

How to select productive sows and gilts

NEWARK, Del. — The productivity of a swine herd depends on the productivity of its sows. And this depends on good management as well as good genetics.

A sow's potential isn't met in most herds, says University of Delaware extension livestock specialist Richard Fowler. She is capable of farrowing 2.5 times a year and weaning 12 pigs from each litter.

This translates into 30 pigs per sow per year.

In 1979 the average number of pigs weaned annually per sow in the U.S. was only 11.7.

Deciding which gilts to keep for your breeding herd is an important job. Keep fast-growing, sound, lean gilts from larger litters. After farrowing, cull sows with poor dispositions, physical problems, poor mothering records, or with litters that are two pigs below the group weaning average.

Records help identify the most productive females, says Fowler. Since some traits are now highly heritable, management has a big influence on productivity.

For example, take litter size at birth. Only about 10 percent of the variation observed in this trait is due to genetics.

Put another way, if one sow farrows 10 pigs and another eight, only .2 of a pig is due to the genetic differences between the two sows. This apparently small influence on litter size may tempt you to underestimate its importance in selection, says the specialist.

Litter weight at three

weeks is an excellent way to measure sow productivity. This measurement recognizes the number of pigs born and the milk-producing ability of the sow.

This information is also useful in determining an index number. It's the basis for the sow indexing programs offered by breed associations and some universities.

One index that is used is: Index No. = 2 (No. born + 2 x No. weaned + 2 x total litter weight at three weeks/30).

The wide variation in litter size among sows makes it difficult to evaluate genetic factors, since heritability of litter size is small and environmental factors are large. But sows on the same farm are in a similar environment and get similar care, so their differences do have some genetic basis.

Good records and an indexing system will help you identify these inherited differences.

Conformation also plays an important role in selection. There is evidence

— though not fully proven — that the very meaty female does not make a good brood sow.

Good brood sows usually have long muscling, rather than short, bunch muscles. These individuals exhibit freedom of movement with an easy-moving stride. They're the kind of gilts that have some slope to their pastern and a front foot that is slightly ahead of the knee.

Avoid keeping gilts with small, up-turned genitalia and poorly defined underlines. Underlines should have six prominent, evenly spaced nipples on each side, three in front of the navel.

Do not save gilts with inverted or scarred teats. The fastest growing, leanest gilts which are sound and from large litters should be saved for replacement females.

The way a gilt is managed at birth and during puberty can affect her reproductive performance. Recent research shows that gilts raised in large litters are less productive than those reared in small ones.

Equalize litters by fostering the male pigs from large litters.

Evaluate gilts at weaning and again during the growing period. At 200 pounds place them on a

restricted diet of about six pounds per head daily. The added weight gained on full-feed is mostly fat.

Place the gilts in fenceline contact with a boar to induce early estrus and a higher

pregnancy rate.

A good record-keeping system and an eye for structurally sound gilts can help improve the reproductive performance of your herd.

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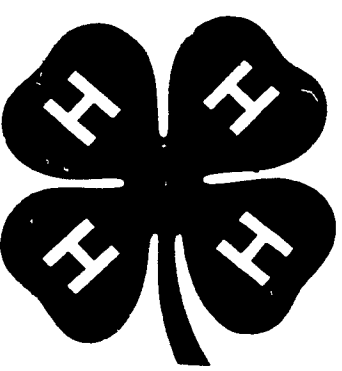
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