

*Costs of  
production  
1949-50*

GIANNI FOUNDATION OF  
AGRICULTURAL ECONOMICS  
LIBRARY

THE NORTH OF SCOTLAND COLLEGE OF AGRICULTURE  
AGRICULTURAL ECONOMICS DEPARTMENT

ECONOMIC REPORT NO. 20

CALF COSTS 1949 - 50

by

D. GODFREY AND A. D. IMPER

April, 1951.

AGRICULTURAL ECONOMICS DEPARTMENT

Provincial Advisory Officer

Albert D. Imper, M.B.E., B.Sc.(Agr.)  
M.S.(Econ.), Ph.D., N.D.A.

Senior Advisory Officer

Gordon G. Hayes, B.Sc.(Econ.), N.D.A.

Advisory Officers

John Clark, B.Sc.(Agr.), N.D.A.  
Vernon Baker, B.Sc.(Econ.)

Assistants

Alexander Grant, B.Sc.(Agr.)  
Dip. Agr. Econ.  
David Godfrey, B.Sc.(Agr.)  
Miss Margaret Haugh, B.Sc.(Agr.)  
Wm. A. C. Jones, B.Sc.(Agr.)  
Miss A. M. Chalmers, B.Sc.(Agr.)  
G. A. Williamson, S.D.A., S.D.D.(H).

Technical Assistants

George Cowie  
Walter A. Duthie  
Miss A. C. Paterson

CALF COSTS 1949-50

During the year 1949-50 the cost of producing and rearing calves was obtained on seven farms in the North of Scotland. The number of costs is too small for the sample to be representative of the area, but the individual costs are of interest and they illustrate a variety of systems.

METHOD OF COSTING Where cows are being kept solely for rearing, the cost of rearing a calf is the cost of keeping the cows for the year divided by the number of calves reared. A bull service charge is added, but no depreciation has been allowed on the cows since they usually bear calves for several years and when they are eventually sold the price received will generally be quite high. The period under consideration was from October, 1949 to October, 1950 when the spring born calves were weaned. All the calves were suckled and there is no record of pail fed (cogged) calves.

Before going on to consider the cost of the cows for the year it is as well to get an idea of the types of farm and the system of rearing employed on them. These facts are set out in Table I.

TABLE I  
TYPE OF FARM AND SYSTEM OF CALF REARING

Farm	1	2	3	4	5	6	7
County	Aberdeen	Banff	Aberdeen	Ross	Caithness	Caithness	Aberdeen
Type of Cow	Cross Shorthorn	Aberdeen Angus	Cross Shorthorn	Cross Shorthorn	Mixed	Cross Shorthorn	Cross Highland
System	Two Calves per cow	Mainly two Calves per cow	Two Calves per cow	Mainly One Calf per cow	One Calf per Cow		
Notes on System	Second Calf obtained from Hfrs. Fattened	Second Calf Purchd. or Transfd. fr. Dairy Cows	Second Calf Purchased		Cows on Hill part of Summer	Cows out during day all the yr. Hill land used.	Cows out during day all the year. Act as "Scavengers".
Destiny of Calves	Retained on Farm and Mainly Fattened.		Sold at 12 - 18 months as stores.	Retained on Farm usually Fattened.	Sold as Spent Calves in Autumn 1950.		

The table emphasises just how different are the farms and the systems employed and we are faced with the intriguing but difficult question of which systems pay best on any particular type of farm.

COST OF KEEPING THE COWS - WINTER 1949-50

The various standards used in the calculations are set out in detail in the appendix. The cost per cow per week is shown for each farm in Table II.

TABLE II  
COST OF COWS PER WEEK IN WINTER PERIOD 1949 - 50.

	1	2	3	4	5	6	7	Average
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
<u>Foods -</u>								
Turnips	7. 6 $\frac{1}{2}$	7.11 $\frac{1}{2}$	6. 6 $\frac{1}{2}$	8. 6 $\frac{1}{4}$	8. 1 $\frac{3}{4}$	1. 9 $\frac{1}{2}$	2. 9	6. 2
Hay	- . 5 $\frac{1}{4}$	-	- . 6	-	- . 8 $\frac{1}{4}$	3. 6 $\frac{1}{2}$	-	- . 9
Straw E	1. 6 $\frac{1}{2}$	1.11 $\frac{1}{2}$	- . 9	1. 4 $\frac{3}{4}$	2. 2 $\frac{1}{4}$	- . 11 $\frac{1}{4}$	2. 6 $\frac{3}{4}$	1. 7 $\frac{1}{2}$
Straw B	1. 6 $\frac{3}{4}$	1.11 $\frac{1}{2}$	1. 6	1. 4 $\frac{3}{4}$	2. 5 $\frac{1}{4}$	1. 6 $\frac{1}{4}$	-	1. 5 $\frac{3}{4}$
Oats	- . 3 $\frac{3}{4}$	-	- . 1	- . 4	3. 8 $\frac{3}{4}$	5. 4	-	1. 4 $\frac{3}{4}$
Silage	-	-	3. 6	-	-	-	-	- . 6
Winter Grazing	-	-	-	-	-	- . 3	- . 6 $\frac{3}{4}$	- . 1 $\frac{1}{4}$
Other	- . 7 $\frac{3}{4}$	-	- . 2	-	-	-	-	- . 1 $\frac{1}{4}$
Total Foods	12. - $\frac{1}{2}$	11.10 $\frac{1}{2}$	13. - $\frac{1}{2}$	11. 7 $\frac{3}{4}$	17. 2 $\frac{1}{2}$	13. 4 $\frac{1}{2}$	5.10 $\frac{1}{2}$	12. 1 $\frac{1}{2}$
Less R.M.V. 's	2. 4 $\frac{3}{4}$	2. 9 $\frac{1}{2}$	2. 7	2. - $\frac{1}{4}$	3. 4 $\frac{3}{4}$	2. 3 $\frac{1}{2}$	- . 9 $\frac{1}{4}$	2. 3 $\frac{1}{2}$
Net Foods	9. 7 $\frac{3}{4}$	9. 1	10. 5 $\frac{1}{2}$	9. 7 $\frac{1}{2}$	13. 9 $\frac{3}{4}$	11. 1 $\frac{1}{4}$	5. 1 $\frac{1}{4}$	9.10
Man Labour	3. 2 $\frac{3}{4}$	2. 4	2.11	4. 2	4. 1 $\frac{1}{2}$	1. 9 $\frac{1}{4}$	1. 2 $\frac{1}{2}$	2.10
Horse & Tr. Labour	-	-	-	-	-	- . 7 $\frac{3}{4}$	- . 8 $\frac{1}{4}$	- . 2 $\frac{1}{4}$
Overheads	- . 11 $\frac{1}{4}$	- . 8	- . 10	1. 2 $\frac{1}{2}$	1. 2 $\frac{1}{2}$	- . 7	1. 1	- . 11
Miscellaneous	- . 1	- . - $\frac{1}{2}$	- . 2 $\frac{1}{2}$	- . 2 $\frac{1}{2}$	-	-	-	- . - $\frac{3}{4}$
NET COST PER WEEK	13.10 $\frac{3}{4}$	12. 1 $\frac{1}{4}$	14. 5	15. 2 $\frac{1}{2}$	19. 1 $\frac{3}{4}$	14. - $\frac{3}{4}$	8. 1	13.10
Average No. of Weeks	28	28	25	28	24.4	28.9	26	26.9
Cost per Cow in Winter	£19. 9. 1	£16.18.11	£18.-.5	£21.5.10	£23.7.2	£20.6.4 $\frac{3}{4}$	£10.10.2	£18.11.1 $\frac{1}{2}$

FOODS form 71% of the average cost per cow per week and thus influence the ultimate winter cost to a very great extent. The amounts of food fed on the different farms are shown in Table III.

TABLE III

AVERAGE FOODS FED IN LBS. PER DAY. WINTER PERIOD 1949/50.

	1	2	3	4	5	6	7	Average
Turnips	77.0	78.0	43.0	58.0	70.0	13.9	36.9	53.8
Hay	1.2	-	1.0	-	1.8	9.3	-	1.9
Total Straw	23.8	32.0	12.5	21.5	26.8	11.8	24.7	21.9
Oats	0.4	-	0.1	.43	3.35	4.24	-	1.2
Silage	-	-	19.0	-	-	-	-	2.7
Other	0.4	-	1.5 (vetches)	-	-	Grazing	Grazing	0.3

On Farms 1, 2 and 4 the cows were kept on turnips and straw with small quantities of hay and concentrates being fed to the autumn calvers on Farm 1. The food cost per week is very uniform on these farms and subsequent results indicate that this is a safe and not too costly system of bringing spring calvers through the winter. Where turnips do not grow successfully a case can be made for using hay and silage as on Farm 3.

The cost per week is considerably higher on Farm 5 because more oats were fed; the yield of oats per acre was low on this Caithness farm and the cost per cwt. was therefore high.

On Farms 6 and 7 the cows were out grazing during the day all through the winter. On farm 6 the cows were not given much hand feeding until December, but thereafter large quantities of hay and oats were fed and here again the yields per acre were low and thus helped to make the net food cost per week rather high. On Farm 7 there were 12 cows and heifers rough wintered and the only feeding apart from their grazing was some turnips and straw during the coldest weather.

TABLE IV

MAN HOURS PER COW WEEK - WINTER PERIOD

	1	2	3	4	5	6	7	Average
Man Hours per Week	1.30	0.93	1.28	1.7	1.65	0.88	0.48	1.17

MAN LABOUR forms an average of 20.5% of the average cost per cow week and Table IV shows the great farm to farm variation which may be due to all kinds of factors. The horse and tractor labour costs on Farms 6 and 7 (Table II) were incurred in carting foods out into the fields.

LENGTH OF WINTER PERIOD This varied from  $24\frac{1}{2}$  to  $29\frac{1}{2}$  weeks and most of the cows were brought in towards the end of October and turned out again near the end of April.

COST OF KEEPING COWS THROUGH THE SUMMER 1950.

Here the main charge is the cost of grazing and Table V shows how that was worked out.

TABLE V  
AVERAGE GRAZING COST PER ACRE FOR THESE FARMS

	£. s. d.	%
Rent	1. -. 4.	20.6
Labour - Man 1/4d. Tractor 1/1d.	-. 2. 5	2.5
Sowing Down Charge	-.15.11	16.1
Manures applied £1. -.11		
Add R.M.V.'s b/f 3. 3. 4		
4. 4. 3		
Less R.M.V.'S c/f 1.19. 4½		
Net Manures	2. 4.10½	45.4
Overhead Costs	-.15. 3	15.4
	4.18. 9½	100.0
Less Proportion of Hay & Silage	-.15. 2½	
Average Grazing Cost per Acre	£4. 3. 7	

Average Grass Cost per Acre £4. 3. 7

Average Grass Cost per Farm £469.18. 5

Less 1/6 Winter Grazing £78. 6. 5

Summer Grass Cost per Farm £391.12. -

Divide this by Number of L.S.U.Weeks 2185.9

to give Net Grazing Cost of 3/7d. per L.S.U. Week.

The cost of the grass is obtained for each field or group of fields and these costs are added together to give grass cost per farm. One sixth is then deducted as an allowance for winter grazing. The remaining figure is the summer grass cost per farm and this divided by the total number of livestock grazing the grass, gives the grazing cost per livestock unit (expressed in Table V as a cost per livestock unit week).