



NUTRITION NOTES

Innovation + Research from Kent Nutrition Group

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SUPPLEMENTAL AMINO ACIDS IN NEXGEN® STARTERS

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Conducting amino acid studies to fine-tune our pig starters are one of several areas of research at the Kent Nutrition Group. In previous research, we evaluated 1,400 pigs involving 180 pens and determined the effects of increasing synthetic lysine along with up to five additional synthetic amino acids on pig performance and economics. We learned that too high a level of synthetic lysine (with the other amino acids balanced in regard to lysine) did not improve performance enough to pay for the additional costs. Furthermore, we observed that if crude protein levels were decreased below our standard levels in the NexGen Starters, that growth, feed efficiency and cost of gain were negatively affected. Therefore, the trial reported in this article is a follow up where we fine-tuned the amount of supplemental synthetic lysine along with balancing the remaining amino acids (threonine, methionine, tryptophan) to the ratios developed at Kent Nutrition Group.

The experimental procedure consisted of the standard NexGen Starter program along with supplementing this program with additional levels of synthetic lysine, threonine, methionine and tryptophan. There were 488 pigs involving 56 pens per treatment. The average initial starting weight was 14.4 lbs with the trial being conducted for 28 days. All pigs previously were fed the NexGen HP 12-17 diet for the first 7 days post-weaning. After this 7 day period, the experimental diets were fed. The pigs were fed grind and mix diets utilizing NexGen 17-40 Mixer for days 7-14 followed by diets made with NexGen 25-40 Mixer from days 14-35. The diets were all medicated with Denagard™ at 35 grams/ton.

TABLE 1. EFFECT OF SUPPLEMENTAL AMINO ACIDS ON NURSERY PERFORMANCE AND ECONOMICS DURING A 28-DAY TRIAL

Treatments	NexGen	NexGen + Amino Acids
Average Daily Gain (ADG), lb	.86	.87
Feed/Gain	1.66	1.63
Cost/lb Gain, ¢	21.78	21.51
Net Return, \$/Pig @ \$60/cwt	9.25	9.44

Compared to pigs fed the standard NexGen program, the pigs supplemented with the additional acids had slight responses in gain with a feed efficiency improvement of 1.9%. By having a better feed efficiency, we were able to pay for the added levels of amino acids with cost of gain being lowered with the NexGen + Amino Acids. In addition, the net return (value of gain @ \$60/cwt minus the feed cost) per pig was improved by \$0.19 from the improved formulations.

SUMMARY

Based on extensive research trials at the Kent Nutrition Group Research Farm, we have developed new and improved pig starter diets based on modifications of synthetic amino acids.