

Dub...
Leon

Some Factors Affecting the Cost of Raising Pigs to Weaning Age

By

J. C. GRIMES
W. E. SEWELL
G. J. COTTIER

AGRICULTURAL EXPERIMENT STATION
OF THE
ALABAMA POLYTECHNIC INSTITUTE

M. J. FUNCHESS, *Director*
AUBURN

Some Factors Affecting the Cost of Raising Pigs to Weaning Age

By

J. C. GRIMES, Head Animal Industry Group
 W. E. SEWELL, Assistant Animal Husbandman
 G. J. COTTIER, Assistant in Animal Husbandry

DURING the six-year period, 1926 to 1931, detailed records were kept on the Experiment Station herd of swine at Auburn. During this time 147 litters of pigs were farrowed and raised. Practically all of these pigs were purebred Duroc Jerseys, purebred Poland Chinas, or crosses between these two breeds. Sows were bred to farrow two litters of pigs each year; the first about March 15, and the second about September 15. An effort was made, particularly at farrowing time, to save all pigs possible. During the gestation period the sows were in a large permanent pasture, and during the suckling period in one-quarter acre lots containing individual houses. The suckling period extended over eight weeks, at the end of which time the pigs were weighed and weaned and the sows were rebred.

The sows were fed a concentrate mixture composed, by weight, of corn 8 parts, wheat shorts 4 parts, and 60-per-cent-protein tankage 1 part. A mineral mixture of equal parts, by weight, of charcoal, slacked lime, and salt was kept before the sows at all times. During the gestation period the sows' feed was regulated to keep them gaining enough to be in a thrifty condition at farrowing time. About three days prior to farrowing the feed was reduced to two pounds per head daily, and after farrowing it was increased gradually to a full feed within about ten days,

TABLE 1.—Summary of Results in Raising 147 Litters of Pigs, 1926-1931, Inclusive.

	Fall farrowings	Spring farrowings	Spring and fall farrowings
Number of litters -----	72	75	147
Average number of live pigs farrowed per litter -----	8.03	7.88	7.95
Average number of pigs weaned per litter -----	5.54	5.97	5.76
Per cent of litter weaned -----	69.00	75.80	72.50
Average weaning weight per pig, lbs. -----	24.75	29.37	27.23
Average feed per sow during gestation, lbs. -----	362.00	408.00	385.00
Average feed per sow during suckling period, lbs. -----	546.00	515.00	530.00
Average feed per sow to produce litter, lbs. -----	908.00	923.00	915.00
Average feed required per pig, lbs. -----	164	155	159
Average feed cost per pig* -----	\$ 3.43	\$ 3.23	\$ 3.32

*Corn @ \$1.13 per bushel; wheat shorts @ \$38 per ton; and tankage @ \$69 per ton.

the amount depending on the size of the sow and the number of pigs she was suckling.

Since the land on the Experiment Station farm at Auburn that is available for the production of hog feed is limited in area and poor in quality it was necessary to purchase all the concentrates used. Pasture was available for only a part of each year. Had land suitable for pasture and feed production been available the cost of producing pigs could probably have been reduced.

RESULTS

Records summarized in Table 1 show that on an average 7.95 pigs were farrowed and 5.76 pigs were weaned per litter. The loss during the suckling period was, therefore 27.5 per cent. This loss was due to a number of different causes, but in the majority of the cases it was due to the sows mashing the pigs during the first week after farrowing.

The sows consumed an average of 385 pounds of feed each during the gestation period and 530 pounds during the suckling period. This constituted a daily consumption of feed equivalent to about one per cent of the live weight of the sows during the gestation and about two per cent during the suckling period. The average amount of feed used to produce the average litter of 5.76 pigs to weaning age was 915 pounds, or 159 pounds per pig. Sows farrowed more pigs per litter in the fall than in the spring, but raised a greater number of pigs per litter during the spring when green feed was more plentiful and weather conditions were more favorable for the suckling pigs. Fifteen pounds less feed was required to raise a litter of fall-farrowed pigs than was required to raise a litter of spring-farrowed pigs. However, the larger number of pigs raised in the spring made the spring-farrowed pigs cost 20 cents per head less than the fall-farrowed pigs. Sows differ considerably in prolificacy and in ability to

TABLE 2.—Summary Showing Effect of Size of Litter on Weight and Feed Cost Per Pig at Weaning Age.

No. of pigs weaned in litter	No. of litters used	No. of pigs per litter farrowed	Per cent of pigs raised	Av. weaning weight per pig (lbs.)	Av. amount feed required to produce litter	Av. feed required per pig (Lbs.)	Av. feed cost per pig (dollars)*
2	5	5	40.0	31.5	895.8	448	9.36
3	14	5.4	55.1	31.8	872.70	291	6.08
4	16	7.1	56.3	34.8	904.04	226	4.72
5	22	8.3	60.2	28.9	950.82	190	3.97
6	22	9.2	65.2	31.4	920.34	153	3.21
7	33	8.3	84.3	27.0	952.24	136	2.84
8	15	9.0	88.9	27.4	948.28	119	2.48
9	13	9.7	92.8	26.5	988.10	110	2.29

*Corn @ \$1.13 per bushel; wheat shorts @ \$38.00 per ton; and tankage @ \$69.00 per ton.

raise pigs. Some sows consistently farrow and raise large litters of pigs, while others, due to a lack of prolificacy or the mother instinct, raise small litters.

The data in Table 2 show that the number of pigs raised per litter was an important factor in the cost of the pig at weaning age. The feed cost of pigs raised in litters of two was \$9.36 each but in litters of nine, only \$2.29 each. The reason for this difference was that the sows which raised only two pigs per litter required as much feed during the gestation period, and almost as much during the suckling period as the sows which raised nine pigs per litter. Pigs from large litters usually weighed less at weaning age than pigs from small litters. Pigs from litters of two averaged 31.5 pounds each when weaned, whereas pigs from litters of nine weighed only 26.5 pounds each. This difference in weight was probably due to the fact that in large litters the pigs received a proportionately smaller amount of milk than the pigs in small litters. The increased weight of the pigs in small litters was not sufficient, however, to offset the increased feed cost per pig in these litters. The cheapest pigs per pound or per head were those raised in large litters.

POINTS OF INTEREST

This report includes records on 147 litters of pigs farrowed on the Alabama Experiment Station farm during the period 1926 to 1931, inclusive. The records show:

(1) That the average number of live pigs farrowed per litter was 7.95; the average number weaned per litter was 5.76. The loss of pigs during the suckling period was 27.5 per cent.

(2) That the average amount of concentrates required to produce a litter of 5.76 pigs to weaning age was 915 pounds. This was an average of 159 pounds of concentrates for each pig raised.

(3) That the feed required to raise a pig to weaning age in litters of two was 448 pounds, but in litters of nine it was only 110 pounds.

(4) That the feed cost of pigs raised to weaning age in litters of two was \$9.36 each, but in litters of nine it was only \$2.29 each.

(5) That the average weight per pig when weaned, at eight weeks of age, was 27.23 pounds.