90.6, 89.9, and 88.0 kg, backfat thickness was 26.7, 26.7, 26.9, and 26.7 mm, dressing percentage was 74.0, 73.7, 73.7, and 72.7%, keratinization score was 0.21, 0.18, 0.08, and 0.05, and ulcer score was 0.22, 0.04, 0.02, and 0, respectively. Our results indicate that increasing cracked corn from none to 40% of diets for finishing pigs did not affect rate of gain but decreased efficiency of growth and dressing percentage with only slight improvements in scores for stomach lesions.

Key Words: finishing pigs, cracked corn, ulcers

183 The effects of feeder design on growth performance and carcass characteristics of finishing pigs. J. R. Bergstrom*, M. D. Tokach, S. S. Dritz, J. L. Nelssen, J. M. DeRouchey, and R. D. Goodband, *Kansas State University, Manhattan*.

Two experiments were conducted to compare the effects of feeder design (conventional dry feeder, Staco® vs. wet-dry feeder, Crystal Springs®) on finishing pig performance. In both experiments, water was provided in pens with a dry feeder via a bowl drinker; whereas, the wet-dry feeder provided the only source of water for those pens. In Exp. 1, 1,186 pigs (32.1 kg BW) were used in a 69-d experiment. There were 26 to 28 pigs/pen and 22 pens/feeder type in a CRD. All pigs were fed the same dietary sequence in 4 phases. Overall (d 0 to 69), pigs fed with a wet-dry feeder had greater (P<0.001) ADG (1.03 vs. 0.95 kg/d), ADFI (2.53 vs. 2.33 kg/d), and final BW (103.1 vs. 98.2 kg) than pigs fed with a dry feeder. In Exp. 2, 1,236 pigs (28.7 kg BW) were used in a 104-d experiment, with 25 to 28 pigs/pen and 23 pens/feeder type. From d 0 to 84, all pigs were fed the same diets in 4 phases according to a feed budget. On d 84, the 3 largest pigs in each pen were removed for marketing, and the remaining pigs were placed on diet containing 5 ppm Paylean® until the end of the experiment (d 104). Carcass measurements were obtained from pigs in 11 pens/feeder type on d 104. Overall (d 0 to 104), pigs fed with a wet-dry feeder had greater (P<0.002) ADG (0.91 vs. 0.86 kg/d), ADFI (2.45 vs. 2.25 kg/d), final BW (123.8 vs. 118.6 kg), feed cost/pig ($61.12 vs. $56.23), and backfat depth (18 vs. 16 mm) than pigs fed from a dry feeder. However, pigs fed with a wet-dry feeder also had reduced (P<0.03) G:F (0.37 vs. 0.38), carcass yield (75.2 vs 76.9%), FFLI (49.9 vs. 50.5), premium/pig ($5.26 vs. $8.67), and revenue/kg live BW ($1.21 vs. $1.24). Combined, these effects resulted in a similar (P=0.36) net income/pig ($24.28 vs. $26.15). In summary, growth performance was improved for pigs fed with a wet-dry feeder compared to a dry feeder. However, carcasses of pigs fed with a wet-dry feeder were fatter and yielded less than pigs fed with a dry feeder.

Key Words: growth, feeders, pigs

184 Effects of feeder adjustment on growth performance of finishing pigs. A. W. Duttlinger*, S. S. Dritz, M. D. Tokach, J. M. DeRouchey, J. L. Nelssen, and R. D. Goodband, *Kansas State University, Manhattan*.

Two studies were conducted to determine the effects of feeder adjustment on growth performance of finishing pigs. In Exp. 1, 1,170 barrows and gilts (58.5 kg BW) were used in a 70-d study. Pigs were blocked by BW and allotted to 1 of 5 treatments with 9 pens per treatment. Treatments were feeder settings of 1, 2, 3, 4, or 5 for STACO® stainless steel 5-hole dry feeders with maximum height below the feed gate of 3.60, 3.28, 2.95, 2.65, and 2.20 cm, respectively. Overall, reducing feeder opening decreased (linear, *P*<0.03) ADFI (2.14, 2.15, 2.11, 2.06, and 2.07 kg/d; SE 0.07). Feeder setting did not affect (*P*>0.18) ADG (0.80, 0.82, 0.82, 0.80, and 0.80 kg/d; SE 0.02) or G:F (0.38, 0.38, 0.39, 0.39, and 0.39; SE 0.04). In Exp. 2, 1,250 barrows and gilts (35.1 kg BW) were used in a 69-d study to determine the effect of feeder setting and diet type. Pigs were blocked by BW and allotted to 1 of 6 treatments with 8 pens per treatment. Treatments were arranged in a 3 × 2 factorial with main effects of STACO® feeder setting (1, 3, or 5) and diet type (corn-soybean meal or byproduct-based with 15% DDGS and 5% bakery byproduct). Overall, there were no feeder setting × diet interactions (*P*>0.31). Diet type did not affect (*P*>0.75) pig performance. Widening feeder openings increased ADG (quadratic, *P*<0.03) and ADFI (linear, *P*<0.01). Feeder setting tended to influence (quadratic, *P*>0.08) G:F with the best G:F at feeder setting 3. In conclusion, with the dry feeders used in this study, feed should cover slightly more than half of the feed pan to not limit pig performance.

Table 1. Trial 2. Main effects of feeder settings.

	Feeder Setting:			
Item	1	3	5	SE
D 0 to 69				
ADG, kg	0.94	0.93	0.88	0.01
ADFI, kg	2.25	2.18	2.08	0.02
G:F	0.42	0.43	0.42	0.01
Maximum height below feed gate, cm	3.59	2.89	2.20	0.05
Week 2 feeder pan coverage, %	79.4	55.0	18.6	4.9
Week 6 feeder pan coverage, %	80.0	61.8	24.1	4.6

Key Words: feeder adjustment, DDGS, pig

185 Effect of incremental levels of red blood cells on growth performance, linear carcass traits, and viscera and organ weights of finishing pigs. E. D. Frugé*, T. D. Bidner, and L. L. Southern, *LSU Agricultural Center, Baton, Rouge, LA*.

Three experiments were conducted to determine the effect of graded levels of red blood cells (RBC; 0 to 4%, Exp 1; 0 to 2%, Exp 2 and 3) on growth performance and carcass traits of finishing pigs. Diets were formulated to contain 0.52 and 0.59% apparent ileal digestible Lys for barrows and gilts, respectively. Treatments in all Exp had 4 reps (Exp 1, 2 reps of barrows and 2 reps of gilts; Exp 2, 4 reps of barrows and 4 reps of gilts; Exp 3, 4 reps of barrows) with initial and final BW of 83.5 and 119.4 kg (Exp 1), 80.9 and 122.7 kg (Exp 2) and 86.0 and 133.4 kg (Exp 3). One to 3 pigs per pen were killed for measurement of carcass traits and viscera weights (viscera weights in Exp 2 and 3 only). In Exp 1, ADG (0.83, 0.81, 0.79, 0.82, and 0.68 kg/d; quadratic, P< 0.08) and G:F (0.28, 0.29, 0.28, 0.27, and 0.25 g/kg; linear P < 0.10) were decreased as RBC addition increased, but the effect was more pronounced at the 4% addition. The RBC addition increased average backfat thickness (2.55, 2.76, 2.86, 2.79, and 2.77 cm; quadratic, P < 0.09), decreased fat free lean (49.1, 50.3, 47.9, 46.8, and 46.7 kg; linear, P < 0.03), and had a quadratic effect (74.2, 74.7, 75.8, 74.2, and 74.2, P < 0.04) on dressing percentage. The RBC had no effect (P > 0.10) on any remaining carcass traits. In Exp 2, there was a quadratic effect (2.57, 2.30, 2.57 cm, P < 0.07) of RBC addition on average backfat thickness. There was no effect of RBC addition (P > 0.10) on any other response variable. In Exp 3, the RBC addition linearly decreased average backfat thickness (3.20, 3.11, and 2.94 cm, P < 0.04) and increased large intestine percentage (1.03, 1.16, and 1.17, P < 0.09) of final BW. There was no effect of RBC addition (P > 0.10) on any other response variable. Our results suggest that feeding 3 or 4% RBC decreases growth performance of finishing pigs, but that 1 or 2% RBC addition in the diets had no detrimental effect. There were no consistent positive or negative effects of RBC addition on carcass traits or viscera weights.

Key Words: finishing pigs, carcass, red blood cells