Diet nutrient digestibility and growth performance of weaned pigs fed canola meal samples varying in nutritive quality

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Canola meal (CM) is a supplemental protein feedstuff for swine, but its nutritive quality varies more than soybean meal (SBM). The implications of variation in CM quality on diet nutrient digestibility and growth performance of weaned pigs are unclear. Thus, 240 pigs (BW, 9.6 kg; 4 pigs/pen) were weaned at 19 days of age and were fed a 20% SBM diet or 4 diets containing 20% CM solvent-extracted from common dark-seeded *Brassica napus* starting 2 wk post-weaning for 4 wk (d 1–28). The 4 CM samples were sourced from 4 crushing plants in Western Canada and contained 39.7–46.2% crude protein (CP), 3.4–4.1% ether extract, 17.5–21.4% acid detergent fibre (ADF), and 1.2–8.0 µmoles/g total glucosinolates on dry matter (DM) basis. Pelleted wheat-based diets were formulated to provide 2.3 Mcal net energy (NE)/kg and 5.1 g standard ileal digestible (SID) Lys/Mcal NE. Inclusion of CM instead of SBM reduced (P < 0.001) diet apparent total tract digestibility (ATTD) of DM by 3.7%-units, of gross energy (GE) by 3.6%-units, and of CP by 4.0%-units. The digestible energy (DE) value of CM diets was similar to, but their predicted NE value was 0.02 Mcal/kg greater (P = 0.027) than that of the SBM diet. Among the 4 CM diets, ATTD of DM, GE, and CP did not differ. Growth performance of pigs fed the 4 CM diets did not differ from pigs fed SBM except for greater (P < 0.05) feed efficiency (G:F) for d 1–7 and for the entire trial. Among the 4 CM diets, average daily feed intake (ADFI, 973–1047 g/d) and average daily gain (ADG, 650–686 g/d) differed (P < 0.05) for the entire trial. However, G:F did not differ among the 4 CM diets for the entire trial. In conclusion, inclusion of 20% CM from 4 crushing plants to replace SBM did not reduce feed intake, weight gain, or feed efficiency in weaned pigs indicating that variation in nutritive quality among the 4 *Brassica napus* CM samples did not affect growth performance of young pigs.

Implications: Canola meal can serve as alternative feed ingredients for weaned pigs to replace expensive soybean meal to reduce feed cost, providing NE and SID lysine were used to formulate the diets.