

214 The effects of deoxynivalenol on growth performance in nursery pigs. S. L. Johnston¹, J. F. Patience², D. Gillis², M. De La Llata^{*1}, S. A. Hansen¹, and A. D. Beaulieu², ¹Hubbard Feeds, Mankato, MN, ²Prairie Swine Centre, Inc., Saskatoon, SK, Canada.

A 22 d experiment was conducted to determine the effect of the mycotoxin deoxynivalenol (DON) on feed intake, gain, and feed efficiency of nursery pigs. Eighty nursery pigs (initial weight = 9.03 kg), were allotted to 2 treatments with 5 pens of gilts and 5 pens of barrows and 4 pigs per pen for each treatment. The 2 treatments were; 1) a diet with no detectable DON contamination; and 2) a diet with 1.57 ppm DON from naturally contaminated corn. Deoxynivalenol concentration in the corn and treatment diets was determined using ELISA methods. All pigs were fed a common diet for 13 d after weaning; at that time they were weighed and feeding of treatment diets started. Pigs were weighed on d 9, d 17, and d 22 after the initiation of treatment diets. Feed efficiency was higher in the pigs fed DON contaminated feed for d 0 – 9 ($P < 0.06$) but not for any other feeding period or overall ($P > 0.20$). For d 0 – 9 and d 9 – 17 there was no effect of DON on ADFI ($P > 0.20$). From d 17 – 22 feeding diets contaminated with DON decreased ADFI by 10.0% (1,178 vs 1,060 g/d; $P < 0.07$). For the overall feeding period, ADFI decreased by 5.6% (823 vs. 777 g/d; $P < 0.03$). For d 0 – 9 and d 9 – 17 there was no effect of DON on ADG ($P > 0.20$). However, from d 17 – 22, ADG decreased by 13.7% (771 vs. 665 g/d; $P < 0.04$) and for the overall feeding period it was decreased by 4.9% (577 vs. 549 g/d; $P < 0.10$). Feeding diets naturally contaminated with 1.57 ppm DON decreased ADFI and ADG in nursery pigs.

Key Words: deoxynivalenol, mycotoxin, pig

215 Effects of mycotoxin binders and a liquid immunity enhancer on the growth performance of wean-to-finish pigs. J. Y. Jacela*, S. S. Dritz, J. M. DeRouchey, M. D. Tokach, R. D. Goodband, and J. L. Nelssen, Kansas State University, Manhattan.

A total of 1,120 pigs (BW=7.2 kg) were used in a study to evaluate the effects of 2 mycotoxin binders and a liquid immunity enhancer product (ARNap) on growth performance of wean-to-finish pigs. Pigs were randomly assigned to 1 of 4 treatments balanced by initial average BW within gender (10 pens/trt). Treatments were: 1) control standard phase-fed diets based on corn and soybean meal with DDGS (20 to 35%) fed for 132 d, 2) treatment 1 with mycotoxin binders Biomannan fed from d 0 to 55 and T-BIND fed from d 0 to 132, 3) treatment 1 with Biomannan and T-BIND fed from d 0 to 132, and 4) treatment 3 with ARNAP administered through the water lines of pens continuously for 7 d every 3 wk. The binders and the liquid immunity enhancer product were obtained from Biotech Development Company, Inc. (Dexter, MO). Pig weights and feed disappearance were obtained every 2 wk. Average BW, ADG, ADFI, and G:F were determined. Ingredients were not tested for nor artificially contaminated with mycotoxins. Analysis of complete feed did not detect the presence of mycotoxins. Overall, there were no treatment-by-gender interactions ($P > 0.73$). As expected, gender differences were noted as barrows had greater

($P < 0.01$) ADG and ADFI but poorer ($P = 0.02$) G:F than gilts. The addition of mycotoxin binders and ARNAP did not affect ADG ($P = 0.73$), ADFI ($P = 0.77$), G:F ($P = 0.97$) from d 0 to 132. In conclusion, in the absence of mycotoxin contamination, the additives had no effect on wean-to-finish pig performance.

Table 1. Effect of mycotoxin binders and ARNAP on pig performance.

	Treatment				SEM
	1	2	3	4	
T-BIND	-	+	+	+	
Biomannan (d 0 to 55)	-	+	+	+	
Biomannan (d 55 to 132)	-	-	+	+	
ARNAP	-	-	-	+	
BW, kg					
d 0	7.2	7.3	7.3	7.2	0.12
d 132	105.7	106.1	106.4	106.7	0.65
d 0 to 132					
ADG, kg	0.743	0.744	0.748	0.751	0.0051
ADFI, kg	1.69	1.70	1.71	1.71	0.017
G:F	0.439	0.439	0.437	0.439	0.0035

Key Words: growth, mycotoxin binder, pig

216 Effects of increasing hominy feed in diets on finishing pig performance. M. L. Potter*, J. Y. Jacela, S. S. Dritz, M. D. Tokach, J. M. DeRouchey, R. D. Goodband, and J. L. Nelssen, Kansas State University, Manhattan.

A total of 1,035 finishing pigs were used in an 84 d growth trial to evaluate the effects of increasing corn hominy feed on finishing pig growth performance. Pens of pigs with a similar number of barrows and gilts were blocked by average initial BW and randomly allotted to 1 of 4 dietary treatments in a randomized complete block design with initial weights balanced across treatments. Treatments were increasing levels (0, 12.5, 25, and 37.5%) of hominy feed added to a corn-soybean meal-based diet. All treatment diets were fed in 4 phases formulated for BW ranges of 36 to 59, 59 to 82, 82 to 104, and 104 to 141 kg with SID lysine levels of 0.96, 0.82, 0.72, and 0.64%, respectively. Hominy feed inclusion was constant among phases and was assigned a ME value of 3,210 kcal/kg for diet formulation. Chemical analysis indicated hominy feed contained 90.4% DM, 9.5% CP, 4.4% fat, 3.6% ADF, 10.0% NDF, 2.8% CF, 2.35% Ash, 0.02% Ca, and 0.51% P on an as-fed basis. Increasing hominy feed linearly decreased ($P < 0.01$) ADG and ADFI from d 0 to 84. Regardless of treatment, there were no differences ($P > 0.54$) in G:F. The lower feed consumption and poorer growth rate resulted in pigs fed diets containing any level of hominy feed weighing less than pigs fed standard corn-soybean meal-based diets on d 84. These data indicate that adding hominy feed as an alternative ingredient in swine diets is a viable option; however, a decrease in performance should be considered when deciding if it is cost-effective to include hominy feed in finishing diets.