



Season 4, Episode 4: Gilt Nutrition and Development and Role It Plays in Swine Production Systems

Matt Romoser, Swine Extension Specialist at Iowa State University, and **Dr. Spenser Becker**, Nutritionist with AB Vista, discuss the aspects of gilt nutrition and development and the role it plays in swine production systems.

Background

Gilt development is a broad topic but describes a culmination of many strategies that producers taking to set gilts up for success and prepare them for their most productive life. This includes all aspects of gilt development such as growth management and gilt nutrition as well as boar exposure and selection. The purpose behind this is to set up the best possible population of gilts as they enter into the sow farm, so the next generation of sows coming in can be in the herd as long as possible and maximize productivity for the farm and producers.

Gilt Nutrition

Nutrition is incredibly important for gilt development. This is helping set the gilt up for success and longevity in the herd as well as strengthening the survivability of her piglets. A critical component to consider for gilt nutrition is optimizing growth rate. Today's genotypes are set to try and maximize growth as much as possible and lean potential whereas with a gilt, that is not the wanted outcome. This is where nutrition comes into play as we may set the goals for developing gilt diets differently. A developing gilt that is going through gestation and lactation needs enough energy and targeted nutritional goals for maintenance for reproduction and growth. Calcium and phosphorus requirements are going to be about seven to eight percent higher in a developing gilt compared to a market hog. The developing gilt's diet should be highly focused on and studied.

Gilt Development

Something the swine industry is trying to still figure out is how the manage the growth rate during the development point. The gilts can grow too fast which can cause increased stress on bone conformation and structure. This results in the sows being heavier throughout their life and have an increased chance for injury or lameness later on. If the opposite happens and the gilt grows too slow, it can limit their genetic potential in regards to reproductive capabilities. Gilts would be later to reach puberty and could compromise mammary development. The tricky part of gilt development is going to be hitting the "sweet spot" and not letting the gilt grow too fast or too slow.

Growth Management

Growth management is highly developed during the grow to finish stage rather than the nursery since at this stage, growth is so rapid. A potential suggestion is increasing growth rate through providing increased square footage during the growing phase. However, sometimes it is forgotten how important the pre-weaning stage is for development and management. We know that gilts from smaller litters tend to do better long term, so if a sow has too big of a litter, it can be difficult to make sure every piglet is getting enough colostrum. A suggestion to help with that issue is maybe to split suckle gilts away from boars to make sure gilts are getting enough colostrum and maximize pre-weaning growth as pre-weaning growth is a determinant of future success as reproductive replacements. Another important factor in growth management is the weaning age. If the weaning age can be extended by a few days, performance and immunity benefits are seen. Growth management is incredibly important and may take a number of factors to get desired results.

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