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Cattle -
Cost of
production
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ECONOMICS DEPARTMENT

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BREEDING CATTLE COSTS 1951/52

by

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AGRICULTURAL ECONOMICS DEPARTMENT

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BREEDING CATTLE COSTS 1951/52

The cost of rearing calves is a topical consideration in this area since with the continual cry of "More cattle for the Highlands" it is essential that those who ask for more beef should appreciate how much it is likely to cost under the systems of keeping breeding cows practised in this area.

In the last two years, the fattening of store cattle has shown profits and the question may be asked as to whether the breeders and rearers of beef cattle are also benefiting (indirectly) by the increased prices for fat cattle.

HERDS COSTED

Thirty-eight farmers provided data for the year's costs and since the cows were kept under widely different circumstances, the herds have been divided into four groups -

- Group 1 - 12 Caithness herds wintered inside.
- Group 2 - 12 Herds receiving Hill Cattle Subsidy.
- Group 3 - 7 Herds not receiving Hill Cattle Subsidy.
- Group 4 - 7 Herds of hardy cattle outwintered.

For convenience, the groups are referred to thus -

- Group 1 - Caithness Herds
- Group 2 - Upland Herds
- Group 3 - Lowland Herds
- Group 4 - Hill Herds.

LOCATION AND SIZE OF FARM

The distribution of the herds by counties is shown in Table I.

TABLE IDISTRIBUTION OF HERDS THROUGH THE COUNTIES

	<u>Caithness</u>	<u>Easter Ross</u>	<u>Inverness</u>	<u>Moray & Nairn</u>	<u>Banff</u>	<u>Aberdeen</u>	<u>Kincardine</u>
Group 1	12	-	-	-	-	-	-
Group 2	-	1	1	5	4	-	1
Group 3	-	1	-	-	2	3	1
Group 4	1	1	3	-	-	2	-

Perhaps the distance from the sea and height above sea level of the various farms gives a clearer indication of the type of farm since, generally speaking, the land gets poorer and thinner with increased altitude and distance from the sea. The average figures for these factors are shown in Table II.

TABLE II
AVERAGE ALTITUDE - DISTANCE FROM THE SEA

	<u>Height Above Sea Level</u>	<u>Distance From Sea</u>
Group 1 - Caithness Farms	162 feet	3 miles
Group 2 - Upland Farms	670 "	16 "
Group 3 - Lowland Farms	215 "	6 "
Group 4 - Hill Farms	693 "	20 "

The Caithness farms are an exception to the general rule and although the soil is quite good the area is a high cost one because of its bleak and unpredictable climate.

SUBSIDIES RECEIVED

The hill cattle subsidy was paid to all farms in Groups 2 and 4 and to all the Caithness farms except one. Marginal land acreage payments were made to 8 Caithness farms, 11 Upland farms and 5 of the farms in Group 4. (The other two hill herds were attached to holdings containing good arable farm land). None of the farms in the lowland group received either the hill cattle subsidy or marginal land acreage payments.

SIZE OF FARM

The average size of farm in the four groups was -

- Group 1 - 108 acres arable + 131 acres rough
- Group 2 - 116 acres arable + 513 acres rough
- Group 3 - 240 acres arable.
- Group 4 - 239 acres arable + 7,900 acres rough.

All the farms in Groups 2 and 4 had some rough land and so did all except one of the Caithness farms.

SIZE OF HERD AND BREEDS

On few of the farms could it be said that calf rearing was the major enterprise since in most cases the cattle were playing second fiddle to sheep or (as in the

farms of Group 3) were kept primarily to make dung for crops of oats or potatoes to be sold off the farm. Hence the number of cows per herd was generally not large and averaged 16 cows for Groups 1, 2 and 3, but the hill herds consisted of an average of 47 cows. Table III demonstrates the small size of Caithness herds in particular, although in no case were there less than six cows in a herd.

TABLE III
NUMBER OF COWS PER HERD

	<u>Under 10 cows</u>	<u>10 - 19 cows</u>	<u>20 - 29 cows</u>	<u>30 cows & over</u>
Group 1	6 herds	4 herds	-	2 herds
Group 2	2 "	7 "	2 herds	1 "
Group 3	3 "	2 "	2 "	-
Group 4	-	1 "	2 "	4 "

BREED OF COWS

Almost all the cows in the first three groups were either Cross Aberdeen-Angus or Cross Shorthorn with a slight preponderance of Shorthorn cows in Caithness and the lowland farms and rather more Aberdeen-Angus in Group 2 which contains herds from the traditional "Black" area around the Findhorn and the Spey. In the hill herds, Cross Highlanders were dominant in 6 of the herds and Galloways in the remaining herd. Most of the cows wintered inside were tied by the neck but on four farms they were in courts and let out to graze during the day.

BULLS

The Aberdeen Angus breed was most popular in Groups 1, 2 and 3, although there were 11 Shorthorn bulls used and a Hereford was being tried out on one farm.

In Group 4 the Shorthorn was naturally most popular and at least one was used in each herd, whilst three Highland bulls were in use and also one Aberdeen-Angus and one Hereford.

TIME OF BIRTH OF CALVES

It was to be expected that the calves in the hill herds would fall later than those of the other three groups and this is shown to be the case in Table IV in which the percentage of calves born in the various months is set out.

TABLE IV

PERCENTAGE OF CALVES BORN IN VARIOUS MONTHS

1952	Group 1 Caithness Herds	Group 2 Upland Herds	Group 3 Lowland Herds	Group 4 Hill Herds
February (or before)	13	35	36	2
March	39	28	32	24
April	33	27	23	47
May	12	6	8	20
June (or later)	3	4	1	7
	100%	100%	100%	100%

Although early calvings may mean heavier feeding of the cows, they will generally prove worthwhile if the calves are to be sold under a year old. Even when the calves are to be retained on the farm for a longer period, early calvings were thought to be well worthwhile by, for example, most of the farmers in Group 3. Hence it seems that on some of the Caithness farms (Group 1) it would pay the farmers better to aim at earlier calvings especially since there is a tradition of feeding oats in that county even to cows which are not due to calve till the grass comes.

SEASON

This is one of the most important factors influencing the costs, and everywhere the season 1951/52 was good. Crop yields from the 1951 harvest were quite high and turnip yields were heavy on most farms. The winter 1951/52 was short and not very severe and thus there was sufficient winter keep on all farms and in some cases there was a glut of turnips.

On the hill farms the feeding period averaged 21 weeks and on the other farms 25 weeks.

METHOD USED IN COSTING

The aim was to find out the cost of weaned calves in the autumn of 1952 and this has been accomplished by determining the cost of keeping the herd of breeding cows for a year (usually 1st November 1951/52) and dividing by the number of calves reared during the year.

≡ There was a wide variation - 13 to 26 weeks.

In making the calculation, certain standard figures had to be used, e.g. the cost per hour of man, horse and tractor labour, and full details of these standards are to be found in Appendix III.

COST PER COW PER YEAR

The average figures for each of the four groups are shown in Table V below, whilst Table VI shows the proportionate cost of the main items.

TABLE V
AVERAGE COST PER COW PER YEAR

Item	12 Caithness Herds	12 Upland Herds	7 Lowland Herds	7 Hill Herds
	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Foods -				
Turnips & Swedes	9. 9. 3	10.13.11	9.16.10	2. -.11
Straw Eaten	1.18. 9	1.18.10	1.16. 4	1. 3. -
Hay	-.18. 9	-. 6. 7	-. 9. 1	1. 9. 9
Oats	3.19. 6	1. 5. 1	-. 1.10	-. 8. 7
Silage	-. -. -	-. -. -	-. 4.10	-.17.10
Concentrates	-. 6. 3	-. 3. 3	-. -. -	-. 4.10
Other Foods	-. 4. 2	-. 8. 4	-. 2. 9	-. -. -
NET FOODS	16.16. 8	14.16. -	12.11. 8	6. 4.11
Labour & Power	6. 1. 2	5.16. 3	3. 8. 6	4. 9. 6
Grazing	3.10. 1	5.15.11	5. 2.11	1. 9. 1
Miscellaneous	-. 2.11	-. 4. 4	-. 2. 7	-. 6. 6
Cow Depreciation	-. 7. 4	1.13. 3	-.11. 1	1. 2. -
Bull Charge	1. 2. 4	1.10. 9	1. 1.10	1. 8. 9
Overhead Costs	2. 1. 9	2. 5. 6	1. 4. -	2. -. 3
NET COST	£30. 2. 3	£32. 2. -	£24. 2. 7	£17. 1. -

TABLE VI
PROPORTION OF COST PER COW PER YEAR DUE TO
VARIOUS ITEMS

Item	12 Caithness Herds	12 Upland Herds	7 Lowland Herds	7 Hill Herds
Foods	56	45	51	37
Labour & Power	20	18	14	27
Grazing	12	18	21	8
Miscellaneous	-	1	1	2
Cow Depreciation	1	6	3	6
Bull Charge	4	5	5	8
Overhead Costs	7	7	5	12
	100%	100%	100%	100%

WINTER FOODS

This is always the most important component in the costs and for comparative purposes it will be best to consider Groups 1, 2 and 3 first, since the feeding of Hill Cattle tends to be very different from that of the other types of herd.

GROUPS 1, 2 AND 3.

All the herds relied upon turnips (and swedes) and straw as the basic ration and in Caithness every farmer except one fed oats too. Eight of the farmers in the upland group also fed oats and so did two of the lowland farmers, but the amounts fed tended to be less than in Caithness and one wondered whether the extra feeding was really necessary in all the Caithness herds, especially as it was not associated with early calvings. Hay was fed to some farms in each group and three farmers in Group 1 and two in Group 2 fed a little concentrates. Other foods used were draff on five farms and grass silage on one farm. It should be mentioned that three of the farmers in the lowland group fed nothing but turnips and straw. The average amounts of food per cow per winter for the three groups is shown in Table VII, the most obvious feature of which is the high figure for oats in Group 1.

TABLE VII
AVERAGE FOODS FED PER COW FOR
WINTER 1951/52

Item	12 Caithness Herds	12 Upland Herds	7 Lowland Herds
Turnips and Swedes	108.6cwt.	110.0cwt.	120.2cwt.
Straw Eaten	11.3 "	12.9 "	18.4 "
Oats	3.5 "	1.2 "	0.2 "
Hay	2.8 "	1.0 "	1.6 "
Concentrates	0.2 "	0.1 "	-
Silage	-	-	3.0 "
Other Foods	-	2.2 " (Mainly Draff)	1.1 " (Draff)

FOODS IN GROUP 4 (Hill Herds)

One of the most surprising features about these herds was the lack of uniformity in feeding and since average figures of foods fed would mean very little Table VIII shows the feeding on each of the seven farms.

TABLE VIII

Per Cow - FEEDING: WINTER 1951/52 ON SEVEN HILL FARMS

Farms -	A	B	C	D	E	F	G
Turnips & Swedes	10 cwt.	-	15 cwt.	-	80 cwt.	54 cwt.	10 cwt.
Straw	6 cwt.	-	13 cwt.	10 cwt.	10 cwt.	19 cwt.	8 cwt.
Hay	8 cwt.	3 cwt.	2 cwt.	10 cwt.	-	-	-
Oats	-	-	-	2 cwt.	1 cwt.	-	-
Silage	-	11 cwt.	15 cwt.	-	-	29 cwt.	61 cwt.
Concentrates	-	-	-	1 cwt.	-	-	-

The feeding on farms A and B in milder districts was less than on the other farms. If the winter had been severe the amount of foods used on all farms would have been much greater and it is possible that in such a year the heavier feeding on e.g. Farms E, F and G would have shown to great advantage. As it was, the calving percentage was high on all farms and the average percent of calves reared per 100 cows reached 84%.

The winter grazing of arable land reached computable proportions in two cases and has been added into the general grazing cost.

LABOUR

On the Caithness and Upland Farms the labour was mainly that of the farmer himself or his family, but on the Lowland Farms there was frequently a full time cattleman since other cattle were kept besides the cows. On the hill farms much of the labour consisted of carting out foods to the stock and to the man labour cost must be added the cost of using the tractor or horses, (power).

The average man hours per cow per week during the winter for the four groups is shown in Table IX together with the range of times.

TABLE IX

AVERAGE MAN HOURS PER COW PER WEEK - WINTER 1951/52.

	Group 1	Group 2	Group 3	Group 4
Man Hours per Cow per Week	1.38	1.24	0.82	0.66
Range	0.92 - 1.83	0.82 - 1.96	0.52 - 1.10	0.28 - 1.12

Group 4 -
Power comes to
.35 Tractor Hours
Per Cow Week.

The small herds show up to a disadvantage here since some jobs take the same time to do whether there are 10 or 60 cattle to care for and moreover on the big farms the arrangement of the buildings and stores was usually more convenient than on the small farms.

GRAZING

Like so many items in these costs the compilation of the grass cost is very arbitrary and in most cases it has been done by obtaining the total cost of all the grass grazed on the farm and dividing by the number of animal livestock units grazing the grass. Full details of the method used is shown in Appendix III where it will be noted that one cow is taken as the equivalent of one livestock unit. The average grass cost per cow per week is shown in Table X.

TABLE X
AVERAGE COST PER COW PER WEEK OF GRASS - SUMMER 1952.

	Group 1 Caithness Farms	Group 2 Upland Farms	Group 3 Lowland Farms	Group 4 Hill Farms
Grass Cost per Cow Week	2/7 $\frac{1}{4}$ d.	4/3 $\frac{1}{2}$ d.	3/10 $\frac{1}{2}$ d.	10d.
Range in Costs	1/6 $\frac{3}{4}$ - 3/10	2/3 $\frac{1}{2}$ - 7/9 $\frac{3}{4}$	2/9 - 5/3	Nil - 2/11 $\frac{1}{2}$

The absence of rough grazing on the lowland farms explains why their costs are above those of the Caithness farms. The higher cost of the grazing in Group 2 does, however, require an explanation since there was ample rough pasture on all the upland farms. It is due partly to two exceptionally high results on farms with early first quality calves and partly to the fewer sheep numbers on this particular sample of upland farms. In Group 4 the grazing cost was naturally very low, but on one farm there had been extensive reseeding of some of the better land and a share of the cost of this was responsible for raising the cost per L.S.U. week to 2/11 $\frac{1}{2}$ d.

COW DEPRECIATION

This item is liable to fluctuate considerably since most herds consist of under twenty cows and occasional deaths of cows or a spate of barrenness can cause the depreciation cost per cow to rocket. On the other hand, a herd might go three years without any cows being transferred in or out. Severe weather of course will often bring deaths and one of the reasons for the fairly low cow depreciation in all the groups was the shortness of the winter 1951/52. This was particularly true of the seven hill herds in Group IV.

BULL CHARGE

It may at first seem surprising that this charge is over £1, but on reflection it is not unexpected.

Of the 38 herds, eight had no bull of their own and in these cases the Bull Charge was 9/10d. per cow of which 7/2d. was the average service fee and 2/8d. the estimated cost of labour in walking to the neighbouring farm and back. Of the 30 farms with bulls, four kept the bull under a "Premium Scheme" Licence and the net cost per cow was 11/8d. On the other 26 farms the service charge per cow worked out at 33/6d. and was compiled thus -

	£. s. d.
Winter Cost per Bull	21. 8. 2
Summer Cost	5. 9. 9
	<u>26. 17. 11</u>
Insurance	- . 11. 5
Depreciation	<u>9. 9. 2</u>
Average Bull Cost per Year	<u>£36. 18. 6</u>

Average Number of Cows Served 25

Bull Charge per Cow £1. 9. 6
or taking the "Average of the Averages" £1. 13. 6 *

The bull charge was of course heavier when only a few cows were served during the year as the following figures show.

	<u>Bull Charge</u>
Under 20 cows served per year	47/4d.
20 - 29 cows served per year	34/-
30 cows or more served per year	20/8

VARIATION IN COST PER COW PER YEAR

The tendency for costs to be higher in Groups 1 and 2 is shown clearly in Table XI, which sets out the spread of the results in the four groups.

TABLE XI

SPREAD OF COSTS PER COW PER YEAR

NUMBER OF HERDS WITH COSTS PER COW

	£10 - £15	£15 - £20	£20 - £25	£25 - £30	£30 - £35	£35 - £40
Caithness Farms	-	-	3	1	6	2
Upland Farms	-	-	1	3	6	2
Lowland Farms	-	-	3	4	-	-
Hill Farms	2	3	2	-	-	-

* This is more accurate, as it counts each farm as one unit.

COST OF THE CALF TO WEANING

The way in which this is obtained from the cost per cow is shown by using Group 1 results as an example -

	Group 1	£. s. d.
Average Cost per Cow per Year	£30. 1. 5	
Number of Cows Kept	14. 25	
Herd Cost		428. 10. 2
Add Cost of Calves Purchased		9. 9. 8
Cost of Keeping Part Year Cows		<u>35. 8. 9</u>
GROSS COST		£473. 8. 7
Deduct Milk Consumed etc. (Proportion of cost of House Cows)		<u>16. 11. 7</u>
		<u>£456. 17. -</u>

Average Number of Calves Reared	14
Cost per Calf to Weaning	£32. 12. 7
or taking the Average of Averages [≡]	£30. 5. -

PART YEAR COWS are cows which were in the herd for a short while and then died or were sold and the cost of keeping these along with the cost of any calves purchased has to be added to the herd cost to get the gross cost.

The average cost per calf for the four groups worked out at -

Caithness Farms	£30. 5. -
Upland Farms	31. 7. 10
Lowland Farms	19. 10. 1
Hill Farms	20. -. -

The range in costs was naturally wide and is shown in detail in Table XII.

TABLE XII

RANGE OF COST PER CALF TO WEANING IN THE FOUR GROUPS

	NUMBER OF FARMS WITH COST				
	Under £20	£20-- £25	£25 - £30	£30 - £35	£35 - £42
Caithness Farms	-	2	6	-	4
Upland Farms	1	-	3	4	4
Lowland Farms	3	3	1	-	-
Hill Farms	3	3	1	-	-

[≡] See note on Page 9.

VALUATION AND RETURNS PER CALF

The proportion of calves sold in the autumn sales was small, but every group of calves not sold was valued at weaning so that the valuation or sale price could be compared with the cost for each lot of calves. The results are very much better than for 1950/51 since the market for calves was much stronger in the autumn sales of 1952. The average results are shown in Table XIII.

TABLE XIII

VALUATIONS AND RETURNS PER CALF - AUTUMN 1952.

AVERAGE RESULTS				
	Group 1 Caithness	Group 2 Upland	Group 3 Lowland	Group 4 Hill
Average Valuation or Sale Price	£26.18. 4	£27. 2. 8	£26. 5. 8	£23.14. -
Net Cost	£30. 5. -	31. 7.10	19.10. 1	20. -. -
Margin	-£3. 6. 8	-£4. 5. 2	+£6.15. 7	+£3.14. -

In Group 3 all the farms showed a profit and so did five of the seven hill herds, whilst in Group 1 there were five herds showing a profit and in Group 2 only three. In the first three groups the best results came from farms in which there was a definite policy e.g. suckling more than one calf to the cow or aiming at early high quality calves. The poorest results came from single suckled calves of medium quality generally where the calvings were on the late side.

SUCKLING MORE THAN ONE CALF TO THE COW

In Group 3 there were three herds suckling two calves to the cow and they showed an average net profit (valuation-costs) of £6.16.11 per ^{head.} herd. Two herds in this group contained a number of cows which reared two calves and there were also three herds in Group 2 and one herd in Group 1 with a proportion of the cows rearing two calves. The net profit for these six herds averaged £3.18.11 per calf with all the herds except one showing profits. In these costings the rearing of two calves and more to the cow invariably has shown good results and although there are real objections to this practice, they are by no means insurmountable. The result from an Aberdeenshire farm getting the second calves from young heifers which are afterwards fattened is contained in Appendix II.

≡ Notably the problem of where to get the second calf.

HILL FARMS

The small average profit of £3.14/- per calf has accrued in a good year in which the calving percentage was high and the season mild. The risks on some (though not all) of these farms are heavy and returns in a good year need to be sufficiently high to cover losses in years of storm.

INFLUENCE OF SUBSIDIES

The effect of subsidies has been excluded from the results, with the exception of the phosphatic subsidy on fertilisers.

The influence of the hill cattle subsidy (£10 per breeding cow) is shown in Table XIV.

TABLE XIV

INFLUENCE OF HILL CATTLE SUBSIDY ON RETURNS PER CALF

AVERAGE RESULTS				
	Caithness Herds	Upland Herds	Lowland Herds	Hill Herds
Net Margin per Calf	- £3. 6. 8	- £4. 5. 2	+ £6.15. 7	+ £3.14. -
Hill Cattle Subsidy	8.19. 9	9. 6.10	- . - . -	10. - . -
Margin per Calf (Including Subsidy)	+ 5.13. 1	+ 5. 1. 8	+ 6.15. 7	+ 13.14. -

In addition the Marginal Land Acreage Payments reduce the cost of the home grown foods fed and if these were taken into account it is estimated that they would lower the cost per calf by £1. 3. 8 in Group 1, £1. 7. 4 in Group 2 and 8/4d. in Group 4.

CONCLUSION

It is readily admitted that the sample of farms considered has been small but nevertheless it is felt that they are fairly representative of the various systems of cattle rearing in this area.

The results do indicate that the increase in beef prices is to a limited extent helping the rearers and that when the subsidies are taken into account almost all the farms show at least a small profit.

This however should not blind us to the fact that the rearing costs are generally high and it is in the farmer's interest to rear calves of as high a quality as possible at as low a cost as possible. To this end it is desirable that everyone should have a definite aim or policy in keeping their cows and consider

say the possibility of double or multiple suckling or producing earlier calves etc.

A summary of all the results is shown in tabular form in Appendix I.

ACKNOWLEDGMENT

To the farmers who have provided the data used in this report, the Economics Department of the North of Scotland College of Agriculture wish to record their grateful thanks. It is intended that this series of costings will be continued for the year 1952/53.

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APPENDIX I

SUMMARY OF ALL RESULTS - 1951/52 CALF COSTS

Item	12 Caithness Herds (in-wintered)	12 Upland Herds (in-wintered)	7 Lowland Herds (in-wintered)	7 Hill Herds (out-wintered)
Size of Farm	108 acres arable 131 " rough	116 acres arable 513 " rough	240 acres arable	239 acres arable 7900 " rough
Hill Cattle Subsidy	11 Farms	12 Farms	Nil	All Farms
Marginal Land Payments	8 "	11 "	Nil	5 "
Size of Herd	15 cows	16 cows	16 cows	47 cows
Calves per Cow	11 reared 1 calf 1 herd with 2 calves per cow	9 reared 1 calf 3 herds with 2 calves per cow	2 reared 1 calf 5 herds with 2 calves per cow	1 calf per cow
Calves Born - February or before March/April Later than April	13% 72% 15%	35% 55% 10%	36% 55% 9%	2% 71% 27%
<u>Winter</u> Man Hours per Animal Week	1.38	1.24	0.82	0.66
Foods - Turnips	108.6 cwts.	110.0 cwts.	120.2 cwts.	27.4 cwts.
Straw Eaten	11.3 "	12.9 "	18.4 "	10.4 "
Hay	2.8 "	1.0 "	1.6 "	3.4 "
Oats	3.5 "	1.2 "	0.2 "	0.4 "
Silage	-	-	3.0 "	19.8 "
Concentrates	0.2 "	0.1 "	-	0.1 "
Other	-	2.2 "	1.1 "	-
Period of Feeding	25 weeks	25½ weeks	25½ weeks	21 weeks
<u>Summer</u> Grass Cost per Week	2/7½d.	4/3½d.	3/10½d.	10d.
<u>Cost per Cow per Year</u>	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Winter Food	16.16. 8	14.16. -	12.11. 8	6. 4.11
Labour and Power	6. 1. 2	5.16. 3	3. 8. 6	4. 9. 6
Grazing	3.10. 1	5.15.11	5. 2.11	1. 9. 1
Bull Charge	1. 2. 4	1.10. 9	1. 1.10	1. 8. 9
Cow Depreciation	- 7. 4	1.13. 3	-11. 1	1. 2. -
Other Costs	2. 4. 8	2. 9.10	1. 6. 7	2. 6. 9
Total Cow Costs	£30. 2. 3	£32. 2. -	£24. 2. 7	£17. 1. -
<u>Autumn 1952</u> Cost per Calf Valuation or Sale Price	30. 5. - 26.18. 4	31. 7.10 27. 2. 8	19.10. 1 26. 5. 8	20. -. - 23.14. -
Margin	- 3. 6. 8	- 4. 5. 2	+ 6.15. 7	+ 3.14. -
+ Margins	Five	Three	All	Five
- Margins	Seven	Nine	None	Two
Margin including Hill Cattle Subsidy	+ 5.13. 1	+ 5. 1. 8	+ 6.15. 7	+13.14. -

APPENDIX II

FATTENING OF COW HEIFERS

Results from an Aberdeenshire Farm in which the cows suckled two calves each, the second calf having been obtained from young heifers which were fattened. (Their calves having been removed from them at birth).

<u>Per Heifer</u>	£. s. d.
Cost to Autumn 1951	33. 3. -
Cost: Winter 1951/52	12. 6. 8
Summer 1952	<u>4. 16. 6</u>
Total Cost	£50. 6. 2
Sold Fat 28/8/52 (Average Date)	<u>59. 13. 7</u>
Net Profit	£9. 7. 5
<u>Plus</u> Value of Calf produced Spring 1952 and transferred to Cows	<u>7. -. -</u>
Total Profit per Heifer	<u>£16. 7. 5</u>

The Average Weight of the Heifers Fat was 9 cwts.

All graded S.S.

The results from this method have proved consistently good, but it demands good management and would not be easy to practice on small farms.

APPENDIX III

METHOD OF COSTING - STANDARDS USED

HOME GROWN FOODS have been charged at cost of production. A sliding scale was used so that on farms with low yields the cost per cwt. or ton was higher. The figures were based on the cost of production figures contained in Economic Report No. 27 of this department.

PURCHASED FOODS have been charged at purchase price.

LABOUR has been charged at the rates recommended by the Conference of Scottish Agricultural Economists.

These were -	Man	2/9d. per hour
	Horse	1/6d. "
	Tractor	4/3d. "

OVERHEAD COSTS have also been charged at the recommended rates which were -

7/-	per £ Direct Manual Labour
4/6	per Tractor Hour or 4 Horse Hours
13/3	per Acre

MANURIAL RESIDUES of foods have been calculated using the tables contained in Advisory Leaflet No. 24 (New Series) of the Department of Agriculture for Scotland whilst the Residual Value of Manures was calculated from Table A in the Advisory Leaflet.

GRAZING COST The cost of the grass for each field is first obtained, the items making up the cost being - a) Rent b) Labour on the Grass c) Manures applied d) Manurial Residues e) Overhead Costs and f) Sowing down charge i.e. $\frac{\text{Av. Cost of Establishing Grass}}{(\text{Years Duration of Lea} + 1)}$

If Hay or Silage has been made a proportion is deducted.*

The field costs are then added together to give a grass cost per farm and from this 1/6 is deducted to allow for winter grazing. The remaining sum is the Summer Grazing Cost which is divided by the number of livestock units grazing the grass to give a grazing cost per livestock unit.

The table of livestock units used was -

1 Horse, Bull, Cow or Cattle over 2 years old	= 1 unit
1 - 2 year old Cattle	= .75 "
Young Horses, Cattle 6 months - 1 year old	= .50 "
Sheep over 6 months	= .25 "
Sheep 3 - 6 months	= .07 "
Lambs under 3 months	} No Charge
Calves Suckling	

* 2/3 deduction for Hay and 1/2 or 3/4 for Silage.