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AGRICULTURAL ECONOMICS DEPARTMENT

ECONOMIC REPORT NO. 47

BREEDING CATTLE COSTS 1953 - 54

by

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AGRICULTURAL ECONOMICS DEPARTMENT

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BREEDING CATTLE COSTS 1953/54

The aim of this report is to give reliable current figures on the cost of producing weaned calves (approximately 6 months old) for the various types of breeding cow herds, kept in the North of Scotland.

Altogether costs from 47 farms are considered and these have been divided into 4 groups, the main features of which are shown in Table I.

Table I
Types of Farm and Breeding Cow Herd

Group	Farm		Herd	
	Average Size	Altitude (Mean)	Breed of Cows*	Breed of Bulls*
I 15 Caitness Herds	122 acres arable 214 acres rough	184 ft.	All A.A. x S. or pure S.	11 A.A. 4 S.
II 16 Upland Herds	99 acres arable 481 acres rough	705 ft.	10 mainly A.A. 6 S. or A.A. x S.	13 A.A. 3 S.
III 5 Lowland Herds	178 acres arable 21 acres rough	223 ft.	2 A.A. 3 A.A. x S.	5 A.A.
IV 11 Outwintered Herds	235 acres arable 5397 acres rough	568 ft.	10 herds S. x HH or HH or S. x S. x HH 3 herds contain some G x or pure G	S. in 9 Herds A.A. in 5 Herds HF in 2 Herds HH in 3 Herds
* A.A. = Aberdeen Angus S. = Shorthorn G. = Galloway H.H. = Highland HF = Hereford				

Method of Rearing

In Group IV and in 14 herds in both Group I and Group II one calf was reared to the cow but in one herd in Group I and two herds in Group II a proportion of cows reared two calves.

In Group III there were three herds in which one calf was reared to the cow but in the other two herds each cow reared two calves.

In almost all the herds of the first three groups the cows were kept inside during the winter months but the distinguishing feature of Group IV is that the cows were of a hardy breed and outwintered.

Herd Type

All the upland herds (Group II) except one lie in the Nairn-Findhorn-Avon-Spey valleys which run North from the Monadhleith and Cairngorm mountains down to the Moray Firth. Some of these herds are 1000 ft. above sea level and 30 miles from the sea and each farm receives not only the £10 per head cow subsidy but also Marginal Land Grants.

The Caithness herds are probably situated on rather better land than most of the upland herds but on the other hand Caithness is exposed to cold winds and the temperature even in summer tends to be low.

All the Caithness farms except 2 received the cow subsidy and 11 received Marginal Land Grants.

On the five farms in Group III the breeding cows tend to be a rather less important enterprise on the farm than is the case with Groups I and II. None of these herds received Marginal Land Grants or the £10 cow subsidy.

The outwintered herds were much bigger in size than those of the other groups and all the herds contained cross bred or pure bred cows of the hardy breeds (Highland and Galloway).

Seven of the 11 farms in this group received Marginal Land Grants but the other 4 herds were attached to good arable farms. In all cases except one the cow subsidy was received.

Size of Herd

The average herd size was :-

	<u>Average</u>	<u>Range</u>
Group I (Caithness)	16 cows	6 - 56 cows
Group II (Upland)	17 cows	7 - 40 cows
Group III (Lowland)	16 cows	7 - 36 cows
Group IV (Outwintered)	59 cows	13 - 150 cows

More cows died than in the previous year's costs and a complete statement of cow numbers is shown in Table II.

Table II

Cow Numbers

	15 Caithness Herds	16 Upland Herds	5 Lowland Herds	11 Outwintered Herds
No. of Cows at Start (Nov. 1953)	206	269	86	576
Purchased	15	6	4	3
Transferred in	38	19	10	102
TOTAL	259	294	100	681
Sold	29	37	20	30
Died	3	5	4	21
No. of Cows at End (Nov. 1954)	227	252	76	630
No. of Calves Reared	227	263	91	541
Proportion of Calves Reared to Cow Numbers	105	101	112	90

Time of Birth of Calves

The general pattern of calvings in the various groups was similar to that of the previous years with the calves in Group II tending to fall distinctly earlier than those of the Caithness group as Table III indicates. This fact coupled with the fact that the Aberdeen Angus breed preponderates in Group II explains why in Table XIII the valuation of Group II calves is higher than those of Group I.

Table III

Herd Group: Time of Calving

	I Caithness	II Upland	III Lowland	IV Outwintered
No. of Herds with over 50% calvings before March 1st	2 Herds	8 Herds	-	-
No. of Herds with over 50% calvings after March 1st	13 "	8 "	5 Herds	11 Herds
No. of Herds with over 50% calvings before April 1st	8 "	14 "	3 "	4 "
No. of Herds with over 50% calvings after April 1st	7 "	2 "	2 "	7 "

Climatic conditions usually decide the most suitable time for calving in the outwintered herds but in the other groups early calves are usually wanted, particularly if the calves are to be sold at about 6 months old in the Autumn sales.

Method of Costing

Home grown foods are charged at standard cost of production figures which, however, are graduated according to the yield of the particular crop concerned. For labour and overhead charges the rates used are those agreed by the Scottish Conference of Agricultural Economists for livestock costings. These appear in detail in the Appendix to Economic Reports Nos. 43 and 46 of this Department.

Cost per Cow per Year

Winter Foods Details of the average net cost of winter foods appear in Table IV for all four types of herd whilst the actual amounts used are shown in the general summary of the costs in Appendix I.

Table IV

Average Winter Foods per Cow: 1953/54

Type of Food	Caithness Herds	Upland Herds	Lowland Herds	Outwintered Herds
Turnips etc.	9.18.10	10.15.11	9. 8. 9	1.14. 5
Straw (eaten)	1.15. 3	1. 8. 2	1.11. 9	1.16. 2
Oats	4.11. 8	1.14. 8	- .10. 8	1. 9. 2
Hay	1. -. 7	1. 2. 2	- .18. 6	1.15. -
Silage	- . - . -	- . 3. 3	1. 2. 9	1. 9.11
Other	- . 6. 2	- . 5. 9	- . - . -	- . 3. 9
Net Foods	17.12. 6	15. 9.11	13.12. 5	8. 8. 5

The pattern of feeding is fixed on most farms with turnips and oat straw as the foundation of the ration for all the herds kept inside. Oats are used heavily in Caithness and were fed on all the farms in Group I but only on 10 of the 16 farms in Group II.

A feed of hay is given on some farms and in this sample was used on 8 Caithness farms, 10 upland farms and 3 of the 5 lowland farms.

The feeding of silage is not common with cows kept inside but with the herds kept outside it was used for 7 out of the 11 herds. The feeding of outwintered cattle varies greatly both in type of food and quantities used so that average figures may convey little meaning. Accordingly it was decided to calculate the amount of food fed in each outwintered herd in terms of Starch Equivalent and it was found that an average of 8.7 cwts. were fed per cow per winter the amount

being as low as 3.1 cwt. in one herd and as high as 13.0 in another. In 8 of the herds the Starch Equivalent figure lay between 8.0 and 11.0 cwt. per cow. As the winter was mild little extra feed had to be purchased and hay was bought in on only one farm.

Crop Yields

Half the total cost of keeping a cow is winter foods and the cost of these depends to a considerable extent on the yield of the home grown crops. In 1953 the yields of the main feed crops was fairly good and this helped bring down the price charged per cwt. of the various foods and offset any rise in gross production costs.

Table V

Average Crop Yields: 1953

	Turnips	Oats	Hay
Group I Caithness Farms	16½ Tons	16½ cwt.	25 cwt.
Group II Upland Farms	18 Tons	16½ cwt.	23 cwt.
Group III Lowland Farms	22 Tons	27 cwt.	32 cwt.
Group IV Outwintered Farms	18 Tons	21 cwt.	29 cwt.

Acres per Cow

On many farms this is a useful figure to calculate and Table VI below gives the average acreage of arable feeding for the various types of herd. It should be remembered that with cows kept inside in the winter, about 1 acre of straw is required for feeding and bedding, but as this is usually regarded as a by-product it has not been included in the Table.

Table VI

Average Acreage Requirement per Cow

Caithness Herds:	.26 acres Turnips;	.07 acres Hay;	.24 acres Oats;	TOTAL: .57 acres
Upland Herds:	.27 acres Turnips;	.09 acres Hay;	.09 acres Oats;	TOTAL: .45 acres
Lowland Herds:	.23 acres Turnips;	.01 acres Hay;	.03 acres Oats;	.06 acres Silage;
				TOTAL: .33 acres
Outwintered Herds:	.05 acres Turnips;	.12 acres Hay;	.06 acres Oats;	.08 acres Silage
				TOTAL: .31 acres

It is very difficult to calculate the acreage of grassland required per cow since the quality and type of rough grazing varies so greatly in the Groups I, II and IV. From data available, however, it does seem that about 1.3 acres of rotational grassland would be required per cow if the grazing were to be entirely on the low ground. Using this figure gives a total of 1.63 acres per cow for herds in the lowland ground and 1.75 and 1.87 acres per cow for the Upland and Caithness groups respectively. Figures for Group IV are impossible to give because of the large acreage of rough grazings and hill.

Total Cost per Cow

The average cost per cow per year in the four groups is shown in Table VII.

Table VII

Average Cost per Cow per Year

	Caithness Herds	Upland Herds	Lowland Herds	Outwintered Herds
Net Foods	17.12. 6	15. 9.11	13.12. 5	8. 8. 5
Labour and Power	6.15.11	5.17. 4	4. 9. 6	3. 6. 5
Grazing	3. 2.11	5.14. 3	6. 7.10	2.12. 7 [≠]
Miscellaneous	- 4. 1	- 3.11	- 3. 9	- 2. 5
Cow Depreciation	2.18. 5	3. 2. 9	3. 5. 3	1. - 3
Bull Charge	1. 7. 9	1.10. 6	1. 3. 6	1.11. 3
Overheads	2. 6.11	1.19. 1	1.13. 2	2. 2. 3
TOTAL	34. 8. 6	33.17. 9	30.15. 5	19. 3. 7

[≠] Includes Winter Grazing

These figures are £2 - £4 higher than last year and apart from small increases in most of the items the main difference is in the figure for cow depreciation. Generally speaking the price received for cast cows is still high so that this cost would not amount to much but in this year's sample it happened that several herds were preparing for or undergoing Attestation with the result that some cows were sold at low prices. A more detailed note of the cost of Attestation is given in Appendix II.

Another cause of the greater cow depreciation figure is the larger number of deaths and casualties in each group compared with the previous year.

Labour and Power

In many of these herds the farmer himself does some or all of the work in connection with the herds, thus:

<u>Type of Herd</u>	<u>Mainly Labour of Farmer & Family</u>
15 Caithness Herds	12 Herds
16 Upland Herds	14 Herds
5 Lowland Herds	3 Herds
11 Outwintered Herds	2 Herds

If the 36 inwintered herds are divided into a) small farms worked mainly with labour of the farmer and his family and b) larger holdings worked with hired labour, then the labour hours per cow per week in the winter is 1.26 for the 'Family' farms and 1.00 for the others. The outwintered cattle receive less attention and the average man hours per cow per week in their case was 0.40.

Grazing

The method of calculation used is that described in Economic Report No. 46 of this Department. In many herds the presence of large acreages of rough grazing complicates the calculations; in almost every case the total stock grazing on the farm during the summer was known and the total "Livestock Unit Weeks" determined and divided into the grazing cost of all the grass on the farm. Table VIII shows the average cost per animal week and the range of costs:-

Table VIII

Grazing Costs per Animal Week

	Average Cost per LSU Weeks	Range in Costs: No. of Herds						
		Under 1/-	1/- to 2/-	2/- to 3/-	3/- to 4/-	4/- to 5/-	5/- to 6/-	Over 6/-
Caithness	2/5	1	4	3	6	-	-	-
Upland	4/5½	-	1	1	5	4	1	4
Lowland	5/1	-	-	-	2	1	1	1
Outwintered	1/7	5	2	2	-	2	-	-

Even cows on hill for part of the summer often spend some period on the ordinary rotation grassland and that explains why costs tend to be high in the Group II (Upland) herds. In Caithness there is often good grazing to be had on 'Old Arable' (i.e. land once cultivated but now in poor permanent grass) and furthermore the manuring of grassland is not so heavy in the Caithness sample of herds so that the average Grazing Cost in Group I is relatively low.

Two high costs in the Group III herds arose because the cows were grazing for part of the time on reseeded land.

Bull Charge

On 9 farms where no bull is kept this cost consists of the cow service fee plus the time taken in walking to the neighbouring farm and back.

On the remaining 38 farms the farmers had their own bull (or bulls) and the average cost per bull counting each farm as one was:-

Winter Foods	£16.18. -
Other Winter Costs	6. 5. 5
Summer Cost	5. 3. 4
Depreciation	14.11. 4
Other Costs	2. --.10
	<u>£44.18.11</u>

The cost is a little higher than the previous year and it will be noted that Bull Depreciation is one of the major items of cost. Actually this is an arbitrary figure on most farms since it is worked out by deducting the expected selling price from the purchase price and dividing by the number of years the bull is expected to be used and in view of the high prices which bulls have been making since the freeing of the markets in July 1954 it is possible that the figure charged for depreciation is on the high side.

In practice it was not found that service charges per cow were greater where expensive bulls were purchased because higher priced bulls are usually used only in the larger herds so that the greater depreciation cost is spread over a greater number of cows.

The variation in cost with the number of cows served in the year is shown in Table IX.

Table IX

Variation of Bull Charge with Number of Services

	Number of Services per Bull per Year				
	Under 20	20 - 29	30 - 39	40 - 49	Over 49
Service Charge per cow	£2.13. 7	1.11. 6	1. 7. 7	1. 5. 2	1. -. 6
No. of Herds	7	10	11	4	6

Variation in Cost per Cow per Year

The spread of costs this year was greater than in previous years due partly to the effect of attestation already referred to.

Table X

Variation in Cost per Cow per Year

Number of Herds with Cost per Cow

	Under £15	£15 - £20	£20 - £25	£25 - £30	£30 - £35	£35 - £40	Over £40
Caithness Herds	-	-	1	2	6	3	3
Upland Herds	-	-	1	4	7	1	3
Lowland Herds	-	-	-	1	3	-	-
Outwintered Herds	3	3	2	3	-	-	-

Cost of the Calf to Weaning

This differs from the cost per cow because the cost of keeping any cows in the herd for part of the year has to be added to the herd cost and so too does the cost of any replacement or additional calves bought in. On the other hand,

it is sometimes found that one of the cows in the herd is partly a 'milk cow' providing milk for the farmer and his family and part of the cost of keeping such cows has to be deducted from the total herd cost. Another deduction is the price received for any calves sold young. If the net figure remaining is called the Net Herd Cost, then this figure divided by the number of calves reared gives the net cost per calf to weaning.

The average cost per calf for each of the four groups is shown in Table XI.

Table XI
Cost per Calf - Variation in Costs

Group	Cost per Cow	No. of Cows	Cost per Calf	No. of Calves Reared	Under £20	£20 to £25	£25 to £30	£30 to £35	£35 to £40	Over £40
Caithness	34: 8: 6	216	32:14: 3	227	1	-	3	4	6	1
Upland	33:17: 9	260	32: 8: 4	263	-	3	2	7	2	2
Lowland	30:15: 5	81	27: 9: 1	91	-	3	1	1	-	-
Outwintered	19: 3: 7	603	22: 5: 2	541	5	1	2	2	1	-

On eleven farms most of the calves were sold, but on the remaining 36 farms the calves were retained over the winter. It is interesting however to value the calves not sold in the light of market prices ruling in the 1954 Autumn sales and so to compare the sale or valuation figure with the cost of production. This has been done in Table XII which gives the estimated returns per weaned calf for the four groups.

Table XII
Average Valuations or Sale Price and Margin per Calf
(Autumn 1954)

	Group I Caithness	Group II Upland	Group III Lowland	Group IV Outwintered
Valuation or Sale Price	30: 7: 9	29: 8: 1	32: 5: 6	27: 1: 7
NET COST	32:14: 3	32: 8: 4	27: 9: 1	22: 5: 2
Margin per Calf	- 2: 6: 6	- 3: -: 3	+ 4:16: 5	+ 4:16: 5

It is difficult to disentangle valuation and sale prices from the calf subsidy which had been paid in some cases and not in others. In Group I and III the value of the calf subsidy was taken into consideration in the valuation and the negative margin of £2: 6: 6 in Group I therefore includes the effect of the calf subsidy. In Group II on the other hand, valuations were made after the subsidy had been received and so the loss of £3: -: 3 requires adjustment. The figures including the effect of the calf subsidy appear in the top portion of Table XIII.

TABLE XIII

Effect of Subsidies & Grants on the Margin per Calf

	15 Caithness Herds	16 Upland Herds	5 Lowland Herds	11 Outwintered Herds
Net Margin per Calf	- 2: 6: 6	- 3: -: 3	+ 4:16: 5	+ 4:16: 5
Calf Subsidy (where not taken into account)	-: -: -	5: -: -	-: -: -	4:10:11
Margin including Calf Subsidy	- 2: 6: 6	+ 1:19: 9	+ 4:16: 5	+ 9: 7: 4
Hill Cow Subsidy	8:11: 5	9:11: 7	-: -: -	9: 1;10
Margin including Calf & Cow Subsidies	+ 6: 4:11	+11:11: 4	+ 4:16: 5	+18: 9: 2
Effect of Marginal Land Grants	-:19: 5	-:18:11	-: -: -	-: 5:10
Margin including effect of Calf & Cow Subsidies & Marginal Land Grant	+ 7: 4: 4	+12:10: 3	+ 4:16: 5	+18:15: -

If the effect of the subsidies is included, all the farms except three showed a profit and in fact the returns are very similar to those of the good year 1952/53. It should be remembered, however, that in the case of the outwintered herds there is a greater risk of an occasional bad year and these good results of "low cost" years do have to cover losses in a year of storm.

Excluding the effect of subsidies there was a profit on all four farms in Group IV in which most of the calves were sold in the Autumn, whilst of five Caithness herds selling calves in the Autumn, three made a profit. Two out of three farms in the Upland group showed a profit on Autumn sales.

Double Suckling

The number of herds practising double suckling on part or all of their herd was five, and two of these were in Group II, two in Group III and one in Group I. Although the difference between valuation and cost may not be so great for these herds as those rearing one calf to the cow, yet when the Margin per Cow is considered, the results favour double suckling.

The best illustration is provided in Group III results shown in Table XIV.

TABLE XIV

Comparison in Results of Single and Double Suckling (Lowland Herds)

	Average of 3 Herds Single Suckling	Average of 2 Herds Double Suckling
Cost per Calf	30: 1: 7	23:10: 5
Valuation	<u>35: 9: 2</u>	<u>27:10: -</u>
Margin per Calf	5: 7: 7	3:19: 7
No. of Calves per Cow	1.00	1.85
Margin per Cow	5: 7: 7	7: 7: 3

Costings done by this Department have always shown double suckling in a favourable light and despite its various snags and objections, its possibility might always be discussed if a farmer with a herd of breeding cattle is dissatisfied with his profits while single suckling.

No multiple suckling results or figures for coggèd (pail fed) calves are available this year, but it should be noted that these methods of rearing beef cattle are being used even more widely in England and that the finished animals appear to grade well. In the North of Scotland the obtaining of suitable calves would be a great problem but if any farmers are practising these more intensive methods, the Economics Department of the College would be interested to collect whatever details are available.

Conclusions

The results of the cost of rearing calves born in the Spring of 1954 showed that following the mild winter, the Outwintered Group showed very satisfactory returns with a difference between costs and valuation (or sale price) of over £4 per head. In the smaller inwintered herds a loss occurs in almost every case until the effect of the calf and cow subsidies are taken into account when an average profit per calf of £7 (Caithness Herds) and £12 (Upland Herds) occurred. The lowering of costs by double suckling normally appears to outweigh the loss in value and this was demonstrated particularly in results from 5 Lowland Herds.

Acknowledgment

The Economics Department of the College wish to thank the farmers who have given the details of their herds for inclusion in this report. It is hoped to continue the series over the year 1954/55 and so to assess the effect of the harder winter.

APPENDIX I

Summary of Results of 1953/54 Calf Costs

	15 Caithness Herds	16 Upland Herds	5 Lowland Herds	11 Outwintered Herds
Size of Farm	122 Arable 214 Rough	99 Arable 481 Rough	178 Arable 22 Rough	235 Arable 5397 Rough
Hill Cattle Subsidy	13 Farms	16 Farms	-	10 Farms
Marginal Land Grants	11 Farms	16 Farms	-	7 Farms
Size of Herd	16 Cows	17 Cows	16 Cows	59 Cows
Calves per Cow	(14 Herds - 1 Calf	(14 Herds - 1 Calf	(3 Herds - 1 Calf	1 Calf 1 Cow
	(1 Herd - (Over 1 Calf	(2 Herds - (Over 1 Calf	(2 Herds - (2 Calves	
<u>Winter: Man Hours per Animal Week</u>	1.39	1.08	0.93	0.40
<u>Foods (Average)</u>				
Turnips, etc.	86.1 cwt.	96.2 cwt.	100.4 cwt.	16.5 cwt.
Straw eaten	12.1	9.6	13.0	12.9
Hay	2.7	3.2	3.1	5.3
Oats	4.0	1.4	0.7	1.2
Silage	-	1.3	10.6	16.2
Other	Conc. 0.3	Conc. 0.1 Draff 1.2	-	0.1
<u>Summer</u>				
Grass Cost per Week	2/5	4/5 ¹ / ₂	5/1	1/7
<u>Cost per cow per year:</u>				
Winter Food	17:12: 6	15: 9:11	13:12: 5	8: 8: 5
Labour & Power	6:15:11	5:17: 4	4: 9: 6	3: 6: 5
Grazing	3: 2:11	5:14: 3	6: 7:10	2: 7: 2
Bull Charge	1: 7: 9	1:10: 6	1: 3: 6	1:11: 3
Cow Depreciation	2:18: 5	3: 2: 9	3: 5: 3	1: -: 3
Other Costs	2:11: -	2: 3: -	1:16:11	2:10: 1
TOTAL	34: 8: 6	33:17: 9	30:15: 5	19: 3: 7
<u>Autumn 1954</u>				
Value of Calves or Sale Price	30: 7: 9	29: 8: 1	32: 5: 6	27: 1: 7
Cost per Calf	32:14: 3	32: 8: 4	27: 9: 1	22: 5: 2
Margin	- 2: 6: 6	- 3: -: 3	+ 4:16: 5	+ 4:16: 5
Calf Subsidy	≠ -: -: -	5: -: -	≠ -: -: -	4:10:11
Cow Subsidy	8:11: 5	9:11: 7	-: -: -	9: 1:10
Effect of M.L. Grants	-:19: 5	-:18:11	-: -: -	-: 5:10
NET MARGIN INCLUDING SUBSIDIES	+ 7: 4: 4	+ 12:10: 3	+ 4:16: 5	+ 18:15: -

≠ Taken into account in valuations

APPENDIX II

The Progress of Attestation

The number of herds becoming fully attested in the North of Scotland has increased very rapidly in the last 3 years so that many herds are now attested as the following figures show -

Table A

Number of Cattle Attested in Northern Counties

	<u>September 1954</u>
Caithness	54%
Sutherland	76%
Ross & Cromarty	63%
Inverness	75%
Moray	47%
Nairn	53%
Banff	28%
Aberdeen	28%

It will be noted from this Table that progress in the North East counties of Aberdeen and Banff is much slower than in the Highlands proper and this characteristic was also shown in the sample of farms keeping Breeding Cattle costings for 1953/54.

Attestation: Breeding Cattle Costs Sample

<u>Counties Group</u>	<u>% Herds Fully Attested</u>	<u>% Herds Supervised or Fully Attested</u>
Caithness, Sutherland, Ross	77	90
Inverness, Moray, Nairn	60	85
Banff and Aberdeen	37	37

Most of the herds in this sample have become attested since 1951 and indeed 8 out of the 32 herds fully attested only received their licence in 1954.

It will be seen from the numbers of herds under 'supervision' (i.e. having tests either with their private or Ministry Veterinary Surgeons) that in the northern counties many of the herds which are not already attested are in the process of becoming so and it is likely that the area will soon be scheduled for complete attestation.

With this situation it has become difficult to get a good price for non-attested calves in Caithness or Sutherland and this in itself is forcing the residuum of breeders who have not gone in for attestation to do so. In the Moray Firth area the non-attested cattle are still making a fair price but it is almost certain that in another 12 months or less the breeders of non-attested stock will find their market rapidly shrinking in that area too.

It is therefore in the interest of every breeder of cattle to become attested as soon as possible.

Difficulties of Attestation

How many of my cattle will fail the test? That is the question which every non-attested breeder asks and we are able to give some idea of the proportion of animals failing in the sample of 32 farms drawn from the Breeding Cattle Costs.

Of these 32 herds attested or supervised, no fewer than 13 (over 1/3rd) had no reactors at all and a further 5 herds had under 5% reactors whilst at the other end of the scale one herd had almost 100% reactors. The figures are shown in tabular form in Table B.

Table B

Proportion of 32 Herds with Reactors in first tests

No Reactors	13 Herds
0 - 5%	5
5 - 10%	4
10 - 20%	6
20 - 40%	3
40 - 80%	-
80 - 100%	1
	<u>32</u>

In none of these herds had the policy of buying in known reactors been adopted but quite frequently where the tests revealed the presence of reactors the dairy cow (often purchased in) was one of the animals which failed the test. It is of interest to note that a number of herds in which all animals were wintered inside passed the test without any trouble.

Attestation Expenses

These may be listed -

1. Veterinary fees for Preliminary Tests.
2. Time taken during tests (labour).
- 3a. Sale and replacement of reactors.
- 3b. Disruption of Herd Policy during attestation.
4. Treatment of buildings, etc. as a result of attestation.

The first two items are unavoidable and will vary for each farm. For a herd of 30 head the charge for these items might work out at about 5/- per head for each preliminary test, depending on the distance the vet has to travel.

Replacement of Reactors

This is a heavy charge in certain cases and allowance must always be made for the increased value of the herd after the replacements have been obtained because old cows are often replaced by heifers during attestation. Table C shows how the replacement cost per head of stock varied according to the percentage of the herd which were found to be reactors. Included in this cost is also the estimated loss on sales of a few animals sold at unseasonable times as a result of attestation.

Table C

Cost of Replacements per Head: 32 Breeding Cattle Farms

<u>% Reactors</u>	<u>No. of Farms</u>	<u>Replacement Cost £ per head</u>
None	13	Nil.
0 - 5	5	7/-
5 - 10	4	£1: 5: -
10 - 20	6	3: 4: -
20 - 40	3	3:13: -
40 - 80	-	-: -: -
80 - 100	1	20: 5: -

Average replacement expenses per animal: £1:16: 4

Herd Dislocation

There is a certain amount of loss in some herds where, for example, a farmer may delay selling reactors until a favourable time and then fail to acquire replacement in time for the following year. If this effect were taken into account it would raise slightly the replacement expenses of the 20 - 40% group in Table C.

Buildings, Disinfection, etc.

No alterations or charges apart from routine repainting and washings are likely unless the proportion of reactors is very high. In the one herd in this category the expenditure on time and materials in scrubbing and disinfection, etc., only came to about £3:10/- or 4/6 per head.

Summary

It is difficult to give an exact estimate of the cost of attestation, but from data obtained from the farms in this report the average cost would work out at about £2: 7/- per head of stock since in about 1 herd in 8, 3 preliminary tests would be necessary instead of 2. Thus in all, except a few herds, the grants received in the first two years following attestation should cover the various expenses likely to be incurred.

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