



## SWINE EXTENSION

Providing educational resources and applied research to assist Minnesota's pork producers and allied industry.

### Managing Highly-Prolific Sows

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A review of production records and reports indicates that our swine industry continues to do a good job improving reproductive efficiency in our breeding herds, as marked by an annual increase in litter size of 2.5% – 3%. However, we also tend to see increased variability in piglet size and variability along with increased pre-weaning mortality. The question then becomes how do we manage these sows and their litters differently given the increases in litter size?

French research findings and commercial experiences may provide useful information and suggestions. Piglets born per litter has increased dramatically in French herds, from 11.9 in 1996 to 13.8 in 2006. However, during the same period, pre-weaning mortality increased over 10%, explained in large part due to significantly more piglets being born weighing less than 3 lbs and having a lower survival rate. What strategies can be undertaken at the farm level to improve viability of pigs in these larger litters? Here are a few suggestions from Sylviane Boulot of the French Institut du Porc:

#### *Pregnancy and farrowing induction*

The majority of fetal growth occurs the last few weeks of gestation. Therefore, extending gestation length improves piglet birthweight and viability. If inducing sows, ensure induction practices are based on close monitoring of expected farrowing time for each individual sow – otherwise induction may result in early farrowing and premature births.

#### *Farrowing supervision*

Larger litters means longer period of time for sows to complete farrowing, sometimes 5 hours or greater. An increased risk of stillborn, weak, and anoxic piglets occurs, so close supervision of farrowing is key. Provide assistance pulling pigs when needed, and immediately dry and warm newborn piglets. Oxytocin administration to speed up the farrowing process when needed, and if conducted appropriately, can be a useful tool.

#### *Colostrum intake*

Newborn piglets are born with poor energy stores and immune protection, so colostrum intake immediately after birth is key. Research indicates that piglets that die early are lighter in weight at birth and have consumed less colostrum than littermates. These smaller piglets are less vigorous and have a lower ability to control their body temperature, two main disadvantages starting out.

#### *Piglet care the first 48 hours*

There are a number of ways to provide assistance the first 48 hours after delivery. Providing additional preserved colostrum or energy rich pastes, split-suckling, supervised nursing, and re-hydration can all improved the survivability of piglets, especially the smallest and weakest ones. Ensure piglets have had adequate time (at least 6 hours) to suckle and obtain colostrum from the sow prior to moving. All these strategies take time – the French data would suggest an additional 1.5 hours per sow during the farrowing week.

#### *Feeding strategy*

Last but not least, feeding strategy can play a key role in maintaining body condition and reproductive performance of the sow while improving piglet viability. Prolific sows have increased

nutrient requirements during lactation due to greater levels of milk production. The majority of these increases in nutrient needs are generally mobilized from body reserves, and therefore it is particularly important to gain back those body stores during the subsequent gestation period by adjusting feeding level. By increasing the proportion of sows entering farrowing in excellent body condition, number of stillborn and weak pigs should decrease due to complications from fat and thin sows. Additionally, increasing the feed level by 2 lbs/d the final couple of weeks of gestation may also improve viability of piglets and result in easier farrowings for these highly-prolific sows.