

Protein and amino acid digestibility of *Camelina sativa* co-products for growing pigsA Cerisuelo¹, P Ferrer¹, E Gómez¹, H Stein², T Woyengo³, J Cano⁴ and O Piquer⁵¹Centro de Investigación y Tecnología Animal - Instituto Valenciano de Investigaciones Agrarias; ²University of Illinois; ³South Dakota State University; ⁴Innovater; ⁵Universidad CEU-Cardenal Herrera

Camelina sativa is an oilseed cultivated in Europe and its oil is used for biofuel production. Solvent-extracted camelina meal (CM) and expeller-extracted camelina expellers (CE) are the co-products that remain after oil extraction. The standardized ileal digestibility (SID) of crude protein (CP) and amino acids (AA) in these two camelina co-products was determined using growing pigs. Thirty-three Pietrain x (Landrace x Large white) barrows of 82.0 ± 2.57 kg body weight were allotted to three treatments (11 pigs/treatment). The experimental diets were a cornstarch-based diet with 30% CM or 35% CE as the sole source of CP and AA; and a N-free diet that was used to determine basal endogenous losses of CP and AA. All diets contained titanium dioxide as an indigestible marker. Pigs were fed at 3 times the maintenance requirement for metabolizable energy. The SID of CP and AA was determined using the direct method. After 7 days of feeding, pigs were slaughtered and the terminal ileum contents were obtained for CP and AA analyses. Solvent-extracted camelina meal contained more protein (419 vs. 381 g/kg dry matter) and most AA, compared with CE. The SID of CP in CE was less than in CM (56.4 vs. 69.3 %, $P = 0.01$). The SID of AA in the CE also tended to be lower ($P < 0.10$) compared with those in CM. Among indispensable AA, methionine had the highest SID both in CM and CE (88.4 and 81.0%, respectively) and lysine and threonine had the lowest SID in CM and CE (69.5 and 56.7% for lysine and 70.0 and 51.9% for threonine, respectively). Results from this experiment indicate that the SID of AA was somewhat less in CE than in CM, and that camelina co-products may be included as a protein source in diets fed to pigs.