

**P069 Table**

Treatment:	1	2	3	4	5	6	7	8	
Diet*:	C	C	C	H	H	H	H	H	
Portion Ground:		Corn	Corn		Corn	Corn	Diet	Diet	
Item Diet form:	Meal	Meal	Pellet	Meal	Meal	Pellet	Meal	Pellet	SEM
ADG, g	648	621	618	585	564	599	548	573	24.8
ADFI, g	1001	963	948	935	917	909	861	890	41.1
G:F	0.648	0.647	0.652	0.626	0.615	0.659	0.637	0.644	0.01
Caloric efficiency, mcal/kg									
ME	5.12	5.14	5.09	5.20	5.31	4.95	5.11	5.07	0.08
NE	3.66	3.67	3.63	3.65	3.73	3.48	3.59	3.56	0.05
Final wt, kg	24.8	24.2	24.7	23.4	23.3	23.8	22.4	23.1	0.58

G:F. Pelleting improved performance; however, fine grinding corn or other components of the high-by-product diet did not further improve nursery pig performance. (See table above.)

**Key Words:** DDGS, feed processing, wheat middlings

**P070 The effects of feeder design (conventional dry vs. wet-dry) on growth performance of 20- to 12-kg pigs.** S. Nitikanchana<sup>1</sup>, S. Dritz, M. Tokach, R. Goodband, J. DeRouche, J. Nelssen, *Kansas State University, Manhattan.*

A total of 1,253 pigs (PIC 1050 × 337; initially 20.4 kg) were used in a 104-d study to evaluate the effects of using a wet-dry (WD) or conventional dry (CD) feeder on growth performance of growing-finishing pigs. There were 25 to 27 pigs per pen and 24 pens per feeder type. At the start of the trial, pens of pigs were weighed and randomly allotted to 1 of the 2 feeder types. The CD feeder was a single-sided, 1.42 m wide, stainless steel feeder (Thorp Equipment, Inc., Thorp, WI) with 4 feeding spaces that were 35.6 cm wide and a 10.8 cm deep trough. A cup waterer in the pen using CD feeders ensured ad libitum access to water. The WD feeder was double-sided (38.1 cm wide feeder opening on each side) with a single nipple waterer (Crystal Springs, GroMaster, Inc., Omaha, NE) where water in the feeder was the only source of water. All pigs were fed the same corn-soybean meal diets containing 30% bakery meal and 10 to 45% dried distillers grains with solubles during 5 dietary phases. For the overall period, pigs fed with WD feeders had greater ADG ( $P < 0.01$ ) and ADFI ( $P = 0.01$ ) with no differences in G:F ( $P = 0.51$ ) compared with pigs fed using the CD feeder. This study confirms previous results where pigs fed using a WD feeder have greater ADG and ADFI than those fed with a CD feeder.

**Effects of feeder design (conventional dry vs. wet-dry) in 20- to 112-kg pigs**

Feeder type	Conventional dry	Wet-dry	SEM	Probability, $P <$
d 0 to 104				
ADG, g	863	891	4.58	0.01
ADFI, g	2153	2235	21.9	0.01
G:F	0.402	0.399	0.003	0.51

**Key Words:** feeder design, growth, pigs

**P071 The effects of increasing levels of pellet fines on growth performance of 14 to 34 kg nursery pigs.** E. D. Frugé<sup>1,\*</sup>, E. L. Hansen<sup>1</sup>, S. A. Hansen<sup>1</sup>, K. A. Frerichs<sup>1</sup>, C. W. Hastad<sup>2</sup>, <sup>1</sup>Hubbard Feeds, Mankato, <sup>2</sup>New Fashion Pork, Jackson.

An experiment was conducted to determine the effects of increasing levels of pellet fines (0 to 100% fines) on growth performance compared to pigs fed meal diets. Pigs (N=1000, 14.5 kg) were allotted to 6 dietary treatments (TRT) with 6 replicates and 27

or 28 pigs per pen in a randomized complete block design. The experimental TRT were; 1) Meal diet; 2) pellet (screened); 3) Pellet with 25% fines; 4) Pellet with 50% fines; 5) Pellet with 75% fines; 6) Pellet with 100% fines. Percentage fines were achieved by roller grinding pellets and blending back to screened pellets. All diets were identical in ingredient and nutrient composition. Pig weights and feed disappearance were measured on d 0, 7, 14, 21, and 28. A summary of the overall (d 0 to 28) results is presented in Table 1. Pigs fed TRT 2 had improved ADG compared with pigs fed TRT 1, 5 and 6 with pigs fed TRT 3 and 4 intermediary. Pigs fed TRT 2 had improved G:F compared with all other TRT. Pigs fed TRT 3 and 4 had improved G:F compared to pigs fed TRT 1, whereas pigs fed TRT 5 and 6 had similar G:F with pigs fed TRT 1. There were no TRT differences for ADFI. Final BW of pigs fed TRT 2 was heavier than pigs fed TRT 1, 5 and 6 with those fed TRT 3 and 4 intermediary. Pigs fed TRT 6 had lighter final BW compared to those fed TRT 1. Regression curves were fitted for TRT 2 - 6 for ADG ( $y = -0.6677x + 749.81$ ,  $R^2 = 0.91$ ), ADFI ( $y = -0.0088x^2 + 0.05019x + 1121.4$ ,  $R^2 = 0.89$ ) and G:F ( $y = -0.0004x + 0.6587$ ,  $R^2 = 0.95$ ). These data allow for performance and financial analysis on the effects of diet form and pellet fines of 14 to 34 kg pigs.

**Table 1** The effects of increasing levels of fines.<sup>1</sup>

TRT <sup>2</sup>	1	2	3	4	5	6	SEM	$P <$
Initial BW, kg	14.6	14.5	14.7	14.4	14.5	14.5	0.10	0.50
ADG, g	705 <sup>b</sup>	742 <sup>a</sup>	721 <sup>ab</sup>	723 <sup>ab</sup>	699 <sup>bc</sup>	677 <sup>c</sup>	9.50	0.05
ADFI, g	1130	1126	1130	1131	1105	1089	15.71	0.33
G:F	0.62 <sup>c</sup>	0.66 <sup>a</sup>	0.64 <sup>b</sup>	0.64 <sup>b</sup>	0.63 <sup>bc</sup>	0.62 <sup>c</sup>	0.004	0.05
Final BW, kg	34.4 <sup>b</sup>	35.3 <sup>a</sup>	34.9 <sup>ab</sup>	34.7 <sup>ab</sup>	34.1 <sup>bc</sup>	33.4 <sup>c</sup>	0.31	0.05

<sup>1</sup>abc Within a row, means without common superscript differ ( $P < 0.05$ ).

<sup>2</sup>Actual fines: meal, 5, 43, 59, 73, & 100%

**Key Words:** fines, nursery pigs, pellet

**P072 Effects of increasing dietary bakery meal on growing-finishing pig growth performance and carcass quality.** C. Paulk<sup>1,\*</sup>, S. Nitikanchana<sup>2</sup>, S. Dritz<sup>2</sup>, M. Tokach<sup>1</sup>, J. Nelssen<sup>1</sup>, J. DeRouche<sup>1</sup>, R. Goodband<sup>1</sup>, K. Prusa<sup>3</sup>, <sup>1</sup>Animal Science and Industry, <sup>2</sup>Diagnostic Medicine Pathobiology, *Kansas State University, Manhattan*, <sup>3</sup>Animal Science, *Iowa State University, Ames.*

A total of 1,263 pigs (PIC 337 × 1050; initially 35.3 kg BW) were used in a 102-d study to determine the effects of dietary bakery meal on growth performance and carcass quality. Pens were randomly allotted to 1 of 3 dietary treatments while balancing for initial BW and gender. There were 16 pens per treatment with 25 to 28 pigs per pen. Dietary treatments included 0, 7.5, and 15% bakery meal. Analyzed bakery meal contained 14.0% CP, 8.1% ADF, 19.0% NDF, 6.4% fat, and 5.3% ash (as-fed basis). On d 84, the 5 heaviest