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Sheep - Cost of production o.s.

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HOGG FATTENING - WINTER 1955-56

SOME RESULTS OF SHEEP FATTENING ON 18 FARMS

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INTRODUCTION

Early this year a small survey was made in order to obtain information on the profitability of the winter fattening of hogs. It was also hoped to collect some physical data which might be of interest to co-operators and which could be used as a basis for some notes required by the Economics Department on low ground sheep in the College area.

This report gives the results of a study of the costs of fattening hogs on eighteen cropping farms during the winter 1955-56. Eight of the farms were in Dumfriesshire and the remaining ten in West Perthshire. In all twenty four cost records were prepared since on some farms there was more than one breed of sheep being fattened.

SUMMARY

The report gives some financial and costing information on twenty four lots of mainly root fattened sheep (totalling 3,397 at the start of the costing) most of which were sold during the period from December 1955 to March 1956.

The general average of the margin (selling price less purchase price), was £1.18. 5. per head. When calculated on the numbers of sheep sold i.e. when allowance is made for deaths and casualties the general average margin was £1.16. 1. per head. Bought feed and direct cash outlays averaged 7/2d. per head leaving a cash surplus of £1. 8.11. out of which all other costs had to be met. Of these the cost of home grown turnips was the greatest averaging 18/- per head. Of the 24 records 12 showed a profit and 12 a loss. Over the whole sample there was a general average loss of 1/11d. per head.

During the period to which this study relates the heavier breeds made the biggest losses. Towards the end of March 1956 prices improved and it is possible that sheep sold at that time may have been more profitable than those in the costing sample.

NOTES ON METHOD

Home bred sheep

These have been valued in at the farmer's estimate of their market value at the beginning of the fattening period.

Sheep sold store

The small proportion of the sheep in the sample sold store has been included in the costing, since estimates of their deadweight at the time of sale were available.

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 been calculated according to the tables in the Seventh Report (1955) 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 the farmer's estimate of their value at market prices current at the time - usually just over 20/- per cwt.

Turnips

The charge for these has depended on the yield per acre. Estimates of this varied from 14 to 28 tons per acre, most falling within the range 15 - 25 tons. Prices charged were based on costings done by the College and varied from £2.10/- to £3.10/- per ton shawed and delivered at the steading. Where the sheep were folded and the turnips eaten off, the charge was reduced by a third. In several cases the weight of turnips eaten off per acre by the sheep was not the total yield since a certain proportion of the crop was removed to feed other stock.

Hay

Home grown hay has been charged at approximately £7 per ton.

Rape

The charge for this was based on the farmer's estimate of grazing costs and varied from £5 to £7 per acre.

Grazing

The charges for home grazing have been estimated at from 9d. to 1/6d. per head per week. The commonest charge was 1/- per head per week. In the two cases where grazing was hired, the actual price paid was charged.

Labour

All labour (farmer, family and hired) has been charged at a flat rate of 3/4d. per hour.

The labour involved was not heavy, mainly looking the sheep, taking out feed and moving the stakes and nets where the sheep were folded on roots. Time spent on the cutter where turnips were cut to the hogs has also been included.

Miscellaneous expenses

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

Overheads

These have not been easy to estimate and in this survey have been based on the labour bill, being charged at the rate of 6/- per £ labour.

THE SAMPLE

This has been grouped according to breeds as follows:-

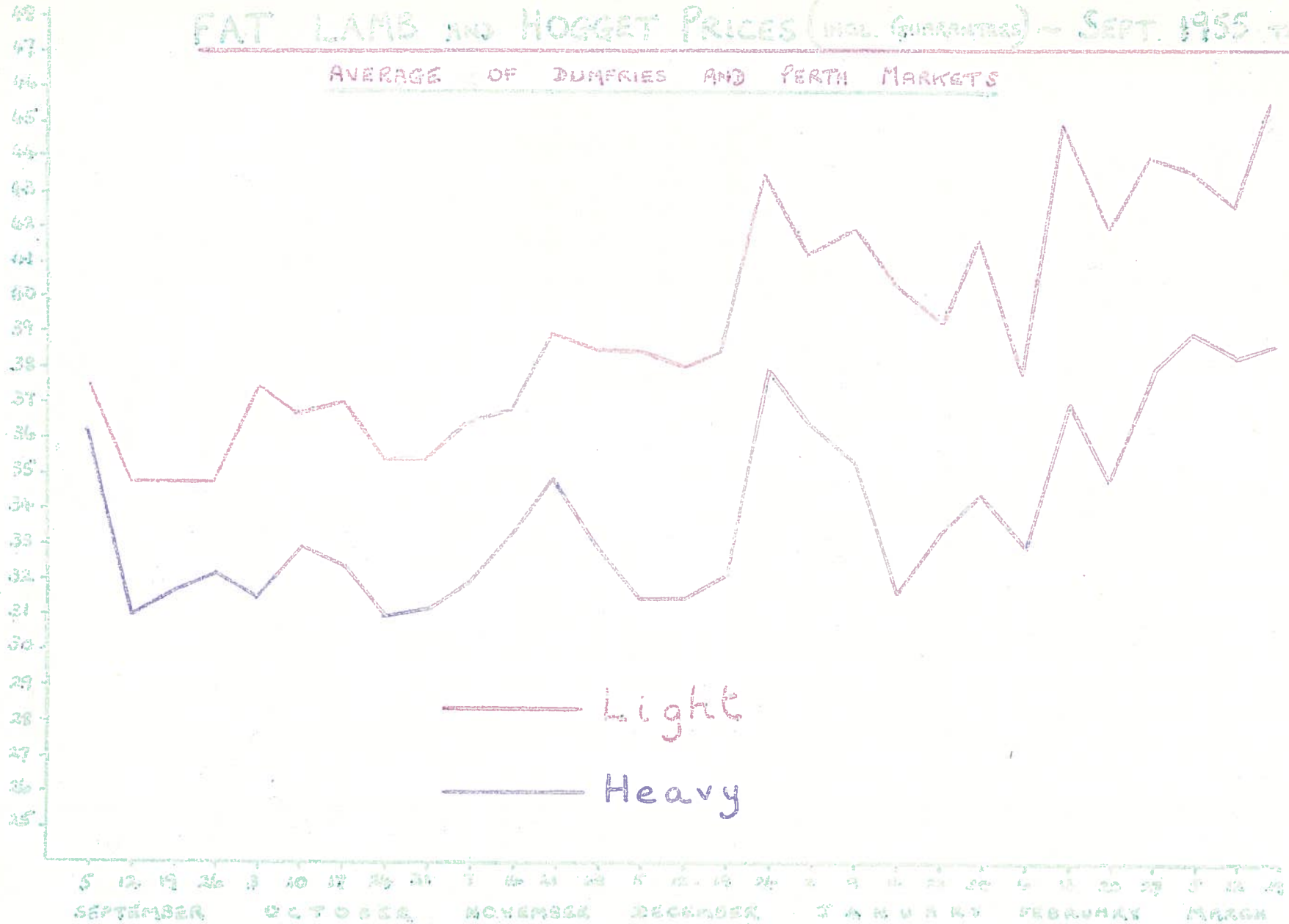
<u>Breed</u>	<u>No. of Costs</u>	<u>Total No. of Sheep</u>
Suffolk cross	4	703
Half-bred	2	205
Cross (greyface)	9	948
Cheviot (South Country)	3	619
Blackface	6	904
Total	<u>24</u>	<u>3,379</u>

This grouping has been made not in order to suggest that any one breed is likely to be more profitable than another, but to give in more detail the findings of the investigation.

FAT LAMB AND HOGGET PRICES (incl. guarantees) - SEPT. 1955 to MARCH 1956

AVERAGE OF DUMFRIES AND FERTH MARKETS

PRICE PER LB. (Poundweight)



— Light

— Heavy

WEEKLY PERIODS (Dates refer to Weeks Ending)

GK 30

Source - Scottish Agricultural Weeklies

Even when the results are considered as they stand, allowance should be made for market fluctuations, for the differences in length of feeding periods and for the fact that the costs of home grown foods, grain and turnips etc. were based on the estimated yield per acre.

MANAGEMENT AND FEEDING

In all there were 3,379 sheep costed. Generally they were purchased in the late summer of 1955 and after a period of grazing the majority were folded on swedes and turnips and fattened off. All the Suffolk crosses, Half-breds and Cheviots were fed a supplementary mixture of oats and bought sheep feed concentrate while on roots. Of the nine lots of Cross-breds, four received this supplementary feeding mixture, two were fed oats without any bought concentrates and three were not given any supplementary oats or concentrates at all.

Of the six Blackface lots three received supplementary feeding of a mixture of oats and bought concentrates while the remaining three were not fed any oats or concentrates.

All the Suffolk crosses, Half-breds and Cheviots were folded on roots. Of the nine lots of Cross-breds seven were folded on roots and three of these seven had additional roots carted to them. Of the remaining two not folded, one received carted turnips while the other received none.

Two of the six Blackface lots were folded on roots. Of the four lots which were not folded, two received carted turnips while the remaining two did not.

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.

Throughout the feeding period the average weight of roots eaten per head was around 10 cwts for the Suffolk crosses, Half-breds and Crosses, about 9 cwts for the Cheviots and $5\frac{1}{2}$ cwts for the Blackfaces.

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

PRICES

The graph prepared from the price quotations given in the agricultural press, shows the averages of the weekly prices quoted for light and heavy lambs and hoggets at Perth and Dumfries from the beginning of September 1955 to 19th March 1956. During this period the average of these weekly average prices was 3/3d. per lb (deadweight actual or estimated) for light and $2/9\frac{1}{2}$ d. per lb for heavy lambs and hoggets.

The collective guarantees which are included in these weekly average prices were paid as follows.

Period No.

Period No.	Period	3d. per lb (deadweight actual or estimated)
6	Aug. 15 - Sept. 11	3d. per lb (deadweight actual or estimated)
7	Sept. 12 - Oct. 9	$2\frac{3}{4}$ d. " "
8	Oct. 10 - Nov. 6	$2\frac{1}{2}$ d. " "
9	Nov. 7 - Dec. 4	$2\frac{1}{2}$ d. " "
10	Dec. 5 - Jan. 1	$2\frac{1}{2}$ d. " "
11	Jan. 2 - Jan. 29	$3\frac{1}{4}$ d. " "
12	Jan. 30 - Feb. 26	$3\frac{1}{2}$ d. " "
13	Feb. 27 - March 25	$3\frac{3}{4}$ d. " "

Compared with these average prices of 3/3d. and 2/9½d. per lb. for light and heavy lambs and hoggets respectively, the average prices per lb obtained in the sample and the average deadweight (actual or estimated) in lbs per head were as follows:-

	<u>Price</u>	<u>Deadweight lbs.</u>
Suffolk cross	2/7¾	61
Half-bred	2/11½	53
Cross	3/3	45
Cheviot	3/6½	37
Blackface	3/4½	30
Whole sample	3/1½	43

PROFITABILITY

After taking into account all chargeable costs (direct cash outlays on bought feed, medicines etc., cost of home grown food and grazing, labour costs and estimated overheads) and making a credit allowance for sheep unsold at the end of the costing period, for receipts for casualties and for the residual values of feeding stuffs, it was found that in twelve of the costings there was a surplus and in the remaining twelve a deficit.

By groups this was as follows:-

	<u>Surplus</u>	<u>Deficit</u>	<u>Average Net Surplus or. (-). Deficit</u>
Suffolk cross	None	4	(-) £1. 2. 4.
Half-bred	None	2	(-) 9. 5.
Cross	6	3	1. 0.
Cheviot	2	1	8. 6.
Blackface	4	2	5. 5.
Total	<u>12</u>	<u>12</u>	(-) 1.11.

The margin between the average buying-in price and the average selling price is summarised below:-

<u>Type</u>	<u>Average Selling Price (incl. guarantees)</u> £'s	<u>Average Buying-in Price</u> £'s	<u>Margin</u> £'s
Suffolk cross	8. 0. 4.	6.19.10.	1. 0. 6.
Half-bred	7.16. 4.	6. 0.11.	1.15. 5.
Cross	7. 6. 3.	4.18. 7.	2. 7. 8.
Cheviot	6.11. 6.	4. 4. 4.	2. 7. 2.
Blackface	5. 2. 4.	3. 5. 5.	1.16.11.
All types	6.15. 5.	4.17. 0.	1.18. 5.

It is out of this margin that the feeder has to meet all his costs and make a profit. In the case of the Suffolk cross and the Half-breds, the margin was not enough for this.

When the calculations are made on the number of sheep actually sold, i.e. when deaths and casualties are taken into account then the margin is lower. Tables IV and V in the Appendix give financial information about the cost structure and margins and returns.

Acknowledgment

Grateful acknowledgment is made of the help received from the farmers who gave information for this survey and for the co-operation given by Mr. A. Broadfoot and Mr. A. Campbell, the County Advisers in West Perth and Dumfries, also to Mr. G.K.R. Black of this Department who prepared the graph.

HOGG FATTENING WINTER 1955-56.

APPENDIX

- TABLE I Numbers of Sheep Handled, Periods Kept, Etc.
- TABLE II Average No. of Weeks Kept, Average Weights of Bought Feed,
Home Grain and Roots Fed.
- TABLE III Acreages of Roots, No. of Weeks Folded, No. 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 1955-56
NUMBERS OF SHEEP HANDLED, PERIODS KEPT, ETC.

	<u>Suffolk cross</u>	<u>Half-bred</u>	<u>Cross</u>	<u>Cheviot</u>	<u>Blackface</u>	<u>Total</u>
Number of costs	4	2	9	3	6	24
Average of numbers costed	176	103	105	206	151	141
Range of numbers costed	40 - 254	80 - 125	34 - 207	160 - 264	33 - 338	33 - 338
Earliest purchase date	30/7/55	16/8/55	16/8/55	12/8/55	26/8/55	30/7/55
Latest purchase date	3/1/56	25/8/55	15/12/55	5/12/55	7/12/55	3/1/56
Earliest selling date	5/9/55	9/12/55	15/9/55	5/12/55	15/9/55	5/9/55
Latest selling date	16/2/56	13/1/56	9/3/56	24/2/56	14/2/56	9/3/56
Total number home bred	173	3	-	-	38	214
Total number bought	530	202	948	619	866	3165
Total number sold fat	683	205	851	543	880	3162
Total number sold store	-	-	80	58	-	138
Total casualties (includes tups and rejects in brackets)	3	-	-	9 (6)	4	16 (6)
Total deaths	7	-	12	8	20	47
Total still on hand	10	-	5	1	-	16
% mortality	1.0	Nil	1.3	1.3	2.2	1.4
% deaths and casualties (tups and rejects excluded)	1.4	Nil	1.3	1.8	2.7	1.9
Average estimated deadweight (lbs. per head)	61	53	45	37	30	43
Average sale price per lb.	2/7 ³ / ₄	2/11 ¹ / ₂	3/3	3/6 ¹ / ₂	3/4 ¹ / ₂	3/1 ¹ / ₂
Average hours labour per sheep	.8	1.1	1.5	.8	.7	1.0

APPENDIX TABLE II

HOGG FATTENING WINTER 1955-56

AVERAGE NO. OF WEEKS KEPT, AVERAGE WEIGHTS OF BOUGHT FEED, HOME GRAIN AND ROOTS FED

	<u>Suffolk Cross</u>	<u>Half-bred</u>	<u>Cross</u>	<u>Cheviot</u>	<u>Blackface</u>	<u>Total</u>
Number of costs	4	2	9	3	6	24
Total number of sheep (opening valuation numbers)	703	205	948	619	904	3379
Total number of sheep sold	683	205	931	601	880	3300
=Average time kept (weeks)	16	19	19	19	15	17
=Average time grazing (weeks)	6	10	10	8	7	8
=Average time folded on roots (weeks)	10	9	9	11	8	9
=Average weight of bought feed eaten (in lbs. per head for the whole period)	11.6	15.7	11.2	16.8	6.2	8.3
=Average weight of home grain eaten (in lbs. per head for the whole period)	18.9	11.3	15.5	11.5	12.6	14.5
=Average weight of all roots eaten (in cwts per head for the whole period)	10.0	10.2	10.2	8.8	5.5	8.6

= Based on the number of sheep sold.

APPENDIX TABLE III
HOGG FATTENING WINTER 1955-56

ACREAGES OF ROOTS, NO. OF WEEKS FOLDED, NO. OF SHEEP PER ACRE, ETC.

	<u>Suffolk cross</u>	<u>Half-bred</u>	<u>Cross</u>	<u>Cheviot</u>	<u>Blackface</u>	<u>Total</u>
Total acreage of roots folded	21	8	24 $\frac{1}{2}$	12 $\frac{1}{3}$	14 $\frac{1}{2}$	80 $\frac{1}{3}$
Estimated total weight of roots eaten off (tons)	341.1	105	430	265	210	1351.1
Estimated weight of roots eaten per acre (tons)	16.2	13.1	17.6	21.5	14.5	16.8
Total number of sheep folded (opening valuation numbers)	703	205	844	619	646	3017
Total number of sheep sold	683	205	785	601	623	2897
Approximate number of weeks folded (based on numbers sold)	10	9	11	11	11	11
Average number of sheep to the acre (based on numbers sold)	33	26	32	49	43	36
Average weight folded roots eaten per day (in lbs. per head)	16	18	16	12 $\frac{1}{2}$	9 $\frac{1}{2}$	14
Assuming a yield of 20 tons to the acre to be eaten off in a 10 week period at the above rate, then the number of sheep folded to the acre would be:	40	36	40	51	67	46

APPENDIX TABLE V.

HOGG FATTENING WINTER 1955-56

MARGINS AND RETURNS

	<u>Suffolk cross</u>	<u>Half-bred</u>	<u>Cross</u>	<u>Cheviot</u>	<u>Blackface</u>	<u>Total</u>
	£. S. D.	£. S. D.	£. S. D.	£. S. D.	£. S. D.	£. S. D.
Average selling price(incl. guarantees)	8. 0. 4.	7.16. 4.	7. 6. 3.	6.11. 6.	5. 2. 4.	6.15. 5.
Average buying-in price	6.19.10.	6. 0.11.	4.18. 7.	4. 4. 4.	3. 5. 5.	4.17. 0.
MARGIN(exclud. deaths, casualties, etc.)	<u>1. 0. 6.</u>	<u>1.15. 5.</u>	<u>2. 7. 8.</u>	<u>2. 7. 2.</u>	<u>1.16.11.</u>	<u>1.18. 5.</u>
MARGINS AND RETURNS						
(Calculated per sheep sold)						
Selling price (incl. guarantees)	8. 0. 4.	7.16. 4.	7. 6. 3.	6.11. 6.	5. 2. 4.	6.15. 5.
Less cost price	<u>7. 3.11.</u>	<u>6. 0.11.</u>	<u>5. 0. 4.</u>	<u>4. 6.10.</u>	<u>3. 7. 2.</u>	<u>4.19. 4.</u>
GROSS MARGIN	16. 5.	1.15. 5.	2. 5.11.	2. 4. 8.	1.15. 2.	1.16. 1.
Less bought feed and direct cash outlays	<u>7.11.</u>	<u>7. 2.</u>	<u>7.10.</u>	<u>7. 9.</u>	<u>5. 3.</u>	<u>7. 2.</u>
CASH SURPLUS	8. 6.	1. 8. 3.	1.18. 1.	1.16.11.	1. 9.11.	1. 8.11.
Less home grown food and grazing	<u>1.11. 8.</u>	<u>1.14. 8.</u>	<u>1.12.11.</u>	<u>1. 7. 9.</u>	<u>1. 3. 0.</u>	<u>1. 9. 2.</u>
SURPLUS OR, (-), DEFICIT	(-)1. 3. 2.	(-) 6. 5.	5. 2.	9. 2.	6.11.	(-) 3.
Add Credits	<u>4. 3.</u>	<u>1.10.</u>	<u>2. 5.</u>	<u>3. 0.</u>	<u>1. 5.</u>	<u>2. 7.</u>
Less Labour	(-) 18.11	(-) 4. 7.	7. 7.	12. 2.	8. 4.	2. 4.
	<u>2. 8.</u>	<u>3. 9.</u>	<u>5. 1.</u>	<u>2.10.</u>	<u>2. 3.</u>	<u>3. 3.</u>
Less Overheads	(-)1. 1. 7.	(-) 8. 4.	2. 6.	9. 4.	6. 1.	(-) 11.
	<u>9.</u>	<u>1. 1.</u>	<u>1. 6.</u>	<u>10.</u>	<u>8.</u>	<u>1. 0.</u>
NET SURPLUS OR, (-), DEFICIT	(-)1. 2. 4.	(-) 9. 5.	1. 0.	8. 6.	5. 5.	(-) 1.11.

APPENDIX TABLE IV

HOGG FATTENING WINTER 1955-56

AVERAGE COST STRUCTURE PER HEAD (CALCULATED PER SHEEP SOLD)

	<u>Suffolk cross</u>	<u>Half-bred</u>	<u>Cross</u>	<u>Cheviot</u>	<u>Blackface</u>	<u>Total</u>
	£. S. D.	£. S. D.	£. S. D.	£. S. D.	£. S. D.	£. S. D.
Cost price	7. 3.11.	6. 0.11.	5. 0. 4.	4. 6.10.	3. 7. 2.	4.19. 4.
Haulage to farm	1. 0.	3.	1. 0.	2.	9.	9.
Bought feed	3. 6.	4. 5.	3. 6.	4. 8.	2. 0.	3. 4.
Miscellaneous expenses	6.	10.	9.	5.	5.	7.
Haulage to market	9.	3.	9.	6.	6.	8.
Commission etc.	2. 2.	1. 5.	1.10.	2. 0.	1. 7.	1.10.
Cash outlay	7.11.	7. 2.	7.10.	7. 9.	5. 3.	7. 2.
Oats	3. 7.	2. 2.	2.10.	2. 2.	2. 5.	2. 9.
Turnips	1. 1. 0.	1. 3. 6.	19. 7.	18. 3.	12. 8.	18. 0.
Hay	2.	-	1. 5.	-	1.	5.
Rape	-	-	2.	-	10.	3.
Total home grown food	1. 4. 9.	1. 5. 8.	1. 4. 0.	1. 0. 5.	16. 0.	1. 1. 5.
Grazing	5.11.	9. 0.	8.11.	7. 4.	7. 0.	7. 9.
Labour	2. 8.	3. 9.	5. 1.	2.10.	2. 3.	3. 3.
Overheads	9.	1. 1.	1. 6.	10.	8.	1. 0.
GROSS COST	9. 6.11.	8. 7. 7.	7. 7. 8.	6. 6. 0.	4.18. 4.	6.19.11.
Sheep on hand	2. 3.	-	8.	3.	-	8.
Casualties	3.	-	-	1. 2.	2.	4.
Residual values	1. 9.	1.10.	1. 9.	1. 7.	1. 3.	1. 7.
Total credits	4. 3.	1.10.	2. 5.	3. 0.	1. 5.	2. 7.
NET COST	<u>9. 2. 8.</u>	<u>8. 5. 9.</u>	<u>7. 5. 3.</u>	<u>6. 3. 0.</u>	<u>4.16.11.</u>	<u>6.17. 4.</u>