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Farm Management
EDINBURGH AND EAST OF SCOTLAND COLLEGE OF AGRICULTURE.

(Economics Department)

REPORT ON
the Financial Results of
Thirteen East of Scotland Smallholdings
for 1932-33.

by

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1st August, 1933.

1. INTRODUCTORY.

In connection with the economic advisory work of the College, the accounts of 13 smallholdings have been completed for the year 1932-33. With only one exception the holdings were brought into existence under the smallholdings scheme of the Department of Agriculture for Scotland; five of them are "demonstration holdings" selected for the purpose of the educational and experimental work of the College, for which the smallholder receives a monetary grant, but for comparative purposes these grants have been excluded from the accounts analysed herein. Although the holdings are widely scattered geographically, and work under very diverse conditions of soil, climate, and situation relative to markets, they may be conveniently classified into two main groups according to their production, as follows:-

- i) Dairy Holdings - 7 holdings specialising in milk production (with poultry as an important subsidiary), their average size being 48 acres. One of them includes an extensive hill run, herein converted into an equivalent acreage of in-land on the basis of the relative rental values of the land. Five sell milk wholesale, and two retail it.
- ii) Mixed Holdings - 6 holdings on which dairying is of but minor importance, which specialise rather on the production of crops for sale (mainly potatoes and oats) and fat cattle, although like the dairy holdings they have a considerable number of poultry. The average size of these holdings is 45 acres; two of them, though owned separately, are managed together. In both cases the acreage quoted is inclusive of a few acres of grazing taken for the season.

A better idea of the nature and scale of their business transactions may be gleaned from a study of p. 8, which sets out the average trading account per holding for the year under review. Taken as a whole, each group is characterised by high output and high costs, details of which are appended, the following terms being used therein:-

Output i.e. Production: the sales e.g. of cattle, or sheep etc. less purchases, after giving effect to any difference between opening and closing valuations.

Power includes repairs, threshing, fuel, tractor expenses, and depreciation of horses and of implements.

General Expenses include livestock expenses, crop expenses, rates, building repairs, carriage, car expenses, insurance and sundries less miscellaneous receipts.

Labour includes cash wages (or board in lieu) paid to members of the smallholder's family at rates locally current, but excludes the labour of himself and his wife.

2. OUTPUT AND COSTS OF PRODUCTION IN 1932-33.1. OUTPUT (= Production).a) Livestock Products.

Cattle
 Sheep & Wool
 Pigs
 Eggs & Poultry
 Dairy Produce
 Sundry Stock

Total Livestock

b) Crop Products.

Wheat
 Barley
 Oats
 Potatoes
 Hay & Straw
 Other Crops

Total Crops

a + b = TOTAL OUTPUT

2. COSTS OF PRODUCTION

Purchased Foods
 Seeds
 Manures
 Power
 General Expenses
 Labour
 Rent

TOTAL COSTS

3. NET PROFIT

		<u>7 Dairy Holdings.</u>		<u>6 Mixed Holdings.</u>	
		Per Acre	Per Cent	Per Acre	Per Cent
		£ s. d.	%	£ s. d.	%
	Cattle	-.17. 8	8	1.17. 3	21
	Sheep & Wool	-. 6. 7	3	-. 5.10	3
	Pigs	-. -. 6	-	-. 4. 3	2
	Eggs & Poultry	1. 7. 9	13	1.11. 9	18
	Dairy Produce	6. 8. 7	59	1. 3.10	13
	Sundry Stock	-	-	-. 3. 2	2
	Total Livestock	£9. 1. 1	83%	£5. 6. 1	59%
	Wheat	-. 2. -	1	-. 4. -	2½
	Barley	-. 2. 7	1	-. 7. 6	4
	Oats	-.12. 1	5	1. 3. 7	13
	Potatoes	-.18.10	9	1.10. 6	17
	Hay & Straw	-. -. 9)	1	-. 5.10	3½
	Other Crops	-. 1.10)		-. 2. -	1
	Total Crops	£1.18. 1	17%	£3.13. 5	41%
	a + b = TOTAL OUTPUT	£10.19. 2	100%	£8.19. 6	100%
	Purchased Foods	2. 7. 2	27	1. 5. 3	18
	Seeds	-. 6. -	3	-. 6. 4	4
	Manures	-.10. 3	6	-.18. 2	13
	Power	-.17.11	10	-.17. 9	12
	General Expenses	-.17. 2	10	-.13. 7	10
	Labour	2. 6. 7	28	1.10. 6	21
	Rent	1. 7. 4	16	1.11. 7	22
	TOTAL COSTS	£8.12. 5	100%	£7. 3. 2	100%
	3. NET PROFIT	£2. 6. 9	-	£1.16. 4	-

From/

From the above table it will be seen that on the dairy holdings dairying and poultry-keeping together account for nearly three-fourths (72%) of the total output. Even on the mixed holdings with but two exceptions dairy produce is becoming increasingly important. The output per acre in the first group ranges from £5.12s. to as much as £16. 7s. an acre, and in the other group from rather less than £6 to over £14 an acre.

3. CROPS, STOCK AND LABOUR EMPLOYED.

a) Crops. The cropping on the holdings for 1932-33 was as follows:-

	Hay acres	Pasture acres	Wheat acres	Barley acres	Oats acres	Potatoes acres	Roots acres	Other acres	Total acres
i)	7	20½	¾	1	11	3½	3½	¾	48
ii)	8	11	1½	2½	12½	4	5	½	45

i) = Dairy Holdings; ii) = Mixed Holdings.

Whilst the dairy holdings have nearly three-fifths of their land under grass owing to the requirements of the dairy herd, the mixed holdings have very little over two-fifths. The latter, taken as a whole, have only half an acre more under potatoes than the dairy holdings, but grow more cereals and roots. 1932 was a year of bountiful harvests, wheat yielding 26 cwt. per acre, and oats and barley 24 cwt. on these holdings, and it is noticeable that they have sold off a much bigger acreage of crops than last year which amounts to about 9¼ acres on the dairy holdings and 14½ acres on the mixed holdings. This includes virtually the whole of the wheat, the barley and the potato crops, and about half the oat crop. The acreage of oats actually sold off is equal to the acreage of all the other sales crops put together; and since oats occupy one half the arable acreage, this crop plays an important part on these holdings.

b) Stock. Each holding carries a pair of horses whilst the dairy holdings have a herd averaging 9 cows (the number of cows in milk ranging from 5 to 11), and about 7 other cattle consisting mostly of young stock to be drafted into the dairy herd in due course. Cross cows are mostly favoured, but one holder carries a very fine herd of Ayrshires, all officially recorded and yielding over 1,000 gallons; two of them also run small flocks of Blackface ewes, whilst two others buy in small flocks of store sheep for winter feeding.

The/

The mixed holdings carry but two or three dairy cows but have a number of store and feeding cattle. Two of them also maintain small flocks of Half bred ewes, which may be further supplemented by feeding sheep bought in in the autumn. On both groups of holdings pigs are almost entirely absent.

- c) Labour. On an average these holdings find employment for one other person besides the smallholder and his wife, all told 12 persons (7 men and 5 women) being regularly employed on the thirteen holdings, the majority of them not being members of the holder's own family. Four holdings however do not employ a regular worker at all; seven employ one; one employs two; and one, an intensive dairy holding, three. Whilst the average labour bill on the dairy holdings (including board and allowances of the holders' family other than himself and his wife) amounts to £112 per annum and that of the other holdings £68 i.e. nearly £1 a week less, there is much variation between one holding and another; one holding has an annual labour bill of over £270, another one of less than £1. Below is given an analysis.

	Labour Bill per holding	Regular Workers' Wages		Total	Casual Labour	Insurance
		Family	Others			
Dairy Holdings	£112 = 100%	36%	41%	77%	19%	4%
Mixed "	£68 = 100%	-	74%	74%	23%	3%
All "	£92 = 100%	24%	53%	77%	20%	3%

Board and allowances make up rather less than one-fifth of the total labour bill, and about one-fourth of the regular workers' total remuneration. It is noticeable that the labour costs show a slight fall on the year.

4. CAPITAL INVESTED.

The tenant's capital invested at the commencement of the accounting year, exclusive of crops in the ground, works out at almost exactly £500 for each type of holding, and is distributed as indicated in the table below:-

Average/

Average Capital Invested in May 1932 (excluding Crops in the Ground).

	<u>7 Dairy Holdings</u>			<u>6 Mixed Holdings</u>		
	Per Holding No.	Per Acre £ s. d.	Per Cent %	Per Holding No.	Per Acre £ s. d.	Per Cent %
<u>Livestock.</u>						
Horses	(2) 30	-.12. 4	6	(2) 60	1. 6.10	12
Dairy Cows	(9) 176	3.13. 3	35	(3) 59	1. 6. 5	12
Other Cattle	(7) 51	1. 1. 3	10	(10) 131	2.18. 5	26
Sheep	23	-. 9. 9	5	15	-. 6. 6	3
Pigs	7	-. 2. 9	1	2	-. -. 9	1/2
Poultry	27	-.11. 2	6	34	-.15. 2	7
Total Livestock	£314	£6.10. 6	63%	£301	£6.14. 1	60 1/2%
Produce	17	-. 7. 2	4	31	-.14. -	6
Implements	166	3. 9. 4	33	167	3.14. 2	33 1/2
TOTAL	£497	£10. 7. -	100%	£499	£11. 2. 3	100%

Thus, to provide the live and dead stock of a holding of 45 - 50 acres, the tenant has invested approximately £500, equal to £10 or £11 an acre, exclusive of growing crops, unexhausted manurial residues etc., and these average figures are certainly not high. In each group livestock accounts for rather less than two-thirds of the capital invested, and implements and fixtures for rather less than one-third. Even on the dairy holdings, the value of the cows and other cattle combined does not absorb one-half of the tenant's capital. Within each group there is a very great variation in the amount of capital invested, as well as in its distribution: in the dairying group it ranges from £6 an acre to nearly £20, and in the mixed holdings from £5 up to £15.

5. COMMENTS ON THE FINANCIAL RESULTS.

Some changes have occurred in the composition of these groups of holdings since last year, but below is set out a comparison of output and costs confined to those holdings the records of which are available for the past three years:-

Output/

Output and Costs: a 3-year comparison.

Average per Holding	3 Dairy Holdings			4 Mixed Holdings		
	1930-31.	1931-32.	1932-33.	1930-31.	1931-32.	1932-33.
Output of Livestock	£ 453	£ 421	£ 415	£ 208	£ 222	£ 186
" " Crops	49	72	32	217	251	183
Total Output	£502	£493	£447	£425	£473	£369
Total Costs	379	398	378	302	366	318
NET PROFIT	£123	£ 95	£ 69	£123	£107	£ 51

Whilst the output of the dairy holdings has continuously declined, that of the mixed holdings rose in 1931-32 largely owing to the excellent potato prices for the 1931 crop, only to fall again much more steeply in 1932-33; and whilst costs of production have shewn a similar movement in both groups they are now, on the whole, no lower than in 1930-31. Hence, in both groups, profits have continuously declined, so that the "average smallholder" is fully £1 a week worse off now than he was two years ago - a large slice out of his total income. The mixed holdings have been worse hit than the dairy holdings due to the greater importance thereon of the feeding of cattle and the production of potatoes - the two "black spots" of the recent farming year.

The relatively better position of the 7 dairy holdings as a group is reflected this year in their higher turnover, their quicker returns, their higher profits, and their higher return on their capital invested, as will be seen below.

	Turnover per acre.	Period for Turnover of capital.	Profit per acre.	Profit as % of Capital Invested.
7 Dairy Holdings	£13.11. 2	9 months	£2. 6. 9	23%
6 Mixed "	£10. 7. 4	13 months	£1.16. 4	16%

The decline in the fortunes of the dairy holdings is due primarily to a fall in the price of milk; in the case of the mixed holdings it is due to the very low prices of potatoes and fat cattle. The/

The two holders who retail their milk have experienced a fall of 2d. to 3d. per gallon sold, and those who wholesale it have scarcely been able to maintain the moderate prices of last year. Milk sold in the alternative form of butter at 1/3d. a lb. represents a return of only 6 $\frac{1}{4}$ d. per gallon* of milk so used.

Potatoes have brought in wretched prices averaging only £1.18. 4d. per ton, for which not even yields as high as 10 tons per acre or more could compensate. The experiences of one holder who regularly grows 6 $\frac{1}{2}$ acres of maincrop potatoes may be taken as typical, to show how the much lighter 1931 crop brought in a far better financial return than the heavy 1932 crop.

	Yield per acre.	Tons Sold.	Total Receipts.	Return per acre.	Average Price per ton.
1931-32.	6 tons	36 $\frac{1}{4}$	£303	£46 $\frac{1}{2}$	£8. 7. 2
1932-33.	10 $\frac{1}{2}$ tons	58 $\frac{3}{4}$	£117 $\frac{1}{2}$	£18	£2. - . -

A return of £18 per acre is far better than most people obtained from the 1932 potato crop; so that the holders who let a few acres of land to potato merchants at £12 to £13 an acre found themselves better off this year than their neighbours who stood the risks of the market.

Fat cattle have proved even worse than in 1931-32; one holder whose stores are still costing him approximately £15 a head has seen the price of his finished beasts fall away from nearly £27 down to below £23 (and they are still falling), his gross profit margin meantime shrinking from £10.11s. to £7. 5s. per beast - a margin quite inadequate to cover the costs of feeding, labour and shelter.

One or two of the smallholders were fortunate enough to benefit from the rise in sheep prices which set in late in 1932. Two of them for instance bought in store lambs in September numbering 103 all told at an average price of 10/6d. a head; these were sold fat the following December, January and February at an average price of 23/10d. a head, well over double the in-buying price. Feeding sheep and the wheat quota were the two redeeming features of the year, since cereal prices continue to rule very low, wheat from these holdings averaging 5/10d. per cwt., barley 6/8d., and oats 5/9d.

To sum up, it can be stated, as last year, that "with so small a group it would be both difficult and dangerous to dogmatise on the factors making for success; and probably the personal factor and geographical situation are of prime importance"; again it is found that "neither high output, nor high capitalisation, nor high investment in livestock is unfailingly associated with high profits".

* Assuming 2 $\frac{1}{2}$ gallons of milk are required to make 1 lb. of butter.

Dr. AVERAGE FARM TRADING ACCOUNT OF 13 EAST OF SCOTLAND SMALLHOLDINGS IN 1932-33. Cr.

Average Size of 7 Dairy Holdings 48 acres.
 " " " 6 Mixed " 45 "

	7 Dairy Holdings		6 Mixed Holdings			7 Dairy Holdings		6 Mixed Holdings	
	Per Holding No.	£	Per Holding No.	£		Per Holding No.	£	Per Holding No.	£
To Valuation at 28 May 1932 (incl. Growing Crops)	-	522	-	585	By Valuation at 28 May 1933 (incl. Growing Crops)	-	550	-	651
To <u>Livestock Purchases.</u>					By <u>Livestock Sales.</u>				
Horses	-	-	-	5	Dairy Cows, cast or fat	2	28	1	6
Dairy Cows	2	33	1	17	Other Cattle	5	32	10	150
Other Cattle	2	10	8	82	Sheep, fat or store	29	34	13	14
Breeding Ewes	-	-	5	6	Pigs	3	5	1	4
Store Sheep	15	8	6	3	Poultry	-	5	-	6
Pigs	-	-	12	3	Eggs		53		75
Poultry & Eggs	-	2	-	8	Milk		379		44
Milk		81		-	Butter		2		1
To Implements etc. bought		29	12		By <u>Crops Sold.</u>				
" Feeding Stuffs "		113	56		Wheat (incl. Quota)		6		5
" Seeds		15	14		Barley		6		17
" Manures		24	41		Oats		27		52
" Labour (incl. Board & All'ces.)		112	68		Potatoes		44		68
" Rent (incl. Grazing taken)		66	71		Other Crops		9		10
" Repairs, Small Tools &c.		22	22		By Produce Consumed		14		16
" General Expenses		47	29		" Miscellaneous Receipts		8		-
" Net Profit for the year		118	97						
		£1202		£1119			£1202		£1119

6. INTERPRETATION OF THE FINANCIAL RESULTS.

Only one out of the thirteen holdings made an actual loss on the year's working (a small one of just over £5); the majority made profits below £100 - but a modest sum with which to meet their personal and household expenditure for the year - whilst each group contains at least one exceptional man who made a profit of well over £200.

The profit earned may be regarded from another angle i.e. as the surplus which it would leave over and above the sum required to cover 4% interest on the tenant's capital invested in live and dead stock, together with a weekly wage of 35/- in return for his manual work: this is regarded as the minimum remuneration, and it is not suggested either that it is adequate for the interminable and arduous hours of toil which a smallholder (and his wife) usually put in on their holding, or that an efficient man would be content with such a low wage in any other sphere.

Average Management Reward to 13 Smallholders in 1932-33.

	7 Dairy Holdings	6 Mixed Holdings	All 13 Holdings
Average net profit per holding	*£113	*£81	*£98
Deduct a) 4% interest on capital	20	20	20
b) Wage for manual work (35/- a week)	91	91	91
Balance = Reward for Management	£2	-£30	-£13
	Surplus	Deficiency	

Thus even allowing the minimum return for the use of capital and labour, the surplus reward for management amounts to but £2 per holding to the dairy group, whilst on the others there is a deficiency of £30. Measured by this standard, only three dairy holdings and one mixed holding shewed a real surplus, but in three of these four cases the surplus amounted to over £100 i.e. over £2 a week.

Hence if we recollect that these groups are composed of holdings which are for the most part better managed and more profitable than the general run of smallholdings in this area, it is apparent that smallholders must, like other groups of farmers, be experiencing a period of lean years. Even so, a price of £4 per ton for the 1932 potato crop would, by itself have put a very different complexion/

* Excluding growing crops from the accounts.

complexion on the year's results. But the salient fact revealed by this investigation is that, even to-day, notwithstanding all the difficulties of the past year, there are still smallholders successful enough to be making well over £200 a year from 40 or 50 acres of land as the fruits of their labour, their management and their savings - sufficient to secure to them a comfortable livelihood.

August, 1933.