



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 -
Cost of production
O.S.

GIANNINI FOUNDATION OF
AGRICULTURAL ECONOMICS
LIBRARY

SEP 30 1958

THE WEST OF SCOTLAND AGRICULTURAL COLLEGE

HOGG FATTENING - WINTER 1957-58

SOME RESULTS OF SHEEP FATTENING ON 9 FARMS

J. F. Macpherson

HOGG FATTENING - WINTER 1957-58

SOME RESULTS OF SHEEP FATTENING ON 9 FARMS

CONTENTS

	<u>Page</u>
<u>FOREWORD</u>	1
<u>PRELIMINARY DEFINITION OF SOME TERMS</u>	1
<u>SUMMARY</u>	1
<u>THE SAMPLE</u>	2
<u>PROFITABILITY</u>	2
<u>PRICES</u>	3
<u>MANAGEMENT AND FEEDING</u>	3
<u>COSTING METHOD AND TERMS</u>	4
<u>SOME PHYSICAL DATA FROM THREE WINTERS' COSTINGS</u>	5
<u>APPENDIX TABLES</u>	
Table I Number of sheep handled, periods kept, etc.	8
Table II Average number of weeks kept, average weights of bought feed, home grain and roots used	9
Table III Acreage of roots, number of weeks folded, number of sheep per acre, etc.	10
Table IV Average cost structure per head (calculated per sheep sold)	11
Table V Average margins and returns	12

HOGG FATTENING - WINTER, 1957-58
SOME RESULTS OF SHEEP FATTENING ON 9 FARMS

FOREWORD

This report gives the results of a study of the costs of fattening hogs on nine cropping farms during the winter 1957-58.

Six of the farms were in Dumfries-shire and the remaining three in West Perthshire.

In all, sixteen cost records covering 2,370 sheep were prepared, since on some farms more than one breed of sheep was fattened.

The survey and this report are on lines similar to those of the two previous years.

Grateful acknowledgment is made of the help received from the farmers who gave information for this survey.

PRELIMINARY DEFINITION OF SOME TERMS

Margin

The margin is the difference between the average selling price per head (including guarantees) of sheep sold and the average purchase price per head of sheep bought.

Gross Margin

The gross margin is the difference between the average selling price per head (including guarantees) of sheep sold and the average cost price per head obtained by dividing the total purchase price of a number of sheep, not by the number bought, but by the number actually sold. By this method, deaths and casualties etc. are taken into account.

Cash Surplus

The cash surplus is the balance remaining after the deduction from the gross margin of direct cash outlays on bought feed, dip, medicines, haulage and commission etc.

Surplus

This is the final balance which remains after all other costs (estimated cost of home grown feed, roots, grazing, etc., labour and power and estimated overheads) have been deducted from the cash surplus, and a credit allowance made for sheep unsold at the end of the costing, for receipts for casualties and for the residual values of feeding stuffs. All the items in the per head cost structure including the credit allowances are calculated per sheep sold.

SUMMARY

Financial and costing information on sixteen lots of sheep (totalling 2,370 at the start of the costing) is given.

The general average of the margin (selling price including guarantees less purchase price), was £2. 4.10. per head. When deaths and casualties, etc. were taken into account the general average of the gross margin (calculated on the number of sheep sold) was £2. 2. 5. per head. After direct cash outlays, which amounted to 8/2^d per head, were deducted from the gross margin, a cash surplus of £1.14. 3. per head remained. Of the remaining items of cost, that of home grown turnips was the highest averaging 15/11^d per head.

After all cost items were taken into account there was a general average surplus over the whole sample of 6/7^d per head.

THE SAMPLE

This has been grouped according to breeds as follows:-

<u>Breed</u>	<u>No. of Costs</u>	<u>Total No. of Sheep</u>
Cross (Greyface)	5	494
Cheviot	6	964
Blackface	3	782
Others =	2	130
Total	<u>16</u>	<u>2,370</u>

= This refers to one lot of once clipped Blackface widders and one Half-bred lot which are included in the total but for which separate figures are not shown.

Of the six Cheviot costings, four were of South Country Cheviots and two of North Country Cheviots, but all have been grouped together since their sizes were comparable.

PROFITABILITY

The margin between the average buying-in price and the average selling price (including guarantee payments) is shown below:-

<u>Breed</u>	<u>No. of Costs</u>	<u>Average Selling Price</u>	<u>Average Buying-in Price</u>	<u>Margin</u>
		£ s. d.	£ s. d.	£ s. d.
Cross	5	8 9 4	5 12 6	2 16 10
Cheviot	6	7 8 0	5 3 5	2 4 7
Blackface	3	6 10 9	4 14 0	1 16 9
All (incl. the 2 costs not shown separately)	16	7 8 11	5 4 1	2 4 10

When the calculations are based on the number of sheep actually sold, i.e. when deaths and casualties are taken into account, the resulting gross margin averaged as follows:-

<u>Breed</u>	<u>Gross Margin</u>
	£ s. d.
Cross	2 13 4
Cheviot	2 2 6
Blackface	1 14 10
All (incl. the 2 costs not shown separately)	2 2 5

After direct cash outlays on bought feed, dip, medicines, haulage and commission etc., were deducted from the gross margin, the average cash surplus which remained was as follows:-

<u>Breed</u>	<u>Cash Surplus</u>
	£ s. d.
Cross	2 4 6
Cheviot	1 14 7
Blackface	1 8 2
All (incl. the 2 costs not shown separately)	1 14 3

It was out of the above cash surplus that all other costs had to be met before the final surplus figure was reached.

When all these other costs (home-grown feed, roots, grazing etc. labour and power and estimated overheads) were deducted from the cash surplus, and a credit allowance made for sheep unsold at the end of the costing, for receipts for casualties and for the residual values of feeding stuffs, twelve of the costings showed a surplus and the remaining four a deficit.

The average surplus per head for each group was as follows:-

<u>Breed</u>	<u>No. of Costs</u>	<u>No. of Sheep Sold</u>	<u>Surplus</u>
			s. d.
Cross	5	479	3 8
Cheviot	6	945	11 10
Blackface	3	766	6 0
All (incl. 2 costs not shown separately)	16	2316	6 7

Tables IV and V in the Appendix give information about the cost structure, margins and returns.

PRICES

The graph prepared from the price quotations given in the agricultural press, shows the averages of the weekly prices for light, medium and heavy lambs and hoggets at Perth, Dumfries and Annan, from 30th September, 1957 to 8th June, 1958.

The guarantee payments made during the same period are also shown on the graph.

The average prices per lb. (including guarantees) and the average dead-weight (actual or estimated) in lb per head of the sheep in the sample were as follows:-

<u>Breed</u>	<u>Price</u>	<u>Deadweight</u>
	s. d.	lb
Cross	3 8 $\frac{3}{4}$	45
Cheviot	3 8 $\frac{1}{2}$	40
Blackface	3 8	36
All (incl. the 2 costs not shown separately)	3 8	41

MANAGEMENT AND FEEDING

In all 2,370 sheep were costed. Generally they were purchased in the late summer and early autumn of 1957 and after a period of grazing were folded on swedes and turnips and fattened off.

In one Cheviot and one Blackface lot the grazing included rape.

Except for one lot of Cross-breds fattened on turnips with some hay, there was supplementary feeding of a mixture of oats and bought sheep feed concentrate.

Some of the sheep in two of the five Cross-bred lots were not folded but received roots carted out, and the folded sheep, with the exception of one lot, were fed additional carted roots.

All the Cheviot lots were folded on roots.

Of the three Blackface lots one was not folded at all but received roots carted out. The remaining two folded lots received additional carted roots.

The Blackface widders and the Half-breds were folded and the latter were fed additional roots.

For one lot of Cross-breds, for the Half-breds and for some sheep within a Blackface lot, the additional roots were fed out.

Since the sheep in any one lot were not always sold at the one time but were drawn off as they became ready for market, the average length of period of grazing and folding for each lot has been calculated on sheep days and sheep weeks, and is based on the numbers finally sold.

One mainly grass fed lot of Blackfaces was kept on until almost the end of May, and some mainly grazing sheep within a Cross-bred lot were not sold until the beginning of June.

Tables I, II and III in the Appendix give the main physical data about the sample.

COSTING METHOD AND TERMS

Sheep sold store

Those sheep which were sold store have also been included in the costing, since it was possible to give an estimated deadweight at the time of sale.

Credits

Credits have been allowed for any sheep on hand at the end of the costing period and for any receipts for casualties.

Residual values of feeding stuffs have also been credited, having been calculated according to the tables in the Ninth Report (1957) of the Scottish Standing Committee appointed to deal with this.

CHARGES ETC. IN THE COST STRUCTURE

Bought Feed

This has been charged at the price the farmer paid for it.

Oats

Home grown oats have been charged at 18/- per cwt.

Turnips

These have been charged at £40 per acre where the sheep were folded and at £2 per ton when carted out to the sheep.

Hay

Home grown hay has been charged at £8 per ton.

Rape

The grazing of rape was charged at £10 per acre.

Grazing

The estimates of charges for home grazing varied from 6d. to 1/- per head per week. The commonest estimated cost was 6d. per head per week.

Labour

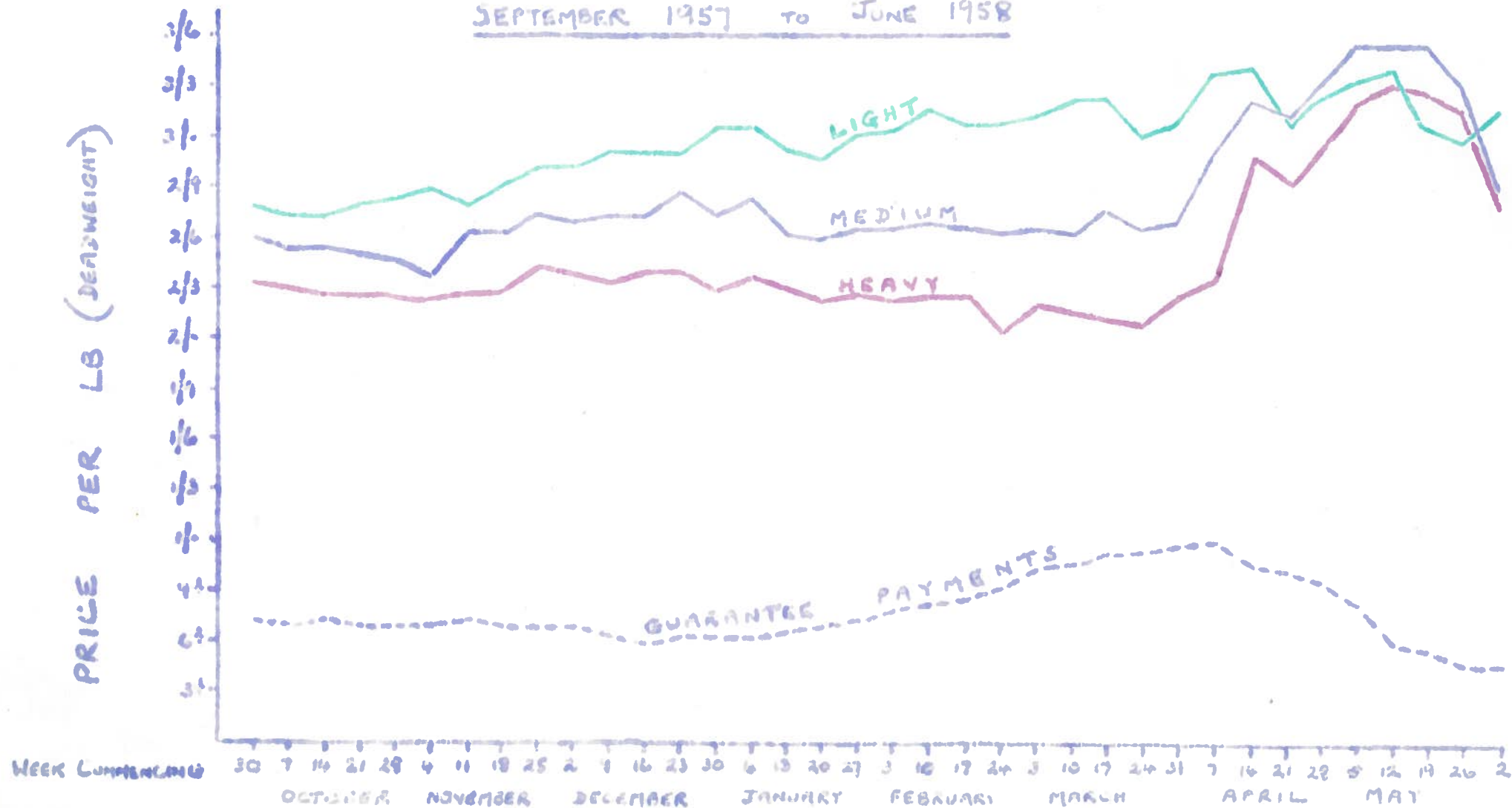
All labour (farmer, family and hired) has been charged at a flat rate of 4/- per hour.

In certain cases a small element of power (when, for example, turnips were taken out to the sheep) has been included under the labour heading and has been calculated at 3/9d. per tractor hour.

FAT LAMB AND HOGGET PRICES (EXCLUDING GUARANTEES)

AVERAGE OF PERTH, DUMFRIES & ANNAN MARKETS FOR THE PERIOD

SEPTEMBER 1957 TO JUNE 1958



GKRB

Source: Scottish Agricultural Press

Miscellaneous expenses

These include the cost of dip and of any medicines or inoculations.

Overheads

These have been based on the labour bill (excluding power) and have been charged at the rate of 7/- per £ labour.

The terms, margin, gross margin, cash surplus and surplus have already been defined.

SOME PHYSICAL DATA FROM THREE WINTERS' COSTINGS

As one of the reasons for starting this small survey was to collect some physical data as a basis for farm planning work, it may be of interest to show some of the figures obtained during the three years.

The table below shows the grouping by breeds.

<u>Breed</u>	<u>Winter of</u>	<u>No. of Costs</u>	<u>No. of Sheep</u>	<u>Deadweight of at Sale</u>	<u>Deaths and Casualties</u>
				lb	%
Suffolk Cross	'55-56	4	703	61	1.4
	'56-57	2	454	56	2.0
	'57-58	-	-	-	-
Half-bred	'55-56	2	205	53	Nil
	'56-57	-	-	-	-
	'57-58	-	-	-	-
Cross	'55-56	9	948	45	1.3
	'56-57	9	1436	44	1.2
	'57-58	5	494	45	3.0
Cheviot	'55-56	3	619	37	1.8
	'56-57	2	523	35	2.9
	'57-58	6	964	40	1.2
Blackface	'55-56	6	904	30	2.7
	'56-57	4	799	31	2.5
	'57-58	3	782	36	2.0

The estimated amounts of feeding per head were as follows:-

<u>Breed</u>	<u>Winter of</u>	<u>Weeks Kept</u> [≡]	<u>Bought feed</u>	<u>Home Grain</u>	<u>Roots</u>
			lb	lb	Cwt
Suffolk Cross	'55-56	16 (10)	11.6	18.9	10.0
	'56-57	17 (11)	4.4	24.3	14.0
	'57-58	-	-	-	-
Half-bred	'55-56	19 (9)	15.7	11.3	10.2
	'56-57	-	-	-	-
	'57-58	-	-	-	-
Cross	'55-56	19 (9)	11.2	15.5	10.2
	'56-57	21 (11)	18.4	22.5	13.1
	'57-58	26 (10)	16.7	13.9	13.0
Cheviot	'55-56	19 (11)	16.8	11.5	8.8
	'56-57	24 (11)	9.1	19.3	12.2
	'57-58	22½ (10½)	14.2	19.1	8.9
Blackface	'55-56	15 (8)	6.2	12.6	5.5
	'56-57	19 (7)	4.1	16.2	6.3
	'57-58	19 (9)	7.9	21.1	6.6

≡

The first figure in this column shows the average length of period from date of buying to selling date. The figure in brackets gives the average number of weeks during which the sheep were folded on roots.

The weight of roots shown in the last column is the weight not only of folded roots used but includes any carted and cut roots which may also have been fed.

In 1956-57 turnips were in some districts more than plentiful, and this may account in certain cases for somewhat higher estimates of roots fed during that winter and spring.

HOGG FATTENING - WINTER 1957-58

APPENDIX

TABLE I	Numbers of sheep handled, periods kept, etc.
TABLE II	Average number of weeks kept, average weights of bought feed, home grain and roots used.
TABLE III	Acreage of roots, number of weeks folded, number of sheep per acre, etc.
TABLE IV	Average cost structure per head (calculated per sheep sold)
TABLE V	Margins and returns

APPENDIX TABLE I

HOGG FATTENING - WINTER 1957-58

NUMBER OF SHEEP HANDLED, PERIODS KEPT, ETC.

	<u>Cross</u>	<u>Cheviot</u>	<u>Blackface</u>	<u>Total</u> [≡]
Number of costs	5	6	3	16
Average of numbers costed	99	161	261	148
Range of numbers costed	41-155	60-362	50-602	28-602
Earliest purchase date	14/8/57	16/8/57	15/8/57	14/8/57
Latest purchase date	20/12/57	18/10/57	1/11/57	20/12/57
Earliest selling date	20/2/58	22/11/57	25/10/57	25/10/57
Latest selling date	5/6/58	7/3/58	26/5/58	5/6/58
Total number home bred	-	-	-	-
Total number bought	494	964	782	2370
Total number sold fat	313	844	599	1882
Total number sold store	166	101	167	434
Total casualties	3	1	2	6
Total deaths	12	11	14	41
Total still on hand	-	7	-	7
% mortality	2.4	1.1	1.8	1.7
Average estimated deadweight (lb. per head)	.45	.40	.36	.41
Average sale price per lb (incl. guarantees)	3/8 ³ / ₄	3/8 ¹ / ₂	3/8	3/8
Average hours labour per sheep	1.0	.5	.4	.6

[≡] This total includes the figures for 1 lot of once clipped Blackfaced wethers and 1 Half-bred lot for which separate figures are not shown.

APPENDIX TABLE II

HOGG FATTENING - WINTER 1957-58

AVERAGE NUMBER OF WEEKS KEPT, AVERAGE WEIGHTS OF BOUGHT FEED, HOME GROWN GRAIN AND ROOTS FED

	<u>Cross</u>	<u>Cheviot</u>	<u>Blackface</u>	<u>Total</u> [≡]
Number of costs	5	6	3	16
Total number of sheep	494	964	782	2370
Total number of sheep sold	479	945	766	2316
Average time kept (weeks)	26	22½	19	22
Average time grazing (weeks)	16	12	10	12
Average time folded on roots (weeks)	10	10½	9	10
Average weight of bought feed eaten (in lb per head for the whole period)	16.7	14.2	7.9	13.7
Average weight of home grown grain eaten (in lb. per head for the whole period)	13.9	19.1	21.1	19.3
Average weight of all roots used (in cwt per head for the whole period)	13.0	8.9	6.6	9.4

[≡] This total includes the figures for 1 lot of once clipped Blackfaced wedders and 1 Half-bred lot for which separate figures are not shown.

1
6
1

APPENDIX TABLE III

HOGG FATTENING - WINTER 1957-58

ACREAGES OF ROOTS, NUMBER OF WEEKS FOLDED, NUMBER OF SHEEP PER ACRE, ETC.

	<u>Cross</u>	<u>Cheviot</u>	<u>Blackface</u>	<u>Total</u> [≡]
Total acreage of roots folded	9½	16	9½	38½
Estimated total weight of folded roots used (tons)	229.4	419.0	229.5	947.0
Estimated weight of folded roots used per acre (tons)	24.3	26.0	24.2	24.6
Total number of sheep folded	372	964	732	2198
Total number of these sold	356	945	716	2143
Approximate number of weeks folded (based on number of folded sheep sold)	14	10½	10	11
Average number of sheep to the acre (based on number of folded sheep sold)	37	59	75	56
Average weight of folded roots used per day (in lb. per head)	15	14	10	13
With a yield of 20 tons to the acre to be eaten off in a 10 week period at the above rate, the number of sheep folded to the acre would be:	43	47	62	51

≡

This total includes the figures for 1 lot of once clipped Blackfaced wethers and 1 Half-bred lot for which separate figures are not shown.

APPENDIX TABLE IV

HOGG FATTENING - WINTER 1957-58

AVERAGE COST STRUCTURE PER HEAD (CALCULATED PER SHEEP SOLD)

	<u>Cross</u>	<u>Cheviot</u>	<u>Blackface</u>	<u>Total</u> [#]
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Cost Price	5 16 -	5 5 6	4 15 11	5 6 6
Haulage to farm	- - 6	- - 3	- 1 1	- - 8
Bought feed	- 4 10	- 4 2	- 2 2	- 3 11
Miscellaneous expenses	- - 9	- - 11	- - 8	- - 10
Haulage to market	- - 8	- - 5	- - 8	- - 7
Commission etc.	- 2 1	- 2 2	- 2 1	- 2 2
Cash outlay	- 8 10	- 7 11	- 6 8	- 8 2
Oats	- 2 3	- 3 1	- 3 5	- 3 1
Turnips	1 2 7	- 13 10	- 11 2	- 15 11
Hay	- 2 -	- - -	neg	- - 6
Rape	- - -	- 1 9	- 1 4	- 1 1
Total home grown feed	1 6 10	- 18 8	- 15 11	1 - 7
Grazing	- 11 8	- 4 1	- 5 9	- 6 2
Labour	- 4 -	- 2 -	- 1 7	- 2 6
Overheads	- 1 4	- - 8	- - 6	- - 10
GROSS COST	8 8 8	6 18 10	6 6 4	7 4 9
Sheep on hand	- - -	- - 9	- - -	- - 4
Casualties	- - 10	- - 2	- - 3	- - 3
Residual values	- 2 2	- 1 9	- 1 4	- 1 10
Total credits	- 3 -	- 2 8	- 1 7	- 2 5
NET COST	8 5 8	6 16 3	6 4 9	7 2 4

[#] This total includes the figure for 1 lot of once clipped Blackfaced widders and 1 Half-bred lot for which separate figures are not shown.

APPENDIX TABLE V

HOGG FATTENING - WINTER 1957-58

MARGINS AND RETURNS

	<u>Cross</u>	<u>Cheviot</u>	<u>Blackface</u>	<u>Total</u> ⁼⁼
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Average selling price (incl. guarantees)	8 9 4	7 8 -	6 10 9	7 8 11
Average buying-in price	5 12 6	5 3 5	4 14 -	5 4 1
MARGIN (excluding deaths, casualties, etc.)	<u>2 16 10</u>	<u>2 4 7</u>	<u>1 16 9</u>	<u>2 4 10</u>
MARGINS AND RETURNS				
(Calculated per sheep sold)				
Selling price (incl. guarantees)	8 9 4	7 8 -	6 10 9	7 8 11
Less cost price	5 16 -	5 5 6	4 15 11	5 6 6
GROSS MARGIN	<u>2 13 4</u>	<u>2 2 6</u>	<u>1 14 10</u>	<u>2 2 5</u>
Less bought feed and direct cash outlays	- 8 10	- 7 11	- 6 8	- 8 2
CASH SURPLUS	<u>2 4 6</u>	<u>1 14 7</u>	<u>1 8 2</u>	<u>1 14 3</u>
Less home grown feed and grazing	<u>1 18 6</u>	<u>1 2 9</u>	<u>1 1 8</u>	<u>1 6 9</u>
	- 6 -	- 11 10	- 6 6	- 7 6
Add credits	- 3 -	- 2 8	- 1 7	- 2 5
	- 9 -	- 14 6	- 8 1	- 9 11
Less labour	- 4 -	- 2 -	- 1 7	- 2 6
	- 5 -	- 12 6	- 6 6	- 7 5
Less overheads	- 1 4	- - 8	- - 6	- - 10
SURPLUS	<u>- 3 8</u>	<u>- 11 10</u>	<u>- 6 -</u>	<u>- 6 7</u>

⁼⁼ This total includes the figure for 1 lot of once clipped Blackfaced widders and 1 Half-bred lot for which separate figures are not shown.