Successful weaning requires adequate pre-weaning preparation

Conference report

The abrupt transition from the sow's milk to solid feed, combined with environmental changes and social restructuring, creates a challenging situation for young piglets. Weaning is a critical phase that subjects piglets to multiple stressors, which can have cumulative effects on their health and development. Weaning stressors are inevitable in the piglets' development; however, effective pre-weaning management practices can significantly minimize their impact on health and performance.

Pre-weaning measures help improve weaner performance.

"Successful weaning of piglets is a multifaceted process that requires careful management and strategic planning well before the actual weaning event," says Dr. Merideth Parke, Global Application Manager, Swine, EW Nutrition. She emphasized the following key pre-weaning factors that can significantly influence success during this most critical time.

Genetics

Selecting the right genetics for your specific production system is crucial for ensuring successful weaning outcomes. The genetic traits of sows with a direct impact include sow resilience, litter size, piglet birth

weights, and overall growth rates.

Furthermore, it is decisive for piglets' survival and performance that the sow shows strong maternal instincts, and, to ensure enhanced colostrum and milk uptake, an adequate number of functional teats and high milk production.

Gestation and farrowing influencers

Having an optimal body condition score at farrowing is essential for sows. Being overweight or underweight poses the risk of prolonged farrowing and reduced colostrum and milk production.

On the piglet side, prolonged farrowing negatively impacts their vitality at birth, which correlates with reduced colostrum uptake and increased pre-weaning mortality rates.

Environmental conditions

Newborn piglets are particularly vulnerable to hypothermia and have a minimal critical temperature of 33-35°C. Below this range, they struggle to maintain their body temperature, which can lead to increased mortality rates. Cold piglets are less likely to suckle, compromising their energy reserves and ability to maintain body temperature.

In contrast, lactating sows have an optimal temperature of 18-22°C to maximize feed intake and milk production. Therefore, to balance the temperature needs of sow and piglets, it is essential to create a controlled temperature, draft-free creep microenvironment for piglets.

Hygiene

The hygiene of farrowing crates plays an essential role in the successful weaning of piglets. Maintaining a clean environment significantly impacts the health and growth of piglets, ultimately influencing their survival and weight at weaning. "We must consider the time spent cleaning, disinfecting, and drying farrowing crates an investment, not a cost," emphasized Dr. Parke. "Doing these routine tasks really well will inevitably reduce the time spent treating sick pigs."

Lactation phase

The primary objective of pre-weaning measures is to ensure adequate colostrum and milk production throughout lactation while beginning the adjustment to solid feed. Efforts should be directed toward facilitating nursing access for all piglets, with particular attention to smaller or weaker ones probably facing difficulties accessing teats.

Split suckling can be the method of choice for improving their colostrum and milk intake, particularly in large litters. For that measure, larger, more robust piglets are separated, allowing smaller or weaker piglets to nurse first. Once the weaker piglets have had sufficient time, the groups are swapped.

However, according to Dr. Parke, fostering piglets is recommended to be undertaken cautiously. "While it can be beneficial, it can significantly disrupt pathogen stability and teat hierarchy, particularly when it occurs after the first 24-48 hours of birth when piglets have established their preference for specific teats. This can increase fighting among piglets as they establish a new hierarchy. This aggression can result in injuries, especially for weaker or smaller piglets. Fighting can also cause damage to the sow's udder, leading to infections or mastitis, compromising milk production and overall sow health," she stated.

Nurturing the gut

Providing creep feed for a minimum of 7 days before weaning significantly boosts litter weight at weaning and reduces the risk of post-weaning fallback. Early exposure to solid feed accelerates the development of

digestive enzymes and acid production, both essential for breaking down carbohydrates and proteins.

Combining pre-weaning creep feeding with high-quality, palatable post-weaning diets has been shown to lead to piglets with increased post-weaning feed intake, health, and growth during the critical post-weaning transition.

As the swine sector evolves with larger litter sizes and, therefore, increased competition for sows' milk, using milk replacers is becoming common practice. Following a "little and often" approach by providing small amounts of fresh milk replacer multiple times a day is most effective. The hygienic preparation and feeding of milk replacers go without saying to prevent the growth of harmful bacteria and molds that can lead to diarrhea and other health issues in piglets.

Collaborative approach

The swine industry is grappling with mounting challenges associated with post-weaning stress and health, exacerbated by the prohibition of AGPs and the use of pharmacological levels of dietary zinc and copper in many regions. Addressing these issues requires a coordinated strategy to improve piglet welfare and optimize production outcomes. "By adopting a proactive approach emphasizing collaboration and comprehensive management strategies across the production system, piglet welfare and long-term productivity can be enhanced," concluded Dr. Parke.

EW Nutrition's Swine Academy took place in Ho Chi Minh City and Bangkok in October 2024. Dr. Merideth Parke, Global Application Manager, Swine, was one of the highly experienced speakers of EW Nutrition. She is a veterinarian who strongly focuses on swine health and preventive medicine.