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UNIVERSITY OF MANCHESTER
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Costs of Fattening Sheep and Lambs on Grass

1946

Code Number

October 1947

Sheep -
Cost of
production
0.5

This report deals with a survey of the costs of grass sheep in 1946. It summarises the information obtained from 23 farms where dairying, and in one case cattle feeding, were the main enterprises. Sheep on the majority of the farms played only a small part in the farm economy and were commonly kept to clean up the grazing and to utilise other home grown foods surplus to the requirements of dairy stock.

The sheep were managed on two distinct systems and the results have accordingly been given for two groups of farms. On 12 farms fairly stable breeding flocks were maintained while on the remainder "flying" flocks were kept and store sheep were purchased for fattening.

Breeding Flocks

The accounting year for this group of farms ran from October 1945 to September 1946. The numbers of ewes and lambs involved with birth rates and death rates are given in the following table.

TABLE I

	Total	Your Farm
Breeding Ewes (No.)	1073	
Ewes died (No.)	67	
Ewes died (%)	6	
Ewes sold fat (No.)	319	
Ewes sold fat (%)	30	
Lambs born per 100 ewes	138	
Lambs reared per 100 ewes	126	

The number of breeding ewes given is the number put to the ram at the beginning of the period and the same figure was used as the bases for calculating the other items. On individual farms the breeding flocks varied from 12 to 310 ewes; there were four farms with less than 30 ewes, four with flocks of 50 to 60 ewes and four with flocks of 103, 108, 263 and 310 ewes respectively. Variations in other items together with some of the financial information for individual farms are given in an Appendix.

Cost of Keep

Under this head has been included for both the ewes and lambs the costs of food and labour and the expenditure on such items as veterinary fees and medicines.

Grass was the main food and its cost has been obtained by apportioning between sheep and other stock the actual farm costs of all grassland to which the sheep had access. The grazing cost includes the costs of manuring, cultivations, rent, hedging, ditching etc. for all fields grazed throughout the year and a proportion of those costs on fields where a hay crop had been taken. A share of the costs of establishing leys was also

charged. Hay and roots fed to sheep were valued at average costs of production and oats and other concentrates at market values.

Labour was charged at a flat rate of 1/9d. per hour and other expenses at the actual cost incurred by each farmer. No charge has been included for overhead expenses, neither has any allowance been made for any beneficial effects of the sheep.

TABLE II

	Total	Your Farm
Grazing	£1395 12	7
Hay	102 5	3
Concentrates	351 8	8
Roots	334 18	6
Vet. & Medicines	119 3	11
Labour	843 8	4
Total	£3146 17	3
Number of sheep weeks (total)	69,175	
Cost per sheep week (pence)	10.92	

The number of sheep weeks was calculated by using the following equivalents.

- 1 ewe or 1 lamb over 6 months old for 1 week = 1 sheep week
- 2 lambs 3-6 months old = 1 sheep week
- 3 lambs under 3 months old = 1 sheep week

The cost per sheep week varied from 5½d. per sheep week to 1/0¼d. per week. The highest cost was incurred on the farm with the greatest number of sheep and the average of 10.92 pence per sheep week is therefore weighted on the high side. The full range of costs is shown by individual figures in the appendix.

Cost and Returns

In presenting the full costs an estimate has been made of the cost of the ewe flock as distinct from the cost of rearing and fattening lambs by dividing the cost of keep between the two categories according to the numbers of sheep weeks represented by each. The cost of 105 ewe lambs purchased by one farmer early in the year to rear as replacements for the flock has been omitted from the following tables and the cost of keep on that farm, for the appropriate number of sheep weeks, has been deducted.

TABLE III

Breeding Flock

	Total				Your Farm			
	No.	£	s	d	No.	£	s	d
Ewes & Rams at beginning	1062	5141	16	0				
" " purchased	42	305	11	0				
Total (1)	1104	5447	7	0				
Ewes sold	323	1036	1	8				
" died	68							
" & rams at end	713	2990	19	0				
Total (2)	1104	4027	0	8				
Flock depreciation (1-2)		1420	6	4				
Carriage		24	14	0				
Keep of breeding flock		2094	5	10				
Gross cost of breeding flock		3539	6	2				
<u>Credit Wool</u>		478	3	7				
Net cost of breeding flock		3061	2	7				

TABLE IV

Rearing & Fattening Lambs

	Total				Your Farm			
	No.	£	s	d	No.	£	s	d
Net Cost of Breeding Flock		3061	2	7				
Keep of lambs		825	18	6				
Carriage		59	2	3				
Lambs valued in	177	512	10	0				
" born	1486							
Total (3)	1663	4458	13	4				
Lambs sold	1289	4904	6	1				
" valued out	238	836	10	0				
" died	136							
Total (4)	1663	5740	16	1				
Margin (4-3)		1282	2	9				
Margin per lamb sold or valued out	1527		16	9½				
Selling price of lambs (per head)		3	16	1				

Flying Flocks

The farms where 70% or more of the ewes used for breeding were fattened and sold off within the year have been classified as possessing "flying flocks" and included in this group. Sales

of fat ewes amounted to nearly one third of the total sales from these farms while the other two-thirds was fairly equally divided between sales of home-bred lambs and lambs bought in as stores. One farm where all the sheep were purchased as stores has also been included in this group.

The cost of keep and the full costs and returns are given in the following two tables.

TABLE V
Cost of Keep ("Flying" Flocks)

	Total			Your Farm		
	£	s	d	£	s	d
Grazing	934	14	8			
Hay	19	0	0			
Roots	235	12	6			
Concentrates Purchased	9	7	11			
Home Grown	97	12	0			
Vet. Expenses	41	9	8			
Labour	350	8	8			
Sundries	1	0	5			
	<u>1689</u>	<u>5</u>	<u>10</u>			
Number of sheep weeks		45,579				
Cost per Sheep week		8.90				

TABLE VI
Cost & Returns ("Flying Flocks")

		No.	Total			Your Farm		
			£	s	d	No.	£	s
Sheep at beginning	Ewes & Rams	507	1959	15	0			
	Lambs	166	419	5	0			
Purchased	Ewes	120	453	17	9			
	Other sheep	677	1681	19	10			
Births		745						
Total (1)		<u>2215</u>	<u>4514</u>	<u>17</u>	<u>7</u>			
Sales	Ewes	597	2048	15	3			
	Lambs	1235	4588	1	7			
	Wool		258	9	1			
Valuation	Ewes	118	450	10	0			
	Lambs	68	172	10	0			
Deaths		197						
Total (2)		<u>2215</u>	<u>7518</u>	<u>5</u>	<u>11</u>			
Production (2-1)			<u>3003</u>	<u>8</u>	<u>4</u>			
Costs	Keep		1689	5	10			
	Carriage		99	18	7			
Total Costs			<u>1789</u>	<u>4</u>	<u>5</u>			
Margin (Production less Costs)			1214	3	11			
Margin per sheep sold or valued out				12	0			

The methods of obtaining and calculating the costs in Tables V and VI are the same as for breeding flocks, but in this case the costs of ewes and lambs have not been separated and the final figure in Table VI is therefore expressed per head of all sheep sold or valued out. Production is the difference between sales + closing valuation and purchases + opening valuation. The profit margin is the difference between production and costs.

A profit margin per sheep of 16/9¹/₂d. for the first group of farms as compared with only 12/0s. per sheep for the second suggests that breeding flocks with home reared stores are the most profitable form of sheep enterprise. This, however, would be to ignore a difference between the two groups other than the broad distinction between breeding and flying flocks used in classifying the farms. In the first group feeding was more intensive. There was less dependence on grazing and greater quantities of concentrates and roots were fed with the result that although the cost of keep per sheep week was increased, the feeding period was reduced and a higher selling price was realised. The saving in costs from a shorter feeding period added to the extra price received accounted for most of the extra profit.

Also the profitability of the sheep enterprise, as a whole, depends not only on the profit margin per sheep, but also on the number of sheep sold at that profit. From the second group of farms dealt with in this study, 210 fat sheep were sold per 100 acres of grass, and other crops eaten off by sheep, while from the first group only 93 sheep were sold per 100 acres of grass and other crops. The profit margin on the enterprise is thus £176 per 100 acres of grass and other crops for the second group, and £73. 1. 7 for the first group. If it can be assumed that all the sheep carried on the farms in this sample were in fact complementary to other branches of livestock farming, and did not compete for food more seriously in one group than in the other, then flying flocks supplemented by purchased stores were the most profitable. By this method the turnover of sheep was greatly increased and a higher total profit obtained.

APPENDIX

Variations in Numbers of Sheep, Costs & Returns

Farm Number	<u>Breeding Flocks</u>											
	1	2	3	4	5	6	7	8	9	10	11	12
Breeding Ewes No.	12	21	103	50	30	55	51	50	108	20	223	310
Lambs born per 100 ewes	166	133	146	140	153	165	147	170	134	165	135	125
Lambs reared per 100 ewes	166	129	131	124	140	155	116	142	119	150	116	124
Cost of keep per sheep week	11d.	9 $\frac{1}{4}$ d.	6d.	6 $\frac{1}{4}$ d.	7 $\frac{1}{4}$ d.	11 $\frac{1}{2}$ d.	9 $\frac{1}{4}$ d.	5 $\frac{1}{2}$ d.	11d.	11 $\frac{1}{2}$ d.	10 $\frac{1}{2}$ d.	1/0s $\frac{1}{4}$.
Margin per lamb	19/7 $\frac{1}{2}$	41/10	35/4 $\frac{1}{2}$	58/6 $\frac{1}{2}$	59/10 $\frac{1}{2}$	27/8 $\frac{1}{2}$	35/11 $\frac{1}{2}$	45/11 $\frac{1}{2}$	35/9	6/-	Loss 3 $\frac{3}{4}$ d.	10 $\frac{1}{4}$
Selling price of lambs	67/-	87/9	76/2 $\frac{1}{2}$	81/6	91/7 $\frac{1}{2}$	75/4	87/2	76/11	80/8	57/10 $\frac{1}{2}$	57/2	79/6 $\frac{1}{2}$

Farm Number	<u>Flying Flocks</u>										
	13	14	15	16	17	18	19	20	21	22	23
Cost of keep per sheep week	7d.	6 $\frac{1}{2}$ d.	1/2d.	6 $\frac{1}{2}$ d.	10 $\frac{1}{2}$ d.	7d.	9 $\frac{1}{2}$ d.	9 $\frac{1}{2}$ d.	7d.	11 $\frac{1}{2}$ d.	1/3 $\frac{1}{2}$ d.
Buying price of stores per head	49/9 $\frac{1}{2}$	-	54/-	48/-	45/9 $\frac{1}{2}$	60/-	nil	77/9	-	-	-
Selling price of fat sheep per head	86/1	51/10 $\frac{1}{2}$	69/9 $\frac{1}{2}$	58/6 $\frac{1}{2}$	67/3 $\frac{1}{2}$	78/6	61/11	71/0 $\frac{1}{2}$	74/7	71/2	82/8
Margin per head	8/11	3/11 $\frac{1}{2}$	10/4 $\frac{1}{2}$	7/11	5/1 $\frac{1}{2}$	24/4	16/11	13/9	21/2	11/0 $\frac{1}{2}$	14/0 $\frac{1}{2}$

1810

1810

1810