

197 Net energy of soybean oil and choice white grease in diets fed to growing or finishing pigs. D. Y. Kil^{*1}, F. Ji¹, R. B. Hinson², A. D. Beaulieu³, L. L. Stewart¹, G. L. Allee², J. F. Patience³, J. E. Pettigrew¹, and H. H. Stein¹, ¹*University of Illinois, Urbana*, ²*University of Missouri, Colombia*, ³*Prarie Swine Centre, Saskatoon, SK, Canada*.

An experiment was conducted to determine the NE of 2 sources of dietary lipids by growing and finishing pigs and to evaluate the effects of inclusion rate on the NE of lipids. Soybean oil (SBO) and choice white grease (CWG) was used. Forty eight growing (initial BW: 22 kg) and 48 finishing (initial BW: 84 kg) barrows were used. Within each stage of growth, pigs were allotted to 8 outcome groups of 6 pigs based on BW. Within each outcome group, pigs were randomly allotted to 1 of 6 treatment groups. Two treatment groups at each stage of growth served as an initial slaughter group. Pigs on the remaining treatment groups were randomly allotted to 4 different diets, housed individually, and harvested after 28 (growing pigs) or 35 days (finishing pigs). The basal diet contained corn and soybean meal without supplemental lipids. Three additional diets were formulated by mixing 95% of the basal diet and 5% of SBO, 90% of the basal diet and 10% of SBO, or 90% of the basal diet and 10% of CWG. Energy retention in each pig was calculated using the comparative slaughter method. The NE of SBO and CWG were calculated using the difference procedure. There were no interactions among main effects. Results showed that the NE of diets increased (linear, $P \leq 0.01$) with increasing level of SBO (2,032, 2,186, and 2,292 kcal/kg for diets containing 0, 5, or 10% SBO), but the NE of the diet containing 10% CWG (2,431 kcal/kg) was greater ($P \leq 0.05$) than the NE of the diet containing 10% SBO. The NE of diets was greater ($P \leq 0.05$) for finishing pigs (2,509 kcal/kg) than for growing pigs (1,961 kcal/kg). The NE of SBO was not effected by the inclusion rate (5,102 kcal/kg and 4,619 kcal/kg for SBO included at 5 or 10%, respectively). The NE of CWG (6,017 kcal/kg) was greater ($P \leq 0.05$) than the NE of SBO. The stage of growth had no impact on NE of lipids. In conclusion, the NE of diets increases with the concentration of lipids. The NE of lipids is not affected by the level of dietary lipids, but the NE of CWG is greater than the NE of SBO.

Key Words: choice white grease, net energy, soybean oil