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SOME OBSERVATIONS ON FARMERS' ATTITUDES TO FINANCE AND INVESTMENT

Based on a Study of a Sample of Owner-Occupied Farms in Devon 1957

by

G. C. McFARLANE, B.Ec. (Sydney)

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FOREWORD

The subject of farm finance is one on which our knowledge is scantier than in most other sectors of the wide field of rural economy. To some extent, this is due to the complexity of the subject — the different mental attitudes in finance as compared, for example, with physical production. To quote the late Professor Ashby "Little attention has been paid to the farmer himself, or to some of the circumstances of his life and of agricultural organisation which condition his actions". Hence his plea that more study be given to this important subject, studies embodying the 'strictest impartiality of inductive procedures'.

Theoretical economic analysis commonly proceeds on the assumption that a business man, when acting rationally, enlarges his output to the point at which his net profits are maximised, -- "but this assumption seems to be refuted by the common observation that the general run of business man is content to stop short of that point. His aim is rather to ensure to himself over a long period an income which enables him to maintain a customary standard. In an unprogressive society, or even in a protected section of a progressive society, he is no doubt able to follow this policy".*

While this small scale investigation into farmers' attitudes to finance and investment was not designed specifically to test this observation for the agricultural industry, it is interesting to note that the empirical test does tend to support the above analysis. The study is a contribution to our knowledge in this field which it is hoped will stimulate other research workers in agricultural economics to develop further work.

S. T. MORRIS

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* Allen C.G. "Economic Progress, Retrospect and Prospect", The Economic Journal, No. 239 Vol. LX, September, 1950, p.473.

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I INTRODUCTION

The purpose of this short report is to give the results of some research into certain aspects of farm finance on 53 holdings in Devon.* The farms included in the study are all managed by owner-operators who have been co-operating for some years in the University's Farm Management Survey.

The objective of the investigation was to make an appraisal of the extent to which farmers are confronted with obstacles which hamper the introduction of more efficient methods. Particular attention was given to problems of investment in additional land and improvements.

The survey included farms of various sizes, from 50 acres to over 200 acres, the highest proportion (over 45 per cent.) falling within the category of 50 to 99 acres. Table 1 shows the number of survey farms in each size group. The 53 farms are not claimed to be representative of all the different conditions of farming in Devon. The diversity of physical and climatic factors in the county is well known and to take account of all the variations would call for a large sample. However, the survey farms are well-distributed and fall into six of the type-of-farming groups distinguished for purposes of the Farm Management Survey[1] - 13 were in the "dairy" group, 8 were "mainly dairy", 3 "mixed and dairy", 16 "mixed livestock", 12 "cattle and sheep" and one "mixed with crops".

II SIZE OF FARMS AND STATE OF IMPROVEMENTS

(a) Farm Size

Since it is often argued that the small size of farm is a major problem in British agriculture, farmers interviewed were asked whether they need additional land. As might be expected the highest proportion of those answering "yes" to this question have less than 100 acres. It is significant to note, however, that the majority of operators, even on the smallest farms, said they did not need any additional land.

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* The assistance of the 53 farmers who participated in the study is gratefully acknowledged.

1 Farms included in the Farm Management Survey carried out by this Department are classified according to output. Detailed analyses of the results achieved on co-operating farms are published each year, the latest being "Farm Organisation and Incomes in South West England, 1955" by S.T. Morris, H.W.B. Luxton and G.D.D. Davies, September, 1957.

Among the group with 50-99 acres, approximately 54 per cent. said they did not need any more land and a further 8 per cent. said they would like a larger area but would be satisfied with a total of less than 100 acres. Eighty-four per cent. of those with 100-199 acres said they did not need additional land.

Table I

Size of Farms in the Survey and Farmers Answers to the Question "Do you need any extra land?"

Farm Size	Number in Group	Whether Extra Land is Needed			
		Yes		No	
		No.	%	No.	%
50-99 acres*	24	11	46	13	54
100-149 "	10	1	10	9	90
150-199 "	9	2	22	7	78
200 acres & over	10	1	10	9	90
Total	53	15	28	38	72

* Includes two farms of 48 acres

Thus of the 53 farmers interviewed only 15 (or 28 per cent.) said they needed more land, and three of these wanted a larger area to enable other members of the family to enter the business. Therefore, no more than 23 per cent. expressed a desire to have additional land in order to expand the enterprises managed by the present labour force.

The apparent lack of interest in acquiring additional land is probably due partly to lack of opportunity to buy adjoining fields. As most farms have for years been too small for further subdivision there has not been much land for sale. Another method of expansion is, of course, to buy an adjoining farm but this has the disadvantage that it entails buying farm buildings that are not required. In any case there have not been many farms offered for sale with vacant possession in recent years.

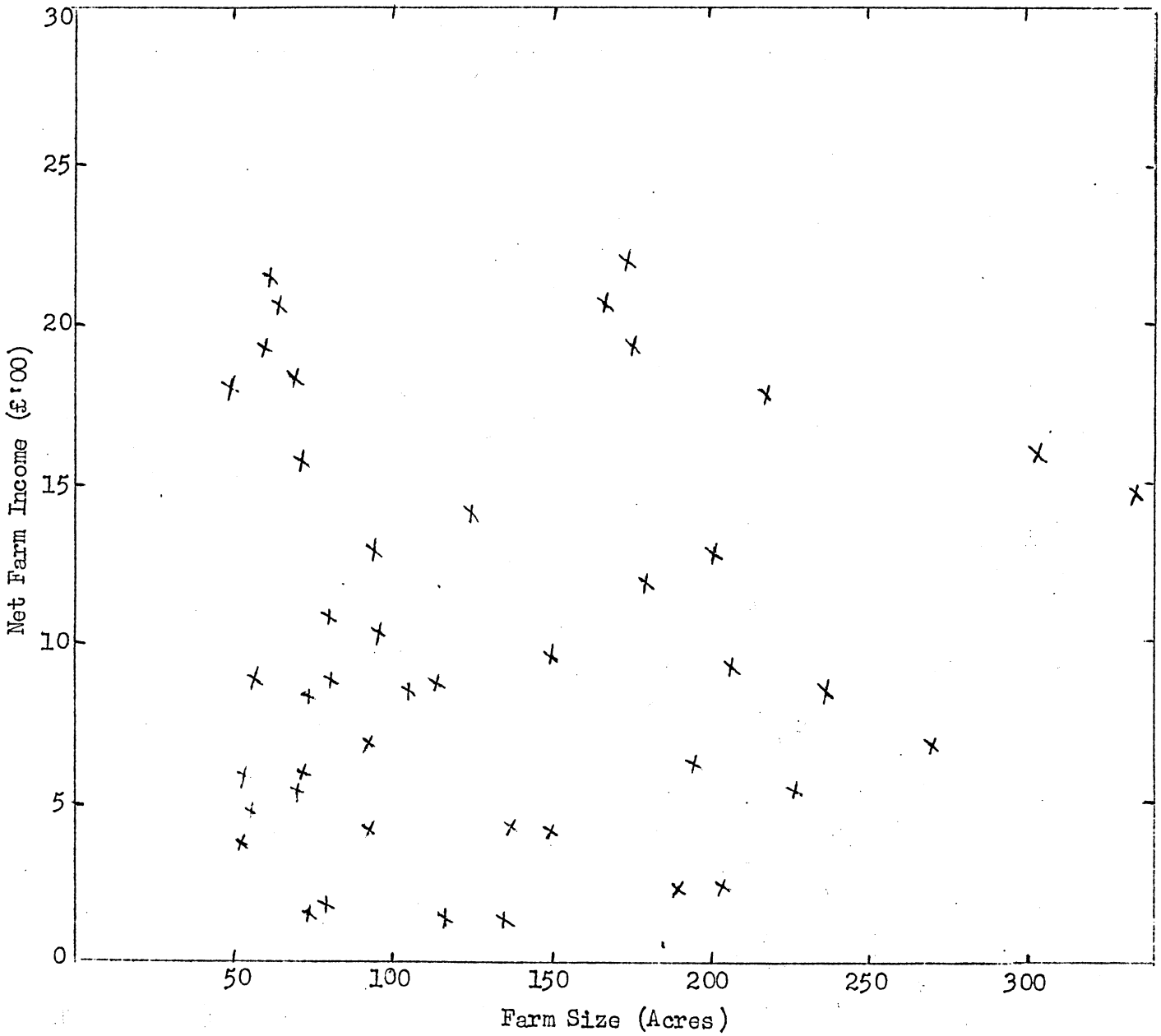

Figure I : Relation Between Net Farm Income and Farm Size, Survey Farms. Average for 3 years 1954-6.

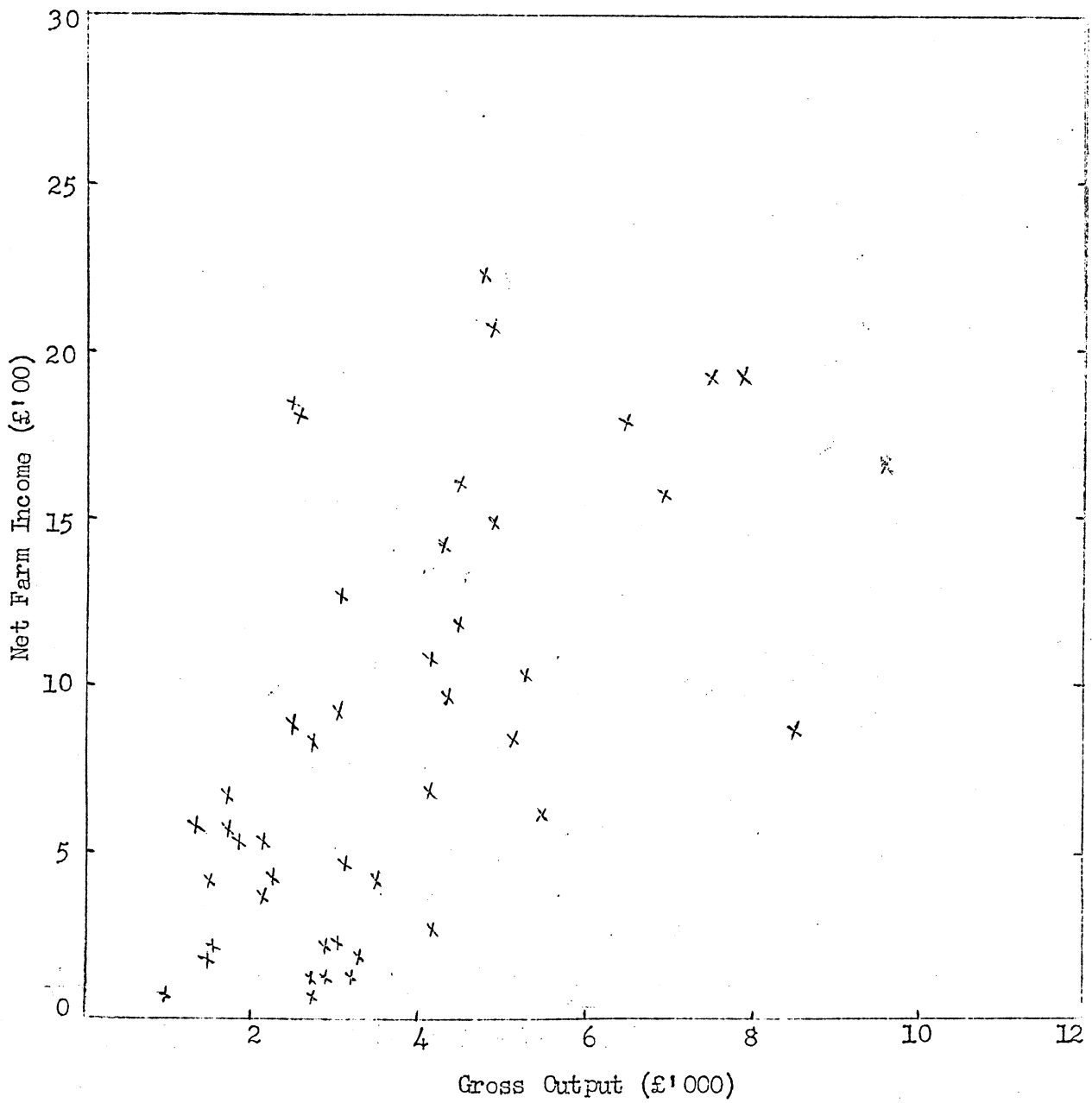

Figure II : Relation Between Net Farm Income and Gross Output, Survey Farms. Average for 3 years 1954-6.

As a consequence of these circumstances farm size has often been regarded as a constant factor and the system of farming planned accordingly. Realising there was little chance of increasing the size of their holdings, farmers have sought to maintain incomes by making greater use of limited areas. This has involved provision of facilities for intensive enterprises and once these were available the need for additional land receded in importance.

That the small size of holdings was not generally regarded as a serious problem was also indicated by the reasons farmers gave for wanting more land. The most common motives were to facilitate an increase in cattle and sheep numbers and to make farms more self-sufficient by being able to rear herd replacements. Farmers were clearly more concerned with the effect a larger area would have on their organisation of enterprises than they were with the possibilities of increasing output. In other words, they displayed more interest in the possibility of introducing slight, but satisfying, changes in the system of farming. If higher output were the objective this could be achieved from the existing acreage.

The fact that the farmers interviewed were not very worried about increasing the size of their farms may perhaps indicate that they thought there was little relation between farm size and income. In fact, there would appear to be little relation between acreage and net farm income on the 53 farms, as can be seen from Figure 1. On the other hand, Figure II reveals a closer relation between gross output and net farm income. The importance of other factors than the size of farms is also revealed in Table II which shows the size, gross output and net farm income of a larger sample of farms in the South West Province. It will be noted that the 30 farms in the East Devon Dairy, Pig and Poultry Group had the highest average output and net farm income for the three years ended 1955/56, despite an average area of only 102 acres. Farm size is naturally one of the determinants of the level of income but the contribution of such factors as the type of land, location and situation of farm, system of farming and level of technical development is clearly of great importance. The East Devon Group had the highest net farm income although the average size of farms in this group was somewhat smaller than in most of the other groups.

It would be difficult to predict farmers' attitudes to acquiring more land if it were readily available. It is interesting to note, however, that areas have been added to about one quarter of the survey farms by the present owners and half of these would acquire more land if it were available. On the other hand, only three farms have become smaller and these

Table II

Output and Net Farm Incomes of Groups of Farms in the South West Province (3 year average, 1954-56).

Group	Number in Group	Average Size	Per Farm		Per Acre	
			Gross Output	Net Farm Income	Gross Output	Net Farm Income
		(acres)	£	£	£	£
Devon and Cornwall Cattle & Sheep	19	160	2,771	709	17·3	4·4
Devon and Cornwall Mixed & Dairy	14	129	4,082	992	31·6	7·7
Devon and Cornwall Mixed Livestock	22	109	4,125	1,016	37·8	9·3
East Devon Dairy, Pigs & Poultry	30	102	4,111	1,039	40·3	10·2
Devon and Cornwall Dairy	18	89	3,490	600	39·1	6·7

reductions were for personal rather than farming reasons. As a consequence of these changes the average size of holdings has increased from 125 to 131 acres during the occupancy of the present owners.

Thus, although few farmers expressed an urgent desire to obtain more land it is perhaps reasonable to suppose that some would add to their holdings if they had the opportunity.

(b) Layout

When questioned about the layout of their properties, a small number of farmers said the hilly nature of their land restricted the area devoted to grain crops and a couple complained of time wasted due to fragmented

holdings. However, over 80 per cent. said they were not restricted in their operations by the arrangement of fields, hedges, roads and buildings. This does not necessarily mean that layout is ideal for maximum efficiency: the implication is simply that the farmers visited did not regard it as a serious obstacle to any adjustments they might want to make in the organisation of enterprises. This is probably because the present layout of each farm has been evolved gradually to suit the farming system.

Farmers who have occupied their farms for many years are able to describe changes that have been made over the years in order to keep pace with developments in farming methods. An example of such changes is the current practice of increasing the size of fields by removing unnecessary hedges. Several of the farmers visited had amalgamated small fields in this way to facilitate the use of larger machinery and reduce labour requirements.

While much drainage work had been carried out on some of the farms additional drainage was needed on one-quarter of the survey farms. On the other hand, less than twenty per cent. required improvements to fences, roads or water supplies.

(c) Conditions of Buildings

The adequacy and condition of farm buildings seems to cause more restriction on output than does the state of other improvements. In general, the restriction is more on the emphasis given to each enterprise than on the combination of enterprises. That is, the scale of production of some commodities is limited by the supply of buildings. Approximately 20 per cent. of the 53 farmers said they would carry more stock (mainly cattle and pigs) if they had more housing for them.

In other cases, farmers said their buildings were old and inconvenient but were nevertheless serving their purposes. In some cases old buildings, originally built for horse stables or harness rooms, have been converted to piggeries or poultry houses and some of these have been thoroughly renovated so that modern, labour-saving methods can be adopted. There have also been marked improvements in dairy buildings in recent years, largely due to health regulations and price incentives designed to improve the quality of milk.

At the time of the survey it was too early to assess the extent to which farmers would take advantage of the scheme of Farm Improvement

Grants, recently announced by the Government. The scheme had clearly aroused considerable interest and it seemed likely to lead to improvements similar to those achieved through grants for drainage and housing.

(d) Electricity Facilities

The survey revealed some dissatisfaction with the electricity facilities available to farmers. Owing to delays in rural electrification, 41 per cent. of the survey farms were equipped with their own generating plants and 21 per cent. had no electricity at all. Thus only 38 per cent. of the 53 farms were connected to electricity mains. As at 31st March, 1957, approximately 45 per cent. of all farms in Devon were served by the public electricity supply.

The fact that a relatively high proportion of farmers have their own generating plants is, understandably, affecting the costs of new connections to mains. Since those who have spent considerable sums on generating equipment and appliances are not keen to change over to public electricity, the cost of extending mains has to be borne by the relatively small number wanting the service. As a consequence the cost is high and some of those without electricity plan to have private plants rather than public electricity. This is clearly a paradoxical situation: from a national viewpoint it would surely be more efficient for all farms to be connected to the electricity mains.

(e) Farm Machinery

Few of the farmers visited indicated they were seriously handicapped by having insufficient farm machinery. Approximately one-third said they would like to have additional machinery but only 10 per cent. were planning to buy the equipment this year.

It is of interest to note that the items most commonly mentioned as being needed were relatively new innovations, viz. manure spreaders, hay balers and hedge trimmers. The main reason for deferring the purchase of these was lack of finance. In most cases credit could have been obtained, or the necessary money borrowed, but farmers preferred to wait until they had saved the money. The work that would be done by the new equipment was already being performed by other methods and the introduction of new innovations was therefore not regarded as urgent.

III ATTITUDES TO BORROWING

(a) Methods of Financing Improvements to Buildings

Nearly 80 per cent. of the farmers visited said their farm buildings needed improvement. Approximately 66 per cent. want additional buildings, 58 per cent. have buildings requiring alterations and 47 per cent. are contemplating both alterations and additions. For various reasons one-third of those who claim their buildings need improvement have not yet decided to proceed with the work. Their main reasons for delaying are lack of finance, uncertainty of future market prices and high costs of building.

Where firm decisions have been made to carry cut the work it will be financed mainly from current revenue and savings. About 86 per cent. said they would pay for the improvements in this way. The fact that very few would resort to borrowing is possibly partly due to current restrictions on lending but a high proportion said they were not keen on borrowing and normally used savings to finance improvements. Only one-third said they had borrowed money from any source for improvements to buildings in recent years and no more than 15 per cent. had borrowed from banks for this purpose. This corresponds approximately to the proportion with current plans to finance improvements by bank borrowing.

Table III

Bank Overdraft Limits on Survey Farms

Overdrafts Arranged from Banks	Farms in Group	
£	No.	%
Nil	34	64
0 - 1,000	8	15
1,001 - 2,000	5	9
2,001 - 3,000	1	2
3,001 - 4,000	2	4
4,001 - 5,000	3	6

Further evidence of this independence of bank finance can be seen from the schedule of overdraft limits given in Table III. These overdraft arrangements were for different purposes and for varying lengths of time. Almost two-thirds of the 53 farmers did not have an arrangement for a bank overdraft limit and a further 15 per cent. had limits of £1,000 or less. These figures slightly understate the extent to which bank credit is used because it is fairly common for farmers to overdraw their accounts, sometimes without prior reference to the bank manager. Such drawings are, however, usually relatively small amounts which are repaid quickly.

The extent to which farmers borrow for investment in buildings and other improvements seems to be associated with their general attitude to farming. While some aim at profit maximization others are more concerned with security and stability of income. Many farms have been passed down from one generation to the next and the present owners are not faced with any serious financial difficulties. As shown in Table IV 32 per cent. of the farmers interviewed have inherited their properties, a further 32 per cent, have occupied their properties for over twenty years and have, presumably, already carried out many major improvements. Where owner-operators have paid for their farms and are earning a comfortable living they are often more interested in security and stability of income than in major changes and improvements designed to increase profits. They realise there is scope for higher income through intensifying the system of farming but are unwilling to borrow for such purposes. They prefer to "make some improvements each year cut of savings" rather than accept the additional risk and managerial responsibility associated with borrowing.

Table IV

Length of Time Farms have been Occupied by Present Operators

Period of Occupancy	Proportion in Group	
	No.	%
All Life*	17	32
Over 20 years	17	32
11-20 "	6	11
1-10 "	13	25
Total	53	100

* That is, where the ownership of the farm has passed from one generation to the next.

Two other points should not be overlooked when considering farmers attitudes to borrowing: the interest rate and the need to have reserves to meet seasonal and price risks. Although few regard the current interest rate as an obstacle to investment, it is evident that farmers take the interest rate into account and endeavour to reduce their dependence on borrowed money when the interest rate is high. On the second point it is clear that the more dependent a farmer is on borrowed money, the more difficult will be his position if faced with a fall in income.

(b) Use of Credit in Buying Farm Requisites

It is frequently claimed that farmers obtain considerable help by being able to obtain credit for certain recurring expenses. In order to appraise the extent of this assistance, farmers interviewed were asked their normal methods of paying for machinery, motor vehicles, livestock, feed, seed, fertilizer, fuel and household supplies.

Table V

Methods of Paying for Certain Farm Requisites on 53 Devon Farms

Item	Cash on Delivery	Within Discount Period (usually 1 month)	Over Longer Period or by Hire Purchase	Total
	%	%	%	%
Machinery	42	46	12	100
Motor Cars	61	27	12	100
Livestock	84	11	5	100
Feed	Nil	82	18	100
Seed	Nil	80	20*	100
Fertilizer	Nil	85	15*	100
Fuel	39	53	8	100
Household Supplies	94	6	Nil	100

* Includes 4 per cent. where farmers consigned their wool to merchants and settled their accounts when the wool was sold.

As can be seen from Table V, a high proportion (over 80 per cent.) normally pay promptly for their purchases. Household supplies are virtually always paid for weekly and 84 per cent. pay cash for livestock. Only 12 per cent. purchase farm machinery or motor vehicles under time-payment systems, the majority preferring to pay cash on delivery or within an agreed time. Sixty-one per cent. said they normally pay cash on delivery for motor vehicles.

Farm machinery firms are often very helpful to farmers by allowing payments to be deferred for two or three months. Also, there is usually little difficulty in deferring payments for feed, seed and fertilizer but 80-85 per cent. of those interviewed endeavour to pay for these items monthly to gain the benefit of discounts.

In considering these figures, it should of course be remembered that they are based on a relatively small sample of owner-operated farms in one county. The position may be different in other counties and tenant-farmers may have different attitudes to the use of credit than do owner-operators.

(c) An Example Showing the Effect of Borrowing on Farm Income

Although the survey revealed a high degree of financial independence among owner-occupying farmers there are some who rely heavily on borrowed money. As already suggested the reason for these differences might be that some farmers are interested in security and stability of income whereas others aim to maximise profits. Where a farmer is earning enough income to be able to accumulate savings for future investment this method is doubtless satisfactory, but where it is not possible to save anything from current income some initial infusion of capital is necessary. In the latter case it could not be expected that the chronic low level of earnings could be alleviated without resort to borrowing.

A Case Study

The following example is introduced to show how a farmer achieved a rapid increase in income by carrying out an intensive improvement programme, financed mainly by borrowing.

When he bought the seventy-acre property in 1949, the young farmer had plans for developing an intensive system of farming, consisting mainly of cattle, sheep, grain crops, pigs and poultry. Having little capital, he immediately resorted to borrowing. This enabled him to make quicker progress with his improvement programme and the bank was willing to make further advances

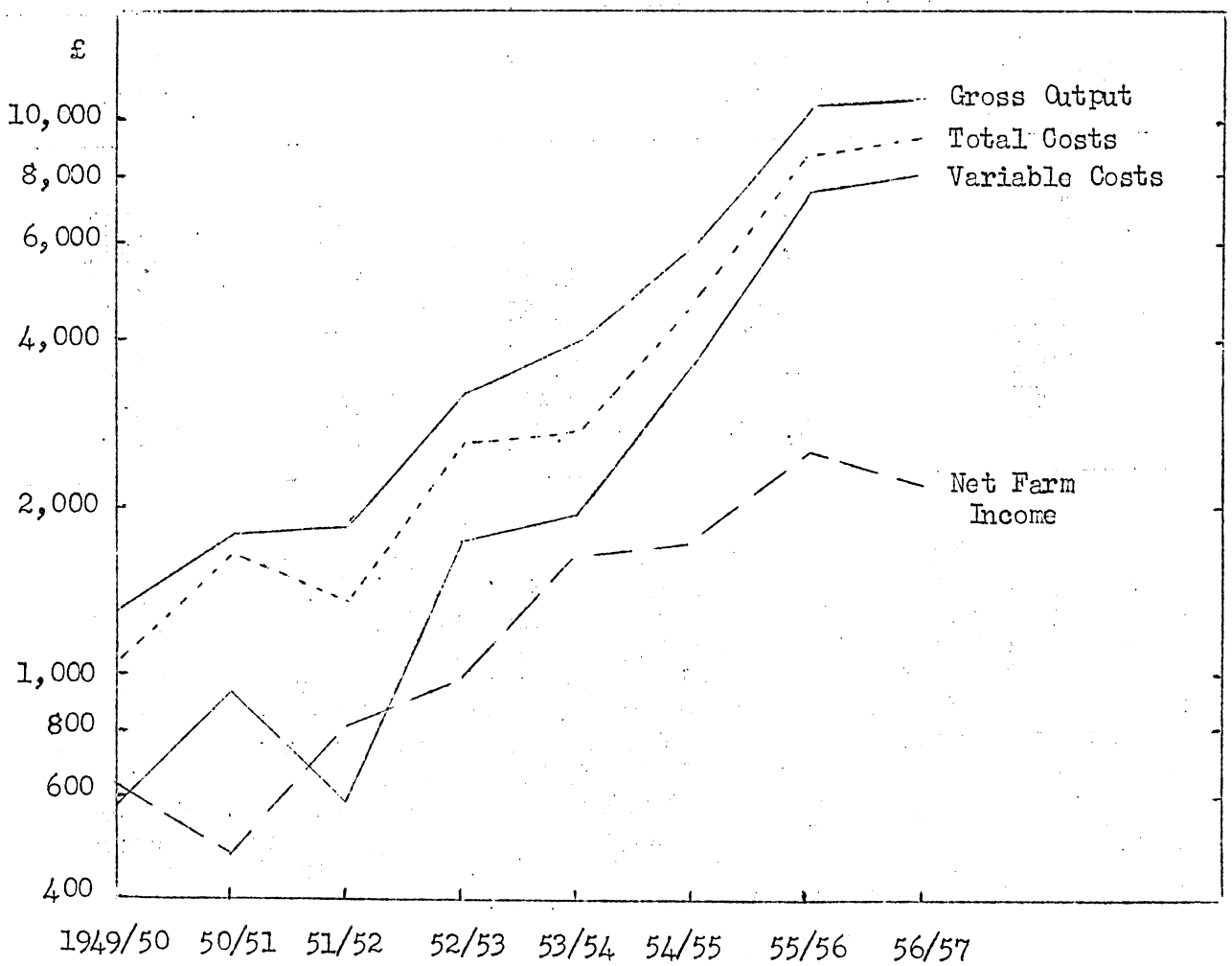

Figure III : Changes in Farm Income, Costs and Output on a Devon Farm, 1949/50 to 1956/57.

as output increased. Care was also taken to obtain credit where possible but this was usually restricted to short-term transactions so that advantage could be taken of discounts. Details of the sources and extent of financial assistance are given in Table VI.

Table VI

Sources of Finance on a Devon Farm, 1949 to 1956

Year (as at 31st December)	Bank Overdraft	Private Loans	Creditors	Total Liabilities
	£	£	£	£
1949	2,015	Nil	126	2,141
1950	2,939	Nil	172	3,111
1951	2,554	1,027	317	3,898
1952	2,467	1,027	514	4,008
1953	3,257	1,027	551	4,835
1954	2,502	3,000	845	6,347
1955	1,968	3,400	1,765	7,133
1956	3,091	5,750	1,794	10,635

Within about seven years most of the original plans had reached fruition, a comfortable home had been erected, output had reached over £10,000 per year and net farm income had risen to £2,500 per annum. The changes in output, costs and net farm income over this period are shown in Figure III. It will be noted that net farm income has risen at a slower rate than output in the last three years. This is attributable partly to the fact that variable costs (which naturally assumed greater significance as output increased) have risen faster than output and partly to a higher incidence of livestock losses as total numbers increased. Output increased so rapidly that new problems of management arose and some losses occurred due to inexperience and inadequate supervision. These problems are unlikely to be repeated in subsequent years.

The main point of relevance in this example is that the level of income would not have risen so quickly, if at all, without borrowing. Similar results could be achieved on other farms suffering the underlying weakness of under-investment, provided the farmers have the necessary managerial skill and are prepared to accept risks.

IV SUMMARY

1. Although the average size of farms in the survey was no more than 131 acres, the majority of farmers said they did not need additional land. Less than one-quarter desired to have more land and 62 per cent. were satisfied with farms of less than 100 acres.

2. Where farmers said they needed more land, the main reason was to permit the adoption of a more extensive, and more self-sufficient, system of farming. The objective was not necessarily to increase total output; if desired, this could be achieved on the existing area.

3. Farmers interviewed were mainly satisfied with the layout of farms and the condition of drains, fences, roads and water supplies.

4. On many farms, output could be increased, and labour costs reduced, by improvements to buildings. Renovations or additional buildings were needed on approximately 80 per cent. of the farms visited and 20 per cent. would carry more livestock if they had adequate buildings.

5. Only 38 per cent. of the survey farms were connected to the electricity mains. Forty-one per cent. had their own plant and the remaining 21 per cent. had no electricity at all.

6. Farms were generally well-equipped with machinery. About one-third of the farmers are, however, contemplating buying new types of labour-saving plant, especially manure spreaders, hay balers and hedge trimmers.

7. It was evident that a high proportion of the farmers visited prefer to rely on their own profits and savings to finance their operations. Approximately 86 per cent. normally pay for improvements to buildings in this way and over 80 per cent. normally pay promptly for farm requisites such as machinery, livestock, fuel, feed, seed and fertilizer. Only one-third of the 53 farmers have a bank overdraft.

8. A study of the results achieved on a particular farm showed the advantages of borrowing to invest in improvements designed to increase farm income. As a result of judicious borrowing and investment, net farm income rose to £2,500 per annum within seven years of the farmer's acquisition of the property. This example serves to illustrate the importance of additional investment where there is a persistently low level of income.