HUBBARD
an Alltech company

SWINE SOLUTIONS

Farrowing barn tips for more pigs

By: Dr. Andrew Bents, Swine Technical Veterinarian, Hubbard Feeds

At Hubbard Feeds, we get to work with a wide variety of producers across the country. From large integrators to small family farms and from commercial pig farms to show pig herds, there are many ways to raise a healthy, productive pig. It has been my great privilege to meet many swine producers over the years, and learning more about their unique operations has really reflected the strength and diversity of the swine industry.

Having grown up on a farrow-to-finish farm myself, I understand the range of challenges that pork producers face on their farms. One of the more challenging locations we deal with as caregivers is the farrowing barn, and this is for good reason: how we manage our sows and piglets in farrowing sets the stage not only for the quality of the pig that will leave the farm on its journey to market, but also for the long-term success of the sows as they prepare for their next litters and beyond.

Although each farm's farrowing barn procedures may be different, I want to focus on a few challenges that practitioners of every swine production philosophy seem to face during farrowing.

Maximizing pigs born alive. We work so hard in the breeding barn to provide a good environment, nutritious feed, optimal boar exposure and a comfortable living space for the sow, and we want to be rewarded with the fruits of that labor as we walk the farrowing rooms by seeing big litters of pigs competing for their mothers' milk. However, despite many advances in genetics, health, nutrition and management, we still lose more than 10% of our pigs before they even hit the ground. In 2019, PigChamp reported that the average number of pigs born in total per litter was 14.88 pigs per sow; however, of those pigs, an average of 1.13 per litter were stillborn and 0.38 per litter were mummified. This presents a great opportunity for improvement on our farms.

Stillborns. Preventing stillborn pigs serves as a huge opportunity for a farm, as these are pigs that made it full-term before something went wrong immediately prior to or during the farrowing process. When I am evaluating high stillborn numbers on a farm, here are a few things I consider first:

- Infectious causes, such as PRRS or leptospirosis
- High levels of mycotoxins in the feed, especially zearalenone
- Environmental factors, such as carbon monoxide poisoning from proximity to power washer exhaust

Once we have ruled out the external factors, we can focus more on the various management techniques for fewer stillbirths. It is important to learn what we can from what we observe in our stillborn pigs. For example, are the pigs stained yellow/brown? This is called meconium staining, and it occurs when the piglet defecates during the delivery process. I use this as an indication that the piglet had a challenging delivery and count pigs with meconium staining as opportunity pigs for the delivery crew on the farm. Maybe the pig was lodged in the birth canal; maybe it was coming out breach and needed correction; or maybe the sow was running out of energy toward the end of the delivery and couldn't push the pig out. Your veterinarian might also necropsy piglets to understand the losses — use this as a chance to see if the lungs of stillborn pigs float or sink. If the lungs float, then the piglet did indeed take a breath of air, meaning it was born weak or was laid on; if the lung sinks, then the pig never even had a chance to breathe.

What can we do? Here are a few focus areas I highlight with our farrowing teams:

1. If you are running an average of more than one stillborn piglet per litter, set a goal for stillborn reduction on the farm. Start by counting the number of meconium-stained pigs over a few days of farrowing, and use this number (as a percentage of the total stillborns) as your goal for stillborn reduction. Remember that your goals should be SMART: specific, measurable, attainable, relevant and time-bound. Set a goal that can be consistently achieved before shooting for the moon.

-continued on next page

2. Monitor farrowings, recording the time of last observation to ensure that the delay between pigs isn't too long. On average, a pig is usually delivered every 15 minutes, so if all of the pigs are dry and the placenta hasn't been expelled yet, it may be worth checking. I also encourage the crew to check immediately for any meconium-stained pigs, as this indicates that there was difficulty with the delivery of that pig. Make sure to wear OB sleeves — and put on a clean one for every sow, as diseases can move readily around the farrowing house during the delivery process. Use plenty of lubricant during inspection to reduce trauma and swelling, and move slowly and with the contractions so you don't wear out the sow. Ultimately, practice makes perfect, and thorough instruction and patient mentoring with new members of the farrowing crew can yield great results. More time spent in the farrowing house typically results in a greater reduction of stillborn pigs, as it gives us an extra opportunity to prevent laid-on piglets and placenta-shrouded suffocation losses as well.
3. Look at how you are feeding your sows prior to farrowing. There are many theories about how to feed sows prior to farrowing, some of which aim to reduce the fecal volume and some of which aim to provide plenty of energy. What I have found to work best is a happy medium: feeding two small meals per day (usually, 2–3 pounds per feeding) provides enough energy for the sows to get through their farrowing but won't produce a large fecal mass, which some believe can impede piglet passage through the birth canal. Some producers will even top-dress the feed prior to farrowing with a pound of dextrose per day, divided between feedings, to give sows extra energy without adding a lot of volume.
4. Review the parity structure of the farm; gilts tend to have narrower birth canals, which can increase the discomfort of the delivery process, while older sows seem to run out of energy toward the end of farrowing. I tend to lean a little heavier on inducing gilt litters if I have a good understanding of the farm's average gestation lengths and good breeding records, just to try to avoid running long and getting potentially larger pigs, but this is typically more of a challenge in lower-total-born herds than in higher-total-born ones. Farms that provide a veterinary-approved anti-inflammatory or, even better, pain management support to gilts immediately prior to farrowing have also reported fewer complications and a faster transition back onto feed after farrowing. To aid sows with the farrowing process, I like to find ways to provide extra calcium to keep smooth muscle contractions going; this can be achieved either through injections of veterinary prescription products or by freeing up bound calcium through acidification by using our Transrite Sow Ultra product as a three-day pre-farrow top-dress. In either instance, I am very conservative with oxytocin usage so that, first, we don't overdose the sow, and second, that we will definitely be able to tend to her farrowing once the shot has been given.

Mummies. To protect the entire litter, the sow will actually wall-off and effectively "mummify" any pre-farrowing mortalities. We can learn a lot by observing the mummies, as the size of the mummified piglet can reveal a great deal of information as to when the loss occurred. For example, as the fetus nears the end of the second trimester, it will be around 8–10 centimeters (3–4 inches) long, about the size of a mouse — but if something occurred during that time, then growth would be halted and the fetus would be mummified, resulting in an 8–10-centimeter (3–4-inch) mummy. It is also telling if there are multiple mummies in the litter that are either the same size or different sizes, as this may indicate a single insult resulting in fetal mortality in the former versus an ongoing challenge (like parvovirus) in the latter. Disease challenges, pen aggression, movements around the farm and even the timing of certain injections are some factors to consider if mummy rates are elevated. The key is to look for patterns in mummy size to better understand the specific factors that need to be addressed on the farm.

What can we do?

1. Pre-breeding vaccinations and the management of on-farm pathogens go a long way toward reducing mummies. For sows that are managed outside, especially during wetter times of the year, crews should employ further measures for heightened leptospirosis control, such as keeping lots dry or reducing the pathogen load with effective antibiotic usage.
2. As we move toward more group housing during gestation, we are re-learning how to manage sows in large pens. There is still a lot of opportunity for reducing lameness and pregnancy losses as we continue to learn how to mitigate aggression within pens of sows.
3. The timing of the stocking of the pens relative to breeding, pen and group sizes, feeder design, fiber levels in the feed, water availability and environmental enrichment are all areas we continue to evaluate as we seek to determine the best way to raise our pigs in a manner that is safe, productive and comfortable for both the people and the animals on the farm.

There are many ways to raise pigs in our industry today. Hopefully, some of the ideas included here can prove to be helpful as you continue to strive for the best on your farm. Always stay safe, and keep the sows' and piglets' health and welfare in mind as you incorporate new ideas on your farm.