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

An experiment was conducted to test the hypothesis that dietary corn germ, tallow, palm kernel oil, or glycine will improve fat quality in pigs fed diets containing distillers dried grains with solubles (DDGS). Thirty 6 barrows and 36 gilts (initial BW: 43.7 ± 2.02 kg) were individually housed and randomly allotted to 1 of 6 dietary treatments in a 2 × 6 factorial design with 2 genders, 6 dietary treatments, and 12 replicate pigs per diet. A corn-soybean meal control diet 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. There were no effects of diet on ADG, ADFI, or G:F, but barrows had greater ($P < 0.05$) ADG and ADFI, but less ($P < 0.05$) G:F, than gilts. There were no effects of diet on live weight, hot carcass weight, dressing percentage, backfat thickness, or fat free lean percentage, but pigs fed the DDGS diet had reduced ($P < 0.05$) loin eye area compared with pigs fed the control diet. Barrows had greater ($P < 0.05$) live weight, hot carcass weight, and backfat thickness, but less ($P < 0.05$) fat free lean percentage, than gilts. There were no effects of diet on muscle color, marbling, firmness, 24-h loin pH, 48-h drip loss, or loin color, but gilts had less ($P < 0.05$) marbling and 24-h loin pH than barrows. Dietary treatments had no effects on a* and b* values of backfat, but pigs fed the control diet had greater ($P < 0.05$) L* values than pigs fed the DDGS containing diets and gilts had greater ($P < 0.05$) a* and b* values than barrows. There were no effects of diet on belly length, belly width, or belly weight, but barrows had heavier ($P < 0.05$) bellies than gilts. Pigs fed the control diet had a greater ($P < 0.05$) flop distance of the belly than pigs fed the DDGS containing diets, but there were no differences among pigs fed the DDGS-containing diets. Barrows also had greater ($P < 0.05$) belly flop distances than gilts. In conclusion, negative effects of DDGS on pork fat quality were not ameliorated by supplementing DDGS containing diets with corn germ, tallow, palm kernel oil, or glycerol.

Key Words: distillers dried grains with solubles, fat quality, pigs