

Feed preference of nursery pigs fed diets with soybean meal, napus canola meal or juncea canola meal. J.L. Landero^{*1}, E. Beltranena^{1,2} and R.T. Zijlstra¹; University of Alberta, Edmonton, AB, Canada¹; Alberta Agriculture and Rural Development, Edmonton, AB, Canada².

Inclusion of conventional dark-seeded (*B. napus*) and novel yellow-seeded (*B. juncea*) canola meal (CM) can potentially replace soybean meal (SBM) in pig diets. The aim of this study was to examine the preference of nursery pigs for diets containing 20% of either SBM, napus CM or juncea CM. Diets formulated to contain 2.36 Mcal NE/kg and 4.5 g standardized ileal digestible Lys/Mcal NE were offered in a paired choice as mash (Exp. 1) or pellets (Exp. 2) for 3 consecutive 7-d periods. Each period consisted of 4-d double-choice test and 3-d non-test. Dietary treatments were provided in 2 separate 4-space feeders in each pen: 1) SBM vs. napus CM, 2) SBM vs. juncea CM, or 3) napus CM vs. juncea CM. Position of the 2 feeders within and among pens was not or was switched daily in Exp. 1 and 2, respectively. Previous to the experiment and during adaptation periods, pigs were fed diets containing SBM (Exp. 1) or none of the feedstuffs tested (Exp 2). In Exp. 1, 216 pigs (9.4 ± 1.6 kg) were housed in 27 pens of 8 pigs (4 gilts and 4 barrows) and randomly allocated to the 3 dietary treatments in a 3×3 Latin square. In Exp 2, 144 pigs (8.9 ± 1.1 kg) were housed in 36 pens of 4 pigs (2 gilts and 2 barrows) and randomly allocated to the 3 dietary treatments in a 3×3 Latin square. Total glucosinolate and gluconapin content in juncea CM (10.8 and 9.4 $\mu\text{mol/g}$, respectively) were 2.2 and 7.3 times greater, respectively than in napus CM. Pigs preferred SBM over napus CM diet ($P < 0.001$; 83.9% vs. 16.1% and 80.9% vs. 19.1% for Exp 1 and 2, respectively) and pigs preferred SBM over juncea CM diet ($P < 0.001$; 89.9 vs. 10.1% and 84.2 vs. 15.8% for Exp 1 and 2, respectively). Napus CM was preferred on the 2-way choice with juncea CM diet ($P < 0.001$; 64.0% vs. 36.0% and 81.4% vs. 18.6% for Exp 1 and 2, respectively). In conclusion, high content of the glucosinolate gluconapin in juncea CM was associated with the reduced feed preference for juncea CM vs. napus CM.

Key Words: canola meal, diet preference, weaned pig