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# **COMMERCIAL PIG PRODUCTION**

IN

1958

by

# J. A. MACLENNAN, B.Sc.

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DEPARTMENT OF ECONOMICS

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#### PUBLICATIONS

A. Annual Reports on Financial Results of East of Scotland Farms :-

Hill Sheep Farms Stock Rearing Farms

{ Reports for the years 1948-49 to 1957-58

Stock Raising and Feeding Farms Arable Farms Dairy Farms

Reports for the years  $191_{4}8-49$  to 1957-58

B. Enterprise Studies :-

Milk Production (Annual Reports) Commercial Egg Production Cattle Rearing Silage Making Wheat, Barley, Oats, Potatoes and Sugar Beet Costs Etc.

C. Miscellaneous :-

Dairy Labour in the East of Scotland Team Work in Grass Silage Making Economics of Small-Scale Farming Piece-Work Potato Gathering Blackface or Cheviot? 1946-53 Hill Farming During the Post-War Period Some Notes on Reseeding Old Grassland on Hill and Upland Farms, 1955-57 Diesel Tractor Costs and Performance in the East of Scotland, 1956-57 Some Notes on Grain Drying - 1957 Harvest Report on Grain Drying - 1958 Harvest Organisation of Hill and Upland Farming in Selkirkshire Economic Aspects of Tractor Work, 1957-58

Copies of these publications may be obtained on request to the Secretary of the College or the Advisory Economist.

#### FOREWORD

The controversy which has raged in recent months around pig production in relation to market conditions makes the publication of any information a matter of considerable interest to producers and others concerned with the welfare of this section of the agricultural industry. This report covers a period before the disparities between the pork and bacon markets led to serious difficulties in the marketing of bacon pigs. Problems on the marketing side cannot be dealt with in this type of investigation which is confined primarily to a study of the variable conditions under which producers operate and which lead to wide differences in costs. The realisation values, selling prices plus any deficiency payments due, constitute only half the equation which decides the profitability of pig production; the other half - costs is just as important.

The study of the eighteen enterprises covered by the report brings out the complexities which are a feature of pig production. But the real importance of the data is the way in which those aspects of management which are critical for efficiency and low costs are underlined. These points have been made many times and in many places but the existence of high cost producers continues to call for information of this nature. Figures which demonstrate what can be achieved under commercial conditions can be useful guides to producers who wish to improve their management.

> J. D. NUTT. Advisory Economist.

#### COMMERCIAL PIG PRODUCTION

#### INTRODUCTION

This report gives the results of an investigation into the costs of and returns from eighteen commercial pig production enterprises in the East of Scotland during 1958. The period covered by the report was one in which there was a reduction of 2s. per score deadweight in the guaranteed price for fat pigs following the Price Review in February of that year. This reduction in the guaranteed price did not result in any reduction in the number of breeding sows in the herds included in this survey but the overall figure for breeding sows at December 1958 was lower by about 8 per cent than the corresponding figure a year previously. This suggests that what may appear to be a slight falling of in the probable returns from pig-keeping can have quite serious results on the Some breeders and feeders soon make supplies of pigs coming forward. up their minds that the probable margin between returns and costs (which cannot be arbitrarily reduced to the same extent) is not sufficient to induce them to carry on - a reflection, if only a minor one, of the notorious "pig cycle" which guaranteed prices might have been expected to mitigate.

The eighteen herds included in this survey show certain features which are common to the pig industry in which the size of the unit, the breed(s) of pigs kept, the housing and feeding vary widely from producer to producer whose management of his herd will be influenced by the type of holding he occupies, buildings and other facilities available, personal predilections for this or that breed of pig or cross, and the particular market he is aiming at. Seventeen of the herds comprised breeding units for the production of weaners to be fattened off as either baconers or porkers. The remaining enterprise was confined to the breeding herd only, the weaners being sold to others to rear and fatten. Seven of the enterprises were maintained on arable farms, seven on small holdings, three on stock-rearing and feeding farms and one on a dairy farm. types of housing and the associated systems of management also differed quite markedly while the differences in breeds and crosses kept could well be taken as exemplifying the problem of selection which faces the The popularity of the Large White breed was evident industry as a whole. in that ten of the enterprises kept this breed only, two used the Landrace boar with Large White sows, and two used the same breed of boar with both Landrace and Large White sows, while three enterprises used both Landrace and Large White boars on cross-bred sows (Wessex X Landrace or Large White). The remaining herd used boars of both white breeds with Wessex sows. This sample of herds suggests that the Large White is still the most popular breed but considerable regard is paid to the merits of the Landrace and Wessex breeds.

The variation in the size of herd indicates the adaptability of pig production which can be made to fit into a wide range of conditions, from utilising a restricted range of existing accommodation to an intensively operated unit which might well be distinct in every way from the rest of the holding. On average, the eighteen enterprises were based on a breeding herd of 30 sows, but the size of the individual herd ranged from under 10 to over 50 sows. This range is shown in Table I.

TABLE	I.	DISTRIBUTION	OF	BREEDING	HERD	BY	SIZE
					_		

AVERAGE SIZE = 30 SOWS

Number	10 and	11 to	21 to	31 to	41 to	Over	TOTAL
of Sows	Under	20 Sows	30 Sows	40 Sows	50 Sows	50 Sows	
Number of Herds	1	5	5	3	3	1	18

COSTS, RETURNS, PROFITS /

#### COMMERCIAL PIG PRODUCTION

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#### TABLE I. DISTRIBUTION OF BREEDING HERD BY SIZE

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Number of Sows	10 and Under	11 to 20 Sows	21 to 30 Sows	31 to 40 Sows	41 to 50 Sows	Over 50 Sows	TOTAL
Number of Herds	1	5	5	3	3	1	18

#### COSTS, RETURNS, PROFITS

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The practical fact that breeding, rearing and fattening were carried on jointly made it impossible to separate all the costs clearly between the major sections of the enterprise, but it was possible to keep separate records of the feed used by the breeding herd and that used from weaning to fattening. A further problem arose from the fact that while most of the fat pigs were disposed of as baconers, pigs were sold in varying numbers as porkers, and heavy hogs and as stores, thus it was not possible to arrive at separate cost schedules for the different categories of sales. The main comparisons between costs and returns have, therefore, been made by relating costs to output, output being the total value of sales plus the closing valuation of stock less the value of purchases and the opening valuation of stock.

#### Profits

Table II shows that there was a wide range in profitability, which actually varied from a loss of  $\pounds_4 8$  to as high a profit as  $\pounds_3 0$  per  $\pounds_1 00$ of output. The fact that five enterprises could achieve a profit of over  $\pounds_2 0$  per  $\pounds_1 00$  output does at least emphasise the possibilities of efficient management, even at a time when there had been a reduction in the level of guaranteed prices. The average profit earned was  $\pounds_7 : 10s$ . per  $\pounds_1 00$  output but this makes no allowance for interest on the capital investment.

TABLE	II.	RANGE	OF	PROFITS	PER	£100	OUTPUT

	Unprofitable	£1 to	£11 to	£20 and	Average
	Enterprises	£10:19s.	£19:19s.	Over	£7:10s.
No. of Enterprises	3	4	6	5	18

#### Factors Affecting Profits

Since there is such a wide range in profitability it is necessary to examine the data to see what the important factors are. One aspect which has already been referred to is the difference in the size of the producing unit and this can be roughly measured by the number of breeding sows. In Table III the eighteen enterprises have been separated into three groups on this basis, and the table shows the average costs per £100 output under three headings as well as the average profits.

TABLE III. COSTS AND PROFITS PER £100 OUTPUT

	SIZE GROUPS						
Costs and Profit per £100 Output	Average of 18 Enterprises	20 Sows and Under 6 Enterprises	21 - 40 Sows 8 Enterprises	41 Sows and Over 4 Enterprises			
	£ 5. £ 5.	£ s, £ s,	£ 5. £ 5.	£ s. £ s.			
Net Food Costs Purchased Home Grown	57:4 <u>14:3</u> 71:7	62: 2 <u>11:14</u> 73:16	53:13 <u>19:13</u> 73: 6	56:17 <u>6:18</u> 63:15			
Labour Costs	11:8	10: 2	12:19	10:6			
Other Costs	<u>9:15</u>	8:6	<u>10: 8</u>	<u>10:12</u>			
Total Net Costs	€92:10	£92:4	£96:13	€84 ;13			
Profit	7:10	7:16	3: 7	15:7			
Output	£100: -	£100: -	£100: -	£100: -			

There /

There is not enough evidence from these figures to suggest that the size of the unit is the really important factor. It would be expected that the larger units could make better use of labour and other working costs, but this is not substantiated by the average figures for the three groups. The lowest labour cost occurred with the smallest sized units and the highest with the medium sized. As far as other working costs are concerned, these were highest for the largest sized units. It is in the cost of food that the large sized units have the greatest superiority.

The really important aspect, which may be associated with size of enterprise, is that greater size will give more opportunity for the exercise of good management which will increase output in relation to costs, particularly food costs which accounted for 77 per cent of the average total costs for all the enterprises. In Table IV the enterprises have again been grouped according to the size of the breeding herd in order to bring out the important differences which have contributed to profitability.

	SIZE GROUPS					
General Data	All Enterprises	20 Sows and Under	21 - 40 Sows	41 Sows and Over		
Number of Enterprises	18	6	8	4		
Breeding Herd						
Average Number of Sows	30.1	17.3	28.6	52.2		
Net Cost of Meal Equivalent per cwt.	30s.	29s.1d.	30s.11d.	29s.4d.		
meal Equivalent per Sow per year (incl. creep feed) Weaners per Sow per year Average Weight per Weaner Feed Cost per lb. Weaner	31.6 cwt. 16.14 35 lb. 1s.7d.	30.6 cwt. 14.59 34 1b. 1s.10d.	32.5 cwt. 16.4 35 lb. 1s.8d.	31.16 cwt. 17.95 37 lb. 1s.4d.		
Feeding Herd						
Net Cost of Meal Equivalent per cwt.	26s.4d.	26s.5d.	25s.10d.	27s.1d.		
lb. Meal per 16. liveweight gain	4.3	4.2	4.7	3.8		
Food Cost per lb. liveweight gain	12.1d.	12.1d.	13d.	11d.		
<u>Average Net Return per Score</u> Liveweight						
Baconer Porker	35s.3d. 33s.2d.	35s.1d. 32s.3d.	35s.2d. 33s.1d.	35s.6d. 34s.6d.		
% Baconers Grading"A "and Over	63%	61%	61%	67%		
<u>% Total Sales</u> Baconers Porkers Heavy Hogs	72.2% 8.5% 3.2%	81.1% 10:7%	63.9% 8:4%	75•5% 5•2% 13•5%		
Stores, Weaners and Casualties Sows, Boars, Gilts	8.4% 7.7%	4% 4•2%	15.9% 11.8%	•5% 5•3%		

TABLE IV. FACTORS AFFECTING PROFITABILITY

The /

The figures for the breeding herds suggest that both feed costs per cwt. and quantities fed per sow were fairly uniform throughout and it seems that the smaller herds were no worse off than the larger ones in these respects. It is when food consumed is related to output that the important differences emerge. The number of weaners produced per sow per year increased as the size of herd increased and the average weight of weaners was greatest in the herds of over 40 sows. The results of those two factors were that the food cost per lb. weaner dropped from 1s.10d. for the smallest herds to 1s.4d. per lb. for the largest, a difference of 27 per cent in the most important item of cost at that stage of production.

In the fattening sections of these enterprises the actual cost of food per cwt. was highest in the case of the large sized units, but the amount consumed per lb. liveweight gain was appreciably lower with the result that feed cost per lb. liveweight gain was the lowest in the case of the largest sized herds. Figures such as these emphasise the importance of good management of the breeding herd to reduce costs per unit of production at that stage and the importance of correct feeding throughout the fattening period to reduce the cost per lb. liveweight increase. These are possibilities which need not be restricted to the larger herds.

On the selling side the average prices realised for both bacon and pork pigs were in favour of the larger herds and this appears to be the result of these herds producing rather better quality pigs as judged by the percentages of bacon pigs grading "A" or better than "A." In this connection the size of herd may be a significant factor as the larger herds may be in a better position to use high class stock, particularly boars, to improve the quality of their output.

The distribution of the total sales between the bacon and pork markets and other outlets (heavy hogs, stores and breeding stock) shows that all enterprises were mainly interested in the bacon market and there is certainly nothing in the figures for 1958 to suggest that greater emphasis on the pork market or on the sale of stores etc. would have brought in better returns.

Similar comparisons may be made by averaging the figures for the four least profitable and the four most profitable enterprises and Table V shows the principal items of cost and the profits per £100 output.

Costs and Profit per £100 Output	Four Most Profitable Enterprises	Average of 18 Enterprises	Four Least Profitable Enterprises	
Net Food Costs	£ S, £ S,	£ S. £ S.	£ S. £ S.	
Purchased	46:15	57:4 14. 3 71. 7	82: 3 8:17 91: -	
Labour	<u>1).</u> 00. – 6:14	11: 8	18: -	
Other Costs	<u>_7:8</u>	<u>9:15</u>	<u> </u>	
Total Costs	€74: 2	£92 <b>:</b> 10	,£120: <del>,</del>	
Profit	25:18	7:10	- 20: -	
Output	£100: -	£100 <b>: −</b>	£100: <b>-</b>	

TABLE V. PROFITABILITY COMPARED

The figures show the very low total cost of food per £100 output for the profitable farms. Labour and other costs were also much lower and the net result was a high level of profit.

This /

This type of comparison where costs are related to output does little more than bring out the fact that certain enterprises are more efficient than others thus it is necessary to look in other directions in order to see how this has been brought about. The average figures in Table VI show how the management factors have varied between the profitable and unprofitable enterprises.

TABLE VI	F. F.	ACTORS	S AF	FECTING	PROFITABI	LITY
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F	ilGH I	AND J	LOW .	PROPIT	GROUPS	

	Four Most Profitable Enterprises	Average of 18 Enterprises	Four Least Profitable Enterprises
<u>Breeding Herd</u> Litters per Sow per year Born per Litter Pre-weaning Deaths per Litter Weaners per Litter Weaners per Sow per year Average Weight per Weaner Meal Equivalent per Sow per year Cost per cwt. of Meal Equivalent Food Cost per 1b. liveweight per Weaner <u>Feeding Herd</u>	2.03 10.8 1.6 9.2 18.67 35 1b. 31.4 cwt. 29s.6d. 1s.5d.	1.83 10.79 1.97 8.82 16.14 35 1b. 31.6 cwt. 30s. 1s.8d.	1.65 10.7 2.3 8.4 13.86 36 1b. 31.28 cwt. 31s.8d. 2s.
<pre>b. Meal per lb. liveweight gain Cost of Meal Equivalent per cwt. Food Cost per lb. liveweight gain Price per score liveweight per Baconer % Grading"A"and above " "B"</pre>	3.92 25s.4d. 10.62d. 34s.8d. 55% 33%	4.5 26s.4d. 12.1d. 35s.3d. 63% 27%	5.1 27s.7d. 15.1d. 31s.8d. 62% 29%
Labour Hours per £100 Output	38	63	97
<u>% Total Sales</u> Baconers Porkers Heavy Hogs Stores, Casualties, Weaners Sows, Boars, Gilts	81.25% 13:5% - 2.0% 3.25%	72.2% 8.5% 3.2% 8.4% 7.7%	55.5% 4.5% 

The breeding record is altogether in favour of the profitable farms. Good management to get at least two litters per sow per year which, with a low pre-weaning death rate has meant an average of 18.67 weaners per sow per year compared with 13.86 in the case of the unprofitable enterprises. There was no significant difference between the amount of food fed per sow, though the profitable enterprises managed to feed their breeding stocks at a slightly lower cost per cwt. The final result has been that the cost per weaner in terms of 1b. weight of weaner, to allow for the slight advantage in weaner weight of the profitable enterprises, has been 29 per cent lower than the corresponding cost of the unprofitable ones.

In the fattening sections the profitable enterprises again managed to feed at a slightly lower cost per cwt. of meal equivalent and, in addition, had a much better conversion ratio, requiring only 3.92 lb. of meal per lb. liveweight gain as compared with 5.10 lb. in the case of the unprofitable. As a result the cost of feed per lb. liveweight gain was 30 per cent lower for the profitable farms.

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Judged on the basis of two of the key factors - feed cost per weaner and cost of feed in the fattening section - the profitable enterprises were running at only two-thirds of the costs incurred by the unprofitable.

Another cost factor which has come out very much in favour of the profitable enterprises is the extremely low cost of labour. This has worked out at little more than one-third of the cost incurred by the unprofitable enterprises.

On the selling side the profitable enterprises concentrated more on producing baconers, whereas the unprofitable sold a comparatively large proportion as weaners and stores, and although the grading of the baconers sold by these latter enterprises was rather better, it is a fact that the profitable enterprises sold more at periods of relatively high prices and hence averaged a better price per score liveweight.

#### PRODUCTION COSTS

The extent to which the costs of pig production vary can be seen from Table VII which shows the average costs and the range for each category of cost.

	Average	Range		
	G.	£		£
Net Food Cost	71.35	from 55	.0 to	120.0
Labour	11.40	11 4	.8 "	23.0
Other Costs	9•75	" 3	•55 "	16.0

TABLE VII. PRODUCTION COSTS PER £100 OUTPUT

Even if it is admitted that it would be expecting too much to say that all pig production units could work on the lowest range of costs, it is not unreasonable to suggest that the average figures should be within the compass of most producers.

#### Food Costs

Food costs amounted to 77.1 per cent of the total costs and it is obvious that the proper selection, careful buying (where home supplies are inadequate or non-existent) and handling of food are most important. The extent to which varying conditions on the farm may affect the food situation is shown by the differences in the buying and mixing policies followed by Fourteen of them bought in varying proportions those eighteen enterprises. of their requirements as "straight" foods to be milled and mixed on the farm; two of these depended entirely on purchased foods, while twelve milled and mixed varying amounts of home-grown foods with the purchased "straights". Three enterprises depended entirely on purchased compound feed, while the remaining one purchased grains to mill and mix on the farm with grain-balancer meals. One producer obtained about one-third of his requirements, in terms of meal equivalent, in the form of skim milk; another fed a similar proportion of swill.

#### Labour Costs

On average, one man looked after eighteen breeding sows and their progeny and although average labour costs amounted to no more than 12 per cent of all costs, there was an extremely wide variation in the cost of labour / labour in relation to production from enterprise to enterprise. The numbers of pigs being kept, the layout of buildings and methods of feeding all come to mind as factors which will mean higher or lower labour costs. Even so, it is something of a shock to note that while the numbers of hours worked compared with output averaged 63 hours per £100 output, the range was from as low as 37 hours to as high as 144 hours. Comparing the total labour requirements with the average number of breeding sows per enterprise, the average figure was 159 hours per sow and the individual requirements ranged from as low as 82 hours to as high as 272.

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#### Other Costs

These comprise a number of items and amounted, on average, to just over 10 per cent of the total costs or £9:15s. per £100 output. The greater part of this cost was made up of sundry expenses, including a charge for overheads which amounted to £5:9:5d. per £100 output. The remaining items were relatively small; depreciation on buildings amounted to no more than £2:18:3d. per £100 output and veterinary expenses to as little as £1:7:4d.

#### Herd Replacements

The eighteen herds studied in this report were almost entirely self-contained. Female breeding stock was replenished in the main from home-bred gilts and the need for new male stock was met by the occasional purchase of a boar. Store pigs made up the bulk of the purchases and, in total, only comprised 8 per cent of the stock transferred to the breeding and fattening sections. Roughly speaking, 9 out of 10 of the small numbers purchased were stores.

#### Baconer Costs

It was not possible to isolate the costs of the different categories of pigs in all the enterprises studied, but it was possible to do this for five enterprises. The average costs and profits per bacon pig for these enterprises are shown in Table VIII.

TABLE VIII. AVERAGE VALUE, COST AND PROFIT PER BACONER

Average Value (including Deficiency Payment) " Net Cost (including weaner cost)	€ s.d. 17:9:3 14:15:9
" Net Profit	€ 2:13: 6
Other Data Average Liveweight " Price per score Per Cent Grading "A" and above lb. Meal per lb. liveweight gain Litters per Sow per year Piglets Weaned per Litter " " Sow per year	201 lb. 34s.11d. 55% 4.2 lb. 1.88 9.1 17.1

Looking at those factors which measure, to some extent, the manage-:ment efficiency and comparing them with the corresponding figures in Table VI, / Table VI, it can be seen that as far as food conversion and the management of the breeding herd to obtain a good output of weaners are concerned, these figures are just a little better than the overall average. It may be claimed that the standard they set is not an unreasonable one and has resulted in a profit of £2:13:6d. per bacon pig. As far as these figures are a guide, it is possible to achieve a reasonable level of production costs for bacon pig production and, under the market conditions operating in the year under review, to get a profit of the order of 18 per cent of working costs.

#### SALES

It has already been noted that bacon pigs comprised the major part of the total sales and that this category accounted for 72 per cent of the total value of sales. Of the remaining 28 per cent of sales, roughly one-third each was taken up by pork pigs, by breeding stock and by stores, weaners and casualties together. A very small proportion, about 3 per cent of the total value was taken up by heavy pigs. Table IX gives the average realisation values (selling price plus any deficiency payment) of the various classes of sales and also gives some additional data concerning those categories which may be regarded as the end-products of the pig industry.

Class of Pig	Average Realisation per Head	Average Liveweight	Average Value Realised per Score Liveweight
	£ s.	Score 1b,	s. d.
Baconers	17:14	10 1	35: 3
Porkers	<b>1</b> 1:18	7 6	33: 2
Heavy Hogs	20:18	13 –	32: 1
Stores and Casualties	8: 3		
Weaners	5:11		
Sows and Gilts	28:10		
Boars	28:19		

TABLE IX. REALISATION VALUES

The main interest in the above figures is in the realisation value per score liveweight. Over the year in question the prices appear to have favoured the bacon pigs as compared with either porkers or heavy pigs. The latter are responsible for so small a proportion of the total sales that, for the enterprises in question, they need not be regarded as a real part of production policy. In any case, the feed conversion rate would need to be lower than 4 lb. meal per lb. liveweight gain to bring the cost of feed below the realisation value of the additional weight above 10 score.

The difference between the baconer and porker realisation values amounted to about 2s. per score in favour of the baconer. Food is the important element in the costs of both categories. If the differential in the realisation values were to remain at the 2s. level and if the food conversion rates did not fall off seriously between the pork and bacon stages, then the bacon pig would appear to be the more profitable. Recent experience has shown, however, that it is not always possible to maintain a stable price differential between those two categories of pigs. Thus, while it may be argued that there is no very great discrepancy between the production costs of baconers and porkers, profitability is very much at the mercy of market conditions over which the individual producer has no measure of control.

#### SUMMARY

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- The report discusses the costs, returns and profits of 18 commercial pig enterprises for the 1958 year. One of these enterprises was restricted to the breeding herd, the progeny being sold as weaners. The other seventeen enterprises bred their own stock to be fed mainly for the bacon market. The average size of the breeding herd was 30 sows.
- 2. These enterprises reflect the complexity of pig production in which variations in the size of enterprise, breed of pig kept, conditions of housing, feeding and the alternative markets (sales as bacon, pork, store pigs or weaners) open to producers are extremely wide.
- 3. As a result of this variability of conditions it has been necessary to summarise much of the cost data in relation to output. This has shown an average cost of £92:10s. per £100 output. This average cost comprises feed 77.1%, labour 12.3% and other costs 10.6%.
- 4. The data from five enterprises which concentrated on bacon pigs showed an average cost of £14:15:9d. and an average realisation value of £17:9:3d. to give a profit of £2:13:6d. per baconer.
- 5. Study of the factors affecting production costs has emphasised the importance of a high number of weaners per sow per year, a good feed conversion ratio and careful consideration of the possibility of cheapening food costs by home milling and mixing. Quality of product and timing of production are also important.
- 6. Production costs are only one side of the picture. The realisation values for the year under review enabled a profit to be shown by those enterprises which achieved reasonable levels of efficiency.

#### ACKNOWLEDGMENT

Grateful acknowledgment is made of the help given by farmers who took part in the investigation and supplied the various records and other information and who always gave the investigator considerate and courteous attention on the occasion of his visits.

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#### COSTING PROCEDURE

#### Sales

This is the net figure after commission etc. have been deducted. In the case of pigs sold through the auction market it also included any guaranteed payments.

#### Purchased Pigs

The cost is the price paid at the time of purchase and does not include transport costs to the farm.

#### Output

This is the total sales of pigs plus the closing valuation less purchases of pigs plus the opening valuation.

#### Purchased Foods

These have been charged at their estimated cost of production on the farm plus the cost of milling and mixing.

#### Unexpired Manurial Residues

Credit has been given for residual values of foods. If manure was sold credit was given for its actual sale price.

#### Labour

This was charged at the rate paid and includes the value of any perquisites. Where the farmer looked after the pigs his time has been charged at standard rates.

#### Other Costs

These include the following :-

- a) Grazing at cost.
- b) Depreciation of Buildings and Equipment at standard rates.
- c) Overheads. At agreed rates.
- d) Veterinary expenses.
- e) Miscellaneous Costs carriage, repairs, heating etc.
- f) Litter at cost.

#### Food. Conversion Ratio

The ratio of meal equivalent to liveweight increase in the fattening section.

#### Managerial Salary and Interest on Capital

No charge has been made in the costs for managerial salary or interest on capital.

