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Sheep - Cost of production O.S.

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THE NORTH OF SCOTLAND COLLEGE OF AGRICULTURE

AGRICULTURAL ECONOMICS DEPARTMENT

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BREEDING SHEEP COSTS - 1958

by

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## BREEDING SHEEP COSTS - 1958

### EWE FLOCK COSTS

#### Introduction

This report concerns the second year of a three year study of ewe flock costs in the county of Caithness and covers the period 1st December, 1957-58.

#### Method of Costing

This is exactly as described in the previous year's report (Economic Report No. 70) and details of the standard figures used are given in Appendix II.

27 flocks were costed and they were divided into two groups:

Group A: 14 flocks in which the ewes were crossed with a Border Leicester ram.

Group B: 13 flocks which were pure bred North Country Cheviot.

#### Season

The grain harvest of 1957 was the poorest for very many years, but the root crop varied from farm to farm so that in this sample 20 farms had an adequate supply, while the other seven were very short of turnips. The spring of 1958 was late and the growth of grass so slow that on most of the farms the ewes, or at least those with twin lambs, were hand fed well into May or even later. From mid-summer there was plenty of grass on all the farms and the autumn of 1958 was mild, but wet.

#### Size of Farm

Average sizes were:

<u>Group A:</u> 114 acres arable	Size of Ewe Flock: 98
35 acres rough grazing	
<u>Group B:</u> 131 acres arable	Size of Ewe Flock: 161
472 acres rough grazing	

#### Time of Lambing

April in almost every case. In the case of farms on better land (mainly in Group A) the lambs were born rather earlier in the month than were those on the farms in Group B.

#### Ewe Numbers

The reconciliation of ewe numbers is shown in Table I.

Table I

Ewe Numbers and Lambing Percentage.

Number of Ewes	At Start	Added	TOTAL	Sold	Died	At End	Lambs Reared	%
Group A	1444	551	1995	408	93	1494	1987	138
Group B	2232	585	2817	442	148	2227	2588	116

Weighting each flock evenly, the lambing percentage was 137% in Group A and 118% in Group B. It should be emphasised that by definition the lambing percentage is:

$$\frac{\text{Number of Lambs Reared}}{\text{Number of Ewes put to the ram}} \times 100$$

Table II

Cost per Ewe per Year

	Group A		Group B	
	£ s. d.	%	£ s. d.	%
Foods: Roots	-. 4. -		-. 8. -	
Hay	-. 7. -		-. 4. -	
Oats	1. 5. -		1. -. -	
Purchased	-. 7. -		-. 7. -	
<b>TOTAL FOODS</b>	<b>2. 3. -</b>	<b>31</b>	<b>1.19. -</b>	<b>34</b>
Summer Grazing	-.16. -	11	-.15. -	13
Winter Grazing	-. 7. -	5	-. 6. -	5
Labour	1. 9. -	19	1. 7. -	24
Ewe Depreciation	1.15. -	23	-.13. -	11
Ram Depreciation	-. 8. -	5	-. 5. -	4
Dip, Medicines, etc.	-. 3. -	2	-. 3. -	3
Other Expenses	-. 2. -	1	-. 2. -	2
Share of Farm Over-head Costs	-. 5. -	3	-. 5. -	4
	<b>7. 8. -</b>	<b>100</b>	<b>5.15. -</b>	<b>100</b>

The Range of Costs was:

<u>Group A:</u>	£5 - £6	£6 - £7	£7 - £8	£8 - £9
	1 flock	5 flocks	4 flocks	4 flocks
<u>Group B:</u>	£3 - £5	£5 - £6	£6 - £9	
	5 flocks	5 flocks	3 flocks	

Foods

Most of the farms with a shortage of roots were in Group A and as a result the feeding of these flocks shows a drop in the turnips fed and an increase in oats, hay and other foods as compared with the amounts fed in 1957.

Average Foods Consumed per Ewe

<u>Group A</u>	<u>1958</u>	<u>1957</u>
Turnips, etc.	2.62 cwts.	6.83 cwts.
Oats	1.03	0.90
Hay	1.07	0.75
Other Foods	0.20	0.06

In Group B the feeding was very similar to that of the previous year with the exception that rather more purchased concentrates were fed.

Average Figures were

<u>Group B</u>	<u>1958</u>	<u>1957</u>
Roots	4.90 cwts.	4.82 cwts.
Oats	0.80	0.84
Hay	0.63	0.53
Other Foods	0.20	0.05

Ewe Depreciation

A high price for replacement breeding stock and a low price for cast ewes (sold for fattening) made this the second largest item of cost in Group A.

The range in Ewe Depreciation Costs emphasises the contrast in the two groups.

Table III

Ewe Depreciation per Ewe

	Nil (appreciation)	0 - 10/-	10 - 20/-	20 - 30/-	30 - 40/-	Over 40/-
Group A	-	-	-	5	5	4
Group B	3	3	2	3	1	1

Seven flocks in Group A purchased ewe lambs (see Appendix I), while the other seven maintained the flock by buying in cast ewes. The latter proved slightly more expensive this year:

Ewe Depreciation per Ewe - 7 flocks buying lambs	£1.11. -
7 flocks buying ewes	£1.19. -

Returns

On seven farms in Group A, a number of wether lambs were retained on the farms for fattening and have been valued at the price they would have made had they been sold. The ewe lambs in Group B retained for breeding have been valued at cost of production.

This year almost all lambs disposed of were sold in the store ring and the total livestock reconciliation was:

<u>Disposal of Lambs</u>	<u>Sold</u>	<u>Retained</u>	<u>Total</u>
Group A	1857	130	1987
Group B	1915	673	2588

The margin per lamb is shown in Table IV together with the range in results:

Table IV

Cost and Returns per Lamb and Range of Results

	Group A	Group B
Share of cost per ewe	5. 6. -	4. 17. -
Lamb grazing cost	- . 1. -	- . 2. -
	<hr/>	<hr/>
Sale price or Valn.	5. 7. -	4. 19. -
	7. 7. -	6. 7. -
	<hr/>	<hr/>
Margin	2. -. -	1. 8. -
Wool Receipts	- . 18. -	1. 5. -
	<hr/>	<hr/>
Net Margin including Wool	2. 18. -	2. 13. -
	<hr/>	<hr/>
Range of Results Loss	-	2
Profit £		
0 - 1	1	1
1 - 2	3	-
2 - 3	2	5
3 - 4	4	3
4 - 5	4	1
5 - 6	-	1
	<hr/>	<hr/>
	14	13
	<hr/>	<hr/>

Cost and Return per Ewe

This is a useful figure and it is given in Table V. The profit per ewe is £1.12/- lower in Group A and 18/- lower in Group B compared with 1957. The main factors causing this decrease in profits were: (1) A lower lambing percentage (which more than offsets a rise in the sale price of lambs); (2) In Group A the high figure for ewe depreciation.

Table V

Cost and Returns per Ewe

	Group A	Group B
Sale price or Valuation of Lambs	10. 11. -	7. 15. -
Wool	1. 6. -	1. 11. -
	<hr/>	<hr/>
Cost per Ewe	11. 17. -	9. 6. -
	7. 11. -	5. 18. -
	<hr/>	<hr/>
Margin per Ewe	4. 6. -	3. 8. -

Tabulation of the Main Results

Co-operating farmers can see their own results compared with the average of their group and the "best 4" farms in Tables VI and VII respectively.

The cost of rearing ewe hoggs is shown in Appendix I.

Acknowledgment

The Economics Department of the North of Scotland College of Agriculture wish to thank the farmers who so willingly supplied the information used in this report.



Table VI

Group A: Tabulation of Main Results

	<u>Average</u> <u>(14 Farms)</u>	<u>Average of</u> <u>"Best 4"</u>	<u>Your Farm</u>
Size of Flock	98 ewes	115 ewes	
Lambing %	137%	156%	
Ewe Deaths %	7.0%	4.7%	
<u>Foods per Ewe:</u>			
Roots	2.62 cwt.	4.75 cwt.	
Hay	1.07 "	1.00 "	
Oats	1.03 "	0.92 "	
Concentrates, etc.	0.20 "	0.18 "	
<u>Cost per Ewe:</u>			
	£ s. d.	£ s. d.	£ s. d.
Foods	2: 3: -	2: 1: -	
Grazing	1: 3: -	1: 7: -	
Labour	1: 9: -	1: 5: -	
Ewe Depreciation	1:15: -	1: 9: -	
Ram Depreciation	-: 8: -	-: 6: -	
Dip, Medicines	-: 3: -	-: 4: -	
Other Expenses	-: 2: -	-: 2: -	
Share of Farm Overheads	-: 5: -	-: 5: -	
	<hr/>	<hr/>	
	7: 8: -	6:19: -	
Lamb Grazing to 1st December	-: 3: -	-: 2: -	
	<hr/>	<hr/>	
TOTAL COSTS	£7:11: -	£7: 1: -	
Receipts per Ewe	11:17: -	14: 1: -	
Margin per Ewe	4: 6: -	7: -: -	
Margin per Lamb	2:18: -	4: 7: -	
Sale Price of Ewes	4:19: -	5:16: -	
Sale Price of Lambs(Wedders)	6: 4: -	6: 6: -	
Sale Price of Lambs(Ewes)	8:15: -	9: 8: -	

Table VII

Group B: Tabulation of Main Results

	<u>Average</u> <u>(13 farms)</u>	<u>Average of</u> <u>"Best 4"</u>	<u>Your Farm</u>
Size of Flock	161 ewes	145 ewes	
Lambing %	118%	141%	
Ewe Deaths %	6.1%	6.1%	
<u>Foods per Ewe:</u>			
Roots	4.90 cwt.	5.34 cwt.	
Hay	0.63 "	0.44 "	
Oats	0.80 "	0.90 "	
Concentrates	0.20 "	0.10 "	
<u>Cost per Ewe:</u>			
	£ s. d.	£ s. d.	£ s. d.
Foods	1:19: -	1:17: -	
Grazing	1: 1: -	1: 3: -	
Labour	1: 7: -	1: 3: -	
Ewe Depreciation	-:13: -	-: 8: -	
Ram Depreciation	-: 5: -	-: 6: -	
Dip, Medicines, etc.	-: 3: -	-: 3: -	
Other Expenses	-: 2: -	-: 1: -	
Share of Farm Overheads	-: 5: -	-: 5: -	
	<hr/>	<hr/>	
	5:15: -	5: 6: -	
Lamb Grazing to 1st December	-: 3: -	-: 3: -	
	<hr/>	<hr/>	
TOTAL COSTS	£5:18: -	£5: 9: -	
Receipts per Ewe	9: 6: -	11: 8: -	
Margin per Ewe	3: 8: -	5:19: -	
Margin per Lamb	2:13: -	4: -: -	
Sale Price of Ewe	6:11: -	6: 2: -	
Sale Price of Lambs(Wedders)	5:18: -	6: 7: -	
Sale Price of Lambs(Ewes)	7:14: -	8: 7: -	

APPENDIX I

COST OF REARING EWE HOGGS

There were 20 records of which 13 were from the flocks in Group B and the remaining 7 from farms in Group A in which ewe hogs were purchased.

Table I

Cost of Rearing Ewe Hoggs (1st December, 1957-58)

Total number of hoggs:	823.	Average number per flock:	41.
Deaths:	12 ( $1\frac{1}{2}\%$ ).		
Foods:	Turnips	£1: 5: -	
	Oats	-: 11: -	
	Hay	-: 2: -	
	Other Foods	-: 2: -	
TOTAL FOODS		2: -: -	
Summer Grazing		-: 16: -	
Winter Grazing		-: 2: -	
Labour		1: 1: -	
Miscellaneous		-: 1: -	
Share of Farm Over-		-: 3: -	
heads			
TOTAL COST OF HOGGS	£4: 3: -	(Range - £2:14/- to £6: 6/-).	
Add cost of Ewe Lambs			
(a) Reared	4:19: -	(b) Purchased	£7:17: -
Cost on entering Flock	£9: 2: -		£12: -: -
(Range - £5:16/- to £14: 5/-).		(Range - £10: 5/- to £15:10/-).	

Roots were fed to all the groups and in most cases the hoggs were folded on the "break". Oats were fed on all farms except one and this year 11 flocks received hay also.

Average amounts fed were:-

Turnips	21.1 cwt. per hogg
Oats	0.43 cwt. per hogg
Hay	0.22 cwt. per hogg

## APPENDIX II

### FOODS

Home grown foods were charged at average cost of production figures adjusted for crop yield.

Average crop yields were: Roots 20 tons per acre (i.e. used)  
Oats 13½ cwt. per acre  
Hay 26 cwt. per acre

For these yields costs were: Roots carted 2/1 per cwt.  
Roots folded 1/6 per cwt.  
Oats £1: 6/- per cwt.  
Hay 7/5 per cwt.

All labour, including that of the farmer, has been included in the cost.

### LABOUR

(a) Stockmen 4/1 per hour  
Tractor Drivers 3/10 per hour  
General Workers 4/- per hour  
(b) Tractors 4/3 per hour

### OVERHEADS

1. 6/9 per £1 man labour
2. 5/- per stock unit

### LIVESTOCK UNITS

1. For overhead cost calculations, the scale used is that recommended by the Scottish Agricultural Economist.

2. For grazing under Caithness conditions

Breeding Cows	1 unit
1-2 yr. cattle	$\frac{3}{4}$ unit
Cattle under 1 yr.	$\frac{1}{2}$ unit
Ewes and Rams	$\frac{1}{4}$ unit
Lambs over 3 months	1/14 unit
Lambs over 6 months	1/7 unit

### GRAZING COST

The method used is that used for the Milk and Feeding Cattle Costs in the North of Scotland.

### SUBSIDIES

No account has been taken of the Marginal Land Grant in lowering the cost of production of crops. Lime and Fertilisers have, however, been charged net (i.e. with subsidies deducted).