad times, and he hoped them in the most calamitous.’ Let wiser and saner generations say the same of us.

When receiving particulars of farming property, the actual details, acreage, etc., are some indication of fact, but the general write-up depends very largely on the imagination and so-called salesmanship of the land agent or auctioneer. They sometimes wax quite lyrical. ‘Delightfully isolated’ may mean that it is badly placed at the end of a long lane. ‘Suitable for a gentleman’s occupation’ may indicate that it is too dear, or useless for a working farmer. But it is what they leave out that is often most significant; after all, why mention there is no water, or a cement works is being built next door?

Before inspecting a farm an appointment is usually arranged, and you are shown round by the vendor, landlord, agent, or tenant in occupation as the case may be.

We naturally enquire why it is for sale, or becoming vacant. There may be a dozen different reasons, any or all of which are worthy of close attention and further investigation. The history of the farm is also of value. The time it has been in the occupation of one person or family is often an indication of a farm worth having, although the average tenancy of a farm in this country is only eight years, and only 15 per cent of our farmers have occupied the same land for twenty-five years. A farm which has had a number of occupants of a period of several years is open to suspicion, although there are many good farms in this category, in a shocking state of neglect, simply because no one had the vision to see their possibilities. How often have I thought, when inspecting land, 'Poor old farm, just waiting like a neglected horse for someone who knows how to look after it.' At one time such farms could be bought very cheaply.

Besides inspecting the house, buildings, and cottages, should they be available, carefully noticing the state of repair, and the accommodation they provide both for man and beast in relation to the acreage, we study the approach from council roads, situation in relation to the land and access to it. A farm in a ring fence, with buildings conveniently placed, has much to recommend it, especially for an 'Attested herd'. But should they be placed on the opposite side of a

busy road from the land that goes with them, then I regard it as a very great disadvantage. In the same way, land which is overlooked from a highway is a constant source of worry, for neither poultry, ricksheets, nor anything else which is portable is safe from one day to the next. We live in an age when there is no respect for property, and if you catch anyone the magistrates will probably weep over the poor fellow and put him on probation. It is hard having to sit up night after night in the weeks before Christmas to guard your turkeys because the local police tell you they cannot do anything about it. A farmer once told me he started to keep guard through fear that thieves might come, and ended by longing that they should, that he might at least have the satisfaction of shooting someone who had kept him out of bed so long!

Water supply is of very great importance and must be carefully studied, to see if it is available to both buildings and fields; and if it is a piped supply by meter, careful enquiry into cost must be made, for on some farms it is almost equivalent to another rent.

Electricity on a farm is a very great asset to the man who can make good use of it; in some areas more than 50 per cent of the farms have it installed or available, but enquiry should be made into the terms on which it is supplied and any agreement taken over.

Then for an inspection of the land, noting the size, situation, and aspect of the fields. As a general rule in this country, land slopes more steeply to the west and north, less to the south and east, and on account of that slope there will be more soil on the south and east of a range of

hills than on the north and west, and in a belt from Dorset to Yorkshire this applies to every little undulation; in fact any slope which does not conform to this rule may be suspected as a man-made alteration. From this it will be seen that a farm with a southerly aspect has an advantage not only from the sun warming the land but also in depth of soil and slope. But wherever possible the wise old landlords arranged that each farm should share the good and the bad; and you will find most farms like that to-day.

The condition of the hedges, fences, gates, gateways, culverts and land drains must be carefully observed, and you must know for which of them custom decrees the farmer is responsible, and which are maintained by neighbours. Good boundary hedges may not make good neighbours, but bad hedges always make bad neighbours.

In passing, it is quite a good plan to enquire about the neighbours. A farmer who tells you that they are all a bad lot who will not help anyone may be commenting on his own character. One wise old farmer used to ask new neighbours where they came from, and what the people were like in that district. And if he was told they were very nice, or the opposite, he would say, 'Ah, yes. You will find them just the same here.'

Hedges and ditches you can change if necessary. The soil is very different, so that must receive your closest attention in inspecting a farm. Is it clean and in good heart? It is easy to see if it is clean, or superficially so, but what do we mean by being in good heart? It is very

largely a matter of texture, depending on the humus content of the soil, lime, and sufficient, but not too much, water. The last aspect is important, for you may be deceived in taking a wet farm in a dry time, or a dry farm in a wet time, unless you have studied the land very closely. Land is either building up or declining in fertility all the time; it never stands still. The soil is a living thing, built up of hundreds and millions of living organisms, on a stony structure, as an animal is built of as many cells on a bony structure. We say a beast is thriving or going back, and the same applies to the soil. It may only be extra-sensory perception which enables the experienced farmer to recognize this, but it is so. The late Sir Daniel Hall, one of the great advocates of the scientific approach to farming, once admitted that the most exhaustive chemical and physical analysis was of little value compared with the opinion of an observant and experienced farmer walking over a field. An inexperienced person can look at a bunch of cattle and not detect that several are suffering from ringworm; a farmer cannot look at land and not recognize the weeds he associates with poor crops, they are engraved on his heart; or the clods he has tried in vain to break down.

The physical condition is important. There is some heavy land which you can plough a foot deep, bury all the weed seeds and have a fresh start; but on land that cracks badly in a bad time, and into which the weed seeds fall, you might turn up millions of seeds which have been waiting for the opportunity to germinate. Very light sandy land is

often difficult to clean, for it will never set hard, and the roots of couch-grass can run deep.

Chalk and limestone is preferable for stockbreeding, providing a freely drained soil, but rich in calcium, if deep-rooting grasses like cocksfoot are used to bring the minerals up. These soils, however, in areas of heavy rainfall, are often deficient in lime, for it is washed away through the subsoil; some of the North Somerset hills are typical examples of this. The ideal soil is a medium loam, suitable for any and every crop. Failing that, you often get the best soil where two geological formations meet; the chalk and the greensand, the oolite and the middle lias, the old red sandstone and the limestone, are typical examples; and they are nearly all marked by luxuriant growth of hedge and tree; and, further, an experienced farmer can recognize the soils by the trees that grow upon them: oak on clay, beech on chalk, and ash on limestone.

The previous stocking and cropping of the farm is important as an indication of what has been produced and of the value of the farm, but is not necessarily any indication of its real capacity. I have known land under bracken, rented at 6*s.* an acre, restored to grow £100 worth of early potatoes, by unlocking the accumulated fertility, and afterwards put down to grow grass of a quality which had to be seen to be believed. But if you must go in for land reclamation, be guided by the old saying, ‘Gold under bracken, silver under gorse, copper under heather.’ It may save a lot of money.

When you are looking round a farm an estimation is also made of the sum which will be incurred at the ingoing valuation, for hay, straw, roots, cultivations and any tenant fixtures which are to be taken over. A landlord will sometimes allow a tenant to build a Dutch barn under an agreement that it will be paid for and taken over at the end of the tenancy. The custom of the district should also be carefully enquired into with regard to the threshing of the corn, or any barn or cartshed space to which the outgoer is entitled for a specified period.

You should also enquire into the labour situation, to know who is available or likely to stop on. In a district of small farms there may be co-operation for threshing between all the farmers, and a knowledge of this, and the local custom in relation to it, may save a breach of etiquette, through failing to ask your nearest neighbour to help, and not knowing that he always stacks the straw, or whatever it may be. You cannot, in fact, collect too much local knowledge. I knew one shrewd farmer who, when going to inspect a farm, always walked the last three or four miles, enquired of everyone he met where the farm was, and then seized the opportunity to get into conversation about it. It took him half a day to get there, but he considered the time well spent.

When all the possible information has been gathered, then is the time to interview the landlord if you are renting, or the vendor who is selling. You will have summed up the possibilities of earning a living, or the farm’s value in comparison with others you have inspected.

In the case of a landlord, the personal approach is important. It may be that he has never done any work himself, and therefore he likes a young man who looks like work and appears to know his job.

You need not endeavour to make an impression with your knowledge, but rather show that your experience of life has blended with that one kind of knowledge to which you attach your reputation as a farmer, the ability to manage the land with practical wisdom and common sense. You will have ample opportunity to demonstrate this in answering the questions about your experience, and the references you can give. Appear cautious on money matters. Say you would like to study carefully all the clauses in the tenancy agreement, even if you know that the Agricultural Act overrides them all.

When the opportunity comes to ask questions, then raise all the points you have already learned in going round the farm with the tenant who is leaving; to know the landlord's views on these matters is always valuable.

With regard to the liabilities for neglected hedges, ditches, etc., to appear willing to do a lot of work, providing it does not involve capital outlay, always makes a good impression. If you can undertake repairs, or make gates, on condition that the landlord will provide the materials, this may make you friends for life. Too many farmers regard a landlord as a kind of charity, forgetting that he is supplying three or four times the capital necessary for their business enterprise, at 1939 rates. Incidentally, if you intend to farm really well, and maintain a high

output per acre and per person employed, the actual rent you pay is of little importance; it is certainly not worth arguing in terms of shillings per acre.

In buying a farm proceed with very great caution. Find out all you can about the financial standing and business integrity of the seller. Remember that ‘a man of straw’ can misrepresent anything, including his title to the property, and you have no remedy in law; for even if you bring an action for damages, and win, you will probably never recover your money or legal expenses. In buying a farm on which you hope to borrow money from the Agricultural Mortgage Corporation, be sure you are buying at no more than the market agricultural price, for they will not advance money on residential values. Farms in the home counties, and in other favoured localities, are at present beyond the reach of practical farmers starting with limited capital, owing to the plague of businessmen-cum-farmers who have settled on the land like a swarm of black-coated locusts. But in the more inaccessible parts of the country, the far west, in Wales, and in Scotland, there are still good farms coming into the market at prices within the reach, and worth the money of the man who knows his business and is a master of his craft; and, as always, when those two come together, he who is prepared to work at it can look for a happy and prosperous future.

CHAPTER X

Pedigree Stockbreeding

Now the most fascinating branch of farming is pedigree stockbreeding, and, needless to say, in the right hands it is the most profitable. A farmer can feel he is contributing something in the great chain of evolution, and his success is rewarded in the prices others are prepared to pay for the superior stock he has to offer. The only drawback is that life is not half long enough to achieve all we would like to do, prove, and demonstrate.

My brother and I have been more than fortunate in that our first and main interest has been poultry, stock that reproduce themselves rapidly and can be kept in large numbers. Although the lessons we have learned can be applied to the larger stock, the time lag is considerable, and information we have gained would be more difficult to measure in stock which take so long to mature.

We are also fortunate in the possession of a strain of poultry into which new blood has only been introduced twice in the last forty years, the stock having been in our hands since 1914; the circumstances leading up to this I described in *The Farming Ladder.* Our contribution to knowledge lies in the value of a closed flock, not originally a matter of deliberate choice, but brought about by our inability to find other

blood which would improve the qualities we value; although we have searched, and still continue to do so, for stock of sufficient merit to incorporate in our strain. It at least enables us to test the quality of other breeders' stock against our own, and under our conditions. Some new stock compels us to think that acclimatization must be a very important factor, and that this is why some do so badly under a change of environment. It also indicates that outcrossing may be an excellent method of producing a few outstanding birds for entry in Laying Tests, but unfortunately it also leaves too many of no merit whatever, and the general average is far below that attained by the closed flock, not only in production but in hatchability, rearability, and longevity.

In poultry, as in other stock, there are many qualities for which a breeder might aim, and many of them difficult to measure, when several factors have to be taken into consideration and weighed against each other, and especially in stock which may have the merit of egg production and table qualities, as in Light Sussex. The aim of most breeders, for many years, has been individual production, and they have selected their stock on that basis, while other emphasize breed type; although, if these factors were related, to breed for one should bring out the other. Their selection either brings out high production, early maturity, and with it a loss of body-size and constitutional vigour, or gives slowly maturing birds which take sufficient time to attain full physical maturity, using any food consumed for bodily development and not on egg production. While the first breeder will have birds

averaging 180 eggs in their pullet year, the other will be content with 80. The breeder who could maintain the balance between the two might be considered the most successful; he would satisfy his customers with the appearance of his stock and with the egg yield of their progeny. But the stock will always have a tendency to swing one way or the other, going up or down, and this will be emphasized, as he seeks to improve his stock by outcrossing with other strains.

Now there is one simple factor, very easy to measure, of great commercial value, and most commonly neglected. It is expressed in Thomas Bates's famous dictum, 'The excellence of an animal is to be found only in the improvement which it makes in comparison with the food consumed.' That is the standard which we have set ourselves on this farm, for it is easy to compare the food consumed by a given number of birds year by year, and as an economic factor it is of equal importance with the labour involved in looking after the stock. Some highly bred poultry will average 200 eggs, with one man giving whole-time attention to the breeding, trap-nesting and selection of 500 birds, whereas 1500 birds averaging only 170 eggs, but involving the same man-hours, will be a much better commercial proposition. It is doubtful if the time involved in trap-nesting and individual selection of high yielding birds for breeding stock has ever been justified once a certain level has been reached; for if the results shown by the Laying Tests are any indication, no improvement has been registered in over twenty years. My experience of buying stock from successful competitors in

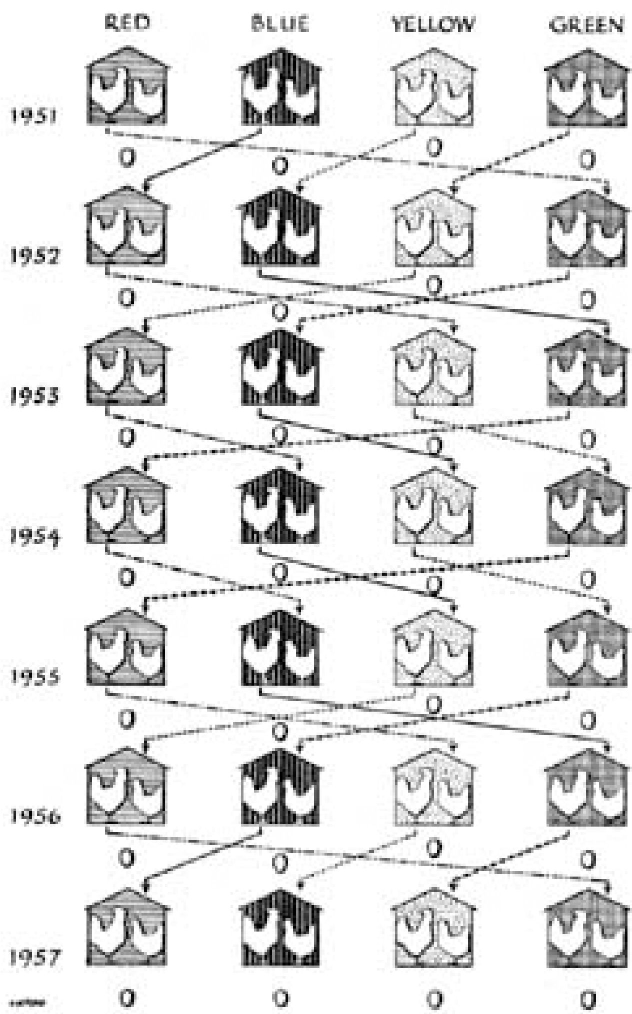
these trials would indicate that success depends far more on their skill in selecting individual birds to come into lay at the right moment than on the inherent capacity of these birds to produce.

It occurred to us, very early on, that successful breeding really depended on the selection of groups most suitable for the purpose, rather than selection of the individual, which all text books on breeding lay down as the first essential. In recent years this idea of ours has resolved itself into the progeny-testing of families, whereas we had thought of it more in connection with tribes, if that is the right term for flocks, but in which, not as in human beings, the female of the species must be considered of the greater value. There have of course been races in the world, including the early Celtic inhabitants of these islands, who favoured the matriarchal system, and our feminists might indicate with some truth that Britain and her affairs flourished under two famous queens!

However, that is by the way. The point is that a tribe inhabits the same district, generation after generation, the males being brought in from other districts. But only certain other tribes are worthy of mating with our native stock. Give them family names if you wish—Blue, Green, Yellow, and White. There is something significant in this, they are the colours of my family tartan. This set me thinking many years ago, for a tartan was really a pedigree showing the relationship of the clans, before people could read or write. To this day, newly married

couples often have a travelling rug interwoven showing, one on each side, the pattern of their respective families.

Now nothing less than the son of a king would be worthy of our noble tribe, so we who are Blue welcome a prince from the noble family of Green; and, lest we should offend our other neighbours, in the next generation our princess will marry a suitor from the equally illustrious family of Yellow, and so it goes on. Our princes, of course, will marry into these other great tribes, but not a near relation; our Blue blood will improve the Green, the Yellow, and the White. You do not believe me? Well, it is all laid out in mosaic designs in Persian temples dating back to 2500 B.C. Irish children also play a game with coloured stones clearly illustrating this, but with no idea of its origin. I also have authority from the Bible, the Koran, and the Celtic Code of Laws and a beautifully knitted Fair Isle pullover, if any Poultry Advisory Officer dares to suggest, and many have, that there is anything fundamentally wrong with this system. The pullover was devised by my wife, to prevent me taking any more sadistic pleasure in watching earnest young men trying to show me, with paper and pencil, where the system would break down, for the paper is used up before they have succeeded in mating anything closer than a half-cousin, if there was only one hen and only one cock in each flock. Actually, with 150 hens and 12 cocks in each flock the chances of half-cousins mating is one in seventeen million. If you do not believe this either, then ask your local P.A.O. to demonstrate it; he will be delighted!



RED
BLUE
YELLOW
GREEN
1951
1952
1953
1954
1955
1956
1957

For all practical purposes it does not matter how you mate, providing there is a generation and a colour between. In the days when we used the actual colours it gave a useful check, on free range, to see how close together the flocks might be placed without the risk of indiscriminate mating. It is far closer than many people might think; the birds can run all together as they go to meet the attendant who feeds them with their grain, for how rarely do you see a cockerel tread a bird at this time, but you find them back with their own hens at all other times of the day. If they range out on to stubble, time after time you will see the white-ringed cockerel with his blue-ringed hens, or whatever colour it may be.

Ancient as this method is, it remained for the mathematical genius of Mr. Bossert of Cambridge to demonstrate this system on a simple basis, and I am happy to acknowledge we use it now, and without the coloured rings. Now the birds from No. 1 pullet flock are moved up to No. 1 hen flock; No. 2 pullet flock to No. 2 hen flock; No. 3 to No. 3; and No. 4 to No. 4. But the cockerels bred in No. 2 are mated in the following year to No. 1; in the year after that, cockerels bred in the previous year in No. 3 are mated to No. 1; and in the following breeding season they will come from No. 4 to No. 1 again. The process is then reversed, and in the following year No. 4 is used again, but they are not the same birds, as it is a year later, and this sequence continues in the order of 4, 3, 2—2, 3, 4. The same rule applies to the other three flocks, flock No. 2 being mated in the order of 3, 4, 1—1, 4, 3; No. 3

flock is 4, 1, 2—2, 1, 4. No 4 flock is 1, 2, 3—3, 2, 1. As shown in the diagram opposite.

By closing the flock, and making careful selection over a period of years, an improvement is shown which, as far as I know, cannot be obtained in any other way, if all the factors which a poultry farmer values are taken into consideration. First of all, selection means that birds of whose appearance the breeder does not approve will not enter the breeding pens and will not have the opportunity of reproducing their kind. But it is in a factor like bad hatchability that the results are most marked, for few eggs of a bird carrying this lethal factor will hatch; and if the tendency is carried on in the few that do hatch, they will soon be eliminated by the fault that they carry. For many years we have only retained birds for breeding which were themselves an 80 per cent hatch, and of which 90 per cent reared to maturity. This has been possible even in extremely bad seasons like 1929 and 1947; but here I believe the success must be attributed to management— large flocks in well-littered houses—rather than to any inherent capacity to withstand extremes of climate.

The degree of inbreeding in large flocks is very small and Mr. R. W. Hale of Northern Ireland, writing in Agriculture some years ago, pointed out that the percentage loss of heterozygosis is 100 divided by eight times the number of effective males in use. Thus, if one sire is used in each generation, the index of inbreeding in the second generation following the closing of the flock will be 12½ per cent; this

generation clearly being produced by mating the single sire to his half-sister. With larger flocks the rate of inbreeding becomes progressively less; and in our case, where a single sire might mate with his half cousin, it will be far, far less than 1 per cent in each generation, apart from the fact that there is a generation between which again reduces it by 50 per cent. Some breeders might even contend that we were outcrossing within the flock; but from our flocks we also make a special selection of third-season hens, which ated to the finest second-season cocks, and in small units of ten or a dozen birds for cockerel breeding. These birds will at least have stood inspection month by month over their whole productive life and have proved their ability to live and lay, to withstand the trials and competition of communal life in a large flock; and being from stock which has hatched and reared well, and having yet to prove, in small pens, that they can still produce stock with the same factors, should bring about some improvement in the strain.

But in stock breeding all progress is slow; in fact, my experience makes me suspicious of any rapid improvement. In our early days we were encouraged by improvements which were really due to better feeding and management, but the proof of any advance was only found when circumstances compelled us to return to the same standards of feeding which had applied in earlier years.

The closed flock

Improvement is slow, but sure, in a closed flock given reasonable and consistent management. Taking all factors into consideration, the improvement is about 1 per cent per annum, and that can only be determined over a period of years, for you may get an annual variation of 10 per cent due to seasonal causes. But the cumulative effect is very striking after, say, fifteen years. Fifteen per cent more eggs per bird on

150 flock average means 22 more eggs. Fifteen per cent more eggs hatched, on perhaps 66 per cent, is useful, especially if 15 per cent more of the chickens hatched rear to maturity. In the same way a 15 per cent reduction in mortality on many farms would make a great difference.

Close inbreeding without deterioration. The product of mating a sire to his daughters and grand-daughters

But our experience would indicate that once that 15 per cent improvement has been achieved further progress is difficult to

maintain. It is true that further progress can be measured, in our basic principle of Thomas Bates, on economic conversion of feeding-stuffs, but strict rationing of poor-quality feeding stuffs, to carry the maximum number of birds, often hampers the stock which could otherwise prove the theory. For since a return at the outbreak of war to our 1925 standards of feeding showed a gratifying result for fifteen years' work, if we could now introduce rations on our 1939 level we might find that even in this last ten years of grim austerity the desired genetic combination of the factors we value is still building up.

The weakness of this system, and all breeders who desire to make a contribution to the knowledge of stock-breeding should frankly admit any failing, is that an outcross will undo the work of all these generations of mild inbreeding. Our only successful introduction of new blood since 1925 was in 1937, when we obtained a strain of the original foundation stock, dating back to 1904. We bought quite a large number of hens and pullets, mated them to cockerels of our own breeding, and tested and compared the progeny, while keeping them in several flocks, and then again in the next generation, before incorporating them as being worthy of the original blood. They proved their worth right through, so that stock from even the first mating could continue in the strain, had any lethal mutants developed they would have been ruthlessly scrapped.

Naturally wishing to go on improving our stock, we have kept in constant touch with other farmers who have bought our stock from time

to time, with the intention of buying back, if possible, anything which showed a definite improvement. But we find only a very level basis of production, varying with the standard and method, while those who trap-nest report a very uniform standard of production, with sometimes not more than 20 per cent between the worst and the best bird and with a very low percentage of mortality and culls.

Needless to say, nearly all our official advisers have always been very sceptical of our claims and critical of our stock, although it is open to any inspection, insisting that no stock could be of any value which was not systematically trap-nested; though they did not mind, and in fact encouraged, what I call 'window dressing', that is picking out as many birds as may be necessary to make it appear a uniform flock. To show them 140 two-year-old hens, sufficient evidence that they were hatched from 400 eggs, indicating an 80 per cent hatch, 95 per cent rearing, and not more than 10 per cent mortality and culling over a period of two years, made no impression at all, and our stock could be dismissed as rubbish on casual inspection, because it did not measure up to their preconceived standard of breed type, on which, nevertheless, they would lay down no standard of weight, suspecting I could catch them out to an ounce if the birds were handled. One man would find fault with one thing, and another with something else, so that it was quite impossible even to select to please them all. I have since found that far greater poultry breeders than we can ever hope to be were also subject to the same unhelpful criticism, and it has since been laid down

that at least stock that qualifies for ‘breeder’s grade’ on an egg production basis may be assumed to be worthy of the breed in which the poultry breeder specializes.

If I am critical of those who have gone before, I am always happy to give credit where credit is due, and I wish to place on record that Mr. Ray Feltwell, appointed to be Poultry Advisory Officer to this county, has been the first to admit that our stock might have some virtue, and suggested a progeny-testing scheme by which, over a period of years, further improvement might be achieved. It involves trap-nesting and individual pedigreeing with a view to finding the forty most desirable breeding birds each season. The pullet-bred progeny of these birds (forty families of ten pullets) will go to the flock houses for trap-nesting and breeding the following season. The forty superior birds will be used during their second year in folds as breeders, for the production of cockerels for use and flock houses.

The 400 pullets will be trapped, culling will only take place by families, and only when it is clearly evident that the family (that is ten pullets) will not give results above the average will it therefore not be considered in finally selecting the forty superior individuals.

This system can also function within our four-pen cycle; and while it has not been in operation long enough to show any results, the trap-nesting and wing banding have confirmed much which we had long suspected with regard to hatchability and rearability—that it is as consistent in the individual as it is in the flock, although the percentage

of cockerels and pullets shows great individual variation, and some birds will fail to qualify for lack of sufficient daughters, though the average for the flock is the normal 50 per cent. If those breeding daughters passed on that tendency it would be a valuable asset in any stock, but that remains to be seen.

Quite unknown to our County Poultry Advisory Officer, in another part of the county Dr. Coles, head of the Poultry Section of the National Agricultural Advisory Service, was advising on a similar progeny-testing scheme, for which he drew stock from many of the leading breeders, in the particular breed he favoured. As these results are published they will give us an interesting standard of comparison between the orthodox method of selection by trap-nest and outcrossing, and that which may be achieved by the closed flock. I imagine that improvement will be far more rapid there, though with a far greater wastage, but these things only time will prove.

We made an interesting experiment some years ago in relation to size in poultry, the factor to which so much emphasis was given. We selected all the biggest birds, weighing over 7 lb. apiece, and housed them together; they received identical treatment and management with the rest of the stock, all of which could help themselves to dry mash. Egg production was uniform throughout, but food consumption was 20 per cent higher in the large bird houses, the difference being taken in dry mash. The stock from them differed in no way from the normal standard, the size being determined by sexual maturity, or the stage at

which the bird came into lay. A big price to pay for the stock which 'fills the eye'!

This explains why a house full of birds in a closed flock are not all exactly the same, under normal standards of feeding, for some mature more quickly than others, and this factor does not appear to be fixed in the closed flock. On the other hand, if we inspect a flock reared totally on grain, as some of our general farmer customers do, and where full physical maturity was achieved before the birds came into lay, then all the birds will be large and of a uniform size. Eggs will be sacrificed, but the bird will live and lay her limited number for years, and be capable of earning her living, or the greater part of it, on free range. I mention this point to illustrate that the closed flock does not automatically give you everything you might desire, and you must have some other standard, such as the consumption of food in relation to the eggs produced, to see if you are progressing on the lines of economic production, for there is always a tendency for pedigree breeding as such to become so absorbing that we tend to forget the object behind it all, which is to convert coarse grains and fodder crops into more acceptable human food. One advantage of the closed flock is that it saves a considerable outlay on stock birds, an important item where considerable numbers are required, as in flock mating for supplying hatcheries. I may also mention that the more progressive hatcheries have also recognized the value of the closed flock in recent years, and some have all their supplying farms line-bred to the same stock, and are

bringing about improvements in hatchability, which are of the very greatest economic importance to that branch of the industry.

The question must arise, is this method applicable to the larger farm stock? My opportunities of introducing it have been limited to one herd of sixty cows, where the owner divided them into four groups of fifteen for breeding purposes and reared a bull from the best cow in each group, to mate with another group; the original stock all having been got by one outstanding bull, so that the young bulls were being mated to their half-sisters in the first place, but leading on to half-cousins. One object was to test which of the young bulls had inherited most of his father's merit, if the seven daughters, which one might hope to obtain from fifteen cows annually, proved superior to their dams. Now this must be a very long-term policy with cattle, and few breeders could hope to live and farm long enough to see the full results; but after only three generations this breeder has got a remarkable uniformity of type, without the heavy outlay on bulls normally necessary to maintain a standard worthy of his original stock bull; for where he would have, in recent years, to give 1000 guineas or more for animals of equal breeding, his own have been obtained for the cost of rearing, less the price obtained when they were sold after use. Here, you will see, there is no attempt to find the proven sire, often too slow and expensive a business, but only to retain and build up on the inherent goodness of the stock, for the bulls are selected from the best cow in each group.

With sheep this system works well; and if four breeders will get together and rotate their ram lambs on this basis, they will achieve a remarkable uniformity in their stock, for that, after all, is the main object of a sheep breeder; people look at the bunch they are buying.

In pigs also we try to get uniformity. I believe the closed-herd system could bring about a great improvement, or at least stamp the virtues of the best on the rest of the herd, for these animals are some of the most prolific of all farm stock; but here again you need a large stock, as boars are expensive to rear and difficult to sell for stock purposes once they have been used. On this farm it would mean keeping four young boars in use, for mating with twelve sows, and the pig position has been so uncertain and precarious this last ten years that we have been unable to try it out, although some of our earlier matings were arranged on the assumption that it could come about; the proportion of our gilts which can be reared to maturity and retained in the herd being very largely dependent on the supply of pig potatoes. During the war years, when we used the single-litter system, an opportunity was lost to try this out solely because of the uncertainty of food supplies, in which everything might have to be diverted to maintain our poultry, always regarded as our most important work.

Of the general principles of breeding, the factor which is most commonly overlooked is that type has never been fixed other than by close breeding, or perhaps very occasionally by accident. All the breeds of livestock were created in this way, and all can be traced back to very

few animals. And when we think of the wonderful work which was done by the master breeders it is difficult to understand the horror that modern farmers have of close breeding. I cannot recall ever seeing any marked deterioration in, say, the stock of farm cats, which indulge in the most indiscriminate inbreeding, brother to sister mating, or father to daughter, in generation after generation. Inbreeding is thought to bring out hidden weaknesses, but so does crossbreeding. How often does a Jersey mated with a Frisian give an animal inheriting the high butter fat of the one and the milk yield of the other? And even if the crossbred animal is good, it is useless for breeding, while the inbred animal has an equal chance of being extra good, or very bad. If the objection arose in human relationships, we know that it is more likely to be to the general poor quality of the stock than to the fact of close mating. If biblical authority is sought—and any farmer or stockbreeder can learn a lot from the Bible—we know that two tribes of Israel were founded on father-and-daughter matings; and others on brother and sister. In Egypt, Queen Cleopatra was the product of three hundred years of brother-and-sister mating, and had children by her brothers, but still seems to have been a lady of remarkable vitality. It is true they were not hampered by Christian ethics and could ‘cull’ any not up to standard, but the system must have had some merit to recommend it, at least in the early stages, in producing something above the average, or, as a geneticist would say, pure for the factor they valued.

One mangel a day after Christmas

Few people realize how many times a single animal may appear in a pedigree if it is followed back to the foundation cows. The following is a list showing the number of times the blood of each bull occurs in the pedigree of a heifer we sold last year. Sleeper, 6. Oxford Lad, 49. Golden Fern Noble, 66. Agatha's Flying Fox, 52. Raleigh, 57. Oxford Daklia, 112. Flying Fox, 150. Khedive, 183. Golden Fern Lad, 384. Boyle, 524. Orange Peel, 1145. Quality, 1203. Sultane, 4255. And Vertummus no less than 5660 times.

I have always enjoyed the work, and time tends to hallow the memories of the passing years

As a general rule we should aim at very great purity even in our commercial flocks and herds, because they are always managed in groups, and it is desirable that they should be sufficiently uniform to react to good management. At present results are only obtained by the skill of the stockman in recognizing certain idiosyncrasies in individual animals and treating them accordingly. One herdsman will pick out half a dozen cows, which he keeps in loose-boxes, and obtain from them very high yields, while another, the next year, can do the same thing but with others.

The risk in breeding for too great a degree of purity lies in selecting for one factor only; and when a farmer sees a report of a cow giving '38,364 lb. of milk, in 305 days, at 1.99 per cent butterfat', he is inclined to speculate on the virtue of a product which, legally, is unsaleable, however skilfully the animal was bred and managed, and to wonder if it would be capable of reproducing its kind should this be desirable.

We know that to breed for one factor is not difficult; to maintain the balance between all the desirable qualities is the problem for the stockbreeder, although once a certain level has been reached there is some indication that, providing you have bred for health, stamina, and longevity, production is very largely a matter of management, and the breeder need not pay too great attention to a few recessive characteristics which continue to come out from time to time. I like to think that they are rather a wonderful demonstration of the ability of

nature to protect its own; that if conditions should require that some special inherent quality should be necessary, nature has it stored somewhere in the breed; and that quality will come out in perhaps one individual in a hundred.

The greatest criticism which is made with regard to pedigree breeding is the lack of progress in breeding outstanding stock. When we are asked what improvement has been made over the years, we must admit that it is very little; but the numbers are steadily increasing, and giving more farmers the opportunity to breed something worth while. For there is a satisfaction in owning and managing well-bred stock which cannot always be measured in facts and figures. At least the pedigree breeders do lead the way in milk recording, testing their cattle, and raising the standards by co-operating in their Flock and Herd Societies to observe certain rules, which, slowly but surely, bring about an improvement which can be observed over a period of years. We, at least, are proud to have been able to associate with those who are trying to do better; and if we can achieve an improvement of only 1 per cent per annum in all the stock we have bred, and for all the factors we value, it will have been well worth the effort, and something for which to be thankful at the end.

CHAPTER XI

The Philosophy in Practice

This farming philosophy is based on my experience of life; for, unlike all other philosophers who only moralize on this world as they see it, I feel I have a message based on the knowledge which has been gained by living in the way I advocate.

There are four things necessary to achieve this philosophy: to *enjoy your work,* to *do it well,* to *earn good money,* and to *share your knowledge.* The first three are closely related, for if you will enjoy your work you must do it well; if you do it well you will enjoy your work; and if you combine the two you should certainly earn good money, for apart from anything you will not have the spare time, or the desire, to spend money, except perhaps on your farming, and there, if wisely spent, it will be cumulative and build up your capital. The reason for sharing your knowledge is that you may gain knowledge from others, for in this world you cannot take out more than you put in; and if, when we are young, the wise and the kind lend us their experience, it is for us to pass it on, with interest added, to the generation to come. Further, no man is master of his trade until he has taught it; to learn, you must hear or read; to remember, you must write it down; but to *understand* you must teach. It is so easy to think you understand, until you are called

upon for a clear, simple explanation of some farming principle or to demonstrate a practice.

There is always one great compensation for those who would achieve these things—that, however great our handicaps or disabilities, an all-wise Providence always sends us equal compensations, if we will but take advantage of them.

I was more than fortunate inasmuch as I never had any desire other than to be a farmer. For the clever and the intelligent there was the Church, law, medicine, and the arts. For the capable and ambitious there was industry, commerce, and finance. For those who desired a secure and pleasant job with a pension at the end of it there was the Civil Service. But for myself I would be content to grow things, and perhaps grow with them.

To be born and reared in a town would seem to be a handicap for a farmer. Not at all. It leads to a greater appreciation of the countryside and teaches the hollow-ness of urban pleasures. In the country there might be poverty, but there was nothing of the dirt, vice, squalor and degradation of human life which I saw in the mean streets of London and which always depressed me.

The knowledge that there was work which could be enjoyed came from spending my holidays on farms and in finding an entirely different attitude of mind. Unlike the city-dweller, the farmer did not shut his life into two compartments—earning money in one and spending it in the other—but passed it in a happy combination of the two. To the farmer

the farm was everything, his house—well, just the place in which he ate and slept—though even there he continued to talk about his farming. It was truly a way of life; his food, his income, his pleasures, all came from the same source. He was always full of interesting reminiscences about bygone days, which were seldom, if ever, mentioned in the towns, where everything was out of date by the next edition of the evening papers.

I hoped, planned and prayed to be a farmer, but everyone advised me that my circumstances and upbringing precluded any possibility of success in the occupation I was choosing to follow. Even the wisest of them never realized that being born and reared in a town might be a positive advantage if it enabled me to stand back, as it were, and take a detached view of farming in a way which would be very difficult for a young man reared on his father's farm and perhaps under a traditional system of farming. Also, my advisers could not know that in having to make my own way on the land I would be saved the terrible anxiety of the majority of established farmers after the first world war over the loss of capital, when forty per cent had to be written off within eight months in 1921; and they continued to suffer serious capital depreciation for a whole decade: a state of affairs which might come about again if some Government should decide to follow here in this country the successful experiment of devaluation of the currency tried out in Western Germany in recent months.

The great advantage I enjoyed is that it is never easy for a townbred boy, of no special ability, without capital, friends or influence in the industry, to get a start in farming; but it is the facing up to life and the overcoming of difficulties which fits one to become a farmer. The effect is cumulative, for the experience gained in overcoming the first obstacle enables the next to be surmounted. The qualities which enable the individual to make a suitable approach to the farmers from whom he can learn his trade are those which, when developed by experience, will lead to other openings, and in God's good time an independence on the land. What a mistake it is to discourage anyone whose heart is set on a certain course, providing he is fitting his ambitions to his talents and has counted the cost of achieving his desires. I was told that I could do better by developing the one odd trick I had of hanging words together than by persisting in the hard and laborious occupation I was choosing to follow; as if any literary merit could possibly compare with all the wonderful opportunities and experiences of a farmer's life, as the days and weeks slide smoothly and silently into one continuous thread of faith and work, faith in the Hand which provides everything which is necessary for the fulfilment of our tiny part in some great purpose, work that we may deserve and enjoy that which is provided.

In the circles in which I moved and received my education there seemed little security or stability and few values based on these abiding things—while pleasures were found in something quite artificial and beyond my simple brain—in art, music, the theatre, idle conversation,

in cards and in games. I often wished that I was like other boys, enjoying the pleasures of the moment or the company of girls—they bored me as foolish and frivolous creatures who could talk of nothing but parties and the pictures, took no interest in the fundamental things I liked to discuss, and, if the truth be told, laughed at my preoccupation in planning something for the future. In later years I learned to appreciate them better in their extraordinary adaptability to the circumstances in which they find themselves.

I found my pleasures at home, in making things, in rabbit, poultry and dog-keeping; pleasures in which my brother fully shared. At school I was the butt for the masters' wit and sarcasm in my patient search for knowledge; and I suppose I learned to hate the clever and intellectual, and my aversion still shows in the pages of this book. I found my teachers in the cheap trays of the secondhand bookshops, something the country boy is often denied, and I well remember the kindness of one of these booksellers in holding books for a few days if I had not the money with which to pay for them. It might be asked, why not use the great public libraries? I did, but the librarian tried

to direct my reading, even refused me books to which I was entitled as unsuitable for my age—my first experience of the encroachment on the liberty of the subject by a public servant. Strangely enough, he was a man who in private life was a member of the Society of Friends, who, one was taught to believe, were the great advocates of freedom of conscience, which to my mind includes reading what we believe to be

necessary and good; and I suppose there is no book in which we could find so much that is immoral and indecent, if we were so disposed, as in the Bible, which every child is encouraged to read.

To me, those Victorian writers, in the battered and dogeared books, seemed inspired with their grasp and understanding of living things and mankind; and, above all, every one of them emphasized the importance of doing everything thoroughly and well. I owe much to Darwin, Carlyle, Buckland, Mill, Hugh Miller, and the rest.

To quote only one of them, Hugh Miller, a man who rose from being a quarryman to a position of great eminence, writing in 1820: 'My advice to young working men desirious of bettering their circumstances, and adding to the amount of their enjoyment, is a very simple one. Do not seek happiness in what is misnamed pleasure; seek it rather in what is termed study. You will gain nothing by attending Chartist meetings. The fellows who speak nonsense with fluency at these assemblies, and deem their nonsense eloquence, are totally unable to help either you or themselves, and if they succeed in helping themselves, it will be at your expense.' I quote from memory, after thirty years, which indicates the influence it must have had on my young life.

What a contrast there was between these great men, who so freely shared their knowledge with all men, and one of my schoolmasters, an ardent Socialist, who told us that for a man of his intellectual

qualifications to have to teach schoolboys was ‘like casting pearls before swine’.

However, all these things turned my thoughts to the country and a more natural, wholesome way of life, which, combined with my practical hobbies and farming holidays, inevitably led me to my true vocation.

The trials and difficulties of learning my trade, and the measure of success my brother and I achieved later, have been described in *The Farming Ladder.* But while I was learning, my masters were very kind and good to me, freely sharing their knowledge in return for the services I was able and willing to give, though there was no recognized route to knowledge and its application; that I should have to find myself.

The great weakness, then as now, lay in our farmers seeking a stable rather than a progressive industry, for while they were desperately clinging to the farming standards of their fathers no one was prepared to live and work as they had in bygone days. The higher wages, the shorter work, the half-holiday on Saturdays had come to stay for the workers; and in the same way a farmer wanted a motor car to replace his horse and trap, and all the other things which went with a higher standard of living. Faced with rising costs and falling prices, a farmer, maintaining the traditional methods, would soon be ruined, while the man who maintained his standard of living would equally ruin his farm. The more progressive farmers were said to be putting the

land down to grass and concentrating on sheep and cattle, dairying, or pigs and poultry, as a specialized business, largely dependent on imported feeding-stuffs. But, as I saw it, the solution was not in scrapping the old and well-tried methods which had served British farming so well, but in superimposing upon them the new methods and departments. If the old standard of a rent off the corn, a rent off the sheep, and a rent off the cattle, with which to provide for landlord, farmer, and man, no longer applied, in view of rising costs, but if pigs and poultry supplied the difference, while the farm was reorganized and mechanized if necessary, without materially increasing the labour or rent charge; and if also what is now called ley farming were adopted, with the utilization of every scrap of organic material to build up fertility, all would be well, and carry even arable farming through, for the farmer would be depending on technical efficiency rather than on the doles and subsidies for which members of the National Farmers' Union were at that time pleading in vain.

I have never joined the N.F.U., simply because I asked myself, when I started farming, will membership make me a better farmer, are their aims and aspirations in the best interests of British agriculture and the country as a whole? The answer in each case was, in my opinion, negative. They appeared to do nothing to increase the technical efficiency of the farmers, or to protect their best interests. Looking back over the years, nothing has depressed me so much as the deterioration in the character and spirit of our farmers under the impact of

legislation. In the early days after the first world war, difficult as those times were, technical efficiency could still see any farmer through. The more progressive were facing the future with a slogan, coined by the late Sir Horace Plunket, himself a great farmer, 'Better methods, better farming, better business, better living.' But since then there has been a tendency to lean more and more on Government aid for the solution of agricultural difficulties, to the incalculable loss of the industry and our fellow-countrymen. The crowning folly was the acceptance of the Agricultural Bill, in which the farmers accepted control of the industry by officials, bartering their rights to buy and sell land, to rent or let, to stock, crop, and manage according to individual judgement, in return for an ephemeral guarantee of prices and markets. Sad as these things are, and sad as is the duty of a farming philosopher to record them, the fact remains that there were wonderful opportunities throughout the years for those who could work, think, and plan. The only hope for the future is that far more of our farmers will start to do this, and so put their affairs in order that when the country demands a more efficient agriculture they will be equal to the occasion. They should then be in a position to press a more reasonably minded Government to repeal at least the penal clauses in the Agricultural Act, so that our farmers once more may know the real security, dependent on their own efforts, which leads to an efficient and progressive type of farming, unhampered by the dead hand of bureaucracy. There are those who have never realized the ability of the individual to rise above his

circumstances and who have no idea how much he can contribute to the common good when he is recognized as a responsible human being, rather than as an ‘A’, ‘B’ or ‘C’ farmer. At present the ‘A’ need not bother, the ‘B’ does not bother, and the ‘C’ cannot bother. The time and effort that is wasted in classifying them, and the heartburnings which the classification causes, might well be used to better purpose. We are not concerned with the name the physician may put to an illness, but only that we should be made well.

The fundamental weakness of the Committee system lies in the fact that the members are appointed by the Ministry of Agriculture, County Council, National Farmers’ Union, and National Union of Agricultural Workers, and not elected by the farmers themselves. This negation of a great principle of democracy, which is to the discredit of the Conservative Government that introduced this system in 1939, has been the great stumbling-block in obtaining the happy co-operation of the farmers in steadily building up production. Had the farmers of each parish elected their member we should have had a much happier state of affairs. The farmers would feel they were truly represented, both individually and collectively, by a man they knew and trusted. The elected member, having the mark of recognition as a capable and trustworthy member of the agricultural community, would not hold his position very long if his friends and relations, of no great farming ability, were put into farms which became vacant. An elected member, as a natural leader, could have brought about a happy co-operation

between the farmers in the parish in the sharing of labour and machinery; and I am convinced that as much could have been produced by making full use of all the resources thus available as with the expensive, wasteful and cumbersome methods which prevailed. The chief qualification of an appointed member must be that he is a yes-man, in fact it was clearly demonstrated during the war that it was so; any member daring to criticize was asked to resign. On the other hand, elected members would not have failed in their duty to draw attention to the appalling waste and inefficiency which has since been found by the Select Committee appointed to enquire into the workings of the County Agricultural Committees.

The solution is still open to any Government having the courage to introduce it; it would be worth half a million votes in the next parliamentary election, and a step in the right direction towards obtaining full production from the land.

Meanwhile, the solution which my brother and I chose, when starting to farm, with little capital, in the darkest days of agricultural depression, is still open to all. People can still show that the individual does count for something, and demonstrate what all farmers could achieve, with security of tenure, freedom in cropping and stocking, and the quiet enjoyment of their property—which should include the right to take drastic action against any trespassers, whether human, official, or canine—while using a balanced and progressive system of farming.

What have we proved, and was it worth while? We came to Oathill planning to spend useful, full, and happy lives, in work of our own choosing; in the hope of a reasonable financial reward for the efforts involved, and a reasonable measure of security in what was then regarded as a very precarious industry. About that time, a Minister of Agriculture described North Oxfordshire as ‘a black spot on the map, in which suicides and bankruptcies appear to be the principal crop’. We have lived to see happier times.

We have demonstrated a way of life open to anyone who can learn his trade, work hard, live simply, and, above all, adopt methods of farming whereby capital accumulates, not only in terms of wealth, but in human happiness and the fertility of the soil.

We have shown that the small farm can compare favourably with any for output per acre, per person employed, and capital involved.

We believe that the small farm, with a balanced system, is the economic unit which can go steadily on, in good times and in bad, and be far less dependent on outside conditions and circumstances than the more specialized pig, poultry, or dairy farm, or the large-scale and mechanized unit.

We have shown that once a certain level of production is reached the drudgery so often associated with the small farm is eliminated, and certainly the monotony inseparable from any large-scale or specialized undertaking.

In doing these things we have, I admit, enjoyed certain advantages. First and foremost, we always knew what we wanted and how to get it.

The management was in a partnership, which always put the farm first, and in this partnership the hopes, dreams and philosophy of the one have been realized very largely by the business organization and the mechanical knowledge of the other.

The freehold of the property, acquired after a few years, has enabled us, within certain limits, to do what we liked with it; and the farm to-day represents what any farm might be, if the rents were reinvested over a period of years.

Above all, in doing these things we have been blessed with the services of young people, who have shared our work, our home, and our ideals; it was on a basis of reciprocity—if they would share our work, we would share our knowledge; if they would help us to farm this farm as it should be farmed with their labour, we would help them to farm their farms, with our knowledge, capital, and experience. And many of them have gone on to prove on their own farms that, had the underlying principles which have been applied here for the last twenty-five years been generally adopted on British farms, this country would now be practically independent of imported food, and the major political problem of the times—how to feed the people—would never have arisen.

Of all the things I have done and enjoyed, it is in teaching that I have found my greatest satisfaction; in my early days it was in training

sheep dogs and horses, and now it is in sharing with others the knowledge which was gained in groping through the mists of agricultural depression in the early days of my farming career; and in trying to make the way a little easier for those who are travelling the same hard road by which we have come. There have been disappointments, of course, for there are those whom we have to tell quite frankly that they lack the qualities necessary for success; but against that there are others so handicapped that no one else would give them a chance to prove their worth, who by application and inherent ability have used the opportunity we gave them to overcome their difficulties and achieve their ambition. It is those who make it seem so worth while. The Principal of a leading Agricultural College once said that if a young man came to him and said that he intended to become a farmer, the first thing to find out was if he had any brains and secondly, £20,000; if he lacked either then out he went. We look for character and common-sense, for those who can offer nothing more than their services, wholehearted interest, obedience and loyalty in return for their training, are those who are going far in farming, for they will look for those same qualities in others when the time comes for them to farm. If a group of people are gathered together in a common purpose, to build a business, to make a farm, to study and share knowledge, there is no limit to what they can achieve. It is agricultural co-operation in the true sense, and as each one is qualified to move on and launch out on his own, another trained in the same tradition can take his place. As a

farmer can set his sons up in business, so can we all help those who have not had an equal chance, if our farm is really productive and efficient, and if we can find those worthy of the assistance we can offer. If I meet the boy in whom I see myself of thirty years ago, he will make a farmer whatever his shortcomings. Other things being equal I choose the lad who wants to farm, rather than the one who wants to be a farmer; there is a difference. In the case of a girl, if you choose one you would be proud to have as a daughter, and then treat her as such, you will not go far wrong. I have had many good boys, I have never had a bad girl.

A farm, and a farming system, like life, never stands still, it is either going forward or back. An economist once said at a public meeting, 'Oathill Farm seemed to be the only one to which the law of diminishing returns did not apply.' I am sorry he should think so, for in my experience wealth and happiness can accumulate on any farm in direct ratio to what we put into it.

Where are the profits in farming? Are they the figures in a book, or in an inflated currency as one desperate Government follows another? I look back on the toil and years necessary to achieve my ambitions, bearing in mind that characteristic of the British race—the desire to grow things and perhaps grow with them, which has enabled the people of these islands to produce so many fine breeds of animals which have stocked nearly all the temperate zones of the world; the urge which I felt, and which is still manifest in the backyards of our great industrial

cities; and sometimes when I drive through those arid wastes on a summer evening and see the clerks and shopkeepers busy in their two-by-one, smoke-laden gardens—trying to raise dahlias or day-old chicks—then I say, with John Bunyan, 'There, but for the Grace of God, go I.' And then I realize that the profits are not in pounds, shillings and pence, but in an act of faith that there was something worth while to do outside the city on our great and wonderful heritage, the land.

Ours is perhaps an ordinary success story, if the essence of success lies in the fulfilment of a purpose. But it is a mistake to think of us as striving and struggling and denying ourselves the simple pleasures and comforts of this life. It is simply that we have been so happy and absorbed in our work that we have had little time or inclination for anything else. In the same way, this is not a place of grim austerity, but rather of order and of peace. The neat and tidy buildings, the well-kept road, the thriving crops and stock are the things we visualized in bygone days, and the effort to bring them about still gives simple happiness.

Recognition is worth a lot, and it has been a pleasure to entertain the parties and farmers who have wished to come here and see in practice that which they have read about. Only a few have abused the privilege, by failing to make an appointment to come on our 'visitors' days'. For we are still busy working farmers, even if we sometimes

snatch a few midnight hours for a book such as this, or devote a little time to our wives and families.

However, I hope this book will serve a useful purpose, for the way by which we have come is still open to anyone who, reviewing his own particular circumstance, has the will to change the things which can be changed, the courage to accept the things which cannot be changed, and the knowledge to know the difference between them.

In spite of all the troubles and difficulties which must be attributed to political causes, I believe that for any young man or woman who can make the vocational approach to farming, it still offers a complete, wholesome, and satisfying way of life, the perfect balance between mental and physical effort, with opportunities for initiative, originality, and independence which should develop an individual personality and character, often so sadly lacking in our rising generation, who have been so meanly regimented, socialized, organized, Beveridged, and divorced from all sense of personal responsibility that they find it difficult to realize that they have a great and individual purpose to fulfil in this world, and in few occupations can it be better demonstrated than in sturdy independence on the land, earning a living, and working in the service of mankind.

But just one note of warning! I have shown that farming as a business suffers from certain inherent handicaps and weaknesses, but that if they can be overcome it offers a reward comparable with the effort involved, and with that which may be derived from any other

profession or occupation; but this is only so if we have something more than a striving after wealth, or land, or power—something perhaps deeper than our speech and thought, beyond our reason's sway, an urge to do the work for which we were wrought still better in every way. And if any should use this book, and the knowledge they gain from it, to enter the ranks of the large-scale farmers, thus denying others the chance to farm, may they qualify for the curse of Isaiah on those 'that join house to house, that lay field to field, till there is no place, that may be placed alone in the midst'. For I do know that those who are not too proud to farm well in a small way will achieve not only a successful business, as they deserve to do, but a harmony of heart, hand, and mind which leads to a life of sweet content, sharing the abundance of the earth with their fellowmen and God's creatures; and even in toil, hardship, or political bitterness, such as I have known and all independent farmers must feel in these times, may they find it equally and infinitely worth while.

If I have been hard on those who should know better, it is only in the hope that they will learn the error of their ways, and in due course will know from actual experience the truth of the following little poem, which I wrote more than thirty years ago, when as a schoolboy I was dreaming and planning for the things which were to be.

There is something in the working of
The bit of land you live on,

Which is not easy to define
In words, or rhyme, or reason.

For the land is like a living thing,
It responds to love and care,
Like flowers in a gentle Spring
To light, and sun and air.

To have the chance of farming
With a simple loving heart,
And to feel the land responding
To all you can impart

Is to know the gifts God gave us,
To take our tiny part
In building a great Universe,
With work, or simple art.

And it's worth the time and effort,
The years of toil and care.
For with this simple guiding thought,
You never need despair:

That somewhere in our countryside
There is a -piece for you,
Just waiting to co-operate
With all you ought to do.

Then what value will you put upon
Those hopes and dreams come true,
That flourish in that bit of earth
Which means so much to you.

So farm it as it should be farmed,
With heart, and hand, and brain,
To make the best of everything,
Of earth, and sun, and rain.

To leave it better than you found it,
For that's the farmer's aim,
That others in the years to come
May do the same again.