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Department of Farm
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Meal Based Pig
Production - Canterbury
Survey 1967-69

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Farm Management Studies 2



**MEAL BASED PIG PRODUCTION –
CANTERBURY SURVEY 1967–1969**

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Subsequently it was decided to present the two years' results in one publication, and in a different form. This has led to revision of the original scripts, which has been done by Mr Ryan. This revision has benefited from advice by Dr R. Townsley.

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I THE PIG SITUATION

1.1 RECENT DEVELOPMENTS

New Zealand pig production in the past has been based on dairy by-products as a source of feed. Rapid advances in methods of utilising these by-products, however, and the resultant change to tanker collection of whole milk in many districts has led to a downward trend in pig numbers in New Zealand. (Table 1.1).

Table 1.1

PIG NUMBERS IN NEW ZEALAND BY YEARS (at 31 January)

	1965	1966	1967	1968	1969
North Island	607,422	549,500	465,529	445,735	404,882
South Island	108,586	117,405	137,166	158,442	148,506
TOTAL	716,008	666,905	602,695	614,177	553,388
% Increase or Decrease over previous year	-7.2%	-6.9%	-9.6%	+1.9%	-9.9%

Source: N.Z. Statistics of Farm Production,
Department of Statistics, Christchurch

North Island production decreased by 9.5%, 15.3% and 2.1% during 1965, 1966 and 1967 respectively. This decline was partly offset by South Island increases of 8.1%, 6.8% and 15.5% during the same periods.

The decline in pig numbers from a stable 760,000 in 1963 and 1964, appeared to have ceased during 1967, when increases in South Island production, in response to high pigmeat prices, were sufficient to counteract the North Island decline.

The overall reduction in pig production, and therefore pork and bacon supply, led to high schedule prices to farmers during the first seven months of 1967. (See Figure 1.1). This was accompanied by steep rises in wholesale and retail prices of bacon and which led to a reduction in consumption. (Table 1.2).

Table 1.2

**CONSUMPTION PER HEAD OF POPULATION
(lbs Pigmear per Head, 1 October—30 September)**

Average from 1960-61 to 1964-65	1965-66	1966-67	1967-68
33.4 lb	31.3 lb	28.7 lb	30.4 lb
Sources:	N.Z. Dairy Board Farm Production Reports N.Z. Pig Council		

The situation was explained in a statement by the New Zealand Pig Council: ⁽¹⁾

“The sudden and steep rise in wholesale and retail prices that occurred in late 1966 and early 1967 was based on an incorrect assessment of processors/wholesalers of both the volume of pigs likely to be available and, more importantly, the reaction of consumers to the new peak level of retail prices.”

Marked production response to high 1967 prices, as well as to speculation concerning development of a South Island grain-based pig section, quickly caused saturation of the local market. ⁽²⁾ The outcome was a surplus of frozen pork and bacon, in late 1967, originally bought at high ‘farm gate’ prices by processing firms which had to sell on a declining market.

A sharp drop in pig prices, amounting to 4.5 cents per pound occurred after September 1967. (Figures 1.1 and 1.2). Price variations in the Canterbury district are shown in Table 1.3.

- (1) N.Z. Pig Council Report: “A Review of the Current Pigmear Production and Trading Position”, March 1968, also N.Z. Dairy Exporter, vol. 43, No. 9, p. 45.
- (2) Pigmear export from New Zealand is now negligible.

Table 1.3

PIG PRICES IN CANTERBURY, 1967-1969

	March 1967	April 1968	December 1968	June 1969
1. Fat Stock (a)				
Pork (cents/lb)	22.40	17.25	21.42	25.13
Bacon (P ₁) (cents/lb)	23.30	19.25	22.35	31.40
2. Store Stock (b)				
Small Weaners (\$/head)	6.23	2.78	5.75	7.70
Best Weaners (\$/head)	7.00	3.45	7.62	9.60

Source: (a) Average prices from six Christchurch processing firms.

(b) Addington Stock Market Reports from 'The Christchurch Press.'

Many farmers, attempting to base their pig enterprise on grain and other high cost feeds found that profit margins had declined to uneconomic levels and, by July 1968, a considerable number had been forced out of production.⁽³⁾ In general they had entered pig production with little idea of the capital outlay, the efficiency levels required to make profits, and the returns required to cover the high risks involved. There was considerable disillusionment.

The surplus of pigmeat from early 1968 and the slaughter of large numbers of capital stock during the winter of 1968 were only sufficient to meet consumption until August-September 1968, when schedule prices showed signs of lifting. Weaner prices rose sharply (Figure 1.2) and, in the latter months of 1968, interest was renewed in the fattening, but not the rearing, of pigs.

By April 1969, Prime 1 bacon price had again reached 26.5 cents per lb and pork price had risen to 23 cents per lb. Pigmeat was again in short supply and evidence existed in Canterbury that producers were beginning to retain breeding stock.⁽⁴⁾

Table 1.4 summarises the fluctuations in pigmeat production since October 1966.

(3) By July 1968, about one third of the sample of farmers under study at Lincoln College were forced to cease production due to low prices.

(4) On Farms 1 to 9 total sow numbers increased by 54% since July 1968.

Table 1.4

QUARTERLY PRODUCTION OF PORK, BACON
AND HAM IN NEW ZEALAND ('000 tons)

		Oct–Dec	Jan–Mar	Apr–June	Jul–Sept
Production	1 October 1966 – 30 September 1967	9.6	11.1	10.1	4.1
Production	1 October 1967 – 30 September 1968	9.7	11.9	9.8	6.0
Production	1 October 1968 – 30 June 1969	8.7	10.5	9.8	6.7

Source: N.Z. Pig Council

The figures reveal a pattern of cyclical instability, characteristic of farm products for which both the production and the demand are elastic. Suggestions for improvement of this situation have been put forward,⁽⁵⁾ but further problems could result unless much more accurate forecasting of changes in prices and production can be achieved.

Supplies of pigmeat in New Zealand are now dependent upon whey, the most important of the bulk feeds, a small quantity of skimmed milk, an almost static garbage supply and the feeding of concentrates such as barley.

Shepherd⁽⁶⁾ has estimated that whey and dairy by-product supplies, with meal as a supplementary feed, would be sufficient to produce 70–78% of the total pigmeat required in 1970. If a further 10% of the total pigmeat requirement is produced from garbage, then only 12 – 20% is required from the meal-based sector. However, innovations in whey processing could increase the importance of the meal-based pig producer.

This study is concerned with the economics of the specialist pig unit, based on meal and other concentrates.

(5) Anon. (1968): "Economic Research for the Pig Industry", N.Z. Dairy Exporter, vol. 43, No. 9, p. 51.

(6) A. Shepherd (1968): "The Meal-based Pig Producer and the Future". Proceedings, Lincoln College Farmers' Conference, pp. 122-124.

1.2 PIG PRICES IN CANTERBURY

Price fluctuation is undoubtedly the most serious uncertainty facing the specialist producer; the 12 cent price variations had serious consequences for farmers during 1967–69. Table 1.5 shows the gross margins for a Prime 1 baconer before the price drop in 1967 and at the lowest prices received during 1968. A 4.83 cent drop in price reduced the gross margin by 62% to an uneconomic level.

Table 1.5

GROSS MARGINS PER BACONER FOR AUGUST 1967 AND MAY 1968 (\$)

Prices during . . .	August 1967	May 1968
Prime 1 Bacon	23.93c/lb	19.10c/lb
Gross Revenue: (120 lb Carcass Weight)	\$28.72	\$22.93
Direct Costs:		
Feed 499 lbs at 2.92c/lb	14.51	14.51
Weaner Cost	4.02	4.02
Vet., Levy, Insurance, etc.	.85	.85
Total Direct Costs	\$19.38	\$19.38
Gross Margin/Pig *	\$ 9.34	\$ 3.55

* Available to cover other farm running costs, overhead costs, and a labour and management reward to the farmer.

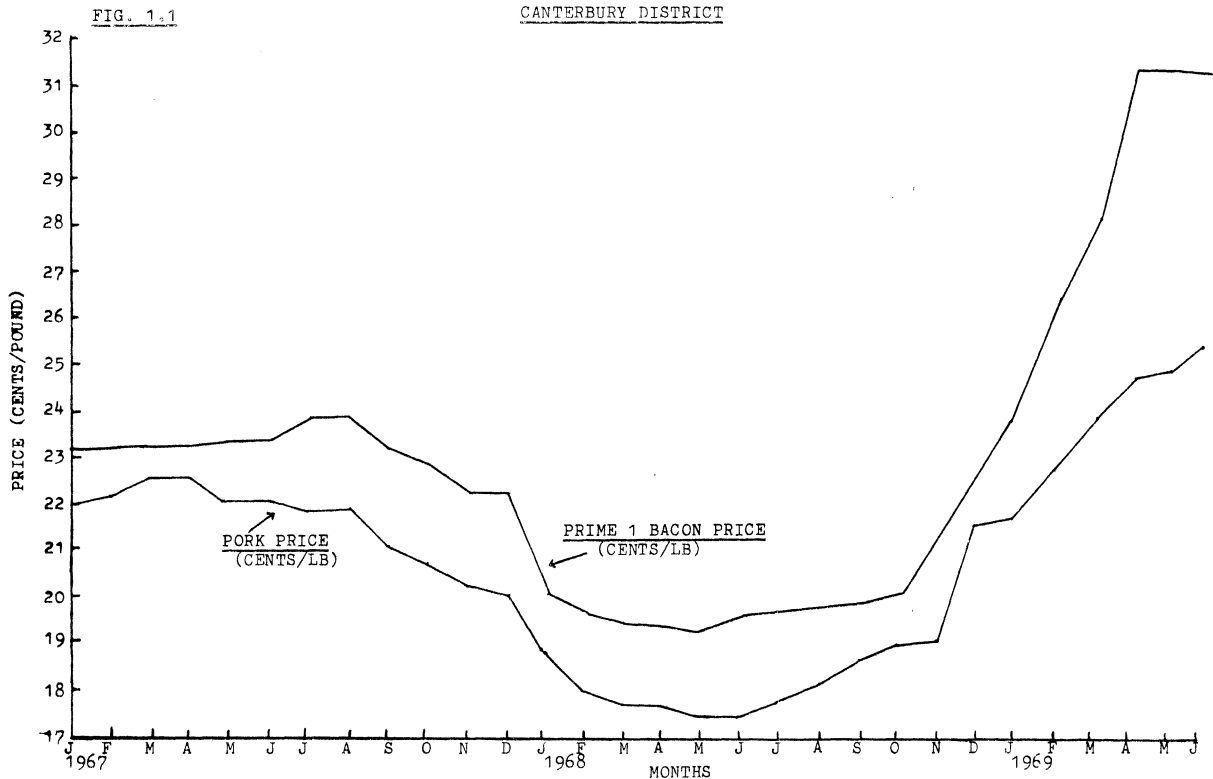
Average monthly prices paid by six Canterbury processing firms are shown in Figure 1.1 for the period 1 January 1967 to 30 June 1969.

The price variation between firms was small and apart from nominal weekly quantities of pork purchased at a premium the prices shown should accurately represent payout prices to producers. ⁽⁷⁾

(7) Monthly prices are shown in detail in Appendix A.

PORK AND BACON PRICES (JANUARY 1967 - JUNE 1969)

CANTERBURY DISTRICT



SOURCE: MONTHLY AVERAGES OF PRICES PAID BY SIX CHRISTCHURCH PROCESSING FIRMS

During the first six months of 1967, most firms did not charge for transport, levy and insurance on pigs killed. However, when pigs became more readily available in the latter part of 1967, this bonus was eliminated. The effect was to slightly reduce prices in August 1967.

Shortly after this, all pigmeat prices dropped by 4.5 cents (see Table 1.3 and Figures 1.1 and 1.2) with lowest prices paid in April – May 1968. However, by December 1968, prices had recovered by 65% and there was a recovery in demand for pork and bacon and prices recovered.

In December 1968, typical charges for pigs killed at local freezing works were as follows:

Insurance	15 cents per head
Pig Council Levy	10 cents per head
Transport Charges (approx.)	50 cents per head (to nearest works)
Typical Killing Charges	75 cents per head *

* Additional \$2.42 killing charges are deducted if pigs are killed on owner's account.

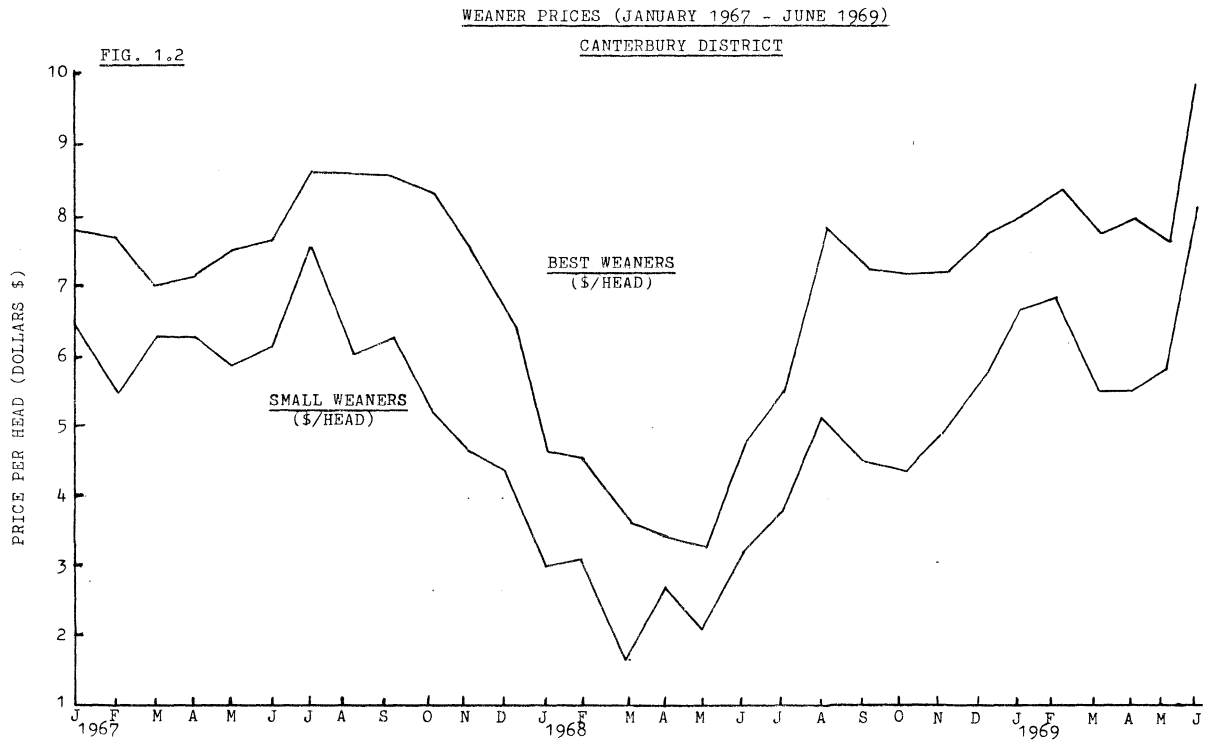
The Pig Council levy increased from 7.5 cents to 10 cents on 1 October 1968.

Figure 1.2 shows the fluctuations in store stock prices during 1967 and 1969. Prices shown are for small weaners (approximately 30 lb liveweight) and best weaners (approximately 40 – 45 lb liveweight) on offer at Addington saleyards and these prices accurately reflect the demand and supply of pigs in Canterbury. Prices are monthly averages of weekly auction prices.

In general, weaner values followed closely the prices paid for pork and bacon. Best weaners continued to fetch good prices until December 1967, however, due to, (i) farmers' expectations concerning the fall in schedule prices, and (ii) the commitment of numerous producers to expensive fattening accommodation. These producers were forced to continue to buy pigs.

The recovery of weaner values in July – August 1978 was much more rapid than schedule prices, but this reflected largely the demand for spring weaners by dairy farmers in the Leeston and Oxford districts.

The recording scheme on which this survey is based covered the financial year of the individual farms. 70% of the sample balanced at 31 March, the remaining 30% balanced at 30 June.



SOURCE: MONTHLY AVERAGES OF WEEKLY PRICES PAID AT ADDINGTON SALE YARDS

Prices over the 12 month period ending 31 March, 1968 were approximately one cent per pound pigmeat higher than for the 12 month period ending 30 June, 1968. (Table 1.6).

Table 1.6

AVERAGE 1967-69 PRICES⁽¹⁾

	1 April 1967 to 31 March 1968	1 April 1968 to 31 March 1969	1 July 1967 to 30 June 1968	1 July 1968 to 30 June 1969
Porkers	20.55c/lb	19.53c/lb	19.40c/lb	21.32c/lb
Baconers 101-110 lb	21.78c/lb	20.77c/lb	20.60c/lb	23.87c/lb
111-140 lb Prime 1	22.23c/lb	21.59c/lb	21.20c/lb	24.65c/lb
Prime 2	20.20c/lb	19.25c/lb	19.20c/lb	22.04c/lb
Second Grade	17.40c/lb	16.41c/lb	16.76c/lb	18.25c/lb
Choppers	8.64c/lb	8.43c/lb	8.74c/lb	8.20c/lb
Small Weaners	\$4.95/head	\$4.55/head	\$4.12/head	\$5.45/head
Best Weaners	\$6.90/head	\$6.49/head	\$6.05/head	\$7.61/head

(1) Schedule prices are from monthly averages of prices paid by six Christchurch processing firms. Weaner prices are the averages of weekly auction prices at Addington Saleyards, Christchurch.

Meal prices during the entire period showed little variation (Table 1.7).

Table 1.7

MEAL PRICES 1967 AND 1969⁽²⁾

Prices at . . .	January 1967		January 1969	
	Average	Range	Average	Range
Creep Feeds (c/lb)	5.05c/lb	4.1-6.0	5.07c/lb	4.2 - 6.0
Weaner Pellets ⁽³⁾	\$66.52	59 - 71	\$66.90	59 - 71
Finisher Meal ⁽³⁾	\$57.60	52 - 61	\$58.40	53 - 61
Breeder (Sow) Meal ⁽³⁾	\$55.00	52 - 61	\$56.20	52 - 61

(2) Meal prices are averages from price lists of seven Christchurch feed firms.

(3) Price per metric ton. \$4.00 per ton has been deducted for bulk deliveries.

All meal firms in the Christchurch district were attempting to stabilize meal and pellet prices. Finisher meal prices increased by only 80 cents per ton and the range was virtually the same.

Average meal prices to farmers in the Canterbury district were in the vicinity of 2.9 cents per pound and this is with a protein content of approximately 16%.

II THE FARMS STUDIED

The survey area includes the Oxford, Rangiora and Kaiapoi districts north of Christchurch and the Lincoln, Leeston and Rakaia districts south of Christchurch.

Twenty farms were originally visited, but seven of these were subsequently excluded. The remaining thirteen units were all specialising in pig farming. Emphasis on these farms was on maximum utilisation of home grown feeds for breeding stock and on cereals or meal for production of pork and bacon.

Acreages of survey farms are shown in Table 2.1.

Table 2.1

ACREAGE AND SOIL TYPE

Acreage Involved in the Pig Enterprise	Number of Farms	Soil Type	
		Heavy	Light
< 10 acres	4	3	1
10 – 15 acres	3	2	1
15 – 20 acres	4	1	3
> 20 acres	2	-	2
Totals	13	6	7

Heavy Soils: Suitable for cropping, 10 inches good topsoil, 8 – 10 inches subsoil, e.g. Temuka silt loam.

Light Soils: 6 – 8 inches stony silt loam, overlying gravel, e.g. Lismore silt stony loams.

The range in farm acreages was from 3 acres to 234 acres.

The small units were situated mainly on heavy soils while the larger farms were predominantly on light soils.

Herd sizes in the group are given in Table 2.2.

Table 2.2**DISTRIBUTION OF HERDS BY SIZE**

Size of Breeding Herd		Size of Fattening Herd	
Average Sow Numbers	Farms	Average Fattening Numbers	Farms
20 – 25	1	100	2
25 – 30	3	100 – 150	4
30 – 35	4	150 – 200	1
35 – 70	2	200 – 250	3
70 +	3	250 +	3
Total	13		13

All farms in the group ran a breeding herd and fattened the progeny. Three farmers bought additional store pigs for fattening.

The average number of fattening pigs carried per sow was 4.27 with a range of from 1.9 to 7.6 pigs per sow. Sow numbers were less than 35 for 8 herds and 7 of these farms carried less than 200 head of fattening stock. Four farmers sold mainly pork and three farmers sold mainly bacon. The balance sold pork, bacon and weaner stock in varying proportions.

The breed of pig varied little between herds. Nine farms used Large-White or Large-White-Landrace sows crossed with a Landrace boar for fat production. Two farmers used Landrace pigs for breeding and fattening while the remaining two farmers had coloured sows (Berkshire, Tamworth and Saddleback) which were run under range conditions.

Table 2.3, indicates that twelve farmers ran their breeding herds outdoors, while fattening pigs were grown under semi-controlled environment finishing houses. Eight farmers however preferred to wean pigs into some form of deep litter housing.

Table 2.3

PIG HOUSING ON THE SURVEY FARMS

Breeding Herds		Weaner Fattening Pigs		
Type of Housing	Number of Farms	Type of Housing	Number of Farms	
1. Extensive: Sows outdoors all year. Outdoor farrowing in temporary shelters.	7	1. Semi-Intensive: Deep litter housing Sawdust, straw etc.	8	1
2. Semi-Intensive: Sows outdoors all year. Permanent indoor farrowing accommodation.	5	2. Intensive: a. Without thermostatically controlled environment.	2	6
3. Intensive: Sows indoors or confined throughout the year.	1	b. With thermostatically controlled environment.	3	6
Total	13	Total	13	13

On seven farms, sows were grazed throughout the year on legume based pastures or greenfeeds with some concentrate supplementation. Ark type shelters were used for both dry sow and farrowing accommodation on most of these farms. Batch farrowing was practised in most of the extensively run herds and farrowing was either in separate, electric-fenced pens or in a rotation of small farrowing paddocks.

The semi-intensive group was similar to group 1 except that sows were brought indoors for farrowing and this enable more intensive management at farrowing time. In the third group, sows were on concrete for their entire productive life. Stall feeding was practised and sows were individually managed.

In the fattening herds, deep-litter weaner systems were popular, the principle being to 'pool' weaners into large, partially enclosed pens for subsequent transfer, at 9–10 weeks age, to intensive finishing houses.

Half of the finishing houses on the survey farms had thermostatically controlled fan systems to achieve a steady environment. However, this outlay was not warranted on many of the smaller units where managerial control was more intensive.

Although it was possible to collect at least one year's full data from the thirteen farms, price fluctuations had forced four of the units out of production by July 1968. These are not included in the case study farms.

FARM RECORDING

Recording was commenced on 1 April, 1967 on ten farms and a further three units were brought into the scheme at 1 July, 1967.

Litter recording as the basis for data collection has not been used due to the excessive calculations, pig weighing and marking, and non-continuity of the data collected. This type of recording is more suited to the stud-breeder.

As feed constitutes over 60% of gross expenditure, and the sole source of income is from pigmeat, a livestock and feed inventory analysis approach was used, together with a system of trials to verify growth rates and feed conversions of fattening pigs. All farms, but one, used proprietary meals.

Recording was carried out monthly and trial pigs were usually weighed every fortnight. The breeding and fattening herds were recorded separately with weaners transferred from the breeding to the fattening herd.

Breeding herd records collected indicate sow productivity from both a reproductive and longevity viewpoint. Fattening records indicate growth rates, grading, feed conversions and the profitability of marketing a variety of pig types.

In view of the quantity of bookwork involved, farmers will not readily record data. Mail collection was unsuccessful. All data was collected by personal visits. This has been a major restriction on the size of the sample.

Through detailed reports to survey farmers, the scheme has enabled individual producers to improve management methods and locate weaknesses in their enterprise. The main purpose of the study has been to compare and analyse detailed economic information obtained from each member of the survey. From the farmer's viewpoint the scheme is essentially an advisory service which can help to increase efficiency levels and profits. From the industry viewpoint however, the study aims to provide general economic data on a sector of New Zealand farming about which little is known.

III SURVEY RESULTS

Due to the small sample under survey and the difficulty in making general statements, each farm is examined with regard to physical and financial performance.

Total farm transactions are shown in preference to production ratios, which will differ with the type of production and management system.

The information obtained has made it possible to locate strengths and weaknesses of the farms concerned. Apart from management and feed economy, control over expenditure and quality stock are seen to be of particular importance.

In an endeavour to get a consistent guide to profitability, owners surplus was taken, excluding interest paid. No reward for labour or management to the owner was included in expenses. Thus the debt servicing of each farm does not obscure the comparative financial performance. The surplus, as defined, can then be related to various factors of production such as capital, sow numbers and pounds pigmeat produced. The surplus is calculated with the stock inventory included at market values per head.

SOW PERFORMANCE

Because the fattening pig requires a certain minimum amount of food per pound liveweight gain, and has therefore a relatively small variation in profit margin, the management of the sow herd becomes critically important as a means of generating profit.

Data from litters born has been separated from data from litters weaned in an effort to overcome bias at the start and termination of the recorded year. This difference is due to the variation in litters on hand at the opening and closing balance date.

Pigs alive per litter represents litter numbers at approximately one week's age, hence does not include pigs which died immediately post farrowing.

Sow replacement rate will vary each year depending on the extent of culling. The average figure obtained in 1968–69 was 20.1%. Because the average number of litters per sow per year was 1.68 then sows on the survey farms are producing approximately 7 litters each. This replacement rate is including deaths, hence if the death rate can be kept down and quality stock maintained then 10–12 litters per sow should be obtained. The average

death rate in the breeding herds was 6.2% and there was no evidence to suggest that this figure increased with herd size.

Weaning age did not vary greatly between herds. The average was 5.5 weeks. Early weaning had been attempted on some units but discarded due to the adverse effect on grading.

The quantity of sow feed per litter reared varied considerably depending on the extent of greenfeed and pasture supplementation. It was thus difficult to relate feed intake with sow performance.

In all cases, the sow meal per litter has been calculated from either sow and litter trials on the farms or farmers estimates, cross-checked from feed reconciliations. Research at Ruakura⁽¹⁾ shows that sows which grazed suitable quality pasture derived an equivalent of three meal units from grass. The present survey results tend to agree with this, as this would equate sow feed intake on extensive systems with the meal intake on intensive systems of sow management.

The direct costs of weaner production can be calculated as follows: e.g. Farm 1 (57 sows) 1967-68.

(i)	Sow Feed Cost 921 lbs/litter at 2.88c/lb = \$26.50 x 1.93 litters/year	\$51.15
(ii)	Boar Feed Cost 4,385 lbs at 2.88c/lb = \$126/57 sows	2.21
(iii)	Boar purchases 1 at \$60/57	1.05
(iv)	Sow replacement 15.8% ⁽²⁾ replacement x 57 sows = 9 gilts at \$30.80 = \$277.20/57	4.86
(v)	Creep feed 17.19 at 4 lbs/pig	3.44
(vi)	Animal Health \$221/57	3.88
(vii)	Sundry charges 17.19 at 20c	3.43
	Total direct costs/sow	\$70.02
Less	revenue from chopper 12.3% x 57 = 7 choppers at 220 lbs C.W. at 8c/lb = \$123.20/57	- 2.17
	Net direct costs/sow	\$67.85
	Direct cost/weaner	\$ 3.95

(1) J.L. Adam (1968): "Grain feeding of the sow". Proceedings, Lincoln College Farmers' Conference.

(2) Where the sow replacement is high or low in any year the effect will show in the weaner cost until such time as the average replacement rate can be used.

In weaner cost calculations the replacement gilt has been charged at the opportunity cost of selling a baconer (140 lb C.W. at 22 cents per lb) as gilts are normally retained from a pen of fattening pigs.

The direct costs per weaner do not include allowances for changes in livestock valuation, cartage, commission, etc., nor do they take into account the relative emphasis placed on home grown feeds on individual farms.

Suckers are included in the fattening stock to isolate them from capital stock which is taken only as the breeding herd and its replacement gilts.

FATTENING STOCK PERFORMANCE

The majority of farmers fattened pigs in concrete fattening houses with controlled or semi-controlled environment. A favourable fattening environment reduces the quantity of feed required for maintenance and therefore improves the conversion rate.

The fattening policy and the liveweight at sale will vary with the fattening space available.

Numerous fattening trials were conducted in an effort to measure growth rates and feed conversions in the fattening herd. In each case the trials were cross-checked by estimates from stock and feed reconciliations. On all the extensively run units, growth rates were poor. At 12 and 24 weeks the weights were 20 lb lower than those on the more intensively run units.

Limited feeding, to ensure good grades at slaughter, does influence growth rates, however, and therefore conversion rates were also examined.

On only four farms were growth rates from 100 lbs to 160 lbs liveweight, over 1 lb per day. Trials at Ruakura on meal fattening of pigs managed growth rates consistently above 1.4 lbs gain per day, hence there is scope for improvement.

The average conversion for fattening pigs was 3.26:1 in 1967-8 and 3.58:1 in 1968-9. These figures compare favourably with recently published English results.⁽³⁾

Death rates were obtained as a percentage of all fattening stock sold or transferred to the breeding herd. Figures were higher than expected as most farmers thought initially that fattening stock death rates were approximately 1%. The group average was 4.33% in 1967-8 and 3.59% in 1968-9 and this agrees with Danish figures of 4%.

(3) É. Burnside and R.C. Rickard (1968): op. cit. p.9, give figures 3.8:1 for a recorded group and 3.6:1 for the top ten.

As five farmers sold very little bacon and, in addition, the majority of these farmers sold their bacon privately at a set price, little data was available on grading of pigs. Average Prime 1 grading was 53% where data was available.

Dressing percentage of pigs could only be obtained from farm trials. With meal feeding of pigs, dressing percentage increases, and on some farms, dressing percentages of 73–75% were regularly recorded. Average dressing percentages used in budgets were 72% for bacon pigs and 71% for pork pigs.

EXPENDITURE

While labour and other farm expense should not be disregarded, they are of much less importance than feed costs. Where the pig enterprise is based on meal feeding, the efficiency of feed use, the price of feed, and pigmeat price, largely determine the profitability of the unit.

Clark ⁽⁴⁾ and Ridgeon ⁽⁵⁾ in two English surveys quoted feedcosts as forming 78–82% and 76.6–82.2% respectively, of total costs. Labour in both studies accounted for 8–11% of total costs while “other costs” formed 6–11% of total costs.

With large variations occurring in meal supplementation of sows and most farms increasing stock numbers, it is outside the scope of this survey to quote consistent percentage figures. Canterbury farmers do have higher farm expenses especially where sows are run extensively and hence feed costs are closer to 60% of total expenses.

Of the breeding herds that were run outdoors an effort was made by some of the survey farms to provide home grown feeds for these sows. Expenses involved in growing fodder crops, fencing, additional vehicle expenses, are substituted for purchased meal, to give a lower figure for bought feed and a higher figure for farm expenses. In most cases low feed costs are associated with a relatively high figure for farm expenses.

Where increases in stock numbers have occurred expenditure on feed per pound of pigmeat output will be high. This is due to the large quantities of feed required by growing stock before full production is reached.

- (4) J.Clark (1965) “Economic results from some pig herds in the north of Scotland 1963-4 and 1964-5”. North of Scotland College of Agriculture Economic Report No. 114, p.5.
- (5) R.F. Ridgeon (1960) “Economics of Pig Production”, University of Cambridge, Farm Economics Branch Report No. 52, p.6.

Capital

The following is an example of the capital structure of the survey farms. This relates to Farm 1.

Land	17 acres at \$400 per acre		\$ 6,800
Buildings			
Farrowing houses	a) 12 pens at \$60	720	
	b) 12 pens at \$25	300	
Fattening houses	a) 6 pens	680	
	b) 4 pens	350	
Two hoppers		320	
Electricity, fittings, etc		200	
Dry sow housing		50	
	TOTAL BUILDINGS		\$ 2,620
Plant			
Tractor and motorised plant		600	
Drinkers, heat bulbs, etc.		300	
Fencing, 65 chain (temporary) at \$15		975	
Sundry		50	
	TOTAL PLANT		\$ 1,925
Stock (at 31 March 1968)			
57 sows at \$60		3,420	
4 boars at \$70		280	
	TOTAL CAPITAL STOCK		\$ 3,700
	TOTAL FARM CAPITAL		\$15,045

On a per sow basis, capitalisation for this farm is one of the lowest for the farms studied.

In general farms employing an extensive system of running sows (i.e. increased use of land rather than buildings) have less capital involved per sow.

Table 3.1

**DISTRIBUTION OF HERDS BY CAPITAL
PER SOW 1967-68**

	Number of Farms
Less than \$300 per sow	2
\$300 - \$350	3
\$350 - \$400	2
\$400 - \$500	1
Greater than \$500	1
	TOTAL
	9

If herds are distributed according to investment per pound of pigmeat produced, however, the reverse situation is obtained. This means the more intensively run herds were more efficient as regards capital use.

LABOUR

There is considerable difficulty in obtaining accurate figures for labour costs in pig farming, especially when other farm enterprises are combined with pigs. As a means of comparison between farms, all labour has been converted to labour-unit equivalents.

1 Labour Unit = one man working at least 50 hours per week, owner/manager.

Labour requirement is governed by the layout of buildings, the use of manual or mechanical methods of dung disposal and feeding, and the type of management system employed.

Under more conventional systems of pig farming,⁽⁶⁾ the average number of sows per labour unit was 52. This is similar to British figures. In general, farmers' attitudes were that increases in sows per labour unit beyond a figure of this order would lead to a decline in sow performance and feed utilisation efficiency. The labour input required per pound pigmeat output did not decrease with increases in output.

(6) That is excluding farms 4 and 6 where sows were run outdoors in large herds.

Farm 1

The property consists of 17 acres of which 12 acres is light, free draining, sandy loam. The balance is heavier silt loam suitable for cropping.

Land utilisation during 1967-9 was as follows:

	1967-8	1968-9
Permanent pasture	8 acres	6.5 acres
Fodder beet	2.5	1.5
Lucerne	3	3
Winter greenfeed	2	3
Old grass/fallow	1	2.5
Pig buildings	0.5	0.5
	17 acres	17 acres

A quick rotation of phased greenfeed crops is used to provide grazing for sows. All pig effluent from the fattening herd is returned to the soil.

With sows farrowing all year, a constant feed supply is required. Minimum sow supplementation is aimed for and during 1967-8 only .89 metric tons of feed was fed per sow and .91 metric tons in 1968-9. The balance of feed required was from grass and legumes while fodder beet was fed from June to September.

At farrowing, sows were brought into concrete, indoor farrowing pens and fed at the rate of 12 lbs per day for a five week lactation. After mating, the feeding level was gradually reduced to 2 lbs per day for the dry period and during the three to five week pre-farrowing period 5 lbs were fed per sow per day. During lactation, sows were periodically allowed outside to graze but suckling stock remained indoors. At weaning, sows were removed from the farrowing quarters and the pens became weaner pools. At eight weeks of age weaners were shifted to the fattening house, which was of cheap construction with no fan systems.

LIVESTOCK PERFORMANCE

Individual monthly records have been combined into a 2 year stock record.

Table 4.1

BREEDING HERD 1967-69			
Stock on hand	1 April 1967	1 April 1968	1 April 1969
Sows at \$60	46	50	34
Gilts at \$60	2	18	—
Boars at \$70	4	3	3
	52	71	37
Value	\$3,160	\$4,290	\$2,250

Average capital stock value during 1967-8 was \$3,725 and \$3,270 in 1968-9.

Table 4.2

SOW PERFORMANCE 1967-69		
	1967-68	1968-69
Sows farrowed	116	97
Piglets increase	1,039	840
Sows weaned	104	110
Piglets weaned	917	933
Litters/sow (born)	2.04	2.11
Litters/sow (weaned)	1.83	2.39
Piglets alive/sow	18.28	18.28
Piglets weaned/sow	16.11	20.27
Sow deaths	2	3

Decreasing sow numbers explain the high sow performance in 1968-9.

The direct cost per weaner ⁽⁷⁾ was \$3.95 in 1967-8 and \$3.74 in 1968-9.

Table 4.3

FATTENING HERD

Stock on hand	1 April 1967	1 April 1968	1 April 1969
Suckers at \$5	83	183	76
Weaners at \$8	44	60	65
Slips at \$10	49	36	25
Stores at \$12	46	50	19
Porkers at \$16	15	23	66
Baconers at \$24	—	—	12
	237	352	263
Value	\$2,049	\$2,723	\$2,722

The death rate in the fattening herd in 1967-8 was 0.95%. This figure was the lowest of all the survey farms. However it rose to 3.3% in 1968-9.

Table 4.4

PHYSICAL PERFORMANCE OF FATTENING STOCK

Conversion rates⁽⁸⁾ at . . .	1967-68	1968-69
30 lb L.W.	2.3:1	2.3:1
70 lb L.W.	2.9:1	2.9:1
100 lb L.W.	3.1:1	2.9:1
130 lb L.W.	3.2:1	3.1:1
160 lb L.W.	3.3:1	3.1:1

(7) This figure includes sow feed and replacement costs, veterinary costs, breeding expenses, and creep feed. It does not include overhead costs, other farm expenses, fattening stock purchases or allowances for changes in livestock valuation.

(8) Pounds feed per one pound liveweight gain.

In 1967-8 pigs weighed 65 lb and 152 lb at 12 and 24 weeks respectively and 66 lb and 150 lb in 1968-9.

Table 4.5

LIVESTOCK TRANSACTIONS 1967-68

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Bacon	27	3,240 C.W.	22.53	730
Pork	354	28,528 C.W.	21.18	6,043
Weaners	537	21,425 L.W.		4,591
Breeding	37)			
Choppers	10)			922
				\$12,286
	No. purchased			\$
Weaners	47			512
Gilts	20			565
Sows	2			140
Boars	1			104
				\$1,321

Table 4.6

LIVESTOCK TRANSACTIONS 1968-69

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Bacon	32	3,768 C.W.	23.01	867
Pork	565	40,091 C.W.	20.83	8,349
Weaners	311	11,769 L.W.		2,689
Breeding	12			336
Choppers	24			459
				\$12,700
	No. purchased			\$
Weaners	45			427
Sows	5			100
				\$527

Table 4.7

CAPITAL SCHEDULE

	1967-68	1968-69
Av. capital stock	\$ 3,725	\$ 3,270
Land	\$ 6,800	\$ 7,225
Buildings	\$ 2,620	\$ 3,181
Plant	\$ 1,925	\$ 1,965
	\$15,070	\$15,641
 Depreciation		
Buildings at 2½%	\$ 66	\$ 80
Plant at 10%	\$193	\$197
	\$259	\$277

Table 4.8

FINANCIAL RETURNS 1967-68

	\$		\$
Value of opening stock	5,209	Value of closing stock	7,013
Stock purchases	1,321	Sales	12,286
Feed	7,613		
Farm expenses ⁽⁹⁾ (excluding interest paid)	1,537		
Labour ⁽¹⁰⁾	240		
Depreciation	259		
Surplus	3,120		
	\$19,299		\$19,299

Table 4.9

FINANCIAL RETURNS 1968-69

	\$		\$
Value of opening stock	7,013	Value of closing stock	5,044
Stock purchases	527	Sales	12,700
Feed	6,729		
Farm expenses (excluding interest paid)	1,433		
Labour	208		
Depreciation	277		
Surplus	1,557		
	\$17,744		\$17,744

- (9) Farm expenses include repairs and maintenance, animal health, cartage, vehicle expenses, electricity, fertiliser and seed (where sows are run extensively), fuel and sundry expenses.
- (10) This is the actual cost of permanent and casual labour but does not include any return to owners labour or management. Where it was part of total labour reward it is calculated as \$2,000 per labour unit.

For the period 1967-8 the labour input on the farm was .8 regular, and .15 casual labour units while in 1968-9 it was .51 regular and .13 casual labour units. This was due to the decrease in sow numbers in 1968-9.

Expenditure of feed per unit of output was less than average while labour input per lb pigmeat produced was higher than average.

The high stock performance and efficient utilisation of buildings is reflected in the financial performance of the farm.

Farm 2

The pig enterprise on the farm occupies 16 acres of heavy cropping soil. The sow herd is grazed outdoors and supplemented each year by 3–4 acres of fodder beet. After harvest, sows are allowed to move through all paddocks to clean up any remaining grain.

Sows are farrowed indoors and transferred to “arks” after one week. Minimum sow supplementation with meal is aimed for and only 476 lb per litter reared was fed in 1967-8. Sows are fed 7 lb per day during lactation and an average of only 1 lb per day at all other times. Weaning is at 6 weeks into deep litter sheds.

Pig effluent from the fattening house plays an important part in soil fertility maintenance.

Table 5.1

BREEDING HERD 1967-69			
Stock on hand	1 April 1967	1 April 1968	1 April 1969
Sows at \$60	70	80	128
Gilts at \$60	20	14	30
Boars at \$70	3	3	7
	93	97	165
Value	\$5,610	\$5,850	\$9,970

Average capital stock value during 1967-8 was \$5,730 while it was \$7,910 during 1968-9.

Table 5.2

SOW PERFORMANCE 1967-69

	1967-68	1968-69
Sows farrowed	113	97
Piglets increase	725	656
Sows weaned	106	98
Piglets weaned	658	600
Litters/sow (born)	1.55	0.92
Litters/sow (weaned)	1.46	0.92
Piglets alive/sow	9.95	6.20
Piglets weaned/sow	9.62	5.65
Sow deaths	4	7

The lowered sow performance in 1968-9 is in part due to the rapid increase in sow numbers (116 gilts entered the breeding herd). Because of low cost of sow supplementation, the direct weaner cost of \$3.75 in 1967-8 was reasonably low. Lowered sow performance in 1968-9 increased the direct weaner cost to \$5.25.

Table 5.3

FATTENING HERD 1967-69

Stock on hand	1 April 1967	1 April 1968	1 April 1969
Suckers at \$5	74	141	140
Weaners at \$8	45	22	35
Slips at \$10	86	140	32
Stores at \$12	30	100	105
Porkers at \$16	50	344	410
Baconers at \$24	—	—	—
	285	747	722
Value	\$2,750	\$8,985	\$9,120

In 1967-8 the death rate in the fattening herd was 7.5%. This fell to 2.5% in 1968-9.

Table 5.4

PHYSICAL PERFORMANCE OF FATTENING HERD

Conversion rate at . . .	1967-68	1968-69
30 lb L.W.	3.3:1	3.3:1
70 lb L.W.	3.3:1	4.1:1
100 lb L.W.	3.4:1	4.4:1
130 lb L.W.	3.5:1	4.6:1
160 lb L.W.	3.7:1	4.6:1

In 1967-8 the 12 week and 24 week pigweights were 60 lb and 146 lb respectively and in 1968-9, 58 lb and 139 lb.

Table 5.5

LIVESTOCK TRANSACTIONS 1967-68

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Weaners	17	—	—	166
Porkers	542	42,440 C.W.	22.65	9,611
Baconers	29	3,538 C.W.	20.49	725
Choppers	12			216
				\$10,718
	No. purchased			\$
Stores	369			1,464
Sows	2			104
Boar	1			100
				\$1,668

Table 5.6

LIVESTOCK TRANSACTIONS 1968-69

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Weaners	—	—	—	—
Porkers	1,211	95,635 C.W.	20.73	19,820
Baconers	62	6,760 C.W.	19.30	1,305
Choppers	28			324
				\$21,449
		No. purchased		\$
Weaners		799		4,349
Sows		21		331
				\$4,680

Table 5.7

CAPITAL SCHEDULE

	1967-68	1968-69
Av. capital stock	\$ 5,730	\$ 7,910
Land	\$ 7,200	\$ 7,200
Buildings	\$ 5,880	\$ 5,981
Plant	\$ 1,290	\$ 1,580
	\$20,100	\$22,671
Depreciation		
Buildings at 2½%	\$147	\$149
Plant at 10%	\$129	\$158
	\$276	\$307

In 1967-8 the labour input was 1.0 regular labour units and .25 casual labour units. In 1968-9 the labour input was .88 regular labour units and .23 casual labour units.

Table 5.8**FINANCIAL RETURNS 1967-68**

	\$		\$
Value of opening stock	8,360	Value of closing stock	14,835
Stock purchases	1,668	Sales	10,718
Feed	9,062		
Farm expenses (excluding interest paid)	1,191		
Labour	500		
Depreciation	276		
Surplus	4,496		
	\$25,553		\$25,553

Table 5.9**FINANCIAL RETURNS 1968-69**

	\$		\$
Value of opening stock	14,835	Value of closing stock	19,090
Stock purchases	4,680	Sales	21,449
Feed	18,617		
Farm expenses (excluding interest paid)	1,553		
Labour	490		
Depreciation	307		
Surplus	57		
	\$40,539		\$40,539

Farm 3

In 1967-8, 16 acres were used for the pig enterprise. This increased to 19.5 acres in 1969-70.

Land utilisation was as follows:

	1967-68	1968-69
Lucerne	4.5	4.5
Turnips and grass	4	4
Pasture	3.5	8
Fodder Beet	4	3
	16 acres	19.5 acres

The breeding herd of Landrace sows was fed only 553 lb meal per litter reared in 1967-8 and 673 lb meal per litter reared in 1968-9. The high quality green feed supplements account for the high level of performance.

Despite the fact that capital was invested in a milling and mixing unit, total investment was low because sows were farrowed outdoors in arks and part of the fattening herd was housed in cheap deep litter sheds.

There was a high labour input, but attention to detail was regarded to be of prime importance.

Table 6.1

BREEDING HERD 1967-69			
Stock on hand	1 July 1967	1 July 1968	1 July 1969
Sows at \$60	48	49	42
Gilts at \$60	42	2	23
Boars at \$70	6	3	3
	96	54	68
Value	\$5,820	\$3,270	\$4,110

Average capital stock value during 1967-8 was \$4,545 and \$3,690 during 1968-9.

Table 6.2

SOW PERFORMANCE 1967-69

	1967-68	1968-69
Sows farrowed	82	90
Piglets increase	708	811
Sows weaned	88	84
Piglets weaned	765	753
Litters/sow (born)	1.78	1.91
Litters/sow (weaned)	1.91	1.79
Piglets alive/sow	15.38	17.41
Piglets weaned/sow	16.64	16.02
Sow deaths	1	3

The high sow performance and low meal cost in the breeding herd were responsible for this farm to have the lowest direct weaner cost of \$2.34 in 1967-8 and \$1.94 in 1968-9.

In Table 6.3 all breeding stock in the fattening house are classified as baconers.

Table 6.3

FATTENING HERD 1967-69

Stock on hand	1 July 1967	1 July 1968	1 July 1969
Suckers at \$5	104	31	88
Weaners at \$8	12	8	47
Stores at \$12	128	68	87
Porkers at \$16	80	105	43
Baconers \$24	10	87	25
	334	299	290
Value	\$3,672	\$4,803	\$3,148

The death rate in the fattening herd was 5.5% in 1967-8 and 1.5% in 1968-9.

Table 6.4**PHYSICAL PERFORMANCE OF FATTENING HERD**

Conversion rate at . . .	1967-68	1968-69
30 lb L.W.	2.9:1	3.1:1
70 lb L.W.	3.1:1	3.3:1
100 lb L.W.	3.2:1	3.6:1
130 lb L.W.	3.4:1	3.7:1
160 lb L.W.	3.6:1	4.1:1

In 1967-8 pig weights were 67 lb at 12 weeks and 154 lbs at 24 weeks and in 1968-9 they were 65 lb and 151 lb respectively.

Table 6.5**LIVESTOCK TRANSACTIONS 1967-68**

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Weaners	160	6,529 L.W.		1,429
Porkers	230	19,240 C.W.	20.95	4,040
Baconers	143	17,381 C.W.	21.80	3,787
Breeding	107			6,009
Choppers				
				\$15,265

If breeding stock is revalued at bacon price the revenue from them would decrease to \$3,715.

Table 6.6

LIVESTOCK TRANSACTIONS 1968-69

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Weaners	208	8,040 L.W.		1,918
Porkers	353	30,155 C.W.	23.09	6,964
Baconers	122	15,320 C.W.	26.24	4,021
Breeding	93			4,530
Choppers	11			539
				\$17,972

Breeding stock revalued at bacon price would reduce revenue from breeding sales to \$2,948.

Table 6.7

CAPITAL SCHEDULE 1967-69

	1967-68	1968-69
Av. capital stock	\$ 4,545	\$ 3,690
Land	\$ 3,200	\$ 3,900
Buildings	\$ 3,934	\$ 4,989
Plant	\$ 2,734	\$ 3,589
	\$14,413	\$16,168
Depreciation		
Buildings at 2½%	\$ 98	\$125
Plant at 10%	\$273	\$359
	\$371	\$484

Table 6.8**FINANCIAL RETURNS 1967-68**

	\$		\$
Value of opening stock	9,492	Value of closing stock	8,073
Feed	5,982	Sales	15,265
Farm expenses (excluding interest paid)	1,558		
Labour	400		
Depreciation	371		
Surplus (gross)	5,535		
	\$23,338		\$23,338

If bacon prices were used for breeding sales the gross surplus would be \$3,683.

Table 6.9**FINANCIAL RETURNS 1968-69**

	\$		\$
Value of opening stock	8,073	Value of closing stock	7,258
Feed	7,292	Sales	17,972
Farm expenses (excluding interest paid)	2,909		
Labour	260		
Depreciation	484		
Surplus	6,212		
	\$25,230		\$25,230

If bacon prices were used for breeding sales the gross surplus would be \$4,048. In 1967-8 regular labour units were .66 and casual labour units .20. The labour input increased in 1968-9 to .9 regular and .13 casual labour units.

Farm 4

This was the largest unit in the survey and pigs formed the sole farm enterprise. Because of the extensive nature of the pig system, land formed the major capital item.

Sows were grazed on lucerne mixtures. In 1967-8 meal supplementation was 398 lb per litter and in 1968-9 574 lb per litter. Pigs are weaned at five to seven weeks of age at approximately 20 lb liveweight and transferred to deep litter weaner sheds where they remain 4-6 weeks. They are then transferred to the fattening house until slaughter.

During gestation sows receive 0-1 lb meal per day except in the last week when it is increased to 3 lb per day. During farrowing the ration is increased to 4 lb per day. The sows remain on this level over mating.

Because of the high investment in land the investment per lb pigmeat was well above average.

Although sows per labour unit was the highest in the group, labour costs per lb pigmeat was not significantly better than average because of the lower sow performance.

In terms of low weaner cost the sow herd is an efficient producing unit but the fattening herd was hampered by slow growth rates and low feed conversions.

Table 7.1

BREEDING HERD 1967-69

Stock on hand	1 July 1967	1 July 1968	1 July 1969
Sows at \$60	330	256	303
Gilts at \$60	109	159	92
Boars at \$70	12	12	16
	451	427	411
Value	\$27,180	\$25,740	\$24,820

Average capital stock value in 1967-8 was \$26,460 and \$25,280 in 1968-9.

Table 7.2**STOCK PERFORMANCE 1967-69**

	1967-68	1968-69
Sows farrowed	514	557
Piglets increase	3,328	3,445
Sows weaned	498	520
Piglets weaned	3,244	3,193
Litters/sow (born)	1.72	1.66
Litters/sow (weaned)	1.65	1.56
Piglets alive/sow	11.12	10.27
Piglets weaned/sow	10.73	9.58
Sow deaths	12	12

As could be expected the direct weaner cost was low at \$3.41 in 1967-8 and \$2.83 in 1968-9. Improved sow performance would reduce this cost still further.

Table 7.3**FATTENING HERD 1967-69**

Stock on hand	1 July 1967	1 July 1968	1 July 1969
Suckers at \$5	270	354	606
Weaners at \$10	162	164	208
Slips at \$10	80	224	234
Stores at \$12	220	164	180
Porkers at \$16	94	50	101
Baconers at \$24	40	12	76
	866	968	1,405
Value	\$8,550	\$8,378	\$12,634

There was a death rate of 5% in the fattening herd in 1967-8 and 1.5% in 1968-9.

41% and 43% bacon graded Prime 1 in 1967-8 and 1968-9 respectively.

Table 7.4

PHYSICAL PERFORMANCE OF FATTENING STOCK

Conversion ratio at . . .	1967-68	1968-69
30 lb L.W.	3.7:1	3.1:1
70 lb L.W.	3.7:1	3.1:1
100 lb L.W.	3.6:1	3.2:1
130 lb L.W.	3.6:1	3.3:1
160 lb L.W.	4.2:1	3.4:1

In both 1967-8 and 1968-9 pigs weighed 52 lb at 12 weeks and 130 lb at 24 weeks. This rate of growth was the slowest on all survey farms.

Table 7.5

LIVESTOCK TRANSACTIONS 1967-68

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Weaners	1,604			\$11,654
Stores	22			183
Porkers	889	61,553 C.W.	17.0	10,475
Baconers P ₁	140	16,768 C.W.	22.3	3,734
Baconers P ₂	99	11,947 C.W.	21.7	2,599
Baconers 2nd	64	7,423 C.W.	16.9	1,257
Prime 101-110 lb	138	14,389 C.W.	20.9	3,011
Choppers	95			1,125
Breeding	34			507
	3,085			\$34,545
	No. purchased			\$
Boars	1			80

Table 7.6

LIVESTOCK TRANSACTIONS 1968-69

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Weaners	3,220			28,456
Porkers	261	19,519 C.W.	21.35	4,168
Baconers	261	78,544 C.W.	23.26	18,273
Breeding	49			1,596
Choppers	46			725
	\$4,254			\$53,218
	No. purchased			\$
Boars	6			350

In Table 7.6 the 3,220 weaners include weaner sales, slips, stores, sucking pigs and weaner gilts.

There was a general shift in production emphasis from bacon to pork during the year 1967-8. In August 1967, 87% of fat stock was bacon while in June 1968 89% of fat stock was sold as pork. This was due to the low pigmeat prices during winter 1968 and reflects in the low average price received for pork (17c per lb).

Labour input on the farm in 1967-8 was 2 full time labour units. In 1968-9 there was an extra .16 labour units on a casual basis.

Table 7.7

CAPITAL SCHEDULE

	1967-68	1968-69
Av. capital stock	\$26,460	\$25,280
Land	\$27,604	\$27,604
Buildings	\$24,011	\$23,411
Plant	\$13,386	\$12,047
	\$91,461	\$88,342
Depreciation		
Buildings at 2½%	\$ 600	\$ 585
Plant at 10%	\$ 1,339	\$ 1,205
	\$ 1,939	\$ 1,790

Table 7.8

FINANCIAL RETURNS 1967-68

	\$		\$
Value of opening stock	35,730	Value of closing stock	33,118
Stock purchases	80	Sales	34,545
Feed	24,273		
Farm expenses (excluding interest paid)	7,616		
Labour	2,606		
Depreciation	1,939	Deficit	4,581
	\$72,244		\$72,244

Table 7.9

FINANCIAL RETURNS 1968-69

	\$		\$
Value of opening stock	33,118	Value of closing stock	37,454
Stock purchases	350	Sales	53,218
Feed	29,760		
Farm expenses (excluding interest paid)	8,368		
Labour	2,318		
Depreciation	1,790		
Surplus	14,968		
	\$90,672		\$90,672

Farm 5

This 9 acre farm was at a rapid stage of development and hence a large number of gilts were retained to increase the breeding herd.

Stock performance was not outstanding due to the fact that pigs were only a small part of a larger farming complex. Heavy losses can be attributed to a failure to control expenditure, mainly feed.

Sows receive only a limited supplementation from pasture as is evidenced by the high meal feeding per litter of 1,344 lb in 1967-8. This figure was the highest of any survey farm in either year. It decreased to 961 lb meal per litter reared in 1968-9 and hence the direct cost per weaner also was reduced.

Table 8.1

BREEDING HERD 1967-69

Stock on hand	1 July 1967	1 July 1968	1 July 1969
Sows at \$60	11	35	50
Gilts at \$60	22	10	9
Boars at \$70	2	3	3
	35	48	62
Value	\$2,120	\$2,910	\$3,750

Average capital stock value during 1967-8 was \$2,515 and \$3,330 in 1968-9.

Table 8.2

SOW PERFORMANCE 1967-69

	1967-68	1968-69
Sows farrowed	41	79
Piglets increase	328	700
Sows weaned	46	70
Piglets weaned	348	603
Litters/sow (born)	1.64	1.84
Litters/sow (weaned)	1.84	1.63
Piglets alive/sow	13.10	16.29
Piglets weaned/sow	13.90	14.01
Sow deaths	3	1

Sows were weaned at 5 weeks. In 1967-8 the direct cost per weaner was \$6.27 which was the highest of all survey farms. This decreased substantially in 1968-9 to \$3.09.

Table 8.3

FATTENING HERD

Stock on hand	1 July 1967	1 July 1968	1 July 1969
Suckers at \$5	47	19	74
Weaners at \$8	—	15	—
Slips at \$10	14	19	17
Stores at \$12	21	22	22
Porkers at \$16	23	13	28
Baconers at \$24	2	1	—
	107	89	141
Value	\$1,043	\$901	\$1,252

The death rate in the fattening herd in 1967-8 was 3.5% while in 1968-9 it increased to 8.5%, the highest of the survey farms in that year.

Table 8.4

PHYSICAL PERFORMANCE OF FATTENING HERD

Conversion ration at . . .	1967-68	1967-68
30 lb L.W.	2.9:1	3.2:1
70 lb L.W.	3.1:1	3.6:1
100 lb L.W.	3.2:1	3.7:1
130 lb L.W.	3.3:1	3.7:1
160 lb L.W.	3.3:1	3.8:1

In 1967-8 pigs weighed 57 lb at 12 weeks and 134 lb at 24 weeks. In 1968-9 pigs weighed 61 lb at 12 weeks and 134 lb at 24 weeks.

Table 8.5

LIVESTOCK TRANSACTIONS 1967-68

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Bacon	4	500 C.W.	18.60	93
Pork	82	6,865 C.W.	20.0	1,373
Weaners	155			1,586
Breeding	2			46
Choppers	1			12
				\$3,110
	No. purchased			\$
Weaners	8			64
Boars	1			52
				\$116

Table 8.6

LIVESTOCK TRANSACTIONS 1968-69

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Weaners	351			2,449
Porkers	254	20,285 C.W.	22.92	4,650
Baconers	11	1,326 C.W.	19.83	263
				\$7,362
	No. purchased			\$
Gilts	3			92
Sows	6			137
Weaners	69			705
				\$934

Table 8.7

CAPITAL SCHEDULE

	1967-68	1968-69
Av. capital stock	\$ 2,515	\$ 6,670
Land	\$ 750	\$ 4,500
Buildings	\$ 500	\$ 3,253
Plant	\$ 150	\$ 930
	\$11,387	\$15,353
Depreciation		
Buildings at 2½%	\$13	\$ 81
Plant at 10%	\$15	\$ 93
	\$28	\$174

Table 8.8**FINANCIAL RETURNS 1967-68**

	\$		\$
Value of opening stock	3,163	Value of closing stock	3,821
Stock purchases	116	Sales	3,110
Feed	3,816		
Farm expenses (excluding interest paid)	543		
Labour	—		
Depreciation	28	Deficit	735
	\$7,666		\$7,666

Table 8.9**FINANCIAL RETURNS 1968-69**

	\$		\$
Value of opening stock	3,821	Value of closing stock	5,012
Stock purchases	934	Sales	7,362
Feed	4,742		
Farm expenses (excluding interest paid)	834		
Labour	—		
Depreciation	174		
Surplus	1,869		
	\$12,374		\$12,374

All labour input was by the owner hence no cost of wages are included. In 1967-8, .36 regular labour units were used and .49 in 1968-9.

In 1967-8 this farm relied on the use of old buildings and little plant. The fattening shed and silos were added in 1968-9.

Farm 6

This was the second largest unit in the survey and was run along similar lines to Farms 2 and 4. In 1967-8 the sow performance was substantially better than either Farm 2 or Farm 4. In 1968-9 rapid development gave rise to apparent inefficiencies and sow performance dropped substantially.

The property consists of 88 acres of Lismore stony silt loam, which until early 1968 was under low fertility weed grasses, old gorse bushes, pines and scrub.

Development emphasis was on temporary pastures, greenfeed and ultimately, when adequate quantities of pig manure were worked into seedbeds, a lucerne programme would be initiated.

Meal supplementation of sows was 890 lb per litter reared in 1967-8 and only 586 lb per litter reared in 1968-9. This would cause some of the drop in sow performance as pastures were not improving at the rate sows were being increased.

In 1967-8 the direct cost per weaner was \$4.92 and it decreased to \$3.30 in 1968-9, again partially due to lowered sow feed cost.

Although performance dropped in 1968-9 the decreased direct cost per weaner helped the profitability of the farm.

Table 9.1

BREEDING HERD 1967-69

Stock on hand	1 April 1967	1 April 1968	1 April 1969
Sows at \$60	144	150	265
Gilts at \$60	—	2	121
Boars at \$70	4	4	15
	148	156	401
Value	\$8,920	\$9,400	\$24,210

Average capital stock value during 1967-8 was \$9,160 and \$16,805 in 1968-9.

Table 9.2

SOW PERFORMANCE 1967-69

	1967-68	1968-69
Sows farrowed	249	224
Piglets increase	1,778	1,831
Sows weaned	241	216
Piglets weaned	1,687	1,668
Litters/sow (born)	2.09	1.1
Litters/sow (weaned)	2.02	1.6
Piglets alive/sow	14.90	8.99
Piglets weaned/sow	14.12	8.19
Sow deaths	16	14

The increasing sow numbers 1968-9 had a deflating effect on sow performance. In fact sow numbers did not increase until December–January to any great effect and hence any litters would not be born until the next survey year.

Litters were weaned at 5 weeks.

Table 9.3

FATTENING HERD

Stock on hand	1 April 1967	1 April 1968	1 April 1969
Suckers at \$5	203	120	169
Weaners at \$8	65	69	114
Slips at \$10	130	300	110
Stores at \$12	—	75	200
Porkers at \$16	100	52	40
Baconers at \$24	52	114	5
	550	730	638
Value	\$5,735	\$8,620	\$6,017

The death rate in the fattening herd in 1967-8 was 3.7% and 7.2% in 1968-9.

Table 9.4

PHYSICAL PERFORMANCE OF FATTENING STOCK

Conversion rate at . . .	1967-68	1968-69
30 lb L.W.	3.2:1	3.8:1
70 lb L.W.	3.4:1	3.9:1
100 lb L.W.	3.5:1	4.2:1
130 lb L.W.	3.6:1	4.5:1
160 lb L.W.	3.7:1	4.7:1

Pigs weighed 59 lb at 12 weeks and 151 lb at 24 weeks in 1967-8. Rate of growth decreased quite markedly in 1968-9 when pigs weighed 47 lb at 12 weeks and only 122 lb at 24 weeks, which was the slowest growth rate of any survey farms that year.

Table 9.5

LIVESTOCK TRANSACTIONS 1967-68

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Bacon	631	76,351 C.W.	20.98	16,020
Pork	144	11,549 C.W.	20.88	2,410
Weaners	964			6,748
Breeding	—			
Choppers	26			520
				\$25,698
	No. purchased			\$
Gilts	36			920
Boars	8			640
				\$1,560

Table 9.6**LIVESTOCK TRANSACTIONS 1968-69**

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Bacon	388	43,706 C.W.	20.08	8,783
Pork	318	25,411 C.W.	20.89	5,306
Weaners	939			10,236
Choppers	18			320
				\$24,645
	No. purchased			\$
Weaners	28			56
Gilts	179			5,816
Sows	18			364
Boars	11			592
				\$6,828

In 1968-9, 51% of baconers graded Prime 1.

Table 9.7**CAPITAL SCHEDULE**

	1967-68	1968-69
Av. capital stock	\$ 9,160	\$16,805
Land	\$15,480	\$15,480
Buildings	\$ 9,610	\$ 9,370
Plant	\$ 6,315	\$ 5,683
	\$40,565	\$47,338
Depreciation		
Buildings at 2½%	\$240	\$234
Plant at 10%	\$632	\$568
	\$872	\$802

Labour input in 1967-8 was 1.0 regular and .20 casual labour units. In 1968-9 this increased to 1.5 regular and 0.1 casual labour units. Because the owner was not included in this the full wage cost in included is expenditure. Surplus is then used as a return to management.

Table 9.8

FINANCIAL RETURNS 1967-68

	\$		\$
Value of opening stock	14,655	Value of closing stock	18,020
Stock purchases	1,560	Sales	25,698
Feed	18,798		
Farm expenses (excluding interest paid)	3,140		
Labour	2,200		
Depreciation	872		
Surplus	2,493		
	\$43,718		\$43,718

Table 9.9

FINANCIAL RETURNS 1968-69

	\$		\$
Value of opening stock	18,020	Value of closing stock	30,229
Stock purchases	6,828	Sales	24,645
Feed	21,832		
Farm expenses (excluding interest paid)	2,385		
Labour	3,240		
Depreciation	802		
Surplus	1,767		
	\$54,874		\$54,874

Farm 7

This 20 acre farm was undergoing development. The farm was on heavy cropping soil and development involved sowing all land into new grass for the purpose of grazing sows.

Sows were crate farrowed and weaned at 5–6 weeks. Weaners stayed in the farrowing house for 2 weeks before being transferred into the fattening house.

In 1967-8, 1194 lb meal was fed per litter reared. This increased to 1234 lb meal per litter reared in 1968-9.

The direct cost per weaner was \$4.86 in 1967-8 and \$4.91 in 1968-9.

In 1967-8, .67 labour units were used on the farm. This increased to .86 labour units in 1968-9. Only .17 of this was casual in 1967-8 and no casual labour was employed in 1968-9.

Because of the high land price investment per pound pigmeat was higher than usual. As sow numbers increase, land as a proportion of total capital will decrease.

Table 10.1

BREEDING HERD 1967-69

Stock on hand	1 April 1967	1 April 1968	1 April 1969
Sows at \$60	13	44	36
Gilts at \$60	30	2	8
Boars at \$70	1	3	3
	44	49	47
Value	\$2,650	\$2,970	\$2,850

Average capital stock value was \$2,810 in 1967-8 and \$2,910 in 1968-9.

Table 10.2

SOW PERFORMANCE

	1967-68	1968-69
Sows farrowed	53	61
Piglets increase	521	576
Sows weaned	53	61
Piglets weaned	525	576
Litters/sow (born)	1.86	1.56
Litters/sow (weaned)	1.61	1.56
Piglets alive/sow	17.45	14.78
Piglets weaned/sow	15.90	14.78
Sow deaths	2	4

Table 10.3

FATTENING HERD

Stock on hand	1 April 1967	1 April 1968	1 April 1969
Suckers at \$5	43	39	24
Weaners at \$8	72	24	32
Slips at \$10	—	78	15
Stores at \$12	11	20	32
Porkers at \$16	—	58	12
Baconers at \$24	12	—	50
	138	219	165
Value	\$1,211	\$2,355	\$2,302

There was a 5% death rate in the fattening herd in 1967-8 which decreased to 1.8% in 1968-9.

Table 10.4**PHYSICAL PERFORMANCE OF FATTENING STOCK**

Conversion rate at . . .	1967-68	1968-69
30 lb L.W.	2.3:1	3.3:1
70 lb L.W.	2.5:1	3.5:1
100 lb L.W.	2.6:1	3.8:1
130 lb L.W.	3.0:1	4.1:1
160 lb L.W.	3.0:1	4.2:1

Pigs weighed 68 lb at 12 weeks and 159 lb at 24 weeks in 1967-8 and in 1968-9 weights were 60 lb at 12 weeks and 146 lb at 24 weeks. Conversion rates on this farm in 1967-8 were the lowest of all survey farms that year.

Table 10.5**LIVESTOCK TRANSACTIONS 1967-68**

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Weaners	55			504
Porkers	355	28,378 C.W.	21.9	6,208
Baconers	5	601 C.W.	23.9	143
Boars	1			60
				\$6,915
	No. purchased			\$
Boars	2			170

Table 10.6

LIVESTOCK TRANSACTIONS 1968-69

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Weaners	159			1,804
Porkers	396	32,301 C.W.	21.02	6,788
Baconers	39	4,953 C.W.	29.90	1,481
Sows	8			147
				\$10,220
	No. purchased			\$
Boars	1			110

Table 10.7

CAPITAL SCHEDULE

	1967-68	1968-69
Av. capital stock	\$ 2,810	\$ 2,910
Land	\$ 9,100	\$ 9,100
Buildings	\$ 4,330	\$ 4,330
Plant	\$ 1,333	\$ 1,200
	\$17,573	\$17,430
Depreciation		
Buildings at 2½%	\$110	\$105
Plant at 10%	\$133	\$120
	\$243	\$225

Table 10.8**FINANCIAL RETURNS 1967-68**

	\$		\$
Value of opening stock	3,861	Value of closing stock	5,305
Stock purchases	170	Sales	6,915
Feed	5,495		
Farm expenses (excluding interest paid)	1,254		
Labour	340		
Depreciation	243		
Surplus	857		
	\$12,220		\$12,220

Table 10.9**FINANCIAL RETURNS 1968-69**

	\$		\$
Value of opening stock	5,305	Value of closing stock	5,152
Stock purchases	110	Sales	10,220
Feed	7,938		
Farm expenses (excluding interest paid)	1,564		
Labour	—		
Depreciation	225		
Surplus	230		
	\$15,372		\$15,372

Casual labour was employed in 1967-8 only.

Farm 8

This unit can undoubtedly be regarded as the most efficient meal feeding unit in the survey.

Management principles are similar to those described for Farm 1 and physical stock performance is very similar for the two farms.

Success of the unit is due to a low investment per lb pigmeat produced, top fattening performance and feed economy, and, of prime importance, management.

In addition to good sow performance, fattening pigs had the best growth rates and feed conversions of all survey farms.

The pig unit consists of 8 acres hence adequate grazing is available for sows. Despite this, meal supplement is high and this results in the high sow performance and quality fattening stock. Meal supplement per litter reared was 1050 lb in 1967-8 and 1015 lb in 1968-9.

The direct cost per weaner was \$4.97 in 1967-8 and \$4.52 in 1968-9. Piglets are not weaned until 7 weeks of age.

In 1967-8 a total of .74 labour units were employed, .28 of which was casual labour. In 1968-9 of the total of .96 labour units only .10 was casual.

Table 11.1

BREEDING HERD 1967-68

Stock on hand	1 April 1967	1 April 1968	1 April 1969
Sows at \$60	36	26	29
Gilts at \$60	6	6	4
Boars at \$70	7	5	3
	49	37	36
Value	\$3,010	\$2,270	\$2,190

Average capital stock value during 1967-8 was \$2,640 and \$2,230 in 1968-9.

Table 11.2**SOW PERFORMANCE 1967-69**

	1967-68	1968-69
Sows farrowed	52	47
Piglets increase	488	453
Sows weaned	51	46
Piglets weaned	464	443
Litters/sow (born)	1.86	1.62
Litters/sow (weaned)	1.82	1.59
Piglets alive/sow	17.45	15.62
Piglets weaned/sow	16.56	15.27
Sow deaths	3	4

Table 11.3**FATTENING HERD**

Stock on hand	1 April 1967	1 April 1968	1 April 1969
Suckers at \$5	48	60	58
Weaners at \$8	50	36	72
Slips at \$10	—	46	10
Stores at \$12	30	—	19
Porkers at \$16	70	31	36
Baconers at \$24	10	25	42
	208	198	237
Value	\$2,360	\$2,144	\$2,778

The death rate was 2.8% in the fattening shed in 1967-8 and 5.8% in 1968-9.

Table 11.4

PHYSICAL PERFORMANCE OF FATTENING STOCK

Conversion rate at . . .	1967-68	1968-69
30 lb L.W.	3.0:1	3.74:1
70 lb L.W.	2.72:1	3.3:1
100 lb L.W.	2.72:1	3.35:1
130 lb L.W.	3.03:1	3.4:1
160 lb L.W.	3.03:1	3.45:1

In each year growth rate was the best of all survey farms, Pigs weighed 72 lb at 12 weeks and 160 lb at 24 weeks in 1967-8 and in 1968-9 they weighed 65 lb at 12 weeks and 166 lb at 24 weeks.

60% of bacon sales graded Prime 1.

Table 11.5

LIVESTOCK TRANSACTIONS 1967-68

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Weaners	46			531
Porkers	19	1,666 C.W.	19.75	329
Baconers	377	44,027 C.W.	21.30	9,386
Breeding Stock	37			1,276
				\$11,522
	No. purchased			\$
Boars	1			60

Table 11.6

LIVESTOCK TRANSACTIONS 1968-69

Class	No. Sold	lb pigmeat	price/lb (c.)	\$
Weaners	45			390
Porkers	3	229 C.W.	22.70	52
Baconers	317	40,062 C.W.	21.36	8,553
Breeding Stock	11			464
				\$9,459
	No. purchased			\$
Boars	3			120

Table 11.7

CAPITAL SCHEDULE

	1967-68	1968-69
Av. capital stock	\$ 2,640	\$ 2,230
Land	\$ 4,800	\$ 4,800
Buildings	\$ 2,410	\$ 2,350
Plant	\$ 1,500	\$ 1,683
	\$11,350	\$11,063
Depreciation		
Buildings at 2½%	\$ 60	\$ 59
Plant at 10%	\$150	\$168
	\$210	\$227

Table 11.8

FINANCIAL RETURNS 1967-68

	\$		\$
Value of opening stock	5,370	Value of closing stock	4,414
Stock purchases	60	Sales	11,522
Feed	6,194		
Farm expenses (excluding interest paid)	1,465		
Depreciation	210		
Labour	705		
Surplus	1,923		
	\$15,936		\$15,936

Table 11.9

FINANCIAL RETURNS 1968-69

	\$		\$
Value of opening stock	4,414	Value of closing stock	4,968
Feed	6,699	Sales	9,459
Farm Expenses (excluding interest paid)	1,260		
Depreciation	227		
Labour	278		
Stock purchases	120		
Surplus	1,429		
	\$14,427		\$14,427

Farm 9

Because recording did not begin on this farm until September 1967 only the 1968-9 results will be discussed.

No more than 2 acres are used for the pig enterprise on this farm and the entire pig herd is kept on concrete.

Although sow numbers were increasing on the property, sow performance was very high.

Sows were fed 1,015 lb meal per litter reared and farrowing was in converted fowl houses. The direct cost per weaner was \$4.52.

Labour input was .7 regular and .23 casual labour units.

Approximately one quarter of the feed is skim milk.

Investment per pound of pigmeat was highest in the group. Because buildings were of top quality the labour input was low.

Table 12.1

BREEDING HERD 1968-69

Stock on hand	1 April 1968	1 April 1969
Sows at \$60	32	47
Gilts at \$60	5	7
Boars at \$70	2	3
	39	57
Value	\$2,360	\$3,450

Average capital stock value was thus \$2,905.

Table 12.2

SOW PERFORMANCE 1968-69

Sows farrowed	86
Piglets increase	725
Sows weaned	83
Piglets weaned	700
Litters/sow (born)	2.33
Litters/sow (weaned)	2.25
Piglets alive/sow	19.64
Piglets weaned/sow	18.98
Sow deaths	2

Table 12.3

FATTENING HERD

Stock on hand	1 April 1968	1 April 1969
Suckers at \$5	44	61
Weaners at \$8	39	32
Slips at \$10	63	126
Stores at \$12	19	101
Porkers at \$16	16	68
Baconers at \$24	58	50
	239	438
Value	\$3,038	\$5,321

Death rate in the fattening herd was 6.9%.

Table 12.4

PHYSICAL PERFORMANCE OF FATTENING STOCK

Conversion ratio . . .	1968-69
30 lb L.W.	2.62
70 lb L.W.	3.1
100 lb L.W.	3.4
130 lb L.W.	3.5
160 lb L.W.	3.6

At 12 weeks pigs weighed 64 lb and 157 lb at 24 weeks. 50% of bacon sales graded Prime 1.

Table 12.5

LIVESTOCK TRANSACTIONS 1968-69

Class	No Sold	lb pigmeat	price/lb (c.)	\$
Porkers	2	179 C.W.	18.0	32
Baconers	432	52,540 C.W.		10,987
				\$11,019
	No. purchased			\$
Boars	1			70

Table 12.6

CAPITAL SCHEDULE 1968-69

	\$
Av. capital stock	2,905
Land	600
Buildings	10,610
Plant	730
	\$14,845
Depreciation	\$
Buildings at 2½%	265
Plant at 10%	73
	\$338

Table 12.7

FINANCIAL RETURNS 1968-69

	\$		\$
Value of opening stock	5,398	Value of closing stock	8,771
Stock purchases	70	Sales	11,019
Feed	9,363		
Farm expenses (excluding interest paid)	2,137		
Labour	460		
Depreciation	338		
Surplus	2,024		
	\$19,790		\$19,790

In Table 12.7 the feed expenses are made up of:—

Meal	\$9,136
Skim	\$ 227 ⁽¹¹⁾
	\$9,363

Total skim milk used was 78,570 gallons.

(11) Skim purchased at 1.02 per gallon.

IV CONCLUSION

With large sums of capital invested in fattening and breeding facilities, coupled with the uncertainty of pigmeat prices, the survey has confirmed that the modern pig farmer must maintain high levels of efficiency.

The key factors to profitability are:—

1. Pigs produced per sow per year

This will depend both on the number raised per litter and the number of litters per sow per year. These are largely factors of management — ensuring sows are mated at the correct time, providing optimum farrowing facilities and keeping sow and piglet health at a high level.

2. Quantity of food for breeding stock

The amount of food will influence both the type and number of weaners. Analysis of the survey results shows that higher meal supplementation alone will increase the number of piglets per litter. The cost of this though may not be justified in itself and improved sow management may give a greater financial return.

Individual sow feeders will decrease the use of meal by controlling sow intake to her requirement yet will not decrease efficiency. The decrease in meal cost can be quite significant and hence will reduce the direct cost of the weaner.

3. Efficiency of fattening stock

The type of weaner produced by the breeding herd has the largest bearing on the efficiency of food conversion and rate of growth in the fattening herd. Although the effect of housing and disease is not so great (except in the extremes) they can also increase the profitability of the unit quite substantially especially when the food cost is so high.

4. Cost of food

A comparison of extensive and intensive systems is outside the scope of this survey and indeed difficult at any time especially when one involves appreciating capital and the other depreciating capital. The farmer who has the lower cost structure and maintains stock performance can best cope with the unstable market. This does not mean that increased performance associated with a higher feed cost is not justified economically.

Profits in pig production depend very much on efficiency levels. Farmers should keep records of stock performance and feed costs. They are simple to record and will at least provide some guide to assess efficiency.

APPENDIX A

PIGMEAT PRICES (JANUARY 1967—JUNE 1969)

Prices used in the study are monthly averages of prices paid by six Canterbury firms. Store stock prices are monthly averages of weekly prices at Addington saleyards.

Prime 2 bacon prices are normally 2 cents per lb below prime 1 prices and second grade price is 3–4 cents below the prime 2 price.

Pork prices are for pigs in the 60–100 lb range.

Month	Pork Price		P1 Bacon		Small Weaners		Best Weaners	
	c/lb	C.W.	c/lb	C.W.	\$/head		\$/head	
January (1967)	22.00		23.20		6.22		7.93	
February	22.20		23.20		5.40		7.82	
March	22.40		23.30		6.23		7.00	
April	22.40		23.30		6.15		7.12	
May	22.03		23.40		5.66		7.53	
June	22.03		23.40		6.10		7.62	
July	21.78		23.90		7.50		8.55	
August	21.80		23.93		5.82		8.54	
September	20.92		23.20		6.14		8.50	
October	20.58		22.70		5.15		8.28	
November	20.22		22.00		4.78		7.62	
December	20.00		22.00		4.28		6.35	
January (1968)	18.75		20.00		3.06		4.60	
February	18.10		19.60		3.10		4.50	
March	17.75		19.29		1.70		3.66	
April	17.75		19.25		2.78		3.45	
May	17.58		19.10		1.90		3.28	
June	17.58		19.40		3.23		4.80	
July	17.75		19.45		3.66		5.46	
August	18.25		19.60		5.21		7.87	
September	18.75		19.60		4.50		7.20	
October	18.90		20.00		4.30		7.05	
November	18.92		21.35		4.90		7.10	
December	21.42		22.35		5.75		7.62	
January (1969)	21.50		23.83		6.40		7.95	
February	22.58		26.60		6.63		8.28	
March	23.41		28.66		5.30		7.74	
April	24.51		31.50		5.35		7.93	
May	24.67		31.50		5.65		7.46	
June	25.13		31.40		7.70		9.60	

Prices shown were used in Figures 1.1 and 1.2

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