The 21-d experiment employed weanling pigs with an average initial weight of 6.5 kg. There was no effect of diet on average daily gain or average daily feed. However, during the first week of the experiment, CY increased feed conversion compared with NC and PC (P < 0.05). PC reduced feed conversion (0.73) compared with NC (0.77), FSM (0.80), CY (0.82) and FSM and CY (0.79; P < 0.05). Over the 21-d experiment, CY increased feed conversion (0.69) compared with NC (0.66), PC (0.65) and FSM plus CY (0.66; P < 0.05). There was no difference between CY and FSM (0.67; P > 0.05). In conclusion, FSM replaced fish meal or part of the soybean meal with no loss in performance, while the use of CY improved feed efficiency.

Key Words: swine, weanlings, fermented soybean meal, candida utilis

204 The influence of the mannan oligosaccharide Bio-Mos® on sow and piglet performance. W. H. Close¹, J. A. Pickard², and K. A. Jacques*¹. ¹Close Consultancy, Wokingham, Berkshire, United Kingdom, ²Alltech Inc., Dunboyne, Co. Meath, Ireland, ³Alltech Inc., Nicholasville, KY.

A review of 12 studies has been carried out and a summary prepared on the effects of Bio-Mos® in sow diets on both sow and piglet performance. Bio-Mos® had been included at 1 kg/ton during both gestation and lactation, or 2 kg during late gestation and lactation. The number of sows on the various commercial and university trials in several countries was 2,996 and varied between 24 and 1,028 sows over a range of parities in the different trials. Data were analyzed with Bio-Mos® inclusion as the main effect to determine its impact on sow and pre-weaning piglet performance. Including Bio-Mos® in the diet of the sow did not influence the number of piglets born alive (11.24 vs 11.14; P > 0.05), but the number of piglets weaned was numerically higher in all studies: 10.11 (±1.09) vs 9.67 (±0.74) (P > 0.05), but weaning weight was increased from 6.87 to 7.17 kg (P > 0.05). However, the difference was significant (P < 0.05) in 4 of the studies. Colostrum samples were collected in 5 of the studies and Ig concentrations measured. The concentration of IgA, IgM and IgG (mg/dl) was considerably increased when Bio-Mos® was included in the diet of the sow and in several studies the difference was significant (P < 0.05). In 2 studies, piglet growth rate was measured during the first 24 h of life and was increased from 83 to 123 g/day and 138 to 164 g/day (P < 0.05), when Bio-Mos® was included in the diet. The responses to Bio-Mos® in sow diets are therefore consistent, with considerable benefits for both sow and piglet productivity.

Key Words: mannan oligosaccharide, pre-weaning mortality, piglets, sows

205 The effects of Biomin Product A and vomitoxin on growth performance of nursery pigs. H. L. Frobose¹, M. D. Tokach¹, J. M. DeRouchey¹, D. Ryder², M. D. Tokach¹, S. S. Dritz¹, R. D. Goodband¹, and J. L. Nelsen¹. ¹Kansas State University, Manhattan, ²Feedlogic Corp., Willmar, MN.

A total of 808 pigs (initial BW = 35.6 kg) were used to compare feed-blending strategies for finishing pigs using the FEEDPro system (Feedlogic Corp., Willmar, MN). FEEDPro is a feed dispensing system that can deliver and blend diets while dispensing. There were 10 pens/treatment and 26 to 27 pigs per pen in a completely randomized design. There were 3 experimental treatments: (1) standard 4-phase complete feed program (Phase), (2) blending a high- and low-lysine complete diet (Curve; daily blending of the 2 complete diets to meet the estimated daily SID lys requirement from d 0 to d 88), and (3) blending ground corn and a supplement to mimic diets fed in 4 phases in treatment 1 (Blend). Experimental diets were fed from d 0 to 88 (~35 to 108 kg BW) with a common diet containing ractopamine HCl fed from d 88 to 110 (~108 to 127 kg BW). Overall (d 0 to 110), pigs phase-fed had greater (P < 0.04) ADG than pigs fed the curve or the blend. Pigs fed the curve had lower (P < 0.05) ADFI, resulting in poorer HCW. However, pigs fed the blend had greater (P < 0.04) G:F compared with the blend. Pigs phase-fed had heavier (95.3 vs. 92.5 kg; P < 0.03) HCW than pigs fed the blend and tended to have heavier (95.3 vs. 93.3 kg; P < 0.07) HCW than curve pigs. However, there were no differences (P ≥ 0.11) in percentage yield, percentage lean, fat depth, or loin depth. There were no differences (P ≥ 0.11) in total revenue or income over feed costs (IOFC). In conclusion, finishing pigs fed the various feeding strategies had differences in growth performance, however revenue and profitability as measured by IOFC was not affected.