639 Effects of including tallow, palm kernel oil, corn germ, or glycerol to diets containing distillers dried grains with solubles on pork fat quality of growing-finishing pigs. J. W. Lee*, B. D. Keever, J. Killefer, F. K. McKeith, and H. H. Stein, *University of Illinois, Urbana.*

Thirty 6 barrows and 36 gilts (initial BW: 43.7 ± 2.0 kg) were used in an 88-d experiment to determine effects of including tallow, palm kernel oil, corn germ, or glycerol to diets containing distillers dried grains with solubles (DDGS) on pork fat quality of growing-finishing pigs. Pigs were individually housed and randomly allotted to 1 of 6 dietary treatments using a 2 × 6 factorial design with 2 genders and 6 diets and 12 replicate pigs per diet. A corn-soybean meal control diet with no added fat and a diet containing corn, soybean meal, and 30% DDGS were formulated. Four additional diets were formulated by adding 15% corn germ, 3% tallow, 3% palm kernel oil, or 5% glycerol to the DDGS-containing diet. At the end of the experiment, pigs were slaughtered, belly characteristics were measured, and backfat and belly fat samples were collected. Fatty acids were analyzed in all ingredients, diets, and fat samples, and iodine value (IV) was calculated. Dietary IVP was calculated using either the sum of the analyzed IVP of each ingredient in the diet (IVP 1) or the analyzed IVP of dietary fat (IVP 2). There were no effects of diet on belly length, width, and weight. Pigs fed the control diet had greater ($P < 0.05$) flop distance than pigs fed the DDGS-containing diets. There were no differences in flop distance among the diets containing DDGS. Barrows had greater ($P < 0.05$) flop distance and heavier ($P < 0.05$) bellies than gilts. Diet did not affect belly fat IV. However, gilts had greater ($P < 0.05$) belly fat IV than barrows. Dietary IVP 1 was positively correlated (r = 0.80; $P = 0.06$) to backfat IV; however, there was no correlation with belly fat IV. Dietary IVP 2 was not correlated with either backfat or belly fat IV. Back fat IV can be predicted using the following equation: IV = 0.11 × dietary IVP 1 + 70.29 (R2 = 0.63, $P < 0.06$). In conclusion, the negative effects of DDGS on pork fat quality were not ameliorated by supplementing diets with corn germ, tallow, palm kernel oil, or glycerol.

Key words: fat quality, DDGS, pigs