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REPORT

ON

FINANCIAL RESULTS OF 178 EAST OF SCOTLAND FARMS FOR 1950-51

COMPRISING

GROUP III.
40 STOCK RAISING AND FEEDING FARMS

GROUP IV.
79 ARABLE FARMS

GROUP V.
59 DAIRY FARMS

BY

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RECENT PUBLICATIONS.

Economic Aspects of War-time Farming : 1939-40 to 1944-45.

Financial Results of East of Scotland Farms : Hill Sheep, Stock Rearing, Stock Raising and Feeding, Arable and Dairy Farms, viz. :—

1946-47	205 Farms.
1947-48	191 Farms.
1948-49	238 Farms.
1949-50	227 Farms.

Costs of Milk Production : Whole Year 1945-46, 1946-47, 1947-48, 1948-49, 1949-50, 1950-51.

Economics of Livestock Production :—

Winter Fattening of Sheep, 1947-48, 1948-49, 1949-50.
Winter Fattening of Cattle, 1947-48, 1948-49, 1949-50.
Commercial Egg Production, 1949-50, 1950-51.

Enterprise Costs : Economics of Silage Making in East of Scotland, 1950, 1951.

Financial Results of East of Scotland Farms : Hill Sheep, Stock Rearing :—

1950-51	53 Farms.

Inquiries regarding the above publications should be addressed to either the Secretary of the College, 13 George Square, or the Provincial Advisory Economist, 22 Rose Street, Edinburgh.

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PART II.

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INTRODUCTION

THIS Report follows an earlier one (Bulletin No. 34), issued in May 1952, which dealt with the financial results of two other types of farms common to the area served by this College—Hill Sheep Farms and Stock Rearing Farms. It relates to the same accounting year—*i.e.*, 1950-51—showing the disposal of the 1950 crop. The farms included in this Report are classified into three distinct groups, viz. :—

GROUP III.—40 Stock Raising and Feeding Farms.
GROUP IV.—79 Arable Farms.
GROUP V.—59 Dairy Farms.

In Part I. of this Report each of these groups in turn is dealt with on similar lines : a general description of the type of farm being given, and of the main features of the farm organisation, followed by a study of the financial results in recent years and factors affecting them.

In Part II. some data on average prices of crops and stock culled from all three groups are set out very briefly.

An Appendix gives detailed definitions of the terms used in the Report.

PART I.

GROUP III.—40 STOCK RAISING AND FEEDING FARMS, 1950-51

I. GENERAL DESCRIPTION

Situation

The farms composing the group dealt with in this section of the Report are, in general, situated at altitudes rather intermediate between those of the upland farms dealt with in Group II., Bulletin 34, and the more intensively arable farms comprising Group IV. dealt with later in this Bulletin. There are, however, wide variations in altitude even on individual farms, ranging from low lying arable ground to high lying hill pastures. These farms may be mainly classed as either high lying arable farms with a large proportion of grass, or upland farms with a larger proportion than usual of arable crops.

Of the 40 farms studied, 28 are situated South of the River Forth—10 in Roxburghshire, 8 in Peeblesshire, 4 in Berwickshire, 3 in Selkirkshire, 2 in Midlothian and 1 in East Lothian. The remaining 12 farms are situated North of the Forth—7 in Angus, 2 in Fife, 2 in Perthshire and 1 in Kinross-shire.

Size of Farm

Farms within the group vary widely in size, the smallest being 43½ acres and the largest over 2300 acres in extent. The proportion of rough grazings including mountain and heath on individual farms is also very variable; 18 farms have no rough grazings and the remainder have varying proportions up to about three-quarters of their total acreage.

The distribution of the farms in the group according to size (including mountain and heath) is set out below.

TABLE I. SIZE DISTRIBUTION

Size in Acres	Up to 125	126 to 250	251 to 500	501 to 750	751 to 1000	1001 to 1250	Over 1251	Total
No. of Farms	4	5	15	8	3	2	3	40

The average size of the farms in the group for 1950-51 is 552 acres, of which 169 acres are mountain and heath. Owing to changes in the composition of the sample of farms included in the group in 1950-51, the average acreage is rather higher than in 1949-50, when it was 528 acres, including 155 acres of mountain and heath.

The greatest number of these farms is to be found in the range from 251-500 acres, three-fifths of all the farms being under 500 acres in extent. Of the 8 farms over 750 acres, two of the largest have 70 per cent, two have slightly over 40 per cent, two 10 per cent and the remaining two none of their total area under mountain and heath.

The table set out below gives the average cropping per farm both in acres and percentages.

TABLE II. AVERAGE CROPPING ON 40 STOCK RAISING AND FEEDING FARMS, 1950

Per Farm and per 100 *Acres*

Crops	Wheat	Barley	Oats	Potatoes	Turnips and Swedes	Other Crops	Rotn. Hay	Rotn. Grass	Perm't. Grass	Mountain and Heath	Total Acres
Per Farm	6½	25	66	9	27	9½	28	141	71	169	552
Per 100 acres	1½	4½	12	1½	5	1½	5	25½	13	30½	100

Owing to changes in the composition of the group, due to the inclusion of two farms with approximately 50 per cent of their total acreage under mountain and heath and the non-availability of a farm with a very small proportion of mountain and heath land, the proportion of the total acreage under arable crops and rotation grass has diminished slightly compared with 1949-50. The proportion under arable crops and hay was the same in both years however. There were small changes in the proportions of the different crops grown in 1950-51 compared with 1949-50 ; barley and turnips showed reductions, but wheat and oats showed increases.

Rents

There have been few changes in the rents of these farms. In only two cases, where new leases had been negotiated, have rents been increased appreciably.

The tables set out below show the distribution of rents both per farm and per acre for all the farms included in this group from 1946 to 1951.

TABLE III. (*a*) ASSESSED RENT PER FARM

Rents	Up to £100	£101-£200	£201-£300	£301-£400	£401-£500	£501-£600	£601-£700	£701-£800	Over £800
	Number of Farms								
1946-47 .	7	5	12	4	4	1	1	2	1
1947-48 .	4	4	10	4	5	3	1	2	1
1948-49 .	7	6	9	5	7	2	2	2	..
1949-50 .	4	7	10	6	4	3	1	2	2
1950-51 .	3	6	10	8	5	2	1	3	2

(*b*) ASSESSED RENT PER ACRE

Rents	5s. 1d.-10s.	10s. 1d.-15s.	15s. 1d.-20s.	20s. 1d.-25s.	25s. 1d.-30s.	Over 30s.
	Number of Farms					
1946-47	9	10	13	2	2	1
1947-48	5	11	10	5	2	1
1948-49	9	11	8	7	4	1
1949-50	7	12	9	6	3	2
1950-51	8	12	10	5	3	2

These tables illustrate the wide variations in rents both per farm and per acre for the farms comprising this group. They also serve to show the comparative stability of the rents paid within the group over the past five years. Rents vary widely between farms of similar size and type with a tendency towards higher rents on the smaller-sized farms. Only one farm of 250 acres or less is rented at under 22s. per acre, the rent in this case being 18s. per acre; only three farms of 400 acres or over have rents of £1 per acre or more with a maximum of £1, 3s. 9d. Of the farms paying rents over £800 one, with 70 per cent of its area under mountain and heath, pays slightly less than 8s. per acre over all and the other with no mountain and heath pays slightly over 18s. per acre. In general, farms over 500 acres in size pay under £1 per acre rent.

Staffing

The number of regular employees averages out at 5 adult male workers per farm, with an additional woman or boy on half of the farms. In addition numbers of casual workers are employed at busy seasons, especially on farms growing considerable acreages of potatoes, sugar beet, &c. The farmers in this group are in practically every case fully employed in the day-to-day work on the farm in addition to their managerial and clerical duties.

Sale Products

Owing to the wide range of altitudes, soil types and climatic conditions under which these farms operate, it follows that there is an equally wide range of sale products. About two-thirds of the cash receipts are derived from livestock, chiefly sheep and cattle, with about one-third from the sale of grain and root crops.

Livestock

Sheep.—Over the group as a whole, sheep and wool provide the largest individual share of the total net income of these farms. Only 5 farms included in this group have no breeding sheep and on only 3 farms were there no sheep of any kind during the year.

The ewe flocks are mainly Half-Breds (Cheviot × Border Leicester) crossed with a Down type ram usually of the Oxford or Suffolk breeds. The Down cross lambs so produced are highly popular with sheep feeders in the more arable districts. The great majority of these lambs are sold as stores at the autumn lamb sales held throughout the area. These farms are not, however, entirely confined to store lamb production, in many cases they feed off a proportion, if not all, of their own lamb crop and in addition may purchase a number of store lambs from other farms for further keep.

Cattle.—Cattle come next in importance to sheep in the value of their net output but, although the average capital investment in cattle falls little short of that in sheep, the net output of cattle is only a little more than one-half of that of sheep and wool.

Twenty-five of the farms within the group carried herds of breeding cows varying in number from 4 to 165, the average being 32 cows per farm. The breeds kept are mainly Aberdeen-Angus, Galloway and Shorthorns or crosses of these breeds. The calves produced by these herds are disposed of in various ways: some are sold at the special autumn sales for suckled

calves, some are kept over the winter by their rearers and sold in the spring as one year old stores, while others may be kept for longer periods and sold either as store or fat animals.

Other Livestock.—Pigs and poultry deserve a passing reference, although even together they are only of minor importance in the economy of this group of farms. The number and value of pigs sold have almost doubled in 1950-51 compared with 1949-50, thus showing an increasing interest in this department. Sales of poultry and eggs also show small increases over 1949-50.

Crops

Arable crops including hay and grass silage account for rather less than one-third of the total acreage of these farms. Rotation and permanent pastures for grazing occupy about two-fifths, and mountain and heath land approximately three-tenths of the total area.

Oats.—The oat crop is the most important of the arable crops, occupying rather more than one-third of the total arable acreage. As a sale crop, however, it comes second to barley in 1950-51 due to the large quantities of oats which are consumed by the stock on these farms.

Barley.—With about two-fifths of the acreage of oats, barley is the most important sale crop and although the average quantity sold per farm is just over three-quarters of that of oats the higher price obtained for barley gives it a larger share of the farmer's total net income.

Wheat.—Only the best conditions of soil and situation on these farms are suitable for growing wheat. In many cases it is grown mainly to provide straw for thatching and potato pit covering. At the best it is only of minor importance as a sale crop.

Potatoes.—Though not occupying a large acreage over this group of farms as a whole, averaging rather less than one-seventh of the acreage under oats, potatoes do bring in the third largest amount of income on the cropping side of these farms.

Other Crops.—Small acreages of sugar beet, peas for canning, soft fruits, &c., are to be found, chiefly on those farms North of the Forth and together with surpluses of hay, straw, roots, &c., provide useful additional sources of income in some farms.

II. CAPITAL INVESTED

The capital invested in the various categories of live and dead stock on these farms is set out in the following table; the most usual valuation date is Whitsunday. The figures

shown are the average of the opening and closing valuations for 1950-51.

The average capital investment amounts to £7284 per farm or £1319 per 100 acres ; these figures are relatively low compared with the present-day market values of these stocks, especially in relation to the permanent breeding stocks of cattle and sheep which have been retained in the farmers' valuations at very moderate values.

Farms taken over in recent years show a higher level of capitalisation, and to take over a farm of this type to-day would involve a much higher capital outlay than that indicated in Table IV.

TABLE IV. AVERAGE CAPITAL INVESTED IN LIVE AND DEAD STOCK, 1950-51

	No.	Per Farm	Per 100 Acres	Per Cent
		£	£	%
Livestock—				
Horses, mainly Working	2	73	13	1
Cows, mainly Breeding	23	633	115	8½
Bulls	1	112	20	1½
Cattle, under 1 year	22	210	38	3
Cattle, 1-2 years	17	460	83	6½
Cattle, over 2 years, Breeding	5	180	33	2½
Cattle, over 2 years, Feeding	8	344	62	4½
Breeding Ewes (274) and Lambs	..	1483	268	20½
Rams	9	81	15	1
Ewe Hoggs	87	472	86	6½
Feeding Sheep	28	122	22	1½
Poultry and Pigs	..	223	40	3
TOTAL LIVESTOCK		£4393	£795	60%
Crops and Produce—				
Oats		176	32	2½
Barley and Wheat		55	10	1
Hay and Straw		77	14	1
Potatoes		74	13	1
Other Crops, Produce &c.		70	13	1
TOTAL CROPS AND PRODUCE		£452	£82	6½%
Cultivations, Crops in Ground and U.M.R.		£1102	£200	15%
Implements and Fixtures		£1337	£242	18½%
TOTAL		£7284	£1319	100%

The figures in the above table show that livestock of all categories accounts for 60 per cent of the total capital investment in 1950-51, of which sheep at 29½ per cent and cattle at

27½ per cent of the total account for practically the whole amount, leaving only 3 per cent for pigs and poultry.

Crops and produce, quantities of which are usually at their lowest at Whitsunday, together with cultivations and crops in the ground account for 21½ per cent of the total.

Implements and fixtures, which are written down according to the standard rates of Wear and Tear allowed by the Inland Revenue, account for the remaining 18½ per cent of the total.

Changes in the valuations of the different items making up the total are very small compared with the two previous years. This indicates that very little change has taken place in the organisation of these farms during the past three years.

In order to show the effect on capital requirement of the varying proportions of mountain and heath included in these farms, the group has been sub-divided according to the proportion of such land in the total area of each farm.

TABLE V. AVERAGE CAPITAL INVESTED IN LIVE AND DEAD STOCK PER ACRE, 1950-51

	Proportion of Farm Area under Mountain and Heath		
	Whole Group 31%	Nil-33%	34%-75%
Number of Farms	40	27	13
Average Size of Farm (acres)	552	404	859
	£ s.	£ s.	£ s.
Implements	2 9	3 7	1 10
Livestock	7 19	11 2	4 18
Produce	0 16	1 3	0 10
Growing Crops	2 0	2 16	1 4
TOTAL	£13 4	£18 8	£8 2

This table shows that, at the very conservative valuations incorporated in these accounts for the farms in this group, the more intensively cropped farms required more than double the capital per acre necessary for the more extensive farms having more than one-third of their total area under mountain and heath.

TABLE VI. Average Profit and Loss Account of 40 Stock Raising and Feeding Farms, 1950-51

Average Size of Farm : Crops and Grass, 383 *Acres ; Mountain and Heath,* 169 *Acres ; Total,* 552 *Acres.*

Dr. *Cr.*

	Per Farm		Per 100 Acres			Per Farm		Per 100 Acres	
	No.	£	No.	£		No	£	No.	£
To Valuation of Live and Dead Stock (at commencement).		6,964		1261	By Cattle sold—				
,, Cattle bought—					Fat	12	671	2	122
Store	10	370	2	67	Store	15	537	3	97
Breeding Cows	4	166	1	30	Breeding Cows	7	413	1	75
Calves	6	88	1	16	All others	9	258	2	47
Bulls and Dairy Cows	1	101	..	18	,, Sheep and Wool sold—				
,, Sheep bought—					Lambs and Hoggs, Store	257	1,452	47	263
Ewes, Gimmers and Ewe Hoggs	89	630	16	114	Lambs and Hoggs, Fat	95	692	17	125
Rams	3	104	..	19	Draft Ewes	53	348	9	63
Store Lambs	72	248	13	45	Cast Ewes and Rams	46	291	8	53
,, Pigs bought	14	118	3	21	Wool (lb.)	2200	271	399	49
,, Other Livestock bought		36		7	,, Pigs sold	19	318		57
,, Feeding Stuffs		767		139	,, Poultry and Eggs sold		288		52
,, Seeds		369		67	,, Other Livestock and Livestock Produce sold		70		13
,, Manures (incl. Lime)		666		121	,, Crops sold—				
,, Implements and Fixtures		824		149	Wheat (cwt.)	102	139	18	25
,, Labour (incl. Perquisites)		2,045		370	Barley (cwt.)	505	804	91	146
,, Rent		364		66	Oats (cwt.)	651	707	118	128
,, Repairs, Fuel, Threshing, Tractor Expenses &c.		798		144	Potatoes (tons)	41-14	422	7-11	76
,, General Expenses—Stock and Crop Expenses, Haulage, Rates and Insurance, Car Expenses &c.		655		119	Other Crops		289		52
,, Bank Interest		28		5	,, Government Subsidies and Grants—				
,, Net Profit for the year		929		168	Land Fertility Scheme Rebate		80		14
					Potato Acreage Payment		62		11
					Hill Cattle Subsidy		59		11
					Calf Subsidy		59		11
					All others		123		22
					,, Miscellaneous Receipts		183		33
					,, Farm Produce consumed, Workers' Perquisites &c.		131		24
					,, Valuation of Live and Dead Stock (at close)		7,603		1377
		£16,270		£2946			£16,270		£2946

III. FINANCIAL RESULTS

The average Profit and Loss Account for 1950-51 as set out on page 14 is arranged to show the figures (*a*) per farm and (*b*) per 100 acres for ease of comparison with other groups.

The largest share of the income comes from sales of sheep and wool; next in order of importance are sales of cash crops, then cattle followed by other livestock sales (including pigs, poultry, eggs, &c.), and finally the total of government grants and subsidies. Compared with 1949-50 the returns under the above group headings have all declined except those for sheep and other livestock, in the latter case due to the number of pigs sold having risen from 9 per farm in 1949-50 to 19 in 1950-51.

Fewer cattle were sold and the increased prices received were insufficient to raise the cash returns to the 1949-50 level. In the case of sheep, however, the higher prices received did bring the cash receipts to a higher level than in 1949-50. The quantity of barley available for sale was reduced owing to the slightly smaller acreage grown, but it retained first place as a cash crop. Although there was an increased acreage of oats grown in 1950-51 and more was available for sale, the surplus was insufficient to regain the first place which it lost in 1949-50. Potato sales were also smaller in quantity than in the previous year. Government grants, acreage payments, &c., only amounted to approximately 14s. per acre compared with £1 in 1949-50. Cash receipts actually totalled £10 less per 100 acres in 1950-51 than in 1949-50.

On the expenditure side only three main items showed no increase in cost compared with 1949-50—viz., purchased cattle, rent and bank interest. All the other items showed increases of varying amounts. The item showing the largest increase was purchased foods due partly to increased prices and partly to extra requirements following the bad weather conditions in the spring of 1951. The costs of repairs to implements and machinery, fuel and tractor expenses rose considerably during the year; so too did general expenses, including such items as haulage, crop and stock expenses. Seeds and manures and new implements and machinery purchased were all more expensive than in 1949-50. Rents averaged out at the same figure per acre as in 1949-50 and, as mentioned previously, very few changes have taken place in the rents paid by these farms over the past five years. Bank interest charges also remained steady compared with 1949-50.

The most expensive item of cost on these farms is hired labour, now amounting to £3, 14s. per acre over all the farms; as almost two-thirds of the total area of these farms is under grazing either temporary or permanent with a low labour requirement, the cost of the labour expended on the arable portion must be in the region of £8 to £9 per acre.

Purchases of livestock showed some changes compared with 1949-50, fewer cattle were bought and the prices paid were slightly lower; more sheep were purchased, breeding sheep costing more but store lambs rather less. Pigs, in general, still play a very small part in the economy of these farms but during 1950-51 purchases of pigs averaged out at double the number bought in 1949-50. Other livestock purchases, mainly poultry, also showed a small increase in cost. Total payments during 1950-51 rose by £133 per 100 acres compared with 1949-50.

The following table shows the average profit (*a*) per farm, (*b*) per 100 acres for this group of farms since 1944-45.

TABLE VII. TREND OF PROFITS

Year	No. of Farms studied	Average Acreage per Farm	Average Profit	
			(*a*) Per Farm	(*b*) Per 100 Acres
			£	£
1944-45	28	626	977	156
1945-46	35	589	676	115
1946-47	37	487	296	61
1947-48	34	490	541	110
1948-49	40	476	986	207
1949-50	39	528	1151	218
1950-51	40	552	929	168

The average net profit per farm and per 100 acres for 1950-51 shows a drop from 1949-50 amounting to £222 per farm and £50 per 100 acres. In comparison with 1949-50 when £122 was reinvested in the average farm in the form of increased valuations at the end of the year, £639 was reinvested in 1950-51. With their reduced profits and the very high reinvestment amounting to over two-thirds of the profit earned, the cash position of the farmers in this group became markedly more difficult.

TABLE VIII. DISTRIBUTION OF PROFITS AND LOSSES PER 100 ACRES

Year	No. of Farms	Farms showing Losses per 100 Acres		Farms showing Profits per 100 Acres				
		Over £200	Nil-£200	Nil-£200	£201-£400	£401-£600	£601-£800	Over £800
1945-46 .	35	3	6	13	9	3	1	..
1946-47 .	37	5	8	15	9	..	..	..
1947-48 .	34	2	6	14	9	1	1	1
1948-49 .	40	2	4	13	11	8	2	..
1949-50 .	39	1	3	14	13	4	3	1
1950-51 .	40	2	5	14	11	4	1	3

The above table shows how the decline in profits earned by this group in 1950-51 has affected the farms concerned. Three more farms show actual losses on the year's work compared with 1949-50 and, although the same number of farms still make profits of over £4 per acre with 2 more in the profits over £8 per acre group, it should be noted that these 2 farms are amongst the smallest in the group so that the actual profit earned per farm in each case is not very large. In general the profits shown per farm are nearer the bottom of their respective divisions than in 1949-50. Although only 7 farms show actual losses, 4 other farms make profits per farm of less than £250, and this includes both the estimated annual value of the farmhouse and the farm produce consumed in the farmer's household.

The following table shows the net output * and expenditure * on these farms for the years 1948-49, 1949-50 and 1950-51, giving details of the principal items involved in arriving at the net profit per 100 acres.

Total net output per 100 acres rose above that for the previous year but not by such a high margin as in 1949-50. On the livestock side there was an improvement amounting to almost 4½ per cent compared with 1949-50 ; on the cropping side there was a decrease of about 5½ per cent compared with 1949-50.

* See Appendix for definition.

Because of the bigger sums involved on the livestock side the balance of total output rose by between 1 per cent and 1½ per cent compared with 1949-50. There was practically no difference in the net output of cattle over the two years and sheep showed a small reduction caused by the higher cost of purchases and losses of stock due to the severe climatic conditions during the spring of 1951. The net output of other livestock produce rose by about 60 per cent due mainly to the increased turnover of pigs.

TABLE IX. NET OUTPUT AND EXPENDITURE PER 100 ACRES

	1948-49		1949-50		1950-51	
	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent
	£	%	£	%	£	%
Net Output—						
Cattle	196	18	234	19	237	18½
Sheep and Wool	378	34	439	35	421	33½
Other Livestock Produce	73	6½	82	6½	132	10
TOTAL LIVESTOCK	£647	58½%	£755	60½%	£790	62%
Wheat	24	2	22	1½	28	2
Barley	107	10	149	12	144	11½
Oats	129	12	121	9½	135	10½
Potatoes	122	11	118	9½	106	8½
Hay and Straw	14	1	12	1	17	1½
Other Crops	60	5½	73	6	47	4
TOTAL CROPS	£456	41½%	£495	39½%	£477	38%
TOTAL OUTPUT	£1103	100%	£1250	100%	£1267	100%
Net Expenditure—						
Feeding Stuffs	58	6½	113	11	140	12½
Seeds	69	7½	66	6½	67	6
Manures	90	10	92	8½	106	9½
Labour	352	39	366	36	370	34
Rent	54	6	54	5	54	5
Power	160	18	215	21	224	20½
General Expenses	113	13	126	12	138	12½
TOTAL EXPENDITURE	£896	100%	£1032	100%	£1099	100%
NET PROFIT	£207	..	£218	..	£168	..

Net output of crops shows increases in the case of wheat, oats and hay and straw with decreases in barley, potatoes and other crops. Changes in the acreages grown of the grain crops compared with the previous year account for the

changes in their respective net outputs. Potatoes did not crop so well as in 1949-50; hay and straw surpluses available for sale fetched very high prices due to scarcity of keep in the spring.

Total net expenditure rose by about 6½ per cent compared with 1949-50. Taking the per 100 acres figures, the most pronounced rise in 1950-51 was in respect of feeding stuffs which were 140 per cent higher than in 1948-49. General expenses, manures, power and labour charges were all higher than in 1949-50. Seeds and rents remained practically steady over the three years shown. The ratios between the different items underwent small changes over the years shown, but the general pattern is fairly constant apart from the exceptional rise in feeding stuffs. As stated before, the average margin of net profit was reduced by £50 to £168 per 100 acres in 1950-51 compared with the previous year.

In order to find out if the changes in the sample of farms reported upon have had any undue influence on the results obtained, the following table which gives the net output and expenditure on 31 identical farms within the group—the largest number continuously available for the past five years —has been drawn up. These 31 farms have practically the same average acreage as the whole group in 1950-51, but they do not have such a high proportion of mountain and heath, only 25 per cent of their total, but they have more permanent and rotation grass; their arable cropping has been on regular lines closely related to that of the whole group and their valuations are also very similar, but about 4 per cent higher than that of the whole group. The same general trend is observable in this identical farm group as in the whole group for these years. There has been a continuing rise in total net output with a decrease in output of crops in 1950-51 compared with 1949-50. Net expenditure has also followed the same general tendencies as in the whole group.

The average profit per 100 acres on the 31 identical farms did not fall so low as that for the whole group in 1946-47 and they have maintained their higher margin each year except in 1948-49 when it was just below that for the whole group. On the whole the results for the identical group bear out those for the whole group over the past five years.

TABLE X. NET OUTPUT AND EXPENDITURE PER 100 ACRES ON 31 IDENTICAL FARMS

	1946-47		1947-48		1948-49		1949-50		1950-51	
	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent
	£	%	£	%	£	%	£	%	£	%
Net Output—										
Cattle	157	18	196	20½	210	19	238	18½	252	19
Sheep and Wool	274	31½	310	32½	404	36	450	35	435	33
Other Livestock Produce	30	3½	31	3	48	4	73	5½	115	8½
TOTAL LIVESTOCK	£461	53%	£537	56%	£662	59%	£761	59%	£802	60½%
Wheat	16	2	28	3	25	2½	22	2	25	2
Barley	113	13	83	9	119	10½	153	12	159	12
Oats	124	14	117	12	120	11	133	10½	154	11½
Potatoes	118	13½	115	12	125	11	129	10	114	8½
Hay and Straw	14	1½	19	2	12	1	11	½	18	1½
Other Crops	29	3	62	6	58	5	77	6	49	4
TOTAL CROPS	£414	47%	£424	44%	£459	41%	£525	41%	£519	39½%
TOTAL OUTPUT	£875	100%	£961	100%	£1121	100%	£1286	100%	£1321	100%
Net Expenditure—										
Feeding Stuffs	46	6	49	6	52	5½	110	10½	130	12
Seeds	65	8	65	7½	65	7½	72	7	70	6½
Manures	68	8½	89	10½	93	10	95	9	113	10
Labour	324	40½	342	40½	371	40½	379	36	388	35
Rent	51	7	52	6½	52	5½	54	5	56	5
Power	135	16½	144	17	165	18	215	20½	212	19
General Expenses	106	13½	101	12	120	13	127	12	137	12½
TOTAL EXPENDITURE	£795	100%	£842	100%	£918	100%	£1052	100%	£1106	100%
NET PROFIT	£80		£119		£203		£234		£215	

IV. COMPARISON BETWEEN 6 FARMS WITH HIGHEST PROFITS AND 6 FARMS WITH BIGGEST LOSSES, 1950-51.

For the purpose of comparison the following table showing the net output and expenditure per 100 acres on the 6 farms showing the highest profits and for the 6 farms showing the biggest losses within the group has been drawn up. From the cropping tables given below it is notable that the farms showing the highest profits average only 261 acres in extent and have only 22 per cent of their total area under permanent grass or rough grazings including only ½ per cent of the latter. The

TABLE XI. (A.) CROPPING; (B.) NET OUTPUT AND EXPENDITURE

	6 Farms with Highest Profits		6 Farms with Biggest Losses	
	Per Farm	Per 100 Acres	Per Farm	Per 100 Acres
	Acres		Acres	
A. CROPPING				
Wheat	6	2	4½	1½
Barley	17½	7	27	4½
Oats	60	23	49	7½
Potatoes	11	4½	2½	½
Turnips and Swedes	14	5½	25	4
Other Crops	14	5	8	1
Rotation Hay	11½	4	18	3
Rotation Grass	69½	27	115½	18
Permanent Grass	55½	21½	33½	5
Mountain and Heath	2	½	356	56
TOTAL	261	100	639	100
	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent
B. NET OUTPUT AND EXPENDITURE	£	%	£	%
Net Output—				
Cattle	576	20	155	18
Sheep and Wool	212	15½	358	42
Other Livestock Produce	474	14½	126	14
TOTAL LIVESTOCK	£1437	50%	£639	74%
Wheat	48	1½	19	2½
Barley	212	7½	111	13
Oats	474	16½	20	2½
Potatoes	345	12	24	3
Hay and Straw	97	3½	5	½
Other Crops	265	9	38	4½
TOTAL CROPS	£1441	50%	£219	26%
TOTAL OUTPUT	£2878	100%	£858	100%
Net Expenditure—				
Feeding Stuffs	360	17	155	15
Seeds	147	7	50	5
Manures	232	11	85	8½
Labour	618	29½	301	29
Rent	80	4	45	4
Power	479	23	262	25
General Expenses	175	8½	141	13½
TOTAL EXPENDITURE	£2091	100%	£1039	100%
NET PROFIT OR LOSS	£787 Profit		£181 Loss	

farms with the biggest losses average 639 acres in extent, of which 61 per cent is composed of permanent grass or rough grazings, the latter accounting for 56 per cent of the total acreage.

Thus, the sub-group showing the biggest profits more nearly approaches the type of farm dealt with later in this Bulletin under the heading of "Arable Farms." Even if the acreage of rough grazings on the less successful group was disregarded and their total output and expenditure calculated on the remaining acreages, their per 100 acre figures of net output, with the exception of those for sheep and barley, would still fall far short of that for the high profit group. On the same basis, their total net expenditure would, however, very closely approach that of the high profit group. It would appear that the farms with high losses are not so naturally productive and that although their output of crops may not be so high they must consume a very much higher proportion of such crops by their stock and especially by their ewe flocks.

V. CONCLUSION

The 40 stock rearing and feeding farms studied showed an average profit of £168 per 100 acres or £929 per farm in 1950-51 compared with £218 per 100 acres or £1151 per farm in 1949-50. This fall in profits is regrettable as not only is the margin of profit lower, but it includes a much higher proportion in the form of increased valuations or capital reinvestment at the end of the year—£115 per 100 acres, leaving a cash margin of £53 per 100 acres or £290 per farm compared with a cash margin of £195 per 100 acres or £929 per farm in 1949-50.

Such a small cash margin must, of necessity, mean that if the farmers in this group do not possess private resources to fall back upon, many of them must have recourse to further extensions of credit from merchants or banks. Under present conditions with the tightening up of all forms of credit it may well be that many of these farmers will be forced to curtail their efforts towards modernisation of their equipment and increasing the productivity of their farms.

GROUP IV.—79 ARABLE FARMS

I. GENERAL DESCRIPTION

Situation

Arable farms in the Edinburgh and East of Scotland Agricultural College area are associated with the more fertile regions around the coast stretching from the English boundary at Lamberton, Berwickshire, in the South, to Montrose in the North, together with the lower lying valleys of the Rivers Tweed, Forth, Tay and their tributaries within the area and including the Vale of Strathmore. Forty-one of the farms in the group are situated North of the River Forth, 18 in Fife, 10 in Angus, 10 in Perthshire and 3 in Kinross-shire. The remaining 38 farms are situated South of the Forth, 17 in Berwickshire, 17 in the Lothians and 2 each in Roxburghshire and Peeblesshire.

Internal Economy

With their low elevation above sea level and their generally more favourable climatic conditions compared with the farms in the previous three groups reported upon for 1950-51, these farms are more suited to cash cropping than most other types of farms in the College area. Livestock is kept mainly as an auxiliary to crop growing, consuming surplus arable and forage crops and converting straw into farmyard manure in order to help maintain the fertility of the soil.

The intensive nature of the cropping programme on these farms is illustrated by the fact that practically two-thirds of their total acreage was under arable crops or hay in 1950-51, leaving the balance of one-third for rotation and permanent grazings. Although primarily arable cropping farms, a considerable number carry herds of breeding cows or ewe flocks or even both. Within the group 14 farms have herds of breeding cows only, 19 have flocks of breeding ewes only and on 16 farms there are both breeding cows and ewes. Twenty-seven farms have no sheep and 2 have no cattle; these latter also do not have any sheep. It is necessary, however, to point out that on several of these farms where sheep do not appear in the accounts, they still play some part in the economy of

these farms since forage crops, clover aftermaths or surplus grass are frequently let out to sheep breeders and feeders.

Over the group as a whole the output of cash crops, principally grain and potatoes, accounts for 70 per cent of the total in 1950-51, with the output of livestock only accounting for the remaining 30 per cent. North of the Forth the potato crop is usually the most important, but barley is generally the principal cash crop South of the Forth.

Size of Farm

The farms comprising this group are very variable in size, the smallest being 29 acres and the largest 838 acres.

Their distribution according to size is set out in the following table.

TABLE I. SIZE DISTRIBUTION

Size in Acres	Up to 100	101-200	201-300	301-400	401-500	501-600	Over 600	TOTAL
No. of Farms	12	18	15	16	10	3	5	79

The majority of the farms lie within the limits of 150 and 450 acres, the average size being 280 acres. This is rather less than in 1949-50 owing to changes in the sample in 1950-51, records relating to some of the larger farms not being available and new farms introduced being of relatively small acreages.

Rents

Owing to the wide range of sizes of the farms included in the group, rents paid per farm are very variable and range from £39 to £1034. A study of the per acre figures involved gives a better idea of the rents paid by these farms.

The range of rents per farm and per acre are shown in sections (*a*) and (*b*) respectively of the following table.

TABLE II. (*a*) ASSESSED RENTS PER FARM

Rents	Up to £150	£151-£300	£301-£450	£451-£600	£601-£750	Over £750
No. of Farms	17	15	13	18	6	10

(*b*) ASSESSED RENTS PER ACRE

Rents	Up to 10/-	10/1-15/-	15/1-20/-	20/1-25/-	25/1-30/-	30/1-35/-	35/1-40/-	Over 40/-
No. of Farms .	1	3	8	12	20	18	10	7

The average rent is £406 per farm or £1, 9s. per acre, the latter figure ranging from 10s. to £3, 5s. 10d. There have been a few upward changes in the rents on farms where new leases have been negotiated by sitting tenants. Compared with 1949-50 rents, the two highest increases were 5s. 3d. and 3s. 10d. per acre—in each case rather less than one-sixth of the previous per acre rental. If these farms had been vacant there is no doubt that much greater increases would have been offered.

Cropping

The average cropping of the farms in this group for the past three years is set out in the following table.

TABLE III. CROPPING—A 3-YEAR COMPARISON

	1948		1949		1950	
	Per Farm	Per 100 Acres	Per Farm	Per 100 Acres	Per Farm	Per 100 Acres
	Acres		Acres		Acres	
Wheat . . .	20½	7	15½	5½	19½	7
Barley . . .	42	14	43	15	39	14
Oats . . .	49	16	46	16	43	15½
Potatoes . . .	26½	9	24½	8	25	9
Turnips and Swedes .	22½	7½	21	7½	18½	6½
Other Crops . .	12	3½	12	4	13	4
Hay . . .	29½	10	23	8	24	9
Pasture . . .	93	30½	94½	33	89½	32
Mountain and Heath .	7½	2½	9	3	8½	3
TOTAL . .	302½	100	288½	100	280	100

There have been no significant changes in the cropping programme on these farms over the past few years. Slight variations which do occur are mainly because, of all the farms involved, very few, if any, have their fields of such sizes that exactly equal acreages of the same crops could be grown every year without having small uneconomic sub-divisions of some fields now and again. It therefore happens that because of these small differences a particular crop may vary by a few acres from year to year but this does not signify any change in cropping policy.

Labour

The average farm employs a regular staff of five men and one woman or boy. In addition, considerable numbers of casual workers are engaged at busy seasons, such as potato planting, turnip and beet thinning and the harvesting of grain and root crops.

All the farms in this group, with two exceptions, are worked under the direct supervision of the farmer. In fact the majority of the farmers in this group spend a considerable proportion of their time on the manual work of their farms in addition to their managerial and clerical duties.

II. CAPITAL INVESTED

The average capital invested is set out in the following table showing the principal items per farm, per 100 acres and per cent.

TABLE IV. AVERAGE CAPITAL INVESTED IN LIVE AND DEAD STOCK, 1950-51

	No.	Per Farm	Per 100 Acres	Per Cent
		£	£	%
Livestock—				
Horses, mainly Working	3	116	41	1½
Cows and 2-year Heifers	10	316	113	4½
Stock Bulls	..	24	8	⅓
Calves	10	126	45	1½
Store Cattle	13	368	132	5
Feeding Cattle	24	1162	415	16
Breeding Ewes (66) and Lambs	..	433	154	6
Rams	2	25	9	½
Ewe Hoggs	13	74	27	1
Feeding Sheep	36	214	76	3
Pigs and Poultry	..	183	65	2½
TOTAL LIVESTOCK		£3041	£1085	42%
Crops and Produce—				
Grain—Wheat, Barley and Oats		477	170	6⅔
Hay and Straw		112	40	1½
Potatoes		317	113	4⅓
Other Crops, Produce &c.		133	48	1½
TOTAL CROPS AND PRODUCE		£1039	£371	14%
Cultivations, Crops in Ground and U.M.R.		£1484	£530	20½%
Implements and Fixtures		£1702	£608	23⅓%
TOTAL		£7266	£2594	100%

The capital invested amounting to £7266 per farm or almost £26 per acre, shown in the above table, is the average of the valuations at the beginning and end of the year and is practically £2 per acre higher than the average for 1949-50. Again, it must be emphasised that these figures are based on very conservative values and that to take over such a farm at the present time might cost much more than the figures shown above.

As the great majority of these farms have valuations around Whitsunday the total is lower than would be the case if the majority had their valuations around November, when stocks are usually at their maximum. To equip such a farm with implements and machinery would entail a much higher expenditure than the sum shown if modern types of these were purchased. Because of the high initial allowances operative up to 5th April 1952 on new plant and implements purchased, and the additional allowances for Wear and Tear agreed with the Inland Revenue, new implements are written down at the end of their year of purchase to less than half their cost. Under present conditions it is several years before the market value of such implements is as low as their written down value as shown in the farmers' financial accounts.

III. FINANCIAL RESULTS

The average Profit and Loss Account set out on page 28 shows in some detail the actual sales and purchases for these farms in 1950-51. As they are regarded as predominantly cash cropping farms the total sales of crops may be expected to be higher than the total sales of livestock. In fact, total sales of crops do exceed total sales of livestock, but only by a very small margin. In terms of net output, however, cash crops account for 70 per cent of the total, livestock and livestock products accounting for the remaining 30 per cent.

Potatoes bring in the biggest amount of cash on the cropping side, closely followed by barley then by oats, wheat and sugar beet. Other crops grouped together, including such crops as soft fruit, peas for canning, odd lots of cabbages and other vegetable crops, in total come next to wheat in respect of cash returns. Sales of oats, it must be noted, only account for a proportion of the actual amount grown as very considerable quantities are consumed by the livestock on these farms.

Sales of livestock bring in almost as much cash as sales of crops but purchases of store and other animals absorb more

TABLE V. AVERAGE PROFIT AND LOSS ACCOUNT OF 79 ARABLE FARMS, 1950-51.

Average Size of Farm : 280 Acres—All Crops and Grass.

Dr. *Cr.*

	Per Farm		Per 100 Acres			Per Farm		Per 100 Acres	
	No.	£	No.	£		No.	£	No.	£
To Valuation of Live and Dead Stock (at commencement)		7,129		2545	By Cattle sold—				
„ Cattle bought—					Fat	42	2,735	15	976
Store	40	1,802	14	643	Store	8	312	3	111
All other—Dairy, Breeding &c.	7	138	3	49	All others	5	170	2	61
„ Sheep bought—					„ Sheep and Wool sold—				
Store Lambs	77	382	27	136	Lambs, Fat and Store	47	313	17	112
Breeding Sheep	25	236	10	84	Hoggs, mainly Fat	109	860	38	307
„ Pigs bought		68		24	Ewes, Draft and Fat	32	183	11	65
„ Other Livestock bought		53		19	Rams	2	25		9
„ Feeding Stuffs		565		202	Wool (lb.)	622	71	222	25
„ Seeds		513		183	„ Pigs sold	15	254	6	91
„ Manures (incl. Lime)		766		274	„ Other Livestock sold		24		9
„ Implements and Fixtures		880		314	„ Milk, Eggs, Poultry, &c.		237		85
„ Labour (incl. Perquisites)		2,390		853	„ Crops sold—				
„ Rent		406		145	Wheat (cwt.)	370	520	132	186
„ Repairs, Fuel, Threshing, Tractor Expenses &c.		810		289	Barley (cwt.)	1019	1,552	364	554
„ General Expenses—Stock and Crop Expenses, Haulage, Rates and Insurance, Car Expenses &c.		636		227	Oats (cwt.)	749	830	268	296
„ Bank Interest		33		12	Potatoes, ware (tons)	97-3	889	34-13	317
„ Net Profit for the year		2,092		747	Potatoes, seed (tons)	79-17	936	28-10	334
					Sugar Beet		265		94
					Hay and Straw		232		83
					Other Crops		363		130
					„ Government Subsidies and Grants—				
					Potato Acreage Payment		222		79
					All others		183		65
					„ Miscellaneous Receipts		199		71
					„ Farm Produce consumed, Workers' Perquisites &c.		121		43
					„ Valuation of Live and Dead Stock (at close)		7,403		2643
		£18,899		£6746			£18,899		£6746

than one-half of the total livestock returns. Government subsidies and grants (excluding potato acreage payments) amounted to 13s. per acre compared with £1 in 1949-50.

On the payments side labour is easily the largest single item of expense, now amounting to £8, 10s. per acre over the whole group of farms, a rise of about 10s. per acre compared with 1949-50. Most of the items of expenditure have risen in cost except purchased seeds which were very slightly less and general expenses down by about 4s. per acre. Repairs, fuel, &c., rose by almost 6s. per acre, new implements bought by 4s. 6d., feeding stuffs by almost 3s. 6d. and manures and lime by about 2s. 4d. Rents and bank interest both showed fractional increases over 1949-50.

The margin of profit shows a considerable improvement in 1950-51 compared with 1949-50. The numbers of livestock and the quantities of crops available for sale in 1950-51 have in certain cases improved upon the results obtained in 1949-50 which were much better than in 1948-49. By maintaining this improved output of both livestock and crops, the increased prices received in 1950-51 have made it possible for these farmers to cover their increased costs and also improve their profit margin by about £2 per acre. The average profit of almost £7, 10s. per acre is the best since 1942-43, and is second only to that memorable year. Reinvestment in the form of higher closing valuations only amounted to about £1 per acre so that these farms averaged a clear margin of practically £6, 10s. per acre.

The following table shows the average profit (*a*) per farm and (*b*) per 100 acres for this group from 1942-43 to 1950-51.

TABLE VI. TREND OF PROFITS

Year	No. of Farms studied	Average Acreage per Farm	Average Profit	
			(*a*) Per Farm	(*b*) Per 100 Acres
1939-40	60	366	£1132	£309
1940-41	63	379	1947	514
1941-42	69	358	2468	689
1942-43	68	351	2743	781
1943-44	66	351	1640	467
1944-45	76	331	1230	371
1945-46	82	322	1111	345
1946-47	75	323½	1284	397
1947-48	67	319	972	305
1948-49	81	302½	1423	470
1949-50	79	288½	1553	538
1950-51	79	280	2092	747

The distribution of profits and losses per 100 acres within the group for the six years from 1945-46 to 1950-51 is set out in the table below.

TABLE VII. DISTRIBUTION OF PROFITS AND LOSSES PER 100 ACRES

Year	No. of Farms	Farms showing Losses per 100 Acres		Farms showing Profits per 100 Acres					
		Over £200	Nil-£200	Nil-£200	£201-£400	£401-£600	£601-£800	£801-£1000	Over £1000
1945-46 .	82	4	7	12	25	15	12	4	3
1946-47 .	75	1	9	12	14	19	8	7	5
1947-48 .	67	6	7	16	10	10	10	6	2
1948-49 .	81	4	4	7	16	26	8	4	12
1949-50 .	79	2	2	11	12	18	14	6	14
1950-51 .	79	1	2	5	13	13	10	13	22

The improvement in the profits earned by these farms is borne out by the above table. The number of farms showing actual losses is down to three and the losses shown are lower than in 1949-50. The number of farms in the lower profit groups have also diminished so that only five of the farms showing profits in 1950-51 have a profit of less than £200 each.

The comparative figures set out in the following table give a summary of the changes which have taken place over the years 1948-49, 1949-50, 1950-51.

The most outstanding features are :—

1. The totals of both net output and expenditure continually increase over the three years shown.
2. The increase in the net output of livestock naturally is less than that of crops, but their relative importance remains unchanged.
3. Wheat and potatoes show comparatively higher increases in net outputs than the other crops in 1950-51.
4. All the items of expenditure have shown increases per 100 acres since 1948-49. The figures for seeds, rent and general expenses are, however, practically the same in 1949-50 and 1950-51.
5. The improved profits in 1950-51 are due to the maintenance of the improved yields shown in 1949-50 combined with the better prices obtained.

TABLE VIII. NET OUTPUT AND EXPENDITURE

	1948-49		1949-50		1950-51	
	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent
	£	%	£	%	£	%
Net Output—						
Cattle	348	14	369	13½	454	14½
Sheep and Wool	292	12	297	11	308	10
Other Livestock Produce	112	5	164	6	179	5½
TOTAL LIVESTOCK	£752	31%	£830	30½%	£941	30%
Wheat	154	6½	154	5½	202	6½
Barley	380	15½	505	18½	560	18
Oats	235	9½	268	10	300	9½
Potatoes	675	28	689	25	805	26
Sugar Beet	57	2	88	3	98	3
Other Roots	19	1	17	½	16	½
Hay	47	2	41	1½	59	2
Straw	16	½	21	½	27	½
Other Crops	97	4	139	5	118	4
TOTAL CROPS	£1680	69%	£1922	69½%	£2185	70%
TOTAL OUTPUT	£2432	100%	£2752	100%	£3126	100%
Net Expenditure—						
Feeding Stuffs	115	6	185	8½	207	8⅓
Seeds	165	8½	183	8	183	7⅓
Manures	190	9½	224	10	245	10⅓
Labour	765	39	796	36	854	36
Rent	110	5½	119	5½	120	5⅓
Power	381	19½	431	19½	493	20⅔
General Expenses	236	12	276	12½	277	11½
TOTAL EXPENDITURE	£1962	100%	£2214	100%	£2379	100%
NET PROFIT	£470		£538		£747	

An examination of the net output and expenditure on 53 farms within the group whose accounts are available for the five years from 1946-47 to 1950-51 shows almost similar changes to those incurred by the whole group over the same periods. These identical farms are rather larger in average size than the whole group, 340 acres instead of 280½ acres. Both their average valuation of £2549 per 100 acres and their cropping programme per 100 acres are very similar to those for the whole group. In 1950-51 the latter consisted of 7½ acres wheat, 13½ acres barley, 15 acres oats, 8½ acres potatoes, 6½ acres turnips and swedes, 5 acres other crops, 8½ acres hay, 33 acres

pasture, 2½ acres mountain and heath. Their total outupt has increased annually and except for 1948-49, when it was slightly less than in 1947-48, their total net expenditure has also increased each year.

TABLE IX. NET OUTPUT AND EXPENDITURE ON 53 IDENTICAL FARMS FOR 5 YEARS

	1946-47		1947-48		1948-49		1949-50		1950-51	
	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent
	£	%	£	%	£	%	£	%	£	%
Net Output—										
Cattle	281	13½	429	18	368	15	387	14	467	15
Sheep and Wool	219	10½	274	11½	296	12	315	11½	341	11
Other Livestock Produce	43	2	60	2½	87	3	122	4½	161	5
TOTAL LIVESTOCK	£543	26%	£763	32%	£751	30%	£824	30%	£969	31%
Wheat	120	5½	161	6½	176	7	170	6	214	7
Barley	410	20	310	13	392	15½	502	18	546	17½
Oats	232	11	237	10	244	10	271	10	294	9
Potatoes	611	29	672	28	703	28	704	25½	813	26
Sugar Beet	58	3	77	3	67	2½	100	3½	111	3½
Other Roots	16	1	14	½	13	½	14	½	13	} 3
Hay	36	1½	53	2	46	2	42	1½	54	
Straw	20	1	19	1	18	½	18	½	26	
Other Crops	42	2	91	4	98	4	126	4½	92	3
TOTAL CROPS	£1545	74%	£1634	68%	£1757	70%	£1947	70%	£2163	69%
TOTAL OUTPUT	£2088	100%	£2397	100%	£2508	100%	£2771	100%	£3132	100%
Net Expenditure—										
Feeding Stuffs	74	4½	100	5	105	5½	172	8	204	8½
Seeds	168	10	191	9½	172	8½	179	8	179	7½
Manures	172	10	216	11	190	9½	215	10	250	10½
Labour	681	40½	795	40	789	40	812	37	854	36
Rent	112	7	125	6	114	6	118	5½	119	5
Power	282	16½	328	16½	375	19	417	19	481	20½
General Expenses	196	11½	240	12	232	11½	275	12½	275	12
TOTAL EXPENDITURE	£1685	100%	£1995	100%	£1977	100%	£2188	100%	£2362	100%
NET PROFIT	£403		£402		£531		£583		£770	

These identical farms have higher outputs of cattle and sheep and a lower output of other livestock produce throughout the period shown and their output of all livestock is proportionally higher than for the whole group in 1950-51. Their output of crops shows greater emphasis on wheat and sugar beet and rather less on " other crops." Net expenditure for the identical group follows approximately the same lines as for the whole

group, with labour and rents per 100 acres almost identically the same.

Since 1947-48 the margin of profit on the identical group of farms has increased annually, but at a slightly higher level than for the whole group. In general the results for the identical group bear out those obtained for the group as a whole.

IV. FARMS NORTH AND SOUTH OF THE FORTH

The following table shows the 79 farms composing the group in 1950-51 divided into two sub-groups according to their situation North or South of the River Forth. It gives the average cropping and net output and expenditure for each of these sub-groups; 41 farms are situated North of the Forth and 38 farms are South of that river.

The table illustrates some of the main differences between these two sub-groups in regard to size and utilisation of the land. Farms North of the Forth averaging 248 acres in size are smaller by 67 acres than the average size of farm in the South of the Forth sub-group. In 1949-50 the North group averaged 106 acres less in size than the South group, but changes in the composition of the group in 1950-51 have increased the average size in the North from 240 to 248 acres and reduced that of the South farms from 346 to 315 acres. Looking at the utilisation of the land exclusive of grass either mown or grazed, 56 per cent of the total acreage is under arable crops in both sub-groups, but the ratios of the different crops grown are very different. Out of every 100 acres on these farms in the North, oats are grown on 19, potatoes on 11, wheat on $7\frac{1}{2}$ and barley on 7 acres; in the South barley is grown on $19\frac{1}{2}$ acres, oats on $12\frac{1}{2}$, potatoes on 7, and wheat on $6\frac{1}{2}$ acres. Turnips and swedes occupy $6\frac{1}{2}$ acres out of every 100 on both sub-groups, but sugar beet has 2 acres in the North to 1 in the South. More hay is cut in the North area than in the South. Compared with 1949-50 there has been a small decrease in tillage on the North area farms and a small increase in tillage on the South area farms. Slight changes have also taken place in the proportions of the various crops grown. Wheat and potatoes occupied a greater proportion of the total acreage both North and South of the Forth with barley and oats occupying a reduced acreage in both areas in 1950-51.

The general pattern of farming in the two sub-groups is little changed despite these differences in cropping. In the North potato growing associated with cattle feeding still accounts for almost half of the total net output. In the South barley is still the most important crop with sheep the main livestock enterprise.

TABLE X. NET OUTPUT AND EXPENDITURE OF 41 ARABLE FARMS NORTH OF THE FORTH AND 38 ARABLE FARMS SOUTH OF THE FORTH, 1950-51 (CROP YEAR, 1950)

NORTH Average Size of Farm, 248 Acres				ITEM	SOUTH Average Size of Farm, 315 Acres			
CROPPING		NET OUTPUT			NET OUTPUT		CROPPING	
Per 100 Acres		Per 100 Acres	Per Cent		Per 100 Acres	Per Cent	Per 100 Acres	
		£	%		£	%		
Wheat	7½	599	18	Cattle	331	11½	Wheat	6½
		178	5½	Sheep and Wool	418	14		
Barley	7			Other Live-stock Pro-duce			Barley	19½
		180	5½		177	6		
Oats	19	£957	29%	Total Livestock	£926	31½%	Oats	12½
		201	6	Wheat	202	7		
		331	9½	Barley	756	25½		
Potatoes	11	419	12½	Oats	199	7	Potatoes	7
Sugar Beet	2	1038	31	Potatoes	608	20½	Sugar Beet	1
		136	4	Sugar Beet	66	2		
Turnips and Swedes	6½	6	2½	Other Roots	23	1	Turnips and Swedes	6½
		69		Hay	51	1½		
		8	5½	Straw	44	1½		
		169		Other Crops	74	2½		
Fallow	..						Fallow	..
		£2377	71%	Total Crops	£2023	68½%		
Other Crops	3	£3334	100%	TOTAL OUTPUT	£2949	100%	Other Crops	3
Tillage	56	NET EXPENDI-TURE		ITEM	NET EXPENDI-TURE		Tillage	56
		£	%		£	%		
Rotn. Grass—				Feeding Stuffs	185	8	Rotn. Grass—	
Mown	10	233	9	Seeds	179	8	Mown	7
Not Mown	22	188	7½	Manures	205	9	Not Mown	25
		292	11½	Labour	815	36½		
		900	35½	Rent	121	5½		
		120	5	Power	497	22		
Perm. Grass	9½	487	19½	General Ex-penses	251	11	Perm. Grass	8½
		308	12					
Rough Grazing	2½	£2528	100%	TOTAL EXPENDITURE	£2253	100%	Rough Grazing	3½
	100	£806	..	NET PROFIT	£696	..		100

The total net output per 100 acres off the North farms is higher than the South farms both for livestock and crops, but their net expenditure per 100 acres was also higher for every item except rent and power. The margin of profit was still higher in the North, however, the profit per 100 acres at £806 being £225 better than in 1949-50 compared with the South farms' profit of £696 per 100 acres, an improvement of £193 over that of 1949-50.

V. COMPARISON BETWEEN 6 FARMS WITH HIGHEST PROFITS AND 6 FARMS WITH LOWEST PROFITS PER 100 ACRES IN 1950-51.

TABLE XI. NET OUTPUT AND EXPENDITURE

	6 Farms with Highest Profits		6 Farms with Lowest Profits	
	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent
	£	%	£	%
Net Output—				
Cattle	453	10	381	19
Sheep and Wool	405	9	270	13
Other Livestock Produce	167	3½	129	6
TOTAL LIVESTOCK	£1025	22½%	£780	38%
Wheat	66	1½	103	5
Barley	834	18½	326	16
Oats	268	6	183	9
Potatoes	1806	40	332	16½
Sugar Beet	348	7½	..	..
Other Roots	12	½	49	2½
Hay	11		58	3
Straw	7		51	2½
Other Crops	141	3½	152	7½
TOTAL CROPS	£3493	77½%	£1254	62%
TOTAL OUTPUT	£4518	100%	£2034	100%
Net Expenditure—				
Feeding Stuffs	177	6½	152	7
Seeds	226	8½	173	8
Manures	226	8½	156	7½
Labour	1004	38	736	35½
Rent	131	5	123	6
Power	487	18½	544	26
General Expenses	403	15	202	10
TOTAL EXPENDITURE	£2654	100%	£2086	100%
NET PROFIT OR LOSS	£1864 Profit	..	£52 Loss	..

The foregoing table shows the net output and expenditure per 100 acres and per cent on the six farms showing the highest profits compared with the six farms showing the lowest profits per 100 acres, this latter group including the three farms showing losses.

The total net output of the high profit farms is almost $2\frac{1}{4}$ times greater but their net expenditure was only little more than $1\frac{1}{4}$ times greater than that of the low profit group.

The average cropping of the two groups per 100 acres set out below shows that the high profit group had a much bigger proportion of their farms under arable crops.

TABLE XII. COMPARISON BETWEEN 6 FARMS WITH HIGHEST PROFITS AND 6 FARMS WITH LOWEST PROFITS, 1950-51

Crop	6 Farms with Highest Profits		6 Farms with Lowest Profits	
	Per Farm	Per 100 Acres	Per Farm	Per 100 Acres
	Acres	Acres	Acres	Acres
Wheat	4	2	16	5
Barley	39	$16\frac{1}{2}$	38	12
Oats	31	13	$48\frac{1}{2}$	15
Potatoes	$38\frac{1}{2}$	$16\frac{1}{2}$	$14\frac{1}{2}$	$4\frac{1}{2}$
Turnips and Swedes	$14\frac{1}{2}$	6	$20\frac{1}{2}$	$6\frac{1}{2}$
Other Crops	18	$7\frac{1}{2}$	11	3
Hay	7	2	$23\frac{1}{2}$	$7\frac{1}{2}$
Pasture	$70\frac{1}{2}$	31	$138\frac{1}{2}$	43
Mountain and Heath	13	$5\frac{1}{2}$	12	$3\frac{1}{2}$
TOTAL	$235\frac{1}{2}$	100	$322\frac{1}{2}$	100

The farms in the high profit group averaged $235\frac{1}{2}$ acres in size and the low profit group $322\frac{1}{2}$ acres respectively.

The high profit farms, in addition to having a greater proportion of arable crops per 100 acres, have a much larger proportion of the more lucrative cash crops—barley, potatoes and sugar beet. Due to their concentration on these crops, yielding high cash returns per acre, their total net output of crops is about $2\frac{3}{4}$ times as great as that of the low profit group. Notwithstanding their higher proportion of arable crops the high profit farms have also a very much bigger net output of stock and the additional expenditure incurred by them for purchased feeding stuffs was negligible in comparison.

Net expenditure on the high profit farms is naturally higher for such items as feeding stuffs mentioned already and for seeds, manures and labour because of their much more intensive cropping programme. Rents paid, however, were very little higher on the most profitable farms and power costs were considerably lower, but general expenses were practically twice as costly compared with the low profit farms.

Average valuations on the high profit farms amounted to approximately £26 per acre compared with £23 on the low profit farms, but the total sales off the high profit group averaged 188 per cent of their average valuation compared with 124 per cent of their average valuation on the low profit group.

As these high profit farms do not appear to have any obvious natural advantages compared with the low profit group—both groups being widely scattered over the College area—it would appear that their much better profits are due to the system of farming they have adopted. With their higher proportion of arable crops and their concentration on crops yielding high cash returns they have been enabled to carry, in addition, a higher concentration of livestock with very little extra outlay for purchased foods.

VI. CONCLUSION

The improved average profit shown by this group of farms in 1950-51 has only been made possible because they have continued to maintain the high average output achieved by them in 1949-50. Prices for their produce having risen compared with 1949-50 ; their total returns have more than covered their additional costs.

The cash position of these farmers has also improved because out of their higher profits, reinvestment in the form of higher valuations at the end of their financial year only amounted to £274 in 1950-51 compared with £525 in 1949-50.

The figures of improved output and profit shown by the whole group have been in general corroborated by the figures shown by the 53 identical farms within the group over the same period.

There still appears to be room for further improvement in output on many of these farms if the example given by the most profitable farms was followed.

GROUP V.—59 DAIRY FARMS, 1950-51.

I. GENERAL DESCRIPTION

Introductory

Dairy farming, as now generally understood, has only become established as a normal farming practice in the area served by the Edinburgh and East of Scotland College of Agriculture within comparatively recent times. Previous to the 1914-18 War, the majority of those farms producing milk for sale in the area supplied their output either directly to consumers in their own vicinity or to retail dairy shops in the neighbouring towns or villages. At that time also a considerable proportion of the milk consumed in the larger towns was produced in what were termed " town dairies " situated within the towns. The cows were kept continuously within doors from the time of their purchase as newly calved cows in milk until they were disposed of as dry cows for slaughter. These establishments purchased all their requirements of hay, straw and forage crops from arable farms on the outskirts of the towns in which they were situated.

This form of dairying has now been almost completely eliminated. Customers in those days in many cases rejected milk unless it was " warm from the cow " and local milk producers would deliver supplies both in the morning and afternoon in order to satisfy this demand. In those days the standards of hygiene and methods of handling milk were far below present-day requirements and milk frequently became sour if kept as much as twenty-four hours. As the populations of the towns increased, local supplies of milk failed to meet the demand and milk had to be bought from farms much farther away. This necessitated sending it by rail, and gradually a system of milk wholesaling was established by firms which set up depots convenient to the railways from which they distributed these supplies to shops and customers.

In the early 1920s with the decline in arable and stock farming many farmers turned to milk production, disposing of their supplies to these wholesalers. In the 1930s the Scottish Milk Marketing Board was established, and now the great majority of the farms producing milk in the area have their output collected daily at their farms by the " Board," who

are responsible for its handling from then on. Very few farmers in the area now either retail directly or wholesale their milk to retail shops. Of the 59 farms studied only 4 farms are retailers or producer-wholesalers.

Situation

The 59 farms dealt with in this Report are situated throughout the College area as follows: Midlothian 7, East Lothian 5, West Lothian 14, Peeblesshire 13, Selkirkshire 2, Roxburghshire 1, Berwickshire 2, East Perthshire 2, Fife 6, Angus 5 and Kinross-shire 2. These farms could be regarded as having belonged, in former times, to any one of the four major types of farms—hill sheep, stock rearing, stock raising and feeding, or arable—already dealt with in this Report and in Bulletin 34, previously issued, on which milk cows have been introduced either as an additional source of income or as substitutes for rearing and feeding cattle.

Size of Farm

Farm acreages in this group range from a minimum of 23½ acres to a maximum of 1169 acres. The average size is 245 acres including 56 acres of mountain and heath.

The acreage distribution of the farms is shown in Table I. The 9 farms shown in the group over 400 acres in extent contain over 90 per cent of the total mountain and heath included in the whole group. Of these 9 farms 2 have no mountain and heath and 1 other only 5 per cent of its total acreage as such; these were arable type farms before the introduction of the dairy cows. Of the remaining 7 farms 2 are normally hill sheep farms having a proportion of good, comparatively low-lying ground which has been utilised to maintain the dairy herd; the other 5 are stock raising and feeding farms on which dairying has replaced beef production.

The majority of the farms under 400 acres in extent are of the arable type on which dairy cows have replaced feeding cattle, but a few of these smaller farms were formerly of the stock rearing type (dealt with in Group II., Bulletin No. 34) or the stock raising and feeding type on which dairy cows have been introduced in comparatively recent times.

Milk is the largest single item sold off these 59 farms amounting to 47 per cent of the total farm sales, and 53 per cent of the net farm output. On only 3 farms within the group does milk take a secondary place and then only by small amounts.

TABLE I. SIZE DISTRIBUTION

Size in Acres	Up to 50	51-100	101-150	151-200	201-300	301-400	Over 400
No. of Farms	11	12	8	5	8	6	9

Rents

Assessed rents show wide variations both per farm and per acre, the very large farms with a high proportion of mountain and heath land are naturally rented at a low figure per acre over all; those with 50 per cent or over of mountain and heath have rents ranging from 7s. 5d. to 10s. 9d. per acre.

The assessed rents are shown in the following tables (*a*) per farm, (*b*) per acre.

TABLE II. (*a*) ASSESSED RENTS PER FARM

Rents	Up to £50	£51-£100	£101-£200	£201-£300	£301-£400	£401-£500	£501-£600	Over £600
No. of Farms	5	18	7	10	4	5	6	4

(*b*) ASSESSED RENTS PER ACRE

Rents	Up to 10/-	10/1-15/-	15/1-20/-	20/1-25/-	25/1-30/-	30/1-35/-	35/1-40/-	Over 40/-
No. of Farms	6	7	8	10	4	9	9	6

The average rent is very nearly £1, 2s. per acre and ranges from 7s. 5d. to £3, 0s. 11d. The average rent is up by rather less than 2s. per acre compared with 1949-50. Part of this is due to the inclusion of buildings insurance in the rent, but there have been small increases in rent in several cases. On 3 farms substantial increases have been made in negotiating new leases; in one of these cases the increase was as much as 18s. per acre.

Beef Production

There is very little surplus feeding available after the needs of the dairy herds are satisfied and only in one or two exceptional cases are bullocks fattened. Fat cattle sold off these farms are either heifers which have proved unsuitable for dairy purposes, or cast cows and bulls.

Sheep

On the farms with considerable areas of grazing ground, ewe flocks are generally kept—Cheviots and Blackfaced on the rougher hill grazings and Half-Breds on the better ground. The lambs produced may be either sold as stores or fattened on these farms. Twenty-three of these farms have ewe flocks and 4 others with no breeding ewes buy in store sheep for feeding.

Cropping

The average cropping per farm is shown in the following table for the three years 1948-49, 1949-50, 1950-51.

TABLE III. CROPPING: A 3-YEAR COMPARISON

	1948		1949		1950	
	Per Farm	Per 100 Acres	Per Farm	Per 100 Acres	Per Farm	Per 100 Acres
	Acres		Acres		Acres	
Wheat	8½	3½	6	2½	8	3
Barley	6½	3	4½	2	4½	2
Oats	33	14	35½	14½	34½	14
Potatoes	11	4½	9½	4	9½	4
Turnips and Swedes	11½	5	13	5	12	5
Other Crops	6½	3	7	3	7½	3
Rotation Hay	22	9	20½	8½	20½	8½
Rotation Grass	52	22½	64½	26½	62½	25½
Permanent Grass	30	13	27	11	30	12
Mountain and Heath	52	22½	56½	23	56	23
TOTAL	233	100	244	100	245	100

Over the three years shown there have been only slight fluctuations in the average cropping of the group. The cropping programme on these farms has become more or less stabilised

and, although they endeavour to provide as much as possible of their dairy cows' rations by home-grown foods, there is still a considerable quantity available for direct sale.

There has been a slight improvement in the quantity of crops sold in 1950-51 compared with 1949-50. Potatoes provide the largest amount of income from crops followed by oats ; although large quantities of oats are consumed by livestock on these farms there is still a considerable surplus available for sale. Wheat and barley are grown in much smaller quantities and their combined sales total about four-fifths of the sales of oats.

The proportion of the different crops grown is very variable from farm to farm as may be expected from their wide range of situation. The following table shows the distribution of the four main cash crops—wheat, barley, oats and potatoes—over this group of farms in 1950-51.

TABLE IV. ACREAGE OF MAIN SALE CROPS GROWN PER FARM, 1950

	None	Up to 10 Acres	11-20 Acres	21-30 Acres	31-40 Acres	Over 40 Acres
			Number of Farms			
Wheat . . .	27	17	7	6	1	1
Barley . . .	42	7	4	3	2	1
Oats . . .	3	8	14	6	8	20
Potatoes (including potato land let) .	8	34	9	5	2	1

As will be seen, nearly three-fourths of the farms studied grew no barley, and nearly one-half of them grew no wheat. It is surprising to find that some of them, although only three, grew no oats.

Labour

The proportion of family labour employed on these farms is higher than in the other groups reported upon. Because of the number of comparatively small sized farms within the group—over 50 per cent of these farms are under 150 acres in size—the farmer and his family undertake a considerable proportion of the dairy work. On 30 of the farms within the group, one or more members of the farmer's family are employed full time on dairy work, in addition to the farmer and his wife.

Hired workers, in addition to the farmer's family, average four per farm—three men and one woman or boy.

Size of Herd

The average size of dairy herd consists of 33 dairy cows plus 40 young stock and 1 bull. The number of milk cows per farm ranged from 4 to 156. Thirty-two farms have under 30 cows (8 of these have under 10 cows); 21 have from 31 to 60 cows and 6 farms have over 60 cows. Of these 6 large dairy farms (4 of which were of the arable type and 2 of the stock raising and feeding type) 3 had herds of 67 or 68 cows, 2 had herds of between 80 and 90 cows, and the very largest had just over 150 cows.

Importance of Milk Production

The range of productivity of these dairy farms may be deduced from the following table showing the value of the milk sold per cow per annum.

TABLE V. VALUE OF MILK SALES

Per Cow per Annum	£61-£80	£81-£100	£101-£120	Over £120
No. of Farms . .	7	26	13	11

The average returns for milk sold approximated closely to £107 per cow, the returns per cow ranging from just under £50 per cow to £172. On the two farms which had returns below £50 per cow there had, in each case, been difficulty in getting their cows in calf and both had exceptionally high numbers of dry cows throughout the year. The farm with the highest returns is one of the few producer-retailers selling " certified " milk.

The total amount of milk sold off the farms in this group during 1950-51 amounted to 1,315,023 gallons or 22,288 gallons per farm.

TABLE VI. MILK AS PERCENTAGE OF NET OUTPUT

Percentage	Not exceeding 40%	41%-50%	51%-60%	61%-70%	71%-80%	Over 80%
No. of Farms . .	9	11	10	18	8	3

On just under two-thirds of these farms milk sales represent over 50 per cent of the total net output. On the farms showing over 80 per cent of their net output as milk, practically the whole economy is directed towards producing milk, any other sales are mainly surplus dairy stock and crops which occasionally may exceed their own requirements.

II. CAPITAL INVESTED

The average capital invested in live and dead stock is shown per farm, per 100 acres and per cent in the following table.

TABLE VII. AVERAGE CAPITAL INVESTED IN LIVE AND DEAD STOCK, 1950-51

	No.	Per Farm	Per 100 Acres	Per Cent
		£	£	%
Livestock—				
Horses, mainly Working	2	89	36	1½
Dairy Cows	33	1311	534	23½
Bulls	1	96	39	1½
Cattle, under 1 year	14	170	69	3
Cattle, 1-2 years	13	293	119	5½
Cattle, over 2 years, mainly Breeding	13	444	181	8
Breeding Ewes (63) and Lambs	..	366	149	6½
Rams	2	17	7	½
Ewe Hoggs	15	65	26	1
Feeding Sheep	13	48	20	1
Poultry and Pigs	..	88	36	1½
TOTAL LIVESTOCK		£2987	£1216	53½%
Crops and Produce—				
Grain—Wheat, Barley and Oats		251	102	4½
Hay and Straw		86	35	1½
Potatoes		44	18	1
Other Crops, Produce &c.		86	35	1½
TOTAL CROPS AND PRODUCE		£467	£190	8½%
Cultivations, Crops in Ground and U.M.R.		£753	£307	13½%
Implements and Fixtures		£1357	£552	24½%
TOTAL		£5564	£2265	100%

The average capital invested per acre at £22, 13s. shows an increase of 17s. 7d. per acre compared with 1949-50. The increase in the closing valuation compared with the opening valuation for 1950-51 was 12s. 7d. per acre. These valuations

have to be considered as minimum figures for this type of farm because they are drawn from established concerns where the livestock may be worth more in the open market than the figures at which they are maintained in the farmer's accounts. As with the other groups already dealt with, equipment has been written down by the amounts allowed by the Inland Revenue (including initial allowances on new purchases) and thus stands in the valuation at much lower figures than current replacement costs. To set up in business as a dairy farmer with no more capital than is shown in Table VII. above would require the maximum of skill in selecting equipment and stock.

III. FINANCIAL RESULTS

The average Profit and Loss Account for this group of 59 farms is set out on page 46, giving the main items of income and expenditure and the profit (*a*) for the average farm, (*b*) per 100 acres. The average profit amounts to £1312 per farm and is £16 lower than that for 1949-50. The size of the average farm—245 acres—despite changes in the composition of the group, is only 1 acre more than in 1949-50. On the per acre basis the drop in profits is just under 2s. per acre; to all intents and purposes the financial results for the two years are identical.

Receipts in general all showed increases with the exception of the total for Government Subsidies and Grants which were rather lower than in 1949-50. Milk accounts for almost 47 per cent of the total cash receipts, and together with sales of dairy stock almost 60 per cent of the income on these farms. Total sales of crops amount to almost half the milk sales and sales of sheep bring in about two-thirds of the total for sales of cattle. The numbers of stock sold and the quantities of crops all showed increases compared with 1949-50.

Expenditure also increased under almost every heading, the heaviest increase being for purchased foods which cost almost £41 per cow compared with £31 in 1949-50 and £20 in 1947-48. Purchases of sheep and other livestock cost rather less in 1950-51 and payments for general expenses cost the same per acre in both years.

The closing valuation is higher by £155 per farm or 12s. 7d. per acre than the opening valuation. This is just about two-thirds of the amount shown as reinvested by the farmers in this group in 1949-50.

TABLE VIII. Average Profit and Loss Account of 59 Dairy Farms, 1950-51.

Average Size of Farm : Crops and Grass, 189 *Acres ; Mountain and Heath,* 56 *Acres ; Total,* 245 *Acres.*

Dr. *Cr.*

	Per Farm		Per 100 Acres			Per Farm		Per 100 Acres	
	No.	£	No.	£		No.	£	No.	£
To Valuation of Live and Dead Stock (at commencement)		5,487		2234	By Cattle sold—				
„ Cattle bought—					Dairy Cows and Heifers	12	666	5	271
Dairy Cows and In-Calf Heifers	6	336	2	137	Cast Cows	5	151	2	62
Bulls		59		24	Fat Cattle (incl. Bulls)	2	128		33
Calves	1	7		3	All others	16	81	6	52
Store	2	82		33	„ Sheep and Wool sold—				
„ Sheep bought—					Lambs and Hoggs, Store	54	255	22	104
Breeding Sheep	16	95	7	39	Lambs and Hoggs, Fat	46	268	18	109
Store Lambs	24	105	10	43	Ewes and Rams	19	100	8	41
„ Pigs bought		41		16	Wool (lb.)	431	55	175	22
„ Other Livestock bought		23		9	„ Pigs sold	5	89	2	36
„ Feeding Stuffs		1,340		545	„ Other Livestock sold		10		4
„ Seeds		220		90	„ Milk sold		3,548		1445
„ Manures (incl. Lime)		515		209	„ Eggs, Poultry &c. sold		103		42
„ Implements and Fixtures		662		270	„ Crops sold—				
„ Labour (incl. Perquisites)		1,648		671	Wheat (cwt.)	158	198	65	81
„ Rent (incl. Building Insurance)		267		109	Barley (cwt.)	122	193	50	78
„ Repairs, Fuel, Threshing, Tractor Expenses &c.		637		259	Oats (cwt.)	423	467	172	190
„ General Expenses—Stock and Crop Expenses, Haulage, Rates and Insurance, Car Expenses &c.		486		198	Potatoes (tons)	68-14	643	27-18	262
„ Bank Interest		21		9	Other Crops		238		97
„ Net Profit for the year		1,312		534	„ Government Subsidies and Grants—				
					Potato Acreage Payment		82		33
					Land Fertility Scheme Rebate		84		34
					All others		98		40
					„ Miscellaneous Receipts		133		54
					„ Farm Produce consumed, Workers' Perquisites &c.		111		45
					„ Valuation of Live and Dead Stock (at close)		5,642		2297
		£13,343		£5432			£13,343		£5432

TABLE IX. TREND OF PROFITS

Year	No. of Farms studied	Average Acreage per Farm	Average Profit	
			(*a*) Per Farm	(*b*) Per 100 Acres
			£	£
1939-40 .	25	317	815	257
1940-41 .	24	339	1628	480
1941-42 .	23	341	1507	442
1942-43 .	25	336	1758	520
1943-44 .	28	342	2068	605
1944-45 .	29	306	1536	501
1945-46 .	37	291	1207	415
1946-47 .	41	284	1302	458
1947-48 .	42	295	1338	454
1948-49 .	63	233	1183	508
1949-50 .	57	244	1328	543
1950-51 .	59	245	1312	534

The above table shows that although the 1950-51 profit is slightly lower than that of 1949-50 per 100 acres it is the third largest profit in the period from 1939 to 1951. The average profits per 100 acres earned by farms in this group have remained much steadier than those of the other groups already dealt with.

The distribution of profits and losses per 100 acres is shown below.

TABLE X. DISTRIBUTION OF PROFITS AND LOSSES PER 100 ACRES

Year	No. of Farms	Farms showing Losses per 100 Acres		Farms showing Profits per 100 Acres					
		Over £200	Nil-£200	Nil-£200	£201-£400	£401-£600	£601-£800	£801-£1000	Over £1000
1945-46 .	37	..	1	6	9	9	6	3	3
1946-47 .	41	..	3	8	7	6	9	5	3
1947-48 .	42	4	..	8	10	5	7	3	5
1948-49 .	63	5	2	8	12	5	8	9	14
1949-50 .	57	2	5	5	8	9	8	4	16
1950-51 .	59	5	3	13	3	8	7	6	14

The above table shows how the diminution in their scale of profit has affected the farms in the group in 1950-51. Although the average profit remained relatively unchanged, the number

of farms showing losses has increased by one and the number of farms in the group showing profits up to £2 per acre has increased from 5 to 13 with fewer in each of the groups with profits up to £4, £6 and £8 per acre. Twenty of these farms still make profits of over £8 per acre; 14 of these, instead of 16 in 1949-50, make profits of over £10 per acre in 1950-51.

TABLE XI. NET OUTPUT AND EXPENDITURE

	1948-49		1949-50		1950-51	
	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent
	£	%	£	%	£	%
Net Output						
Cattle	220	9	234	9	275	10
Sheep and Wool	133	6	188	8	191	7
Milk	1278	53	1352	53	1468	53
Other Livestock Produce	48	2	55	2	71	2
TOTAL LIVESTOCK	£1679	70%	£1829	72%	£2005	72%
Wheat	78	3	72	3	96	3
Barley	77	3	57	2	80	3
Oats	162	7	165	6½	191	7
Potatoes	304	13	297	11½	319	11½
Hay and Straw	25	1	22	1	18	} 3½
Other Crops	86	3	94	4	85	}
TOTAL CROPS	£732	30%	£707	28%	£789	28%
TOTAL OUTPUT	£2411	100%	£2536	100%	£2794	100%
Net Expenditure—						
Feeding Stuffs	343	18	425	21	558	24½
Seeds	107	5½	87	4½	90	4
Manures	151	8	152	8	172	7½
Labour	642	34	639	32	671	30
Rent	81	4	82	4	90	4
Power	351	18½	366	18½	426	19
General Expenses	228	12	242	12	253	11
TOTAL EXPENDITURE	£1903	100%	£1993	100%	£2260	100%
NET PROFIT	£508		£543		£534	

Both the total net output and net expenditure have shown annual increases from 1948-49 to 1950-51. The output of milk has remained at a steady 53 per cent of the total in each year shown with an increasing net output per 100 acres each year. In 1950-51 the only items having lower per 100 acre figures than in 1949-50 are hay and straw and " other crops " on the receipts side.

Feeding stuffs made the biggest increase on the expenditure side raising its proportion of the total to 24½ per cent instead of 21 per cent in 1949-50 and 18 per cent in 1948-49. Although the cost of labour per 100 acres has gone up from £639 in 1949-50 to £671 in 1950-51 the percentage figure has fallen from 32 per cent to 30 per cent of the total net expenditure. Similarly seeds, manures and general expenses though costing more per 100 acres have smaller percentage figures in 1950-51.

An examination of the results of 34 farms within the group whose accounts are available for the five years from 1946-47 to 1950-51 shows that total net output and expenditure have risen year by year, but on the identical group of farms the profit margin has also risen each year. This is accounted for by the fact that, of the eight farms showing losses in 1950-51, only one is available in the identical group and that one of the smallest in size and loss.

The identical group averages 302½ acres in size and the cropping policy has undergone no definite changes over the five years. In 1950-51 the cropping per 100 acres was wheat 4, barley 2, oats 15, potatoes 4½, turnips and swedes 5, other crops 3½, rotation hay 8½, rotation grass 29, permanent grass 8, mountain and heath 20½ respectively.

From the cropping figures for these identical farms it is seen that they are rather more intensively arable than the average for the whole group and this is borne out by the figures in the following table. Sheep is the only item which is lower in output on the identical group than for the whole group. All the other items show a higher return per 100 acres. Expenditure shows less for feeding and more for seeds, manures, labour, power and general expenses ; rent is very little different per 100 acres.

As mentioned above, the identical farm group includes only one of the farms showing losses in 1950-51, the accounting material for the other seven not being available over the whole period.

TABLE XII. NET OUTPUT AND EXPENDITURE ON 34 IDENTICAL FARMS FOR 5 YEARS

	1946-47		1947-48		1948-49		1949-50		1950-51	
	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent
	£	%	£	%	£	%	£	%	£	%
Net Output—										
Cattle	161	8	243	11	251	10	288	10	342	11
Sheep and Wool	95	4½	106	5	138	5½	168	6	171	5½
Milk	1025	51½	1133	52	1287	52	1496	53	1599	51
Other Livestock Produce	19	1	17	1	27	1½	37	1	38	1½
TOTAL LIVESTOCK	£1300	65%	£1499	69%	£1703	69%	£1989	70%	£2150	69%
Wheat	74	3½	79	3½	92	4	95	3½	116	4
Barley	73	3½	57	2½	66	2½	67	2½	94	3
Oats	154	8	138	6½	190	7½	198	7	231	7½
Potatoes	319	16	306	14	328	13	362	12½	403	13
Hay and Straw	22	1½	18	1	28	1	25	1	20	½
Other Crops	48	2½	69	3½	73	3	105	3½	106	3
TOTAL CROPS	£690	35%	£667	31%	£777	31%	£852	30%	£970	31%
TOTAL OUTPUT	£1990	100%	£2166	100%	£2480	100%	£2841	100%	£3120	100%
Net Expenditure—										
Feeding Stuffs	228	15	260	15½	299	16	413	19½	555	23
Seeds	83	5½	99	6	108	5½	98	4½	103	4½
Manures	119	8	139	8	155	8	176	8	183	7½
Labour	562	36½	607	36	663	34½	712	33½	752	31
Rent	81	5	81	5	82	5	86	4	91	4
Power	288	18½	310	18	344	18	390	18	460	19
General Expenses	174	11½	195	11½	242	13	269	12½	271	11
TOTAL EXPENDITURE	£1535	100%	£1691	100%	£1893	100%	£2144	100%	£2415	100%
NET PROFIT	£455		£475		£587		£697		£705	

IV. COMPARISON BETWEEN 6 FARMS WITH HIGHEST PROFITS AND 6 FARMS WITH BIGGEST LOSSES, 1950-51.

As an illustration of the wide range of output and expenditure within this group, the following table shows the net output and expenditure per 100 acres for the six farms showing the highest profits with corresponding figures for the six farms showing the biggest losses.

TABLE XIII. COMPARISON BETWEEN 6 FARMS WITH HIGHEST PROFITS AND 6 FARMS WITH BIGGEST LOSSES, 1950-51

NET OUTPUT AND EXPENDITURE

	6 Farms with Highest Profits		6 Farms with Biggest Losses	
	Per 100 Acres	Per Cent	Per 100 Acres	Per Cent
	£	%	£	%
Net Output—				
Cattle	584	11½	104	5½
Sheep and Wool	91	1½	331	17
Milk	2328	45½	1140	59
Other Livestock Produce	44	1	195	10½
TOTAL LIVESTOCK	£3047	59½%	£1770	92%
Wheat	257	5	4	½
Barley	70	1½	3	
Oats	447	8½	28	1½
Potatoes	1115	21½	69	3½
Hay and Straw	41	1	1	..
Other Crops	153	3	44	2½
TOTAL CROPS	£2083	40½%	£149	8%
TOTAL OUTPUT	£5130	100%	£1919	100%
Net Expenditure—				
Feeding Stuffs	729	21½	864	37
Seeds	118	3½	55	2½
Manures	281	8	165	7
Labour	1140	33	579	25
Rent	125	3½	79	3½
Power	693	20	359	15
General Expenses	358	10½	235	10
TOTAL EXPENDITURE	£3444	100%	£2336	100%
NET PROFIT OR LOSS	£1686 Profit		£417 Loss	

The above table shows the great differences in output and expenditure per 100 acres which are to be found on examining the financial returns for any group of farms contained in a general classification such as the Dairy Farm group being dealt with here.

About their only point of similarity is that in both these sub-groups the net output of milk is the largest single item of output in each case.

The cropping table shown below shows how different are the farming systems of these two sub-groups.

TABLE XIV. COMPARISON BETWEEN 6 FARMS WITH HIGHEST PROFITS AND 6 FARMS WITH BIGGEST LOSSES, 1950-51

CROPPING, 1950

Crop	6 Farms with Highest Profits		6 Farms with Biggest Losses	
	Per Farm	Per Cent	Per Farm	Per Cent
	Acres		Acres	
Wheat	25½	8½	½	¼
Barley	4	1½	..	..
Oats	62	20½	27	16
Potatoes	33	11	1½	1
Turnips and Swedes	21	7	9	5¼
Other Crops	12½	4	2	1
Rotation Hay	38	13	11	6½
Rotation Grass	96	32	47½	28
Permanent Grass	8½	2½	52	30½
Mountain and Heath	..	..	19½	11½
TOTAL	300½	100	170	100

The high profit farms are of the arable type dealt with in Group IV. but the six farms with the biggest losses are of the livestock type closely resembling the stock rearing farms dealt with in Bulletin No. 34. The farms showing losses are, with one exception, relatively small with a considerable proportion of the manual work done by the farmer and his wife, thus partly accounting for the lower wages paid per 100 acres.

On those farms showing losses net output of sheep and "other livestock," mainly poultry and eggs, are the only items which are higher in value than the corresponding items on the high profit farms. The total output on the high profit farms amounted to more than two and one-half times that of the farms showing the biggest losses and is about 190 per cent better than the average for the whole group. The output of crops on the high profit farms is actually fourteen times greater than for the farms showing losses and indicates the vast difference there is in the fertility and crop bearing capacities of these two sub-groups.

Net expenditure is about one and one-half times greater on the high profit group but they actually spend less on purchased feeding stuffs per 100 acres than the farms with the biggest losses.

V. CONCLUSION

This group of farms has, on the average, managed to maintain a comparatively stable level of profits per 100 acres over the past ten years or so. Increased costs have, in general, been recouped by increased returns ; although there is a small decline in the level of profit of the whole group, the 34 identical farms available for the past five years show increasing profits each year over that period.

The wide differences in the conditions under which milk is produced on farms within the group are illustrated by the figures for the 6 most profitable farms and the 6 farms with the biggest losses. These figures demonstrate that dairying does not prosper on these low productive farms any more than their more normal stock rearing systems.

Over the group as a whole the amount of profit already " tied up " in the form of increased valuations at the end of the year is lower than in 1949-50 being £155 per farm compared with £238. Thus, although the total profit is slightly less the cash margin has improved over the year.

PART II.
AVERAGE PRICES AND RETURNS
I. LIVESTOCK

In order to illustrate the general movement in livestock prices and to obtain as much information thereon as possible, the total purchases and sales of the various classes of livestock for the three groups of farms dealt with in Part I. of this Report have been merged.

The following table shows these aggregate figures for 1950-51 with comparative data for 1949-50 and 1948-49.

TABLE I. AVERAGE PRICES *

	1948-49		1949-50		1950-51	
	Total No.	Average Price	Total No.	Average Price	Total No.	Average Price
		£ s. d.		£ s. d.		£ s. d.
(*a*) LIVESTOCK BOUGHT—						
Cattle—						
Dairy Cows and In-Calf Heifers	388	56 17 5	349	63 12 2	398	56 13 10
Breeding Cows and In-Calf Heifers	393	43 4 4	384	42 16 8	223	42 15 11
Bulls	65	87 7 0	58	75 5 11	56	130 4 0
Calves	555	10 11 7	699	12 1 5	751	12 11 0
Store Cattle	3,627	45 2 3	3,491	45 16 8	3,662	44 4 9
Sheep—						
Breeding Ewes, Gimmers and Ewe Hoggs	6,455	6 2 0	5,682	7 7 2	6,426	7 6 1
Rams	157	30 15 11	184	35 12 3	189	35 4 9
Store Sheep	8,086	4 7 5	9,402	4 16 0	10,398	4 9 0
Pigs	587	6 4 7	975	7 13 0	1,421	8 15 6
(*b*) LIVESTOCK SOLD—						
Cattle—						
Cast Cows	513	28 0 10	460	29 13 9	551	30 17 10
Breeding Cows and Heifers	933	53 8 7	1,020	59 0 0	1,146	56 2 2
Store Cattle	695	39 7 11	1,065	38 17 4	1,314	37 11 9
Fat Cattle	3,749	58 8 3	3,567	61 19 0	3,907	63 8 2
Sheep—						
Store Lambs	13,696	5 0 0	13,423	5 4 10	14,182	5 9 10
Fat Lambs	3,463	5 8 11	4,343	5 16 8	4,176	6 10 1
Store Hoggs	1,416	5 0 0	2,138	5 13 4	1,946	6 7 0
Fat Hoggs	11,526	6 19 0	13,180	7 4 6	12,054	7 12 5
Draft Ewes	2,547	6 8 11	3,082	7 9 1	3,777	6 10 8
Fat Ewes	3,319	4 14 2	2,822	4 9 8	3,527	4 11 9
Rams	336	16 1 3	451	16 0 2	383	18 3 11
Pigs—						
Store Pigs	869	6 12 3	1,049	6 15 6	659	7 19 7
Fat Pigs	367	16 16 5	883	19 16 5	1,579	20 11 10
Produce—		lb.		lb.		lb.
Wool	136,677	0 2 3	158,104	0 2 5	162,563	0 2 5

* Numbers bought or turned over are inserted mainly as indications of the sizes of the samples from which statistics are drawn.

Looking at the prices paid for livestock bought it will be seen that the only changes of note were in respect of dairy cows and in-calf heifers which were almost £7 per head cheaper on the average than in 1949-50 and store pigs which were dearer by £1, 2s. 6d. per head. Prices paid for bulls purchased were very much higher than in either 1948-49 or 1949-50, but the numbers purchased were small and individual prices extremely variable, depending to a large extent on the personal choice or needs of the purchasers for their own particular requirements.

The decrease in the average price of purchased dairy cows and heifers was due in part to doubts about the future prospects for milk production after the 1950 price review adjustments, and also to the more plentiful supply of dairy heifers coming on the market.

The increased demand and prices paid for store pigs was a reflection of the more optimistic view of the prospects for fat pig production engendered during the year. Purchases of sheep showed increases in numbers both for feeding and breeding, but the average prices paid were slightly lower than in 1949-50.

Prices realised by sales of livestock followed much the same course as the cost of purchases of similar types. Breeding cows and heifers and store cattle sold were slightly cheaper per head than in 1949-50. Fat cattle sold made a small increase in the price received per head compared with 1949-50. Young sheep sold, both store and fat, made improved prices compared with 1949-50, store lambs made 5s. more, fat lambs 13s. 5d., store hoggs 7s. 11d. and fat hoggs 13s. 8d. more per head; fat ewes averaged 2s. 1d. per head more but draft ewes were 18s. 5d. per head less than in 1949-50. Pigs bought and sold all made better prices than in 1949-50 with a big increase in the number of fat pigs sold.

TABLE II. CATTLE—GROSS PROFIT MARGIN

Year	No. of Farms	Store Cattle Bought		Fat Cattle Sold		Average Margin of Gross Profit
		No.	Average Price	No.	Average Price	
1945-46	19	1467	£33 2 10	1363	£44 3 5	£11 0 7
1946-47	31	1792	£34 4 5	1793	£48 2 2	£13 17 9
1947-48	37	2519	£41 11 7	2412	£56 16 0	£15 4 5
1948-49	39	2582	£47 12 9	2364	£61 16 8	£14 3 11
1949-50	30	2264	£49 6 8	2132	£65 2 0	£15 15 4
1950-51	26	2181	£48 15 5	2209	£67 11 7	£18 16 2

The margin shown above represents the difference in price between store cattle bought and fat cattle sold for each of the years from 1945-46 to 1950-51 on farms where no cattle are bred. The figure does not represent the inbuying price and selling price of identical lots of cattle. In 1950-51, 2181 store cattle were purchased at an average cost of £48, 15s. 5d. and 2209 fat cattle were sold off the same farms at an average price of £67, 11s. 7d., the margin being £18, 16s. 2d. This was a considerable improvement over 1949-50 and the biggest margin so far shown in these Reports, but whether it is sufficient to cover the increasing costs of feeding is a moot point.

TABLE III. SHEEP—GROSS PROFIT MARGIN

Year	No. of Farms	Store Lambs Bought		Fat Hoggs Sold		Average Margin of Gross Profit
		No.	Average Price	No.	Average Price	
1945-46	22	4707	£3 3 1	4047	£5 0 10	£1 17 9
1946-47	23	4486	£3 4 8	4633	£4 18 0	£1 13 4
1947-48	16	2688	£4 4 8	2228	£6 9 0	£2 4 4
1948-49	19	3155	£4 13 0	2698	£6 19 8	£2 6 8
1949-50	20	3550	£5 1 10	3068	£7 5 3	£2 3 5
1950-51	20	3447	£4 12 2	3249	£7 6 5	£2 14 3

The margins shown for the three years from 1945-46 to 1950-51 are derived by a process similar to that employed in the case of cattle. All farms in the three groups dealt with in this Report, having no breeding sheep of their own, but buying in store lambs for feeding, had their purchases and sales of sheep grouped together. In 1950-51, 20 farms with no breeding sheep purchased 3447 store lambs at an average cost of £4, 12s. 2d. per head and during the same year these 20 farms sold 3249 fat hoggs at an average price of £7, 6s. 5d. per head, the margin being £2, 14s. 3d. per head. This is a decided improvement compared with 1949-50 and 1948-49 and is also the highest margin shown so far, for this class of stock, in these Reports. These farmers had been discouraged by the low margin obtained in 1949-50 so that they were more cautious in their purchases, paying less than in either 1949-50 or 1948-49 for their store lambs.

II. CROPS.

The total acreages of the principal sales crops and the quantities sold off per acre, together with their average selling prices, have been set out in the following table for 1950-51 together with comparative figures for 1948-49 and 1949-50.

TABLE IV. CROP SALES AND PRICES

Crop	1948-49			1949-50			1950-51		
	Acreage grown	Quantity per Acre sold off	Price per Cwt.	Acreage grown	Quantity per Acre sold off	Price per Cwt.	Acreage grown	Quantity per Acre sold off	Price per Cwt.
	Acres	Cwts.	£ s. d.	Acres	Cwts.	£ s. d.	Acres	Cwts.	£ s. d.
Wheat*	2437	16·8	1 2 5	1787	23·6	1 3 8	2294	18·6	1 7 5
Barley	4639	18·2	1 8 11	4703	23·9	1 7 3	4338	24·9	1 10 9
Oats	8468	10·8	1 0 11	7953	13·0	1 1 0	8043	13·7	1 2 0
Potatoes*	3010	5t. 19c.	9 12 9†	2562	7t. 8c.	9 16 0†	2603	7t. 12c.	10 1 11†

* These prices are exclusive of Government Acreage Payments.
† Per ton.

Owing to changes in the numbers of farms included in the groups dealt with in this Report from year to year, acreage figures are not strictly comparable. What is shown, however, in the above table is a slight decrease in the barley acreage and an increase in the wheat acreage, neither of any great significance. The quantity of wheat available for sale per acre grown was rather lower in 1950-51 than in 1949-50, but it was still better than in 1948-49. The quantity of barley sold per acre actually improved in 1950-51 compared with the very good average figure for 1949-50. Oats also showed a bigger surplus sold per acre, but the quantities consumed on these farms may vary from year to year so that it is not possible to say whether the actual yield per acre was greater in 1950-51 than in previous years. The average prices realised were a good deal better in the case of wheat, 3s. 9d. per cwt., and barley, 3s. 6d. per cwt., with a slight improvement of 1s. per cwt. in the case of oats sold. Potato sales also showed a small increase in net weight per acre with a small increase in the price per ton of 5s. 11d.

The principal feature brought out in the foregoing table is the larger quantities of barley, oats and potatoes available for sale per acre grown in 1950-51 compared with 1949-50 which itself was a record year in this respect. Wheat sales per acre declined, but were still higher than in 1948-49.

III. CONCLUSION

The results shown by the three groups of farms in 1950-51, reported upon in Part I., give a good indication of the general trend of profits on those types of farms throughout the College area.

The higher lying stock raising farms, from their situation on the less fertile and usually later districts of the area, have had their margin of profit reduced. With a cropping programme not very greatly reduced in intensity from that of the 1940s and with their lower per acre yields of crops compared with the farms in the highly arable districts, these farms found that the increases during 1950-51 in the cost of labour, manures, power, &c., outstripped the increased returns obtained.

On the arable group of farms, however, the yields per acre are much higher and the increased prices obtained for their produce rather more than covered their increase in expenditure so that they, in general, improved their margin of profit during the year. Dairy farms in the area generally found that the increases in their costs, especially for feeding, accentuated by the bad spring in 1951, did, on the average, rather more than counterbalance the small gains they made in milk prices during the year. On those dairy farms situated on what were formerly arable farms, the yields of the arable cropping side of their business kept up their profits, but on dairy farms situated on the higher farms of the stock rearing type, for example, the profit margin deteriorated very considerably in 1950-51.

ACKNOWLEDGMENT

Grateful acknowledgment is hereby made of the valuable assistance given by farmers and accountants collaborating in our accounts work, and of the care taken to provide us with accurate records. Each farmer will receive a copy of this Report, together with comparative tables relating to his own farm. Inquiries are invited from other farmers who might care to collaborate in this work.

APPENDIX

1. Valuation.

(*a*) *Valuation of Permanent Stock.*—In general, the breeding stock have been valued at conservative figures which are usually below current cost of replacements.

(*b*) *Growing Crops and U.M.R.*—The actual figures given by farmers or valuators have been used for these items. In those cases where no such figures were given in the accounts as originally prepared, estimated values have been inserted so that all farms should have particulars relating to capital investment on a comparable basis.

(c) *Implements, Equipment, &c.*—These have been depreciated on the bases agreed upon by the Inland Revenue Authorities—viz., five-fourths of the standard rates. Where necessary, appropriate adjustments have been made to give effect to the concessions introduced by the Income Tax Act, 1945, and the Finance Act, 1947, for initial allowances, balancing charges and allowances, &c.

2. Net Output.

The net output of each class of livestock, crop or produce is calculated by subtracting any purchases from the sales. To this sum any increase in the valuations over the year is added, while any decrease is deducted. Any subsidies for stock and crop are added to their respective categories, *e.g.* :—

Net Output of cattle = (Sales + Closing Valuation) — (Purchases + Opening Valuation).

Net Output of Potatoes = (Sales + Closing Valuation (if any) + Acreage Payment) — Opening Valuation (if any).

3. Net Expenditure.

Net expenditure refers to all operating costs necessarily incurred in running the farm business, except those categories of expenditure—*e.g.*, cattle bought—which are already dealt with in calculating net output. They comprise Purchased Foods, Seeds, Manures, Labour, Rent, Power, and General Expenses. Adjustments for changes in stocks on hand are made where required, and, where Government subsidies in effect reduce any costs, such receipts have been deducted from the appropriate items of cost.

Two grouped categories of net expenditure need further definition :—

(a) *Power.*—This includes the cost of repairs to implements, tractor expenses, fuel, hire charges, and the depreciation of implements and of horses.

(b) *General Expenses.*—These include livestock expenses, crop expenses, rates, building repairs, carriage, car expenses, insurances, bank interest and sundries, *less* miscellaneous receipts.

4. Growing Crops and Unexhausted Manurial Residues.

Generally speaking, these represent costs which have been incurred up to the valuation dates on seed, manure, labour, and power. Any increase in the Growing Crop and U.M.R. Valuation is treated as *Net Output* and is included as such under the heading of Sundry Crops ; any decrease is treated as an item of costs and is included in the *Net Expenditure*—with General Expenses.

5. Labour.

The accounts have been adjusted in such a way that no charge has been made for the labour of the farmer or for that of his wife ; charges for other " family " or " unpaid " labour have been included.

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