Large Litters Require Meticulous Management

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The economic news in the hog industry looks better than it has in 24 months—hog prices are up and profitability is returning, largely because of fewer sows farrowing—the US and Canadian sow inventory is down 4.2% from a year ago and down 8% from 2008, and the USDA reports 11% more corn stored than a year ago. That's good news for the producers who rode out the storm, and it lightens their step on the daily trek to the hog barn.

With all of this in mind, the question is how to get more hogs to the packer with the sows we have. In the not-so-distant past, we were pleased with 10 pigs per litter weaned at 17 days of age and our pigs weaned/sow/year goal was 22 or 23. Sow genetics continue to improve, and it's common to wean 12-13 pigs per litter and, even at a 25-day weaning age, yield 28-30 pigs weaned/sow/ year.

Recent swine studies focus on management practices which can feed the pregnant and lactating sow who will be raising and weaning 13 or more pigs per litter. In addition, research attention is being paid to the birth and weaning weights of these large litters to learn whether the pigs are efficient feed converters and if their carcasses deliver consistent quality pork to the packer.

Research investigating the effect of litter size on pigs' pre-weaning growth by Kansas State University found relatively few differences in the variability of pig size at birth through weaning between larger and smaller litters (Bergstrom, et al). North Carolina State University research has shown that low birth weights yield pigs who are less likely to develop a full value carcass when compared to their littermates of average or larger birth weights (Fix, J.S. and See, T.).

These results all point back to that all-time favorite production challenge—feeding the sow. But it's not just about feeding the lactating sow. Replacement gilts need to be developed carefully with their purpose in life in mind. If there are fewer sows in production these days, they must be grown and fed not just for productivity but for longevity, too.

Replacement gilts must be fed separately and differently from their counterparts in the finishing barn. Gilt development rations need to contain higher levels of calcium and phosphorus to provide a good foundation of bone development to take her through her

first parity and beyond. Both university and industry research indicate that it is most economically efficient and physiologically appropriate to breed gilts at 300-320 pounds and after they've attained estrus a minimum of two times. After the gilt is pregnant, feeding a nutrient-dense gestation ration enables her to deliver fewer low-birth-weight piglets.

Studies relating to gilt body types also point to the differences between thicker-muscled, leaner gilts vs. lighter-muscled gilts with an extra quarter-inch of back fat. Back fat has traditionally been the measure of a gilt's development. By concentrating more on the gilt's body condition and keeping her size under control, producers can reduce feed costs in gestation and bring her to the farrowing room with a hearty appetite. Sows who eat aggressively in lactation are able to maintain their body condition and also wean a heavier litter. Current University of Minnesota recommendations are that young sows of parity 3 or less should be fed diets with higher nutrient concentration to help them minimize loss of body weight during lactation. Young sows need levels of amino acids to provide for their own growth needs as well as their litters'. Older sows can feed their litters and maintain their body condition when consuming diets which more closely fulfill their gestation and lactation requirements. This is an added bonus because it lowers the feed cost of those sows.

Creep feeding piglets prior to weaning supplements the sow's milk production, prompts the pigs to begin eating feed, and reduces the shock of weaning on the pigs. Kansas State University research has found that pigs age 21 days and older get the most benefit from creep feeding. Even when they are introduced to it at an older age, they may actually consume more creep feed overall than pigs who were started on creep feed at a younger age. Again, Kansas State research found that creep feeding may not realize heavier weaning weights than in pigs who were not provided creep feed, but because the pigs were eating when they were weaned, they gained faster after weaning.

Today's finely tuned swine genetics allow sows to produce large numbers of fast-growing pigs. The sow, in turn, must be able to lactate profusely, maintain her body condition, and return to the breeding herd ready to develop another large litter. These are all possible with meticulous management practices. Careful sow and gilt nutrition throughout their life, and supplemental feeding of the piglets in late lactation will ensure that today's sow herd manager will make the most of all of those pigs.