0744 Effects of sugar beet pulp on reproductive performance of gestation sows. Z. Cheng*, D. Hou, Y. Chen, H. Zhang, B. Wang, Y. Wang, S. Bai, H. Lei, S. Jiang, and W. Jin, *Animal Nutrition & Feed Center, COFCO Nutrition and Health Institute, Beijing, China.*

Sugar beet pulp is widely used as feed ingredient in dairy feeds. However, its use in sow feeds may benefit sows because of its high level of fiber. The purpose of the study was to investigate the use of sugar beet pulp to see if there is any benefits for gestation sows fed sugar beet pulp. One hundred gestation sows were divided into three treatments with 33, 34, and 33 sows per treatment, they were fed diets containing 0, 7.5, or 15% of sugar beet pulp at breeding, respectively, for 3 mo. The diets contained the same calculated levels of crude protein and digestible energy. On d 91, they were fed the same lactating sow diets for another 25 d until farrowing. Total number of pigs born were 12.48 ± 2.44, 12.28 ± 2.21, and 13.24 ± 2.26 for sows fed diets containing 0, 7.5, or 15% of sugar beet pulp, respectively. Total pigs born live weight were 17.66 ± 2.87 kg, 17.86 ± 3.82 kg, and 18.45 ± 2.98 kg, for sows fed diets containing 0, 7.5, or 15% of sugar beet pulp, respectively. There were no significant differences in total pigs born and total pigs born live weight among all treatments ($P = 0.063$). Total number of pigs born alive were 11.76 ± 2.23, 12.00 ± 2.08, and 13.05 ± 2.40, for sows fed diets containing 0, 7.5, or 15% of sugar beet pulp, respectively; total number of pigs born alive were significantly increased ($P < 0.032$) by supplementing 15% sugar beet pulp into gestation sow diets as compared to control sow diets.

Key Words: sugar beet pulp, gestation sows, reproductive performance

0745 Utilizing meta-analyses to generate prediction equations for pork carcass back, belly, and jowl fat iodine value. C. B. Paulk*[1], J. R. Bergstrom[2], M. D. Tokach[1], S. S. Dritz[1], D. D. Burnett[1], J. M. DeRouchey[1], R. D. Goodband[1], J. L. Nelssen[1], and J. M. Gonzalez[1], [1]*Kansas State University, Manhattan,* [2]*DSM Nutritional Products, Inc., Parsippany, NJ.*

Iodine value (IV) is a measure of unsaturated fatty acids and is currently the industry standard for assessing pork fat quality. The objective of this meta-analysis was to use data from existing literature to generate equations to predict back, belly, and jowl fat IV of finishing pigs. The final database resulted in 24 papers with 169 observations for backfat IV, 21 papers with 124 observations for belly fat IV, and 29 papers with 197 observations for jowl fat IV. Some observations (back $n = 36$, belly $n = 37$, and jowl $n = 45$) changed dietary fatty acid composition during the experiment (i.e., switching from higher to lower or lower to higher iodine value product diet), where initial diets (I) were defined as those fed before the change in diet composition and final diets (F) were defined as those fed after the change in diet composition. The predictor variables tested were divided into five groups: 1) diet fat composition (dietary percent C16:1, C18:1, C18:2, C18:3, EFA, and unsaturated fatty acids, and iodine value product) for both I and F diets; 2) duration of feeding of the I and F diets; 3) ME or NE content of the I and F diet; 4) performance criteria (initial BW, final BW, ADG, ADFI, and G:F); and 5) carcass criteria (HCW and backfat thickness). PROC MIXED (SAS institute, Inc., Cary, NC) was used to develop regression equations, and experiment within paper was included as a random effect. Statistical significance for including terms in the models was determined at $P < 0.10$. Evaluation of models with significant terms was then conducted based on the Bayesian Information Criterion (BIC), where the lowest BIC were preferred. Optimum equations to predict back (BIC = 739), belly (BIC = 558), and jowl (BIC = 758) fat IV were: backfat IV = 84.83 + (6.87 × I EFA) − (3.90 × F EFA) − (0.12 × I d) − (1.30 × F d) − (0.11 × I EFA × F d) + (0.048 × F EFA × I d) + (0.12 × F EFA × F d) − (0.0060 × F NE) + (0.0005 × F NE × F d) − (0.26 × backfat depth); belly fat IV = 106.16 + (6.21 × I EFA) − (1.50 × F d) − (0.11 × I EFA × F d) − (0.012 × I NE) + (0.00069 × I NE × F d) − (0.18 × HCW) − (0.25 × BF); and jowl fat IV = 85.50 + (1.08 × I EFA) + (0.87 × F EFA) − (0.014 × I d) − (0.050 × F d) + (0.038 × I EFA × I d) + (0.054 × F EFA × F d) − (0.0066 × I NE) + (0.071 × I BW) − (2.19 × ADFI) − (0.29 × backfat depth). These regression equations may be used to predict the back, belly, and jowl fat IV of finishing pigs fed different diets.

Key Words: Iodine value, meta-analysis, pork quality

0746 The effects of copper source (copper sulfate or methionine hydroxy analogue chelate; Mintrex) on growth performance, carcass characteristics, and barn cleaning time in finishing pigs. K. F. Coble*[1], J. M. DeRouchey[1], M. D. Tokach[1], S. S. Dritz[1], B. Lawrence[2], J. Escobar[2], J. C. Woodworth[1], R. D. Goodband[1], and N. Boettger[2], [1]*Kansas State University, Manhattan,* [2]*Novus International, St. Charles, MO.*

Copper source and feeding duration on growth performance, carcass characteristics, and pen wash time were determined using 1196 pigs (initially 25.7 kg BW) in a 111-d study. Pigs were allotted to one of six dietary treatments, based on initial pen weight in a randomized incomplete block design with 26 pigs/pen and seven to eight pens/treatment. A negative control diet was supplemented with 17 ppm Cu from the basal trace mineral. Remaining diets were formulated by supplementing the negative control with 50 ppm Cu from $CuSO_4$ or Mintrex, or 125 ppm Cu from $CuSO_4$. The 50 ppm Cu as CuSO4 diet was fed for 111 d. The 50 ppm Mintrex and 125 ppm CuSO4 diets were fed for either 42 or 111 d. Diets were formulated 0.05% below the estimated standardized ileal digestible Lys