
0973 Effects of inclusion of canola meal in weanling pig diets containing different concentrations of energy.

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The objective of the experiment was to determine effects of diet NE and addition of an exogenous enzyme on growth performance and physiological parameters of weanling pigs fed a corn-soybean meal (SBM) diet or diets containing high protein canola meal (CM-HP) or conventional canola meal (CM-CV). In total, 492 pigs (initial BW: 9.15 ± 0.06 kg) were used in a randomized complete block design with 9 replicate pens per treatment. A control diet based on corn and SBM and 4 diets containing 20 or 30% CM-HP or CM-CV were formulated; inclusion of choice white grease (CWG) was adjusted to maintain constant NE among diets. Four additional diets containing 20 or 30% CM-HP or CM-CV were formulated without adjusting CWG and NE in these diets was, therefore, reduced compared with the control diet. Three diets that were similar to the control diet and the diets containing 30% CM-HP or CM-CV without adjusted CWG were formulated, but a carbohydrase was included in these diets. Pigs were fed experimental diets for 22 d. Results indicated that ADG and G:F decreased (linear, $P < 0.05$) as CM-HP was included in diets with constant energy, but that was not the case if CM-CV was included in the diet or if diets were not formulated to a constant NE. There were also no differences in G:F or in final BW among pigs fed the control diet and pigs fed canola meal diets. Only minor and inconsistent effects of CM-HP or CM-CV on intestinal weight, gut fill, digesta pH, cecal VFA concentrations, and serum concentrations of urea N, total N, or albumin were observed. However, thyroid gland weight increased ($P < 0.05$) or tended to increase ($P < 0.10$) as the concentration of canola meal increased. Serum concentrations of IgG and total tract digestibility of GE were reduced (linear, $P < 0.05$) if CM-HP or CM-CV was included in the diets. No major effects of the carbohydrase were observed. In conclusion, up to 30% CM-HP or CM-CV may be used in diets fed to weanling pigs from 2 wk post-weaning without impacting growth performance and NE in diets containing canola meal does not have to be similar to that in corn-SBM diets.

Key Words: canola meal, energy concentration, pigs