Swine Production

main factors of improvement are prolificacy, milk production, type

Hubert Heitman, Jr.

Swine production can be improved by using purebreds with records consistent in prolificacy, milk production, and type.

The hog producer can make more immediate profit if his sows farrow more pigs—if their prolificacy is increased. But, in the long range program, a definite goal is needed. The following table shows the relationship between litter size and birth weight:

Average numbr of pigs per litter	Average birth weight per pig, pounds
4	3.2
8	2.9
14	2.4

Average birth weight per pig is lowered as the litter size increases. This is important as it is often said that birth weight determines worth. The following table indicates the relationship between birth weight and performance:

Pig birth weight lbs.	Average weaning weight lbs.	Weaning percentage	Average daily gain (weaning till 190 days) lbs.	Average 190-day weight lbs.
1.5	18	30	1.2	170
2.5	25	68	1.3	197
3.5	30	79	1.4	218

These figures show the advantage of large birth weight, but selection for birth weight alone would reduce litter size, and large birth weights might cause additional difficulties in the farrowing process. This would seem to indicate that selection in swine should be based on both litter size and individual birth weight. The sow must be used to her greatest advantage as a producer of milk without sacrificing individual birth weight too far. It appears that a goal of eight to twelve pigs farrowed and averaging close to three pounds each at birth would be reasonable.

Other factors also influence litter size and weight. As the sow grows older, average birth weight per pig increases slightly, though significantly. Litter size increases usually up through the fourth litter and then declines. Type of sow also affects litter size. One study indicated that small-type sows farrowed litters at an average of 6.4 pigs whereas intermediate-type sows farrowed litters at an average of 8.3 pigs.

Selection on the basis of weaning weight means, to a large degree, selection for milk production. Maximum production is reached during the third week of lactation in the sow and falls off fairly rapidly thereafter. This emphasizes the importance of creep feeding at this time, as the pig is getting less milk, while it is larger and needs more feed.

To nurse a litter of appropriate size, a sow should have no less than 12 evenly spaced sections of her udder, each with a teat capable of functioning. The udder should start immediately behind the forelegs as the fore sections of the udder usually produce more milk than those in the rear. Length of side gives space for udder development, and also is a factor in body capacity necessary for feed consumption and prolificacy. This does not mean selection should be for great length, turning hogs into narrow, leggy, and rangy individuals. Selection should rather be for moderate length of body which is found in middle-of-the-road, intermediate-type swine.

This is accomplished by Production Registry—PR—testing of swine as carried on by the various breed associations. It is based on prolificacy and milk production which is measured by a sow's rearing at least eight pigs to weaning with at least a certain minimum litter weight of 275 or 320 pounds depending on the sow's age.

Sows vary greatly in prolificacy and milk production. To learn to distinguish the good sows from the poor, and sell the boarders, is just as important to the swine producer as to the dairyman. Breeding replacements should be selected from the real producers. This would require at least some system of ear notching and bookkeeping.

Extreme changes in the type of swine have certain dangers. The old-fashioned hot-blood was popular at the turn of the century; the big-type in the 20's; proper feeding coupled with wise selection can produce the type needed today: an intermediate-type hog not overly fattened.

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For experimental purposes

For use in connection with control of Pacific mite on grapes
100 lbs. 2% 88R Dust

Pittsburgh Agricultural Chemical Co.....100 lbs. 1½% metacide dust
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