1294 (M168) Phosphorus digestibility in high protein canola meals, conventional canola meal, and soybean meal fed to growing pigs. C. K. Parr*, Y. Liu, C. M. Parsons, and H. H. Stein, *University of Illinois at Urbana-Champaign, Urbana.*

An experiment was conducted to determine the digestibility of Ca and P in 2 high protein canola meals (CMA; 45.69% CP and CMB; 46.97% CP) fed to growing pigs, and to compare values obtained in high protein canola meal with digestibility of Ca and P in conventional canola meal (CM-CV; 35.10% CP) and soybean meal (SBM). The Ca and P contents of CMA, CMB, and CM-CV were 0.64 and 1.26%, 0.51 and 1.16%, and 1.25 and 1.16%, respectively. Four cornstarch-based diets were formulated using each source of canola meal or SBM as the sole source of P in the diet. Four additional diets that were similar to the initial four diets with the exception that 500 FTU/kg of microbial phytase were added to each diet were also formulated. Therefore, a total of eight diets were formulated. Forty-eight barrows were divided into two periods and randomly allotted via a randomized complete block design using a 2 × 4 factorial arrangement to the eight dietary treatments based on initial BW. There were six replicate pigs per dietary treatment. Experimental diets were provided for 12 d with the initial 5 d being the adaptation period. Indigo carmine was added as an indigestible marker to the morning meals on d 6 and 11, respectively. Fecal collections started when the first marker appeared in the feces and ceased when the second marker appeared. The endogenous loss of P was assumed to be 190 mg kg^{-1} DMI. At the conclusion of the experiment, feed intake, Ca and P intake, apparent total tract digestibility (ATTD) of Ca and P, and standardized total tract digestibility (STTD) of P were calculated. Results indicate that ATTD of Ca and P and STTD of P were not different among treatments. Apparent total tract digestibility of Ca was 62, 66, 69, and 73% for CMA, CMB, CM-CV, and SBM, respectively. Standardized total tract digestibility of P was 55, 60, 49, and 66% for CMA, CMB, CM-CV, and SBM, respectively. Inclusion of phytase to the diets reduced both Ca and P outputs ($P < 0.05$). Inclusion of phytase improved ($P < 0.05$) ATTD of Ca and P and STTD of P regardless of the ingredient in the diet and there was no interaction between diet and phytase supplementation.

Key Words: canola meal, phosphorus, pig