

Some Financial Phases of Bacon Production.

Our experiment stations have conducted numerous investigations regarding the many phases of the swine industry, and the information they have given to the world is valuable indeed. During the last two or three years some of the younger generation of farmers have thrown their hats into the ring and have challenged the older and more experienced feeders to make gains as cheaply as the boys have done. They have, in some cases, even surpassed the results of the experiment stations in economical hog raising, but since their tests were made with fewer swine than are commonly used by the official investigators, and only in rare cases checked against lots fed in different ways, we must still cling to the old records of costs and production. However, the rearing of a few hogs on an average-sized farm is not fraught with the dangers and disadvantages that accrue from herding in numbers or confining them in small pens. The average farmer who tallies up the cost of a bunch of hogs is liable to overlook a few items which the trained investigator would enter with all accuracy. Further, there are usually by-products about the farm which have no commercial value, but when thrown to the pigs they take the place of concentrates which are worth money, and in this way the cost of gain is ostensibly lowered. So far as the farmer, who has the waste material to dispose of, is concerned the expense of rearing is decreased, but anyone speaking of the cost of one pound of gain wishes to know the actual weight of meal, milk or roughage required to put on those sixteen ounces. Almost all feeds can be spoken of in terms of corn, or wheat, or oats, or barley, so the whole matter can be reduced to the weight of meal required to produce one pound of gain. Again, there are influencing factors which govern the effect of the rations. These may be stated briefly, as the breeding of the animal, the way it is fed, and the environments under which it is obliged to exist. As for the breeding, we need not go farther than to assume that we are working with pure-breds of any recognized bacon breed of hog, the cross of two distinct breeds, or a good grade having bacon characteristics. With this class of stock to work on, let us consider the details of hog-raising and the average cost of each pound of gain.

The Cost of a Litter.

The gross returns from a bunch of finished hogs minus the cost of rearing does not represent the net gain or profit. A sow must be maintained about nine months in every year when she is not nursing her young, so the cost of the pigs at six weeks old, or thereabouts, should be considered. At the Ontario Agricultural College, Prof. G. E. Day conducted an experiment with 12 sows and their litters to ascertain the cost of a pig when six weeks old. The average number reared was 6½ per litter, and the average cost of feeding the young and dam for six weeks amounted to \$3.74. It was assumed that a sow would raise two litters per year, which would leave her about 9¼ months out of the twelve when she would be, in one sense, non-productive. It was calculated that \$6.94, or, roughly, \$7 would maintain her for this period, and half of that amount should be charged against each litter. Risk, interest on investment, labor and manure were not considered, but \$1 as service fee was charged. The cost of a litter of pigs at six weeks old would then be somewhat as follows:

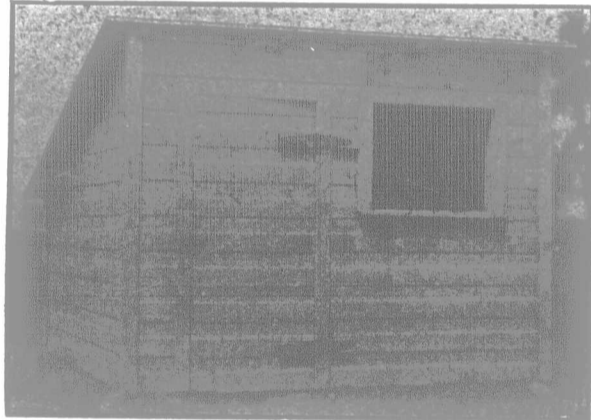
Service fee.....	\$1.00
Half cost of maintaining dry sow (½ of \$7).....	3.50
Average cost of feed for sow and litter.....	3.74
Total.....	\$8.24

In this experiment meals of all kinds, including bran and middlings, were estimated at \$20 per ton; roots, \$2 per ton, and skim-milk 15 cents per cwt. At this time these figures are manifestly too low, but if we add 50 per cent. to the prices listed we shall be as nearly correct as is possible under the many condi-

tions and prices quotable in the different sections of the country where this article will be read. The cost of feeding the dam and young pigs for 6 weeks was \$3.74, and half the maintenance of the sow amounted to \$3.50, making a total of \$7.24. Fifty per cent. added would bring it up to \$10.86, and the \$1 service fee would make the 6½ pigs cost \$11.86 or \$1.82 each. With good breeding sows, which are careful mothers, one might increase the average size of the litter. Throughout the country, eight as an average is quite common. This might increase the cost of feed during the six weeks the young pigs were on the sow, but not to any great extent. At any rate the greater number in the litter would tend to reduce the average cost of each one.

The Cost of a Pound of Gain.

The actual cost of adding one pound in weight to a pig will depend upon two factors; one is the size of the hog and the other is the price of meal. Prof. Henry, in "Feeds and Feeding" sets forth in tabular form the amounts consumed daily as well as per live weight, and the resulting gain on swine of different sizes and ages. Following is an abbreviation of the table:

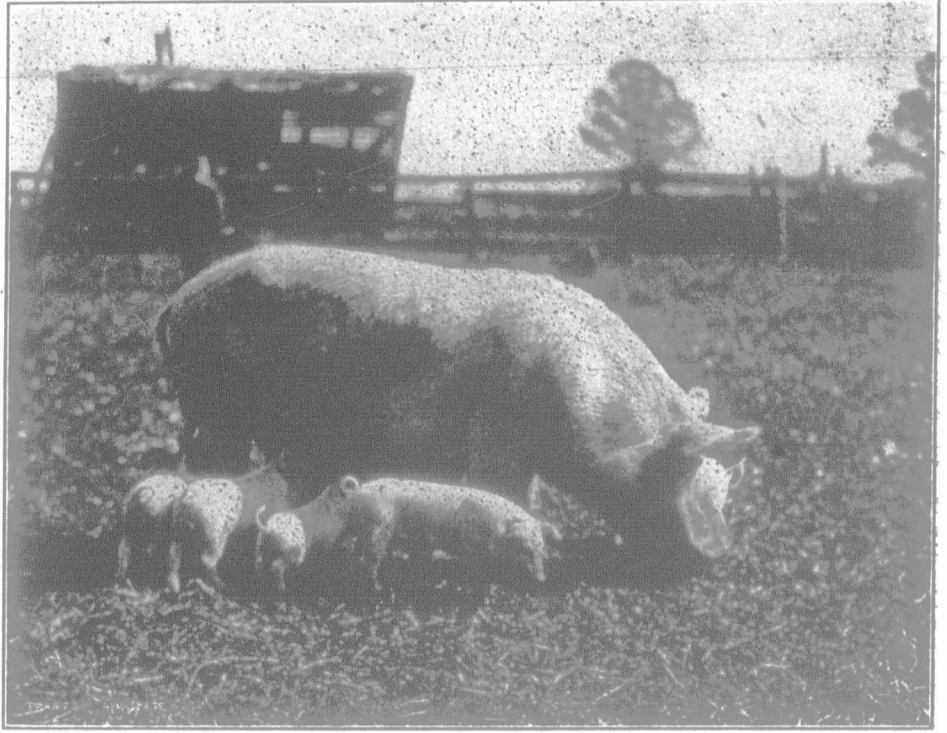


A Serviceable Colony Pen.

Gains and Feed Consumed.

Cwt. of animals.	No. of animals fed	Av. feed eaten daily	Feed eaten daily per 100 lbs. live weight	Average gain per day	Feed for 100 lbs. gain
Lbs.		Lbs.	Lbs.	Lbs.	Lbs.
15-50	174	2.2	6.0	0.8	293
50-100	417	3.4	4.3	0.8	400
100-150	495	4.8	3.8	1.1	437
150-200	489	5.9	3.5	1.2	482
200-250	300	6.6	2.9	1.3	498
250-300	223	7.4	2.7	1.5	511

In this table 6 lbs. of skim-milk or 12 lbs. of whey are rated as equal to 1 lb. of concentrates. The most striking feature of the table is the difference in the economy of feeding young and old swine. Pigs up to 50 lbs. required only 293 lbs. of meal, or its equivalent, to produce 100 lbs of gain, while hogs weighing up to 200 lbs. required 482 lbs. This condition applies to almost all kinds of live stock that are fed for meat purposes. A deduction from the previous table follows to show the cost of gain at the different ages or



Good Pigs Raised in the Big Out-doors.

weights. Concentrates are estimated at \$30 per ton, and it is assumed that 6 lbs. of skim-milk or 12 lbs. of whey will be equal in feeding value to 1 lb. of meal.

The Cost of Gain.

Weight of animals	Cost of 100 lbs. gain
15 to 50 lbs.....	\$4.30
50 to 100 lbs.....	6.00
100 to 150 lbs.....	6.55
150 to 200 lbs.....	7.23
200 to 250 lbs.....	7.47
250 to 300 lbs.....	7.66

Prof. Day, at the Ontario Agricultural College, got very similar results to those published by Henry. Since the animals at Guelph were of bacon type and fed under Canadian conditions, they are worthy of consideration here. The following table shows the relation between weights and gains, while the last column is our own deduction, calculating meal at \$30 per ton.

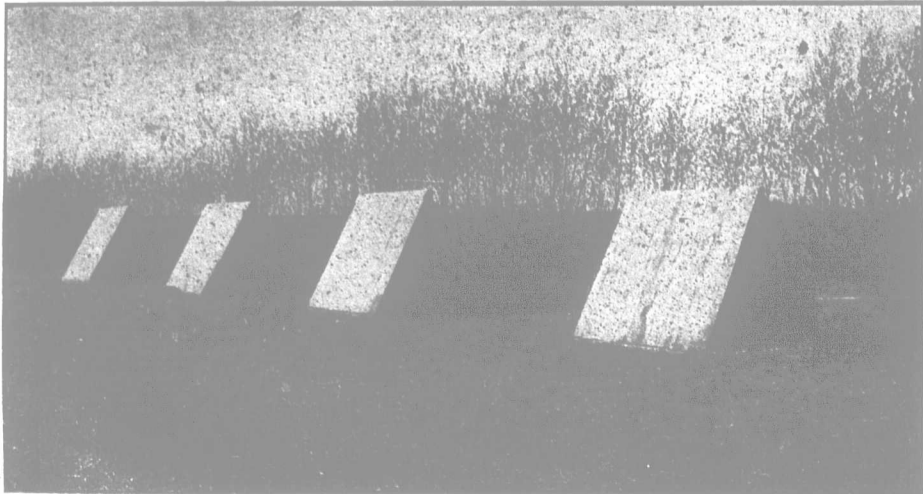
Live Weight of Hogs and Cost of Gain.

Live weight of hogs.	Meal required for 100 lbs. gain.	Cost of 100 lbs. gain.
Lbs.	Lbs.	
54 to 82	310	\$4.65
85 to 115	375	5.12
115 to 148	438	6.57
148 to 170	455	6.82

The average cost of 100 pounds of gain for these four periods would be \$5.91, counting concentrates at \$30 per ton, and giving milk and whey the same values as in previous calculations. Although \$5.91 for every 100 lbs. of gain is quite satisfactory, it cannot be taken as final. Recently, at the Guelph Station, a bunch of pigs from weaning time till they averaged 170 lbs. each, made 100 lbs. of gain on 280 lbs. of meal, and, furthermore, they never tasted skim-milk. Tankage was used as a substitute for skim-milk to the extent of 10 to 11 per cent. of the ration. The tankage cost in the neighborhood of \$50 per ton.

Summer Versus Winter Finishing.

Taking everything into consideration, the most satisfactory way to handle a large number of swine is to have the sows farrow at different periods throughout the season so the young ones will not all come about the same time, and there will be a bunch ready to market whenever the price is good. This is economical of space, both for farrowing sows and finishing pigs, and it distributes the labor more evenly. Under this system a fairly large herd of brood sows will require only a few pens for they can run in the barnyard or pasture except when nursing a litter, and then an outdoor run with a small house is most suitable. An adaptation of this system is quite common in some of the hog raising districts of Ontario. The method there is to winter over the spring and summer litters as thrifty shotes and finish them early the next summer after they have been forced ahead with grass and grain. The litters farrowed the previous fall are also brought along and subjected to the beneficial influences of the grass. In mid-summer they are turned off after making profitable gains. While this system is not generally advocated, some experiments seem to justify the method in that cheaper gains are made in warm weather than in cold. At the Copenhagen Station in Denmark 199 trials were conducted with 2,500 pigs, to show the difference between winter and summer feeding. The results are compiled in the following table, taken from "Feeds and Feeding":



Some A-shaped Houses.