Oral Caffeine Administered To Late Gestation Sows

Being a producer in the swine industry carries a tough load. From the producers' standpoint, it is crucial to meet the needs of the consumers in the most efficient way possible. However, often times what is thought to be the most efficient way turns out to not be. As the consumption of pork increases, it leaves producers with the question of how to produce more pork. The seemingly obvious answer is to produce more pigs because more pigs result in more pork, but that may not be the case. Often times the result of random trial and errors can lead to industry-changing results. A recent study found in “Animal Reproduction Science,” Volume 198 determined how administering caffeine to late gestation sows can increase gestation length and overall health of the piglets. It also was determined that producing large quantities of pigs isn’t how to increase production but to increase the qualities of the piglets born. Adding something as simple as caffeine to a sow's diet can result in fewer stillborn, increased gestation length, and increased temperatures.

With the demand for pork products on the rise, often times people strive to have the largest litters of pigs thinking that will solve the shortage of the wanted pork. With that comes the idea that larger litter sizes mean more pigs, but that isn’t always the cure. In today’s industry, some people put quantity over quality. They want to produce the highest number reachable even if that results in the quality of their product being sacrificed. Having this mentality can result in inconsistent variable weights of piglets born, more pigs born stillborn, and longer times to figure out and compete for the teat. This results in less colostrum intake and can be directly related to a weaker immunity, increased mortality, and reduced growth rates. An increased litter at birth doesn’t mean an increased litter at the time of weaning. Pigs that have a large range of weight often grow at different paces and this can result in uneven market times which can cause the producer to spend more money keeping the pigs longer.

Research shows the effects caffeine has on the pre and postnatal variables during parturition versus a sow that wasn’t exposed to anything different. There were two groups of sows used in this experiment. One group was just a normal group of sows that didn’t have anything changed, and this served as the control. The other group received 6 grams of caffeine a day starting three days before the expected partition until farrowing. Often times caffeine is administered by weight. In order to get results that can be related to a commercial pig farm, a set amount of caffeine was given. This allowed the experiment to relate to the real-world pig industry. To obtain better results the two groups of sows were picked at random. The sows were all managed similarly throughout the experiment. The sows that received caffeine before farrowing resulted in more pigs being born, the better overall health of the liter, and a longer gestation period. Rectal temperatures were checked three hours after birth and then again 24 hours after birth. The piglets born from a sow that received caffeine overall had higher rectal temperatures after birth and also had more evenly compared birth weights. Fewer stillborn were delivered compared to the control group of sows. The caffeine resulted in only positive changes, but it didn’t change every aspect of the piglets. The things that caffeine didn’t change still indirectly had a positive outcome. One example being, the total number born was still similar in numbers, but the percent born alive had increased greatly. Another example of a factor the caffeine didn’t change was the time between each piglet being more, but what did change was the amount of time it took for the piglets to find a teat and start suckling.

In conclusion, the sows that received caffeine days before partition resulted in many improvements to the piglets born. Overall the piglets had more evenly distributed birth weights, higher rectal temperatures, and a decreased mortality rate. This breakthrough could help producers go back to focusing on not just quantity but quality as well. To do this experiment sows would be administered 6g/day caffeine with their normal feed three days before expected parturition until farrowing. This may cause a very slight increase to the feed bill but in the grand scheme spending a little more on feed is worth having more piglets that are of better health. When weighing the pros and cons of deciding to do this, the pros overpower the cons and make it an easy decision that doing this experiment is worth it. All in all, simply feeding sows a small amount of caffeine for a short period of time could be what the industry needs to fulfill the uprising demand for pork and pork products. This information can bring perspective when producers want to produce large quantities of piglets. This serves as a simple way to result in healthy happy pigs and could have a huge overall effect on the industry as a whole. The money that would be spent on the caffeine would easily pay for itself in the extra money spent to keep undesired pigs longer along with the money lost by not using caffeine and having higher mortality.