This is a reasonable average to aim at, allowing for the food used by the breeding stock. If consideration is given to the gains in individual lots of fattening pigs up to 200lb. liveweight, the basis for these pigs should be 3 to 4.5 food units to produce 1lb. of liveweight gain or 4 to 6 food units per pound of carcass weight gain.

As pigs grow the amount of food consumed for each pound of gain increases progressively. Table 2, adapted from Henry and Morrison's "Feeds and Feeding," shows that the amount of food per pound gain increases rapidly up to 200lb. liveweight. Thereafter the requirement increases more gradually.

sows capable of rearing good pigs and of giving these a really good start by creep feeding is obvious.

This is the basic reason for sow recording. By the more extensive use of this method the efficiency of the national breeding herd could be materially increased.

## Heavy Litters

Heavy individual weights are obtained in large litters as frequently as in small ones. The standard which should be set is 9 or 10 pigs reared per litter and averaging 36 to 40lb. at 8 weeks. Good management of the

per litter this means that only a little more than half the sows farrowed two litters in the year, or if the assumed number marketed per litter is correct, sows in this country average 1.3 litters per year.

... EFFICIENCY OF PIG PRODUCTION

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The aim should be 8 pigs marketed per litter and two litters per sow per year. The ideal of two litters for each sow is almost impossible, but with the target set high it will be possible to achieve the standard of 14 pigs marketed per sow each year, which is at present attained by those who are careful to ensure that their sows are well managed at all times. Based on this performance, a standard of 1400 to 1500lb. of pig meat per sow should be attained under average conditions where portion of the output is as baconers and part porkers. The sow-cow ratio will depend on the type of basic food supply and the type of output aimed at.

## Systems of Production

Before laying down further standards an analysis should be made of the various systems of production which are used in the pig industry in New Zealand. Within the skim-milk feeding group there is a wide variation in systems of production from those who breed and sell pigs mainly as weaners and stores to those who do not keep sows, but buy all their requirements mainly through saleyards as weaners or stores. Probably the system which yields the best profits is that of breeding all one's own requirements for fattening as baconers or porkers, whichever command the higher price, and having a few surplus weaners for sale when the markets are good. Care in arranging farrowing dates and provision of suitable farrowing a accommodation as well as thorough understanding of and keenness for the management of the breeding stock are, of course, essential to the success of the system.

TABLE 2—STANDARDS OF EFFICIENCY OF FOOD CONSUMPTION AT VARIOUS LIVEWEIGHTS

	ewe		Actual average weight lb.	Total number of animals fed	· Average feed eaten daily food units	Feed eaten per 1001b. liveweight food units	Average gain per day lb.	Feed per lb. I'wt. gain food units
15	to	50	 38	174	2.23	5.95	.76	2.93
50	to	100	 78	417	3,35	4.32	.83	4.00
100	to	150	 128	495	4.79	3.75	1.10	4.37
150	to	200	 174	489	5.91	3.43	1.24	4.82
200	to	250	 226	300	6.57	2.91	1.33	4.98
250	to	300	 271	223	7.40	2,74	1.46	5.11
300	to	350	 320	105	7.50	2.35	1.40	5.35

## Importance of Heavy Weaning Weights

It has been noted frequently that pigs which are heaviest as weaners maintain their advantage throughout the fattening period. On the average the weight at 8 weeks is three times that at 3 weeks, the 16 weeks weight is 2½ times that at 8 weeks, and at 26 weeks the well-grown weaner should make a bacon weight about double the 16 weeks weight. Examples of typical differences are set out in Table 3.

## TABLE 3—GROWTH OF WEANERS OF DIFFERENT WEIGHTS UNDER UNIFORM MANAGEMENT

3 weeks	8 weeks weaning	16 weeks	26 weeks baconer
Ib.	Ib.	lb.	Ib.
16	50	125	250
13	40	100	200
10	30	75	150

The 40lb, weaner will make a baconer which will dress at 146lb. at 26 weeks, the 50lb. weaner, with restricted feeding in the later stages, will make the same weight about 2 or 3 weeks earlier, and the 30lb. weaner will require a month to 6 weeks' extra feeding than the 40lb. weaner.

The food consumption figures emphasise the economic importance of heavy weaners. Results of feed trials show that pigs which averaged 45lb. at 8 weeks produced 1lb. liveweight increase for 3.5lb. of feed, and light pigs averaging 29lb. at 8 weeks required 4.25lb. of feed for each pound of liveweight increase up to porker weights.

This means that the light pigs required an extra 120lb, of feed to reach the same killable porker weight. The difference to baconer weight is about double this. If a food unit is valued at 1d, the difference in profit between the well-grown and the poorly-grown weaner is £1. When the extra labour and overheads associated with the six weeks' extra feeding of the lighter pig are taken into consideration the advantage of selecting

sow is the key to success in this and is the most important factor in laying the foundations for successful fattening. The officially-recorded litter of 15 pigs which averaged over 64lb. at 8 weeks recently is an outstanding example.

Efficient utilisation of the present breeding sows demands that more of them have two litters per year. In recorded litters an average of 9.4 piglets are born and 7.3 are weaned. If all the 63,000 sows on New Zealand farms in 1948 had produced two litters in each of which 6.5 pigs had reached market weight, the total pigs slaughtered would have reached 884,000. The actual slaughterings were 650,000. On the basis of 6.5 pigs sold



Large litters of heavy pigs are the basis of profitable pig production. This litter of 15 averaged more than 64lb, at 8 weeks.