0442 Amino acid digestibility in processed soybean products and rapeseed products fed to weanling pigs. D. M. D. L. Navarro*[1], Y. Liu[1], T. S. Bruun[2], and H. H. Stein[1], *[1]University of Illinois at Urbana-Champaign, Urbana, [2]Danish Pig Research Centre, Copenhagen, Denmark.*

An experiment was conducted to determine the standardized ileal digestibility (SID) of CP and AA in 4 sources of processed soybean meal, in conventional soybean meal (SBM-CV), in rapeseed expellers (RSE), and in a fermented co-product mixture (FCM) that contained rapeseed meal, wheat, soy molasses, and potato peel. The 4 processed soybean products included 2 sources of enzyme-treated soybean meal (ESBM-1 and ESBM-2), extruded soybean meal (SBM-EX), and soy protein concentrate (SPC). A N-free diet and 7 cornstarch-based diets that contained each of the 7 protein sources as the sole source of CP and AA were prepared. Twenty-seven ileal-cannulated weanling barrows (initial BW: 9.29 ± 0.58 kg) were allotted to three 9 × 5 Youden squares with 9 pigs and 5 periods in each square. In each square, 7 pigs were each fed 1 of the 7 AA-containing diets and 2 pigs were fed the N-free diet. Results indicated that the SID of CP was greater ($P < 0.05$) in ESBM-1 than in SPC, RSE, and FCM. The SID of Arg, His, Ile, Leu, Met, and Phe were greater ($P < 0.05$) in ESBM-1 than in SPC, and the SID of Lys was greater ($P < 0.05$) in SBM-CV than in ESBM-2. The SID of Thr, Trp, Val and total indispensable AA were not different among the soybean products. The SID of most AA in RSE and the SID of all AA in FCM were less ($P < 0.05$) than in all soybean products, but the SID of all AA in RSE was greater ($P < 0.05$) than in FCM. Results of this experiment indicate that, although processing of soybean meal results in increased concentration of CP, processing may also reduce the digestibility of some AA, which is likely due to heat damage during processing. There are, however, differences among processed soy products, with some products having greater SID of AA than others. Results also indicate that fermentation of a mixture of rapeseed meal, wheat, and relatively low quality co-products does not result in SID values that are similar to those of unfermented rapeseed expellers or soybean products.

Key Words: amino acid digestibility, soybean products, rapeseed products