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**INTERNATIONAL
JOURNAL OF
AGRARIAN AFFAIRS**

Vol. II, No. 3, July 1957

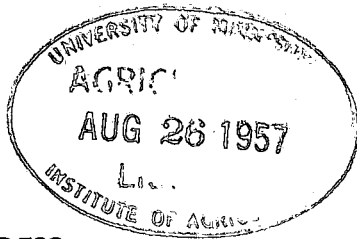
**Capital and Credit
in Agriculture:**

Denmark

Norway

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United Kingdom



Price 5s. 0d. net

OXFORD UNIVERSITY PRESS
LONDON

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CAPITAL FORMATION AND USE IN UNITED KINGDOM AGRICULTURE

ONLY in recent years have agricultural economists in Britain paid any degree of attention to the subject of capital in agriculture. While much has been done, particularly in connexion with the capital cost of land and the amount of money invested in farming, there are very considerable lacunae in the information about the capital position of the industry. To a great extent this is due to the fact that in the United Kingdom agriculture is a family industry, nearly all farms being individual businesses run by single families. While examples of joint-stock companies are not unknown, and partnerships are becoming more common, it remains true to say that British agriculture is predominantly a collection of family businesses, whose finance is determined largely by the resources of the individual families managing them and by their ability to secure command over resources by borrowing. Of the money that is borrowed, hardly any is directly raised on the capital market, so that only in very rare instances has the industry been subjected to the normal market tests as to its efficiency as a capital user. Any comparison of the efficiency of capital utilization in agriculture with other forms of enterprise is therefore exceedingly difficult, although some indication could be obtained if it were known what farmers did with capital surplus to their own requirements and whether the industry as a whole were a net capital creditor or debtor of the rest of the economy. Both these, however, are topics about which scarcely anything is known.

Apart from the family nature of agriculture, the other factors which specially affect its capital position are its highly developed state and the system of land tenure. For several centuries the traditional feature of agriculture has been the divorce of the function of entrepreneur from that of landowner, the latter providing the capital needed for the land and its permanent equipment (subsequently referred to as permanent capital) and then letting it to the farmer in return for an annual cash payment. The farmer, as entrepreneur, has therefore had to provide himself only with capital for stocking and operating the farm (subsequently referred to as tenants' capital) and

has been able to obtain the permanent capital he needed without having to put up any equity himself. While not in any way reducing the capital requirements of the agricultural sector, this system of tenure has considerably reduced those of entrepreneurs. Recently, however, the tenure pattern has been changing and while, in 1909, 88 per cent. of the agricultural land in England and Wales was rented, by 1954 the proportion had fallen to 58 per cent. with consequent effects on the capital position of farmers.

This change in the pattern of land tenure has occurred at a time when the dynamic nature of the industry has been particularly evident. Thus British agriculture, which for a century or more has been highly developed compared with the agriculture of many other countries, has developed even more in the last fifteen or twenty years and at a particularly rapid rate. This has had important effects on capital formation, as will be discussed subsequently, but it is mentioned here for its general bearing on the position. Thus, as agriculture develops, the nature of its capital requirements changes, permanent capital becoming relatively less and tenants' capital relatively more important. While in the 1930's tenants' capital represented about one-third of the total capital invested, the proportion is now between two-fifths and a half. This is a much higher ratio than is found in many countries of the world and has partly offset the advantage that has accrued to the British farmer from the landlord-tenant system. At the same time the great developments that have occurred in recent years, coupled with the increase in owner-occupation of land, have caused attention to be drawn to the provision of capital for the industry since capital requirements have risen considerably, even when measured in real terms.

Sources of capital

Since agriculture in Britain is a family industry, its basic sources of capital are the same as those available to any family business. For that matter they are also the same as those available to any other form of business enterprise, including joint-stock companies. These basic sources are three in number, inheritance, saving and borrowing. No precise knowledge exists as to the relative contribution made by each to the present capital stock of the farming industry but some information, although fragmentary, is available, chiefly as to how farmers obtained their capital to start farming.

Inheritance, as might be expected in a family industry, has been

the principal source. Under inheritance are included all methods by which a younger generation succeeds to the property of a preceding generation—chiefly by inheritance at death or by gift during life, but including acquisition through marriage. It has been estimated that between the two world wars about two-thirds of the farming capital (excluding real property) was obtained by inheritance.¹ Similarly in a study of 152 farmers in England in 1950 it was found that one-half (73) started entirely with family help (and not including family loans in this connexion)—a 'complete setting up by the family'.² These are high proportions and, while there are no figures in support, it is highly probable that the inheritance took the form of physical goods—a farm, livestock or equipment—rather than of cash. This is not the whole extent of family assistance, however, since many farmers have been assisted by a family loan or by a bank loan which has been guaranteed against default by a relative. While both of these are known to be common in farming families, no statistical information is available about them.

The second important source of capital is saving—both prior to starting and then in the actual process of farming. As regards the former, in the survey of 152 farmers already mentioned, it was found that one-third of the farmers started entirely from their own savings.³ This figure is probably subject to error in that an individual's savings may well include some inheritance and cannot therefore be regarded entirely as the product of his own thrift; but it is common in Britain for many a young man to save for the day when he will have his own farm. This saving may take the form of rearing and selling some livestock, generally kept free of charge on his father's farm, by going out to work for other farmers for a money wage or even, sometimes, of taking a non-farming job. Saving continues after the commencement of farming and it has been estimated that between the two world wars about one-third of the farming capital in use (excluding real property) was saved by each generation as it came along.⁴ From one point of view British farmers have found saving fairly easy, since livestock play a predominant part in the agricultural economy and saving has taken a material rather than a money form. Thus saving has occurred as part of the process of farming by adding home-reared young stock to the breeding herds or flocks in numbers in excess of

¹ Ashby, A. W. 'The Farmer in Business', *Journal of Proceedings of the Agricultural Economics Society*, vol. x (1953), p. 100.

² *Ibid.*, p. 121. Contribution to discussion by J. Ashton.

³ *Ibid.*, p. 120. Contribution to discussion by J. Ashton.

⁴ *Ibid.*, p. 100.

those required for normal replacement. Costs are borne in rearing these young stock, of course, and immediate income foregone through not selling them but, apart from this, there is no question of allocating a given money income between saving and consumption. Further, the determining factor in causing this saving has been the desire to build up the farming business and this has frequently been done without consideration of the current rate of interest earned by capital outside agriculture. As an illustration of the savings that arise in this way the following figures of the livestock breeding herds in the United Kingdom are quoted, although it is realized that part of the cost of rearing the increased numbers may have been borrowed:

	1946	1956	Per cent. increase	
	Thousands		Total	Compound per annum
Cows and heifers in calf or in milk	4,422	4,672	6	$\frac{1}{2}$
Ewes for breeding	8,294	9,587	16	$1\frac{1}{2}$
Sows for breeding	221	696	215	12
Fowls of six months and over	19,504	33,016	69	$5\frac{1}{2}$

Material saving in British agriculture also takes other forms, such as improving the land by manuring and draining, but on nothing like the same scale as the increase in livestock numbers. As will be discussed later, however, this form of saving has slightly declined in importance since horses have been replaced by tractors.

The third source of capital is borrowing and here least of all is known. As already mentioned, scarcely any money for farming is obtained directly from the capital market, but with this exception, all the main sources of borrowed money are known to be exploited. In addition to friends and relations, these include the commercial banks, the government through their Goods and Services Scheme,¹ agricultural merchants, auctioneers and cattle dealers, hire purchase firms, private individuals (generally through the medium of lawyers) and, for longer term loans, chiefly for farm purchase, the Agricultural Mortgage Corporation, the Lands Improvement Company and building societies. Figures exist of farmers' borrowings from the commercial banks and from the Agricultural Mortgage Corporation and the Lands Improvement Company but for the rest little is known. An estimate of the total indebtedness of British agriculture in 1954

¹ This scheme is designed to provide goods and services to farmers who cannot obtain credit through the normal channels.

put the figure at £879 million (for a gross output of £1,371 million); this included an outright guess for loans from private sources (e.g. solicitors, relatives, &c.) at £450 million and a slightly firmer estimate for credit from merchants at £200 million.¹ Not all of this indebtedness is attributable to farm operations, however, since a great deal must have been incurred for land purchase—although how much it is difficult to say. The money borrowed from the organizations specially set up to finance the purchase and improvement of land amounted to £28 million² while in addition part of the bank loans to the industry, which averaged £214 million that year, must also have been so used. But in a survey of the credit needs of 300 small farmers in 1949 it was found that, of forty-eight owner-occupiers who had mortgages on their land and could say whence the loans had come, thirty had borrowed from solicitors, friends and relations while only eighteen had borrowed from the commercial banks, building societies or the Agricultural Mortgage Corporation.³ Private lenders would thus seem much more important than institutions for providing money for land purchase although it is possible that the size of individual loans is larger from the institutional lenders. While this is not without significance it does nothing to help determine the indebtedness of agriculture for farming purposes, nor the amounts borrowed from each source, as opposed to the total indebtedness of the agricultural sector.

One point which has troubled agricultural economists is whether British agriculture is a net capital creditor or debtor of the rest of the economy, the reason being bound up with the need or otherwise for a cheap source of credit for farming. The data available do not provide an answer, since they relate solely to farmers' cash balances, but they do throw some light on how farmers manage their finances. The first inquiry,⁴ based on farm account data from the south-west of England, showed that, of the seventy-two tenant farmers investigated for each of the two years 1949-50 and 1950-1, approximately three-quarters had positive balances at their banks and only one-quarter had negative balances or overdrafts, the overall position being that farmers were net creditors of the banks. This was also found to be true for a somewhat larger sample for 1949-50 including owner-occupiers, although the average size of the overall positive balance was smaller owing to a higher proportion (one-third) of farmers with

¹ Cheveley, Stephen, and Price, Owen. *Capital in United Kingdom Agriculture Present and Future*. The Netherhall Press (London, 1956), p. 28.

² *Ibid.*, p. 26.

³ Wace, Sir Blyth, *Credit and the Farmer*. Reprint from *The Year Book of Agricultural Co-operation*, 1951, p. 18.

⁴ Ashby, *op. cit.*, pp. 108-9.

overdrafts. The second inquiry¹ was made by the chairman of one of the five principal commercial banks into the state of the accounts of his bank's farmer customers. This disclosed that, on the day to which the inquiry related, this bank had over 110,000 farmers operating accounts, of whom 85,000 had credit balances and 25,000 overdrafts. The money in the credit balances totalled £71 million, while that in the overdrawn accounts amounted to £41 million. The findings of both these inquiries have been subject to criticism, chiefly on the score of the day chosen, but the criticism cannot overcome the fact that there are substantial sums of money in the possession of the farming industry. This was borne out by the third inquiry,² into savings generally, where it was found that those farmers who had credit balances at their banks tended to have fairly large ones. This survey also disclosed that about one-third of the small group of farmers sampled had overdrafts. On the basis of these three inquiries, therefore, it seems reasonable to assume that the farming industry is certainly not a net debtor of the banks and in all probability it is a net creditor. This is only one of the aspects that need to be considered in determining the net capital position of the industry, however, and against this is the fact that farmers have been shown to owe more to traders than they are owed by them, although the difference was less than their average positive balance with the banks.³ But when it comes to the question of what investments farmers have outside agriculture, which is crucial to a determination of the net capital position of the industry, information is entirely lacking. It is well known that many farmers have investments in industries ancillary to agriculture but nothing is known about holdings of stocks and shares, particularly fixed-interest industrial shares and government securities, or of money lent on mortgage through solicitors. It is possible that agriculture, while a net creditor as regards its cash position, is a net debtor when more permanent investment is considered although no evidence is available to prove this. But if it is true that British agriculture is a net capital debtor of the rest of the economy then very important implications arise. Thus if money has to be borrowed from non-farming sources on any extensive scale, changes in the form of business enterprise are bound to occur, with family firms giving way

¹ Tuke, A. W., 'Agricultural Finance' or 'The Farmer and his Banker', *Journal of the Farmers' Club*, part 5, 1956.

² Lydall, H. F., 'National Survey of Personal Incomes and Savings Part III. The Ownership of Liquid and Non-Liquid Assets', *Bulletin of the Oxford University Institute of Statistics*, vol. xv, nos. 6 and 7, 1953.

³ Ashby, *op. cit.*, pp. 108-9.

to partnerships and finally to public companies obtaining their money from the capital market. Provision of cheap credit facilities by the government would delay this development and preserve the family nature of the industry but, without this, changes in its organization are inevitable once its net indebtedness becomes great.

Factors currently affecting the capital position

In the last few years the view has frequently been expressed in farming circles in Britain that there is a shortage of capital in agriculture. The factors usually advanced as having caused this state of affairs are of two sorts: those peculiar to agriculture and those common to the whole economy.

There are three factors peculiar to agriculture and all have increased the capital requirements of farmers. The decline in the landlord-tenant system and the consequent increase in owner-occupation has already been mentioned. This change has come about partly for economic reasons in general but also as a result of the security of tenure granted to tenants under the Agriculture Act of 1947 which has prompted many landlords to sell farms as they became vacant, thereby avoiding the difficulties that have arisen in the tenancy system over such matters as raising rent or terminating a tenancy. The necessity for farm purchase has affected potential farmers most severely owing to the higher prices that have had to be paid for farms with vacant possession, but tenant farmers have also been affected by the need to purchase their farms when a landlord has decided to sell his estate. Thus in 1955 the average price per acre of farms sold with vacant possession was £90.2, while that for farms sold without possession was only £49.0.¹ The potential farmer, therefore, had to pay on average £41.2 per acre more to purchase a farm than did a sitting tenant. While this was a considerable difference in price for those farms with vacant possession compared with those without, it was smaller in 1955 than in almost any year since 1946, having been over £50 per acre in 1949, 1951 and 1952.² While capital required for land purchase or improvement has been thought of in the past more as a problem for the landlord than for the tenant this is changing since, when a farmer has to put an equity into the land he farms, this may seriously affect his supply of tenants' capital. It is obvious, therefore, that the increase in owner-occupation has raised the capital require-

¹ *The Farm Economist*, vol. viii, no. 6, 1956, p. 52.

² *Ibid.*, vol. vii, no. 4, 1953, p. 149, and vol. vii, no. 6, 1953, p. 274.

ments of farmers despite the facilities that exist through the Agricultural Mortgage Corporation and other sources for borrowing money for farm purchase.

The second factor giving rise to the need for more capital has been government policy, since this has encouraged increased farm production both during the war and in much of the post-war period. This increased production has raised capital requirements—both as regards tenants' capital for fertilizers, feedingstuffs, &c., and permanent capital for buildings, drainage, water supplies, &c. Further, because of government encouragement, the industry has been highly prosperous relative to the rest of the economy in much of this period. This has meant that the rate of adoption of new techniques, machinery, &c. (the third factor causing increased capital requirements) has been more rapid than in the past. It is not so much that the pace of new discoveries has quickened, although this may be so, but that the lag between the time of a discovery and its general adoption by farmers has been very considerably reduced, if not abolished. Since in this period farmers not only virtually eliminated the time lag that had existed before but kept up with all subsequent developments, as well as increased their production as the government desired, tenants' capital requirements rose tremendously. In money terms tenants' capital in the United Kingdom is estimated to have increased by 261 per cent. between 1937-8 and 1952-3 or, if allowance is made for inflation, by 46 per cent. in real terms.¹ This is an increase in the volume of capital investment of $2\frac{1}{2}$ per cent. per annum compound and compares with the increase in the volume of net output of the industry in the same years of 51 per cent.² ($2\frac{3}{4}$ per cent. per annum). While potential farmers have needed more capital in real terms than their predecessors before the war, existing farmers have also had to increase the physical volume of their capital during this period. To a great extent this need has arisen from the substitution of capital for manual labour, the 51 per cent. increase in the industry's net output having been obtained with a relatively unchanged labour force.

Not only have these new developments raised the capital requirements of the industry but they have also had an effect on the process and character of capital saving. Thus, of the total increase in tenants' capital in real terms between 1937-8 and 1952-3, some 70 per cent.

¹ Cheveley and Price, *op. cit.*, p. 15, quoting revised data from F. D. W. Taylor and J. R. Bellerby, 'Index of Farm Occupiers' Capital in the United Kingdom, 1937-8 to 1951-2', *The Farm Economist*, vol. vii, no. 7, 1954.

² Annual Review and Determination of Guarantees 1956. Cmd. 9721, p. 10.

is represented by machinery,¹ of which a considerable part must have been in tractors. While horses appreciate, at least for a few years, and replacements can be obtained as a result of material saving, tractors depreciate from the day they are bought and any saving to finance their purchase has to take a money form. Further, as with all machinery, improved and more costly models are continually being produced and depreciation provisions are thus insufficient to finance their renewal. This applies quite apart from inflation, the effect of which will be discussed shortly. But while the replacements necessitate increased capital investment they are at the same time more efficient so that their introduction should secure savings elsewhere to offset their greater cost.

As far as the agricultural industry as a whole is concerned, part of the disadvantage suffered by the change that has had to take place in the process and character of capital saving has been offset by the very rapid rate at which mechanization has occurred. Thus, once capital had been made available for the initial expansion, further expansion must have been self-financing to a very considerable extent from the annual provision for depreciation.² While the annual charge for depreciation has been calculated on the current quantity of assets in use, physical replacement has been limited to the quantity of assets actually wearing out, which has necessarily been much smaller. In other words, while mechanization has been expanding, current depreciation provisions have always been in excess of the current gross value of the assets falling due for replacement and capital has thus automatically become available for further investment. In the days of most rapid expansion during and immediately after World War II the proportion of net capital formation financed in this way was not large, but in the last few years, when the pace of expansion has been much slower, a very substantial part of all new investment must have been self-financed out of the annual provision for depreciation. This is undoubtedly one of the main reasons why farmers' bank overdrafts, which rose by 160 per cent. between 1946 and 1951, only increased by one-quarter between then and 1955, when the current 'credit squeeze' began.

Of the two factors which are claimed to have affected the capital position of the industry and which are not specific to agriculture, the first is inflation. Some idea of the extent of the inflation that has

¹ Cheveley and Price, *op. cit.*, p. 16.

² See Domar, E. D., 'Depreciation, Replacement and Growth', *The Economic Journal*, vol. lxiii, no. 249, 1953.

occurred in the agricultural sector can be obtained from the fact that the different price indexes used by Cheveley and Price, in calculating the volume increase in tenants' capital of 46 per cent. between 1937-8 and 1952-3, showed an average increase of 147 per cent., or $6\frac{1}{4}$ per cent. per annum compound. During the same period the general index of agricultural product prices rose by 203 per cent., or $7\frac{3}{4}$ per cent. compound. The effect of this inflation has been most severe on potential farmers, who have seen their savings continuously depreciate, unless they were able to invest them in real assets, e.g. livestock, which appreciated in money value as the inflation continued. But despite this tendency for money savings to lose their purchasing power there has been no shortage of potential farmers for any farm that has become available, as is evidenced by the high prices that have been paid to secure farms with vacant possession compared with the prices of farms let to tenants. While potential farmers have thus suffered from inflation, established farmers have avoided most of its harmful effects since their assets are almost entirely in material, rather than money form. Even they, however, have not entirely escaped since they have been compelled to find additional capital for their businesses, although inflation has brought them higher profits from which the increased capital could be derived. This need for increased capital has arisen through the failure of the accountants' system of depreciating machinery according to its historical cost to provide for the replacement cost of the items concerned, so that farmers have not been in a position to regard their book profits as being wholly available for consumption. The effect of inflation on the capital position of the industry, therefore, has been limited to potential farmers or to farmers who were expanding their businesses, since the remainder have probably gained more than they have lost.

The other factor which is claimed to have affected the capital position of United Kingdom agriculture is taxation, both of an individual's annual income during life and of his wealth at death. In the case of income tax it is argued that both the high level of the tax and its sharply progressive nature seriously affect the return on capital and therefore the opportunity for capital accumulation. Thus, if profit is considered a function of size of business, the net return on capital after payment of tax is smaller the larger the business, even though the gross return is the same. Similarly, additional capital investment in a given business earns a lower net rate of return than the original investment. Farming profits, however, are no differently

taxed from those in other industries and these problems are consequently not peculiar to farming, being equally true of all industries. While capital accumulation in farming may be rendered difficult by taxation of income, farming is not unique in this respect. In actual fact farming gets off lightly with regard to tax payments compared with many industries because of its small-scale nature. Thus if farming were organized along joint-stock company lines all profits would be taxed at $42\frac{1}{2}$ per cent. plus a further 3 per cent. on profits retained in the business and 30 per cent. on distributed profits. The minimum rate of tax would therefore be $45\frac{1}{2}$ per cent.; this is a considerably higher average rate than all but a small proportion of farmers pay, since not until an individual's gross income is about £5,000 does tax absorb $45\frac{1}{2}$ per cent. of the whole. In the more likely event of some distribution of profits, the proportion of the gross profits of a joint-stock company which is paid to the tax collector rises rapidly and for comparable tax payment the profits of any privately run business would have to be far higher than those obtained from all but a very small proportion of farms. While capital accumulation may be difficult for farmers, therefore, it is no more difficult for them than for other businessmen and is easier than it would be if the joint-stock company form of association were as prevalent in agriculture as in other industries.

Taxation is also levied on the estate of a deceased person, again at a steeply progressive rate, thereby reducing the amount of wealth that can be passed from one generation to another at death. While agricultural land receives specially favourable treatment, being taxed at slightly under half the normal rate, no such advantage accrues to the capital invested in the actual business of farming, which pays the same rate as any other investment. Death duties as such do nothing to prevent the inheritance of farming capital, but they do cut down the amount that can be inherited, just as they reduce the amount of any deceased person's estate that is available for distribution among his heirs. Farmers are thus no differently treated from other people but this is not a denial that all family businesses are affected by death duties when the owner dies. Moreover, the larger the business the greater is the effect. The preservation of a business within a family is therefore made difficult by death duties and, in so far as money has to be found to pay them, a shortage of capital for farming purposes may follow their payment. This is the penalty all owners of family businesses have to pay in trying to hand over intact their businesses (whether farming or other) from father to son. It may

explain why many farmers appear to strive to accumulate large cash balances, i.e. to provide for death duties and thus to keep their farming businesses together. The only claim farmers may have to special treatment would be one based upon the need to avoid reducing the size of farms below the optimum level, but as yet there is no indication that the average farm size is falling.

Thus it can be said that the three factors which are special to agriculture have all played a part in increasing the need for capital and that taxation, of farms as well as of other businesses, has tended to make the accumulation of capital by saving difficult. While inflation may have rendered saving more difficult for potential farmers, it has probably provided existing farmers with more benefits than disadvantages.

Capital use in United Kingdom agriculture

Here the discussion will be limited to capital used in actual farming operations and will exclude that invested in land. As previously mentioned, tenants' capital currently comprises about two-fifths to a half of the total capital, having increased from probably less than one-third just before World War II.

Historically, almost the entire amount of tenants' capital has consisted of investment in livestock and crops, with the latter being slightly more important. Thus up to 1914 more than 90 per cent. of all tenants' capital in agriculture was represented by these two items.¹ Machinery came into greater use during and after World War I and consequently the proportion represented by livestock and crops declined. At the same time there was a relative change between the two, livestock becoming more important than crops. World War II brought another change and crops once more became the more important item. Changes in the make-up of tenants' capital since before the last war can be seen from the following figures:²

	Total tenants' capital	Composition of total capital				
		Live-stock	Crops	Machinery and implements	Stocks of purchased feed	Other items
	£ million			per cent.		
1937-8	448.0	41.5	32.9	18.9	1.9	4.8
1941-2	842.0	29.1	51.7	13.9	0.5	4.8
1952-3	1,615.4	34.5	37.7	21.7	1.3	4.8

¹ Boreham, A. J., 'A Series of Estimates of Occupiers' Capital, 1867-1938', *The Farm Economist*, vol. vii, no. 6 (1953), p. 260.

² Cheveley and Price, *op. cit.*, p. 15.

Despite the growth of the livestock industry after the war, investment in livestock had not surpassed that in crops by 1952-3 though it may have done so since then. The other noteworthy feature of the capital breakdown is that, despite the tremendous increase in investment in machinery and equipment, this item comprised only a slightly larger proportion of the total in 1952-3 than it had in 1937-8. The reason is that for machinery and equipment the increase in the value of the investment was caused more by a volume increase than by a price increase whereas for the other items the opposite was true. The actual changes,¹ in both money and real terms, for each item in this fifteen-year period ending in 1952-3 were as follows:

	<i>Money terms</i>	<i>Real terms</i>
	1937-8 = 100	
Livestock	299	106
Crops	413	136
Machinery and implements	415	268
Stocks of purchased feed	245	61
Other items	361	111
Total tenants' capital	361	146

The fact that crops displaced livestock as the most important constituent of tenants' capital in this period, therefore, was the result of their greater volume increase. In fact, livestock numbers declined during the war years and only increased subsequently.

Annual estimates of gross capital formation in agriculture have recently been made as part of the national-income calculations and are available for each year since 1948. These estimates of gross capital formation relate to fixed assets; these are divided into three groups, two of which, namely vehicles and plant and machinery, coincide with the machinery group previously referred to. The estimates² are as follows:

	<i>All fixed assets</i>	<i>Buildings and works</i>	<i>Vehicles</i>	<i>Plant and machinery</i>	<i>Depreciation*</i>
	<i>£ million</i>				
1948	89	21	14	54	28
1949	87	23	16	48	40
1950	86	22	15	49	45
1951	91	22	15	54	47
1952	92	20	23	49	38
1953	89	23	19	47	45
1954	96	24	17	55	51
1955	104	25	18	61	56

* Statutory depreciation allowances for income tax.

¹ *Ibid.*, pp. 15 and 16.

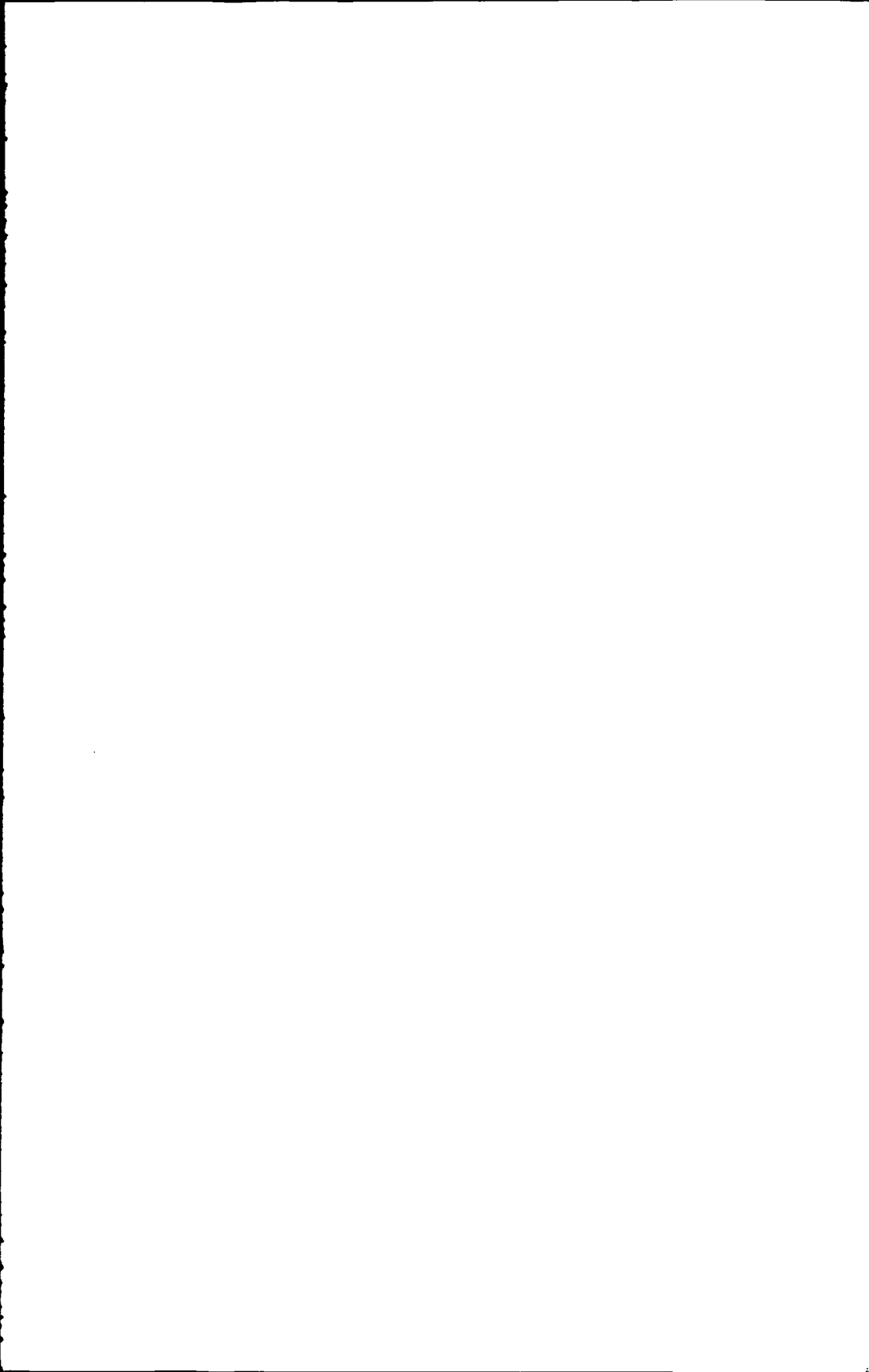
² National Income and Expenditure, 1956. H.M.S.O.

Investment in buildings and works is more properly landlords' investment and is consequently outside this discussion. Of the remaining investment, about three-quarters is represented by plant and machinery and the other quarter by vehicles, i.e. cars, vans and lorries; investment in these two groups of assets is currently running at over £70 million a year. This is gross investment, however, and net capital formation is obviously very much less. Estimates of depreciation on a replacement cost basis are not made in sufficient detail in the national-income statistics to enable net capital formation to be calculated for agriculture alone. The only information on depreciation of agricultural assets published in the statistics relates to the statutory allowances for income-tax purposes; while these are based on historical cost they include the initial (subsequently investment) allowances granted in the year of purchase in addition to the normal depreciation allowance and thus probably bear some relation to the capital costs incurred in current production. These depreciation allowances relate chiefly to the investment in vehicles and in plant and machinery, of which they comprise just over two-thirds; this suggests that net capital formation in these items is currently less than one-third of gross investment, or about £20 million per annum. This rough calculation gives results much higher than those obtained by Redfern¹ when he calculated net capital formation for agricultural plant and machinery (including tractors) after deducting depreciation based on replacement cost. On the assumption that the life of each asset was that normally adopted by the Inland Revenue, he found that net capital formation in agricultural plant and machinery was not very large after 1948, being nil in 1952 and actually minus the following year. This latter finding he justified on the grounds that the concept of net capital formation used took age into account as well as quantity and that a money decline in the stock of plant and machinery might only mean that the stock was getting older and not that it was getting smaller, which was obviously incorrect. Other assumptions about length of life, however, might have been more realistic where agricultural machinery was concerned. If these assumptions had been made some net capital formation might have been found in all years. In any event it is true to say that the amount of new capital formation in agricultural equipment is currently lower than it has been, since much more of the gross capital formation is required for replacement and

¹ Redfern, Philip, 'Net Investment in Fixed Assets in the United Kingdom, 1938-1953', *Journal of the Royal Statistical Society*, Series A, vol. cxviii, part 2 (1955), p. 152.

less is consequently available for expansion. This is only one aspect of farmers' investment, however, and there has been a continued increase in other forms, particularly in livestock.

In conclusion, therefore, it can be said that the capital position of British agriculture is very much affected by the family nature of the industry. Capital is necessary for entering farming as an entrepreneur and the principal source is the family. Moreover, so long as farming remains a family industry, all capital for future growth has to come in the last resort from the individual families comprising the industry. That these families do save and invest considerable amounts in agriculture has been shown. Whether this investment has brought as high a return as it would have in other industries is difficult to say but the disparity, if any, cannot have been great or some farmers would have been aware of it and sought the higher returns elsewhere.



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PRINTED IN
GREAT BRITAIN
AT THE
UNIVERSITY PRESS
OXFORD
BY
CHARLES BATEY
PRINTER
TO THE
UNIVERSITY