AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Sheep Contribution O.S.

GIANNINI FOUNDATION OF AGRICULTURAL ECONOMICS LIBRARY

THE WEST OF SCOTLAND AGRICULTURAL COLLEGE

(ECONOMICS DEPARTMENT)

HILL-FARM FINANCIAL RETURNS

1951 LAMB CROP AND WOOL CLIP

By

J. B. McCREATH

REPORT No. 9

June, 1953

6 BLYTHSWOOD SQUARE,

GLASGOW, C.2

Recent Publications of this Department include :—

No. 5—POULTRY COSTS INVESTIGATION.
(Year ended 30th September, 1952.)

No. 6—TRACTOR OPERATING COSTS, 1951-52.
(A Summary for Twenty Medium Tractors.)

No. 7—FARM LABOUR STUDIES, No. 3—POTATO HARVESTING.
(Some Aspects of the Labour Organisation.)

No. 8—COSTS OF MILK PRODUCTION, 1951-52.
(Averages from 150 Dairy Herds.)

Copies of these Reports may be had on application.

HILL-FARM FINANCIAL RETURNS

1951 LAMB CROP AND WOOL CLIP

Foreword

This report is one of a series of annual reports dealing with the financial results of a sample of hill-farms in the College area. The number of farms in the sample varies slightly from year to year, but they are all commercial farms and are not, in any way, a specially selected sample.

During the year ended June, 1952, financial accounts were obtained from 55 hill-sheep farms in the College area. All but four of these were considered to be typical hill-farm accounts. Of the 51 remaining, 40 accounts had closing valuation dates in October, November, or December, 1951 ; the other 11 in March, April, or May, 1952. Thus the majority of the records covered the winter of 1950-51 and all dealt with the disposal of the 1951 lamb crop and wool clip.

The farms were situated in the following counties :—

Argyll, Dunbarton and West Perth	39
Stirling, Clackmannan, Lanark, Renfrew and Ayr	7
Dumfries and Kirkcudbright	5
	51 farms.

Furthermore, 43 farms produced Blackface lambs and only 8 farms reared Cross or Cheviot lambs. Thus the sample tends to represent Blackface flocks under Central and West Highland conditions. Certainly the Southern Upland farms, especially those with Cross Lambs or Cheviot lambs, are under-represented.

The weather of the 1951 lamb crop year was very poor. Following a wet autumn in 1950 in which harvesting of grain and fodder crops was difficult, the winter of 1950-51 was unusually prolonged. Many farms were very scarce of fodder and had to pay high prices for hay. It was probably not so much the severity as the length of the winter which caused the most harm. Ewes were poor in condition and with the shortage and lateness of Spring grass, in many cases they had not enough milk for their lambs. Generally speaking, the 1951 lambing season was one of the most trying for many years and mortality among ewes and lambs was high. This is borne out to a certain extent by the figures in Table VIII and the low marking percentages in Table VI. The autumn of 1951, however, was open and mild and the 1951-52 winter was much more favourable than the previous one. However, only those eleven accounts with valuation dates in March, April or May, 1952, cover this better winter season.

Considering these very unfavourable conditions, financially the 1951 lamb-crop year was not altogether unsatisfactory, at least so far as the farms in the sample were concerned. This present report, covering 51 farms in the province, gave an average net profit per ewe of 24/– as against 16/3 per ewe over 46 farms in the 1950 report.

Undoubtedly the main factor which counteracted the effect of the heavy stock losses and low lamb marking-counts (with the resultant drop in numbers available for sale), was the high price of wool. At 5/10d per lb., a record price for the producer, the price of Blackface wool was approximately 133⅓% higher than the 1950 figure of 2/5¾d per lb. On a 4 lb. fleece, this represents an increase in revenue of 13/5 per sheep clipped. During the period under review, some farms received a wool bonus but as this bonus was related to the 1950 clip, it was omitted from the 1951 wool revenue.

In general, store sheep prices at Scottish markets in the autumn of 1951 were higher than in 1950, although, in some instances, not so high as the prices prevailing in 1949. The increase was partly due to a shortage of saleable sheep, particularly of ewe lambs.

The Hill Sheep subsidy pertaining to the year under review, was at the rate of 2/6 per ewe and all the accounts in the sample were credited at that rate. This was a drop of 3/6 per ewe compared with 1950 (6/–).

ACCOUNTING METHOD.

Before dealing with the financial results, a definition of the terms used and the accounting method followed is necessary.

All accounts are prepared on a tenancy basis. **Trading Expenditure** and **Trading Revenue** relate to all normal tenancy outgoings and income on the farms, but exclude any purchases or sales of new capital equipment, or any expenditure on capital improvements such as new steadings, cottages, etc. All expenses and revenue arising out of Ownership are excluded, as are all payments of Income Tax.

Total Expenditure and **Total Revenue** include all normal tenancy outgoings and income and also all expenditure on new equipment or structures, or income from sales of implements, cars, etc.

Depreciation was charged on all equipment on hand at the date of the opening valuation and also on all new equipment and structures bought or erected during the year. The rates used for machinery are those allowed for income-tax purposes (5% plus one-quarter; 10% plus one-quarter, etc.), while for new structures an annual allowance of one-tenth of net outlay was applied. It is to be noted, however, that "initial" allowances on new equipment were NOT charged among depreciation. The gross charge for depreciation was offset by the value realised for any equipment sold.

Stock and Crop Valuations at the opening and closing dates of the financial year were generally on a conservative basis either of market value or estimated cost of production.

Net Profit represents the balance between Trading Revenue and Trading Expenditure, less the charge for depreciation, plus or minus any increase or decrease in the Stock and Crop Valuations during the year.

Regarding the figures of Net Profit, several points require to be noted. At this stage, no charge has been made for any manual work done by the farmer or his wife, nor has any charge been made for interest on capital invested in tenancy of the farm. Expenditure charged includes all actual payments for, or estimates of, the cash value and perquisites of all hired and family labour employed on farm work, excepting only farmer and wife. Revenue includes all grants and subsidies; also a share of rent against the dwelling-house, an estimate of the value of produce taken for the house or given as perquisites, and a share of car-running expenses, transferred to the domestic account.

Surplus.—This term has been used more commonly throughout the report as a measure of profitability than has Net Profit. To obtain this figure of Surplus there was added to expenditure an estimate of the value of the manual work done on each farm by the farmer; the basis of the calculation being on a scale rather higher than the minimum rates for specialist workers as scheduled in the Wage Board Orders. In addition a charge was made for the value of the manual work done by the farmer's wife. This assessment of the extent to which the work of farmer and wife augmented the labour of hired or family workers was possible only on an approximate basis, but was considered necessary in view of the importance of the farmer's work, especially on the smaller farms in this area. Neither the figures of Net Profit nor of Surplus make any allowance for interest on capital invested in tenancy.

Where figures have been expressed PER EWE, the basis of the calculation was the average of the numbers of ewes carried at the opening and closing valuation dates, except where otherwise stated.

General Average.

The following table gives, in summary form, the average financial results over the 51 farms, regardless of size or breed.

TABLE I.

AVERAGE NET PROFIT AND SURPLUS PER FARM AND PER EWE.

51 Farms.

Average Size of Farm	2,386 acres.
Average Number of Ewes per Farm	854
Average Stock-Carrying Capacity	2·8 acres per ewe.

		Per Farm.		Per Ewe.
Trading Revenue exceeded Trading Expenses by		£1205		£1 8 4
DEDUCT Depreciation on Equipment		186		4 4
		£1019		£1 4 0
ADD Increase in Stock and Crop Valuation		3		Neg.
NET PROFIT		£1022		£1 4 0
DEDUCT Average Charge for Farmer's Manual Work ...	£197		4/7	
Wife's Manual Work ...	37		10	
		234	—	5 5
SURPLUS ...		£788		£0 18 7

It should be kept in mind that these per farm figures are AVERAGE figures obtained by dividing the grand totals of each heading by 51. For example, on 13 of the farms there was no charge for farmer's manual work for various reasons, *e.g.*, estate farms in hand, led farms, illness, etc. Consequently, when the total figure of farmer's manual work for 38 farms is spread over the 51, the average figure obtained appears low in relation to a representative charge for full-time work.

As Table I. shows, on the average farm carrying some 850 ewes, there was a Surplus of £788 per farm or 18/7 per ewe, after allowing for the manual work of the farmer and his wife. Almost all of this Surplus was made up of revenue (including subsidies) derived from the year's trading transactions; the change in valuation being only £3.

Range of Profitability.

Although the surplus per ewe averaged out at 18/7 for the 51 farms, there was a very wide variation from farm to farm. This ranged from a deficit of 39/- per ewe to a surplus of 68/- per ewe. The following table gives the distribution of deficits and surpluses in the sample.

TABLE II.

RANGE OF PROFITABILITY.

Per Ewe.

Range. Shillings per Ewe.	Number of Farms with a Deficit.	Number of Farms with a Surplus.
0 – 10	3	9
10 – 20	3	10
20 – 30	1	12
30 – 40	4	8
Over 40	...	1
Total	11	40

Eleven of the 51 accounts in the sample, or approximately one farm in five, showed a deficit.

Group Averages.

The 51 farms were divided into two main groups, *viz.*, farms producing Blackface lambs only and those producing Cross or Cheviot lambs.

The 43 units with pure Blackface stock were further sub-divided according to size of flock. As two of these flocks were very much larger than the others, they were omitted from the size grouping averages. The remaining 41 farms were grouped as follows :—

	Number.
GROUP A—Farms with less than 500 ewes	13
GROUP B—Farms with 500 to 1,000 ewes	18
GROUP C—Farms with 1,000 to 2,000 ewes	10
	41

As there were only 8 farms with Cross or Cheviot lambs, sub-grouping by breed or size was not worthwhile and they have been left in one grouping, *viz.*

GROUP D—Farms producing lambs other than Blackface 8

TABLE III.

GROUP AVERAGES PER FARM AND PER EWE.

	Group A	Group B	Group C	Group D
Number of Farms	13	18	10	8
Average Size of Farm (Acres)	1117	2230	3236	2094
Percentage of Rough Grazing	96	97	98	96
Average Number of Ewes per Farm	359	725	1275	908
Average Stock-Carrying Capacity (Acres/Ewe)	3·1	3·1	2·5	2·3
Rent per Ewe	4/9	4/5	3/5	7/5
Net Profit per Farm	£328	£672	£1256	£1593
Surplus per Farm	£14	£397	£1143	£1373
Net Profit per Ewe	18/3	18/7	19/9	35/1
Surplus per Ewe	9d.	11/-	18/-	30/3

The average farm in all four groups had a net profit and surplus but on the smallest Blackface farms (Group A), after charging £314 for farmer and wife's manual work, the surplus was only £14 per farm or 9d. per ewe. This sum would be quite insufficient to cover interest on capital invested.

The average farm with Cross or Cheviot lambs (D) was dearer rented, more heavily stocked and had a much higher net profit and surplus than any of the three Blackface groups.

Revenue from subsidies and grants amounted to 11/5, 10/-, 4/4, and 15/2 per ewe for Groups A, B, C and D respectively.

In the following two tables, the main items of revenue and expenditure in each group have been expressed as percentages of total revenue and total expenditure.

TABLE IV.

PERCENTAGE REVENUE ON THE AVERAGE FARM PER GROUP.

	Group A	Group B	Group C	Group D
PERCENTAGE OF REVENUE FROM :—	%	%	%	%
Total Cattle Sales	15	12	4	8
Total Sheep Sales	28	36	36	49
Wool Sales	32	33	49	26
Total Crop Sales	4	1	1	1
Total Subsidies	12	11	7	12

This table shows the important part played by the 1951 wool clip in the economy of these farms, especially on the pure Blackface farms. In Group A and Group C revenue from wool exceeded revenue from sheep sales and in the latter group more money came in from wool than from cattle and sheep sales combined. Indeed, almost half the total revenue came from wool in this 1000–2000 ewe group. On the smaller farms (Group A), cattle receipts were relatively more important than on the other groups. Sales of sheep off the Cross and Cheviot group-farm brought in almost half the total revenue of that farm. Crop sales were not of any great importance in any group. Apart from Group C, subsidies and grants accounted for more than one-tenth of the total revenue.

TABLE V.

PERCENTAGE EXPENDITURE ON THE AVERAGE FARM PER GROUP.

	Group A	Group B	Group C	Group D
PERCENTAGE EXPENDITURE ON :—	%	%	%	%
Total Livestock	9	13	16	19
Concentrate Foods	11	7	2	5
Hay and Other Fodders	5	4	1	2
Wintering and Summer Grazing	3	6	12	5
Dip, Medicines, Vet., etc.	4	4	4	2
Total Labour excluding Farmer and Wife ...	31	20	33	21
Farm Rent	7	6	7	7
New Implements and Equipment	4	15	6	16

On the average farm in each group, labour was the largest single item of expenditure. If expressed PER EWE the group figures were :—

	A	B	C	D
Excluding estimate for Farmer and Wife	22/7	14/5	15/9	23/1
Including estimate for Farmer and Wife	40/1	22/–	17/6	28/–

The above figures indicate that, as one would expect, on the smaller farms a higher proportion of the farmer's time was spent in manual work and less on managerial duties. Farm rent made up some 6–7% of total outgoings.

Further details of the average revenue and expenditure in each group are given in Tables I. and II. of the Appendix.

Lamb Disposal.

In general, the 1951 lambing season was one of the worst for many years and many lambs died before marking time. There were considerable differences, however, from district to district and even from farm to farm in some areas. Some districts suffered more severely from inclement weather than others.

In the following table, details of the 1951 lamb crop disposal are given for 31 Blackface farms for which fairly accurate counts were available.

TABLE VI.

LAMB RECONCILIATION.

	Group A		Group B		Group C	
Number of Farms giving Counts	11		12		8	
Average Size of Ewe Flock	359		725		1275	
Marking Percentage	56		57		57	
	Average Number Per Farm	%	Average Number Per Farm.	%	Average Number Per Farm.	%
Marked	196	100	413	100	714	100
Sold	74	37·6	196	47·5	336	47·0
Dead and Unaccounted for	16	8·3	23	5·6	36	5·1
Retained for Stock	106	54·1	194	46·9	342	47·9
	196	100·0	413	100·0	714	100·0

The marking percentage was obtained by expressing the number of lambs marked as a percentage of the number of ewes at tupping time.

The average marking percentages in the three size groups were all around 56–57%. The lambs retained for stock were mainly ewe lambs for ewe flock replacement and, in some cases, a few wedder lambs. When the lamb marking percentage is only 55% or so and the flock is being maintained solely by home bred replacements, almost all the ewe lambs have to be retained. This not only means little or no revenue from surplus ewe lamb sales in the current year, but may also mean a slight lowering in quality of the flock in the future, since no selection has been possible.

Fall in Ewe Hogg Numbers.

In the next table, the average number of ewe hoggs per farm at the beginning of the period under review has been compared with the average number at the end.

TABLE VII.

COMPARISON OF 1950 AND 1951 EWE HOGG NUMBERS.

Per Farm per Size Group.

	Group A	Group B	Group C
Number of Farms	13	18	10
Average Number of Ewes	359	725	1275
Opening Valuation Number of Ewe Hoggs (Ex. 1950 Crop) ...	142	223	368
Closing Valuation Number of Ewe Hoggs (Ex. 1951 Crop) ...	126	197	300
Fall in Numbers	16	26	68
Percentage Fall	11·3%	11·6%	18·5%

In the small and medium size groups, the average farm had over 11% fewer ewe hoggs on hand from the 1951 lamb crop than it had from the 1950 lamb crop. In Group C there were 18·5% fewer. As the majority of these accounts ended in October, November, or December, 1951, most of the winter and spring deaths among ewe hoggs had still to come. It would appear from these figures, at least as far as the large farm is concerned, that this drop in potential replacement sheep would mean a reduction in the numbers of first-crop ewes in 1953. Thus the effects of the bad season may be felt for several years.

Ewe Stock Reconciliation.

A detailed stock reconciliation was possible for 25 of the farms and the average figures per farm are given for the three groups in the following table.

TABLE VIII.

EWE STOCK RECONCILIATION.

	Group A		Group B		Group C	
Number of Farms giving Counts	10		11		4	
	Average Number per Farm	%	Average Number per Farm	%	Average Number per Farm	%
Opening Ewe Stock	346		696		1249	
Gimmers Added	84	24·7	181	26·3	369	28·8
	430		877		1618	
Sold	40	11·6	102	14·7	191	15·3
Dead and Unaccounted for	49	14·1	87	12·5	148	11·8
Closing Ewe Stock	341		688		1279	
Total	430		877		1618	

The number of gimmers added was expressed as a percentage of the closing stock numbers. The percentages of sold and dead were expressed on the opening stock numbers. As all 25 accounts closed in October, November, or December, 1951, the figures of deaths relate mainly to the winter and spring of 1950-51.

On the average farm with less than 500 ewes (A), more ewes died or were unaccounted for than were sold. One of the farmers in this group, however, was of the opinion that his high figure of " unaccounted for " was due, in the main, to sheep stealing. As there are only 10 units in this group, the effect of the large numbers missing on this farm would unduly influence the average figure. Only in Group C did the intake of gimmers cover the "wastage" of cast and dead. Over the 25 farms, 2034 ewes died or were missing out of a total of 16,106 ; a percentage " death rate " of 12·6.

Acknowledgments.

In conclucion, the writer takes this opportunity of expressing his thanks to the farmers for their continued co-operation. Their interest in a difficult year was greatly appreciated. The valuable help afforded by professional accountants is also recorded. Grateful acknowledgment is made of the work done, both in the field and in the office, by other members of staff.

APPENDIX.

Definition of Groups.	No.
Group A—Pure Blackface farms with less than 500 ewes	13
Group B—Pure Blackface farms with 500 to 1,000 ewes	18
Group C—Pure Blackface farms with 1,000 to 2,000 ewes	10
Group D—Farms producing lambs other than Blackface	8
	49

APPENDIX TABLE I.

49 HILL SHEEP FARMS—1951 LAMB CROP YEAR.

Average Revenue Per Farm By Groups.

	Group A	Group B	Group C	Group D
Number of Farms	13	18	10	8
Average Size (Acres)	1117	2230	3236	2094
Average Number of Ewes per Farm	359	725	1275	908
REVENUE FROM :—	£	£	£	£
Horses	2	13	2	2
Cows	100	153	41	194
Bulls	18	6	0	6
Calves	18	34	21	244
Other Cattle—Mainly Store	132	200	103	46
CATTLE	268	393	165	490
Ewes	(49) 137	(118) 369	(193) 564	(164) 546
Rams	26	54	28	213
Store Lambs	(63) 145	(132) 370	(281) 645	(524) 1822
Fat Lambs	(31) 102	(89) 299	(42) 134	(54) 267
Hoggs and Wethers	82	108	110	108
SHEEP	492	1200	1481	2956
Pigs	5	25	0	9
Poultry	6	9	0	1
TOTAL LIVESTOCK	773	1640	1648	3458
Wool	564	1106	2005	1569
Milk, Eggs, etc.	34	51	20	21
TOTAL LIVESTOCK PRODUCE ...	598	1157	2025	1590
Grain Crops	0	5	0	6
Potatoes	75	32	7	14
Other Crops	0	5	5	8
Grazing Let	3	5	26	1
TOTAL CROPS	78	47	38	29
Hill Cattle Subsidy	86	68	19	96
Calf Subsidy	21	17	8	40
Hill Sheep Subsidy	45	102	162	113
Fertility Subsidy	11	23	9	68
Drainage Grant	0	16	0	31
Marginal Land Grant	11	11	9	13
Livestock Rearing Grant	6	19	0	270
Attestation Grant	24	88	16	45
Other Grants	2	18	51	13
TOTAL SUBSIDIES	206	362	274	689
Miscellaneous	6	25	50	25
Perquisites to Workers	4	9	24	23
Produce to House	44	35	16	29
Private Share of Car Expenses	13	20	5	24
Rental Value of House	10	14	5	17
TOTAL "OTHER" REVENUE ...	77	103	100	118
TOTAL TRADING REVENUE ...	1732	3309	4085	5884
Equipment Sold	13	37	0	87
TOTAL REVENUE	1745	3346	4085	5971

Note.—The figures in brackets are the numbers of sheep sold.

APPENDIX TABLE II.

49 HILL SHEEP FARMS—1951 LAMP CROP YEAR.

Average Expenditure Per Farm By Groups.

	Group A	Group B	Group C	Group D
Number of Farms	13	18	10	8
Average Size (Acres)	1117	2230	3236	2094
Average Number of Ewes per Farm	359	725	1275	908
EXPENDITURE ON :—	£	£	£	£
Horses	0	3	1	4
Cows	15	78	0	34
Bulls	16	1	0	6
Calves	5	12	6	6
Store Cattle	3	37	187	233
CATTLE	39	128	193	279
Ewes and Gimmers	0	21	0	236
Rams	68	141	300	211
Store Sheep—Mainly Ewe Hoggs	4	14	0	198
SHEEP	72	176	300	645
Pigs	5	22	1	7
Poultry	6	17	1	11
TOTAL LIVESTOCK	122	346	496	946
Concentrate Foods	140	197	65	253
Hay, Straw, Roots, etc.	77	115	33	100
Grazing—Mainly Wintering	38	161	373	261
Dips, Vaccines, Medicine, etc.	50	106	125	114
TOTAL LIVESTOCK EXPENSES ...	305	579	596	728
Seeds	35	47	42	57
Lime and Manures	60	140	114	306
Sundry Crop Expenses	2	12	4	13
TOTAL CROP EXPENSES ...	97	199	160	376
TOTAL LABOUR	406	522	1007	1046
Implement Repairs and Tools	40	59	40	78
Contract Work	4	32	36	55
Fuel, Light and Power	40	69	31	70
Building, Drain and Fence Repairs ...	17	67	65	277
Farm Rent	85	159	218	338
Other Annual Rent	1	3	10	0
Rates as Occupier	4	8	5	17
General Insurances	5	10	7	13
Car Running	54	82	46	97
Interest on Overdraft	8	21	2	7
Haulage	20	42	52	56
Miscellaneous	39	77	41	101
TOTAL "OTHER" EXPENSES	317	629	553	1109
TOTAL TRADING EXPENSES ...	1247	2275	2812	4205
New Structures, etc.	0	150	54	529
New Implements	25	147	80	74
New Car	23	107	54	176
TOTAL NEW EQUIPMENT ...	48	404	188	779
TOTAL EXPENDITURE	£1295	£2679	£3000	£4984

Note.—The sum of Total Labour includes all cash wages, insurances, perquisites, board and lodgings, etc., for all farm labour, hired and family, EXCLUDING farmer and wife.