



NUTRITION NOTES

Innovation + Research from Kent Nutrition Group

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NEXGEN NURSERY FEED CHANGES

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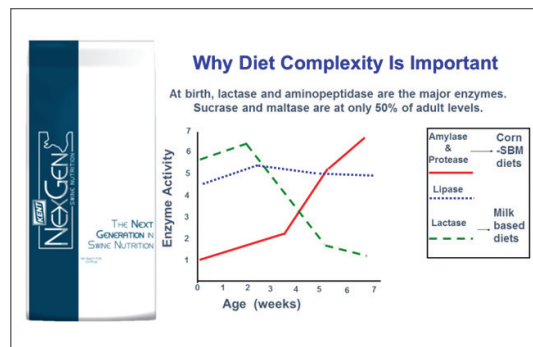
The objective of a successful nursery feeding program for healthy pigs is fourfold: 1) ensure pigs eat well; 2) encourage growth and bloom of the piglets; 3) promote good stool quality; and 4) transition the piglets from a highly fortified liquid feed to corn-and-soybean-meal-based rations. All of this must be achieved while maintaining a reasonable price. To ensure that pigs fed the NexGen line of nursery feeds achieve this four-part objective, several modifications have been made to the NexGen 12-17 Complete and NexGen 17-25 Complete feeds. In general, we improved the digestibility of these complete feeds by changing the complexity of the ingredients along with the use of cutting edge technology to increase the amount of nutrition available from the main ingredients in the feeds.

The biggest change was the increase in the amount of specialty carbohydrate sources in both feeds. We decreased the amount of corn in both feeds and replaced it with “feeding oatmeal.” Swine nutritionists have long known that oats are a highly digestible source of carbohydrates for pigs. The added fiber and increased digestibility of the feeding oatmeal should improve the bloom of the pigs, but more importantly improve the quality and consistency of the stools without sacrificing piglet performance (Mahan and Newton, 1993).

In addition to decreasing the amount of corn, we also reduced the amount of soybean meal. Very young pigs have sensitivity to soybean meal (Li et al. 1990); however, with the rapid increase in the price of specialty protein products such as Menhaden fishmeal, milk proteins, and others, the industry has pushed the limits of soybean meal inclusion levels in an effort to strike a balance between performance and diet cost. To reduce the soybean meal level, we needed to allow other ingredients to supply the amino acid levels necessary to optimize piglet growth. This is accomplished with the addition of higher levels of synthetic amino acids, high-quality animal protein products, and the use of a novel protease enzyme.

The protease enzyme used to help reduce the soybean meal content of the NexGen 12-17 and 17-25 complete feeds is the last tool used to achieve the objectives of a successful nursery feeding program. This novel enzyme allowed for a change in the ingredient matrix without sacrificing performance (Ma et al., 2014). In addition, improving the digestibility of the proteins found in the major feed ingredients, the reduction in the soybean meal level reduces the amount of non-nutritive compounds flowing through the pig’s gut. These compounds coupled with excess protein in the diet of young pigs with undeveloped intestines can lead to loose stools (Nollet et al, 1999). This type of loose stool is not an indication of poor performance or sickness in young pigs, but it can lead to wet pens, higher humidity in nursery rooms, and greater challenges in operating ventilation systems.

The changes implemented to the NexGen 12-17 and 17-25 complete feeds are yet another improvement to help our customers enhance the growth and wellbeing of their pigs while maintaining a cost-effective blend of ingredients and nutrients.



Ma, Y., N. Odetallah, M. Vazquez-Anon, J. Escobar. Protease supplementation improved growth performance and profitability of nursery pigs consuming a corn-soybean meal based diet. 2014. *J. Anim. Sci.* 92 Suppl. 2:62.

Mahan, D. C., E. A. Newton. 1993. Evaluation of Feed Grains with Dried Skim Milk and Added Carbohydrate Sources on Weanling Pig Performance. *J. Anim. Sci.* 71:3376-3382.

Nollet, H., P. Deprez, E. Van Driessche, and E. Muylle. 1999. Protection of just weaned pigs against infection with F18+ *Escherichia coli* by non-immune plasma powder. *Vet Microbiol.* 65:37-45.

Li, D. F., J. L. Nelssen, P. G. Reddy, F. Blecha, J. D. Hancock, G. L. Allee, R. D. Goodband, and R. D. Klemm. 1990. Transient hypersensitivity to soybean meal in the early-weaned pig. *J. Anim. Sci.* 68:1790-1799.

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