

**139 Does Feeding an Increased Level of Narasin (Skycis) Result in Improved Growth Performance and Mortality in a Commercial Wean-to-finish Swine Feeding Program?** Trey A. Kellner<sup>1</sup>, Josh Ellingson<sup>2</sup>, Paul Thomas<sup>2</sup>, <sup>1</sup>AMVC Nutritional Services, <sup>2</sup>AMVC Management Services

The response to narasin (Skycis 100, Elanco, Greenfield, IN) to date has been documented in research facilities with a high degree of control and via pigs with no insults to health or feed intake. Furthermore, these studies are always conducted on a single subset of pigs and diets. However, in commercial conditions, the response to narasin must be consistent and defined over a wide range of health statuses, stocking densities, feed intakes, environments, and diet formulations. The objective of this experiment was to determine which inclusion level of narasin (13.6 or 18.1 g/ton) would provide the greatest response under commercial conditions. A total of 197,629 weaned barrows and gilts ( $6.0 \pm 0.1$  kg; PIC 337 sired, Hendersonville, TN) were placed in 73 2,400-head commercial wean-to-finish barns that were alternated to 1 of 2 treatments (13.6 or 18.1 g of narasin/ton) in a rolling allotment over an 18-month period. Pigs were on the experiment for an average of  $163 \pm 1.6$  days (until harvest). Throughout the 18-month experimental period, diets (outside of the narasin inclusion) were allowed to change to maximize return over feed costs. Data were analyzed using Proc MIXED (SAS 9.4; Cary, NC) with treatment as the main effect and barn as the experimental unit. Compared to 13.6 g/ton, the increased level of narasin (18.1 g/ton) improved ADG (13.6 g/ton = 0.76 versus 18.1 g/ton = 0.78 kg/d;  $P = 0.035$ ), gain:feed (13.6 g/ton = 0.389 versus 18.1 g/ton = 0.401;  $P = 0.042$ ), and mortality from wean to harvest (13.6 g/ton = 7.2% versus 18.1 g/ton = 5.3%;  $P = 0.084$ ). In summary, feeding an increased level of narasin (18.1 g/ton) during an ever-changing (diet formulation, environment, and health status) commercial experimental conditions resulted in greater growth performance and reduced mortality.

**Keywords:** narasin mortality growth

**138 Effects of Increasing Soybean Meal in Corn-based Diets on Growth Performance of Late-finishing Pigs.** Julia P. Holen<sup>1</sup>, Robert D. Goodband<sup>2</sup>, Mike D. Tokach<sup>3</sup>, Jason C. Woodworth<sup>3</sup>, Joel M. DeRouchey<sup>3</sup>, <sup>1</sup>Kansas State University, <sup>2</sup>Department of Animal Sciences & Industry, Kansas State University, <sup>3</sup>Department of Animal Sciences & Industry, College of Agriculture, Kansas State University

Two experiments were conducted to determine the effects of increasing levels of soybean meal (SBM) replacing feed grade amino acids in corn or corn-dried distillers grains with solubles (DDGS)-based diets on growth performance of late finishing pigs. In both experiments, there were 22 to 27 pigs per pen and 14 pens per treatment. Average length of the experiments was 35 (Exp. 1) and 29 days (Exp. 2). Diets were balanced to contain 0.70% SID Lys and 2,667 or 2,610 kcal NE/kg for Exp. 1 and 2, respectively. Minimum amino acid ratios relative to Lys were: Ile, 55; Met&Cys, 60; Thr, 65; Trp, 19.5, and Val, 70. Dietary crude protein ranged from 10.1 to 15.2 for Exp. 1 and 13.6 to 19.4 for Exp. 2. The statistical model considered fixed effects of treatment, linear and quadratic contrasts, and random effect of block. In Exp.1, 1,793 pigs (L337×1050, PIC; initially  $104.9 \pm 1.4$  kg) were fed corn-based diets and pens of pigs were assigned to 1 of 5 dietary treatments with increasing SBM from 5 to 20%. Overall, average daily gain (ADG) and gain-to-feed (G:F) increased (linear;  $P < 0.05$ ) as SBM increased with the greatest improvement observed as SBM increased from 5 to 8.75%, with little improvement thereafter. In Exp. 2, 1,827 pigs (L337×1050, PIC; initially  $97.9 \pm 1.1$  kg) were used in a similar study as Exp. 1, but all diets contained 25% DDGS and SBM levels increased from 0 to 16%. Overall, G:F and final bodyweight of pigs marginally improved (linear and quadratic, respectively;  $P < 0.10$ ) as SBM increased, with the greatest performance observed when diets contained 8% SBM. These results suggest that increasing SBM up to 8% at the expense of feed grade amino acids in corn or corn-DDGS-based diets improved ADG or G:F in late-finishing pigs.

Effects of increasing soybean meal (SBM) in corn- and corn-DDGS-based diets on growth performance of late-finishing pigs									
Item	SBM					SEM	Probability, =		
	5%	8.75%	12.5%	16.25%	20%		Linear	Quadratic	
<b>Exp. 1</b>									
ADG, kg	0.74	0.82	0.80	0.80	0.83	0.017	0.001	0.142	
ADFI, kg	2.80	2.85	2.79	2.79	2.75	0.036	0.118	0.331	
G:F, g/kg	265	287	288	287	302	6.7	<0.001	0.373	
Final BW, kg <sup>1</sup>	125.2	127.1	126.1	126.3	127.1	2.09	0.114	0.602	
<b>Exp. 2</b>									
	SBM						Probability, =		
	0%	4%	8%	12%	16%	SEM	Linear	Quadratic	
ADG, kg	0.77	0.76	0.80	0.79	0.78	0.023	0.317	0.231	
ADFI, kg	2.65	2.61	2.66	2.64	2.61	0.080	0.637	0.594	
G:F, g/kg	291	294	300	298	299	4.2	0.100	0.380	
Final BW, kg <sup>1</sup>	124.0	124.4	125.3	124.5	124.0	0.62	0.901	0.065	

<sup>1</sup>Utilized initial BW as covariate.

**Keywords:** finishing pigs, growth performance, soybean meal