**O215 Table**

| | | Maximum feeder opening | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1.27 cm | | | 2.54 cm | | | |
| | Diet form: | Meal | 50% pellet + 50% fines | Screened pellet | Meal | 50% pellet + 50% fines | Screened pellet | SEM |
| d 0 to 22: | ADG, kg | 0.97 | 0.93 | 1.00 | 0.98 | 0.96 | 0.99 | 0.029 |
| | G:F | 0.422 | 0.441 | 0.462 | 0.407 | 0.420 | 0.451 | 0.007 |
| d 22 to 48: | ADG, kg | 0.98 | 1.05 | 1.01 | 1.03 | 1.05 | 1.02 | 0.021 |
| | G:F | 0.364 | 0.402 | 0.407 | 0.357 | 0.369 | 0.403 | 0.008 |
| d 48 to 69: | ADG, kg | 0.91 | 0.99 | 1.01 | 0.94 | 0.98 | 1.00 | 0.032 |
| | G:F | 0.279 | 0.300 | 0.324 | 0.266 | 0.288 | 0.323 | 0.009 |
| d 0 to 69: | ADG, kg | 0.95 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.019 |
| | G:F | 0.349 | 0.374 | 0.392 | 0.337 | 0.354 | 0.387 | 0.006 |

for pigs fed from the narrow adjusted feeders compared to the wide adjustment. From d 48 to 69, feeder adjustment had no effect on growth.Overall, ADG did not differ ($P>0.46$) between pigs fed from the 2 feeder adjustments, but ADFI decreased ($P<0.03$) and G:F increased ($P<0.03$) for pigs fed from the narrow adjusted feeders compared to the wide adjustment. The response to diet form was similar among phases. Overall, pigs fed meal diets tended to have decreased ($P<0.08$) ADG and had decreased ($P<0.001$) G:F compared with pigs fed screened pellets, with those fed poor-quality pellets intermediate. Feeding meal or poor-quality pellets increased ($P<0.02$) ADFI compared to pigs fed screened pellets. In conclusion, reducing feeder gap reduced feed wastage and improved G:F. Feeding pelleted diets improved G:F, but improvement was greatest when percentage of fines was minimized. (See table above.)

**Key Words**: feeder adjustment, pellet, pig

O216 **Effects of corn particle size, complete diet grinding, and diet form on pig growth performance, caloric efficiency, and carcass characteristics**. J. A. De Jong [1,*], J. M. DeRouchey [1], M. D. Tokach [1], R. D. Goodband [1], S. S. Dritz [1], J. L. Nelssen [1], C. Hastad [2], *[1]Animal Science, Kansas State University, Manhattan, [2]New Fashion Pork, Jackson.*

A total of 855 pigs (25.6 kg BW) were used in a 111-d trial to determine the effects of corn particle size, complete diet grinding, and diet form (meal or pellet) on finishing pig growth performance, caloric efficiency, and carcass characteristics. Pigs were allotted to 1 of 5 dietary treatments (8 or 9 pens/treatment with 19 pigs/pen). The same corn-soybean meal–based diets containing 30% dried distillers grains with solubles and 20% wheat middlings were used for all treatments. The 5 treatments were: 1) roller ground corn (650 µ) and fed in meal form (596 µ); 2) hammer-mill ground corn (320 µ) and fed in meal form (487 µ); 3) treatment 2 pelleted; 4) complete mixed diet reground through a hammer mill to approximately 360 µ and fed in meal form; and 5) treatment 4 pelleted. Overall (d 0 to 111), reducing corn particle size improved ($P<0.03$) G:F and caloric efficiency on a ME and NE basis. Grinding the complete diet decreased ADG, ADFI, and final BW when fed in meal form, but increased performance when pelleted resulting in diet form × portion ground interactions ($P < 0.02$). Pelleting improved ($P<0.02$) ADG, G:F, ME and NE caloric efficiencies, final BW, HCW, and loin depth. Reducing corn particle size and pelleting complete diets improved performance and carcass characteristics. Fine-grinding the entire diet was detrimental when fed in meal form but improved performance when pelleted.

| Treatment: | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Portion ground: | | Corn | Corn | Diet | Diet | |
| Item, Diet form: | Meal | Meal | Pellet | Meal | Pellet | SEM |
| ADG, kg | 0.92 | 0.93 | 0.96 | 0.90 | 0.98 | 0.01 |
| ADFI, kg | 2.58 | 2.53 | 2.48 | 2.48 | 2.55 | 0.03 |
| G:F | 0.36 | 0.37 | 0.39 | 0.37 | 0.39 | 0.003 |
| Caloric Efficiency, mcal/kg | | | | | | |
| ME | 9.15 | 8.80 | 8.43 | 8.89 | 8.44 | 0.08 |
| NE | 4.41 | 4.23 | 4.06 | 4.28 | 4.06 | 0.04 |
| Final BW, kg | 122.8 | 125.0 | 125.5 | 121.8 | 129.4 | 1.11 |
| HCW, kg | 90.9 | 91.2 | 93.1 | 89.3 | 94.7 | 0.75 |
| Loin depth, mm | 60.1 | 59.5 | 61.5 | 59.4 | 60.2 | 0.54 |

**Key Words**: finishing pig, particle size, pellet

O217 **Interaction between feeder space availability and corn DDGS on grow-finish pig performance and total tract digestibility in a commercial setting.** E. K. Weber[*], K. J. Stalder, J. F. Patience, *Animal Science, Iowa State University, Ames.*

There is a need to re-evaluate feeder space allowance as the industry moves to diets with higher fiber levels. Our objective was to evaluate three linear feeder space allowances (4.1, 4.9, or 5.7 cm/pig) at two levels of DDGS inclusion (D30 or D60) on grow-finish pig performance, carcass characteristics, and diet digestibility. Treatments were arranged as a 3 X 2 factorial. Diets were formulated to be isolysogenous and isocaloric based on ME. Phases 1, 2, and 3, contained approximately 30% (D30) or 60% (D60) DDGS. Phase 4 diets contained 26% (D30) or 30% (D60) DDGS. Sixty pens fitted with double sided feeders; thus 30 feeders (n = 1,860 pigs; 62 pigs/feeder; initial BW 29.8 kg ± 0.7 kg; final BW 122.6 ± 4.5 kg) were assigned randomly to one of 6 treatments using a completely randomized design. Feeder space allowance was adjusted by covering 1 or 2 feeder sections. Fecal grab samples were collected during dietary phases 2 and 3 and stored at -20ºC for later assay for dry matter, energy, and titanium dioxide content. Data were analyzed using the MIXED procedure of SAS with feeder as the experimental unit and fixed effects of feeder space treatment, diet treatment, and sex. Feeder space allowance and DDGS inclusion level did not affect ADG, ADFI, or G:F ($P>0.10$) from d 57 post-weaning to market. However, for the last 30 d on test, pigs provided with 5.7 cm/pig feeder space had a greater ADG when compared to pigs provided with 4.1 cm/pig ($P<0.05$), and tended ($P<0.10$) to have a greater G:F. Pigs fed the D30 diet had greater HCW, percent yield, and loin depth than pigs fed the D60 diet ($P<0.05$). ATTD for DM and GE was greater ($P<0.05$) for the D30 pigs for both collection periods. When ADG was based on carcass instead of live weight,