335 Ileal digestibility of amino acids in low-Kunitz soybeans fed to weanling pigs. K. P. Goebel* and H. H. Stein, *University of Illinois*, *Urbana*.

An experiment was conducted to determine the standardized ileal digestibility (SID) of AA in 5 sources of full fat soybeans (FFSB) and soybean meal (SBM) with different concentrations of trypsin inhibitor activity (TIU). A cold-processed FFSB (37.7% CP, 35.4 TIU/mg), a cold-processed low-Kunitz FFSB (36.17% CP, 23.5 TIU/mg), a conventional extruded FFSB (40.45% CP, 4.40 TIU/mg), a low-Kunitz extruded FFSB (38.19% CP, 4.0 TIU/mg), and a conventional SBM (47.47% CP, 3.20 TIU/mg) were used. Twelve weanling barrows (initial BW: 11.1 ± 1.3 kg) were fitted with a T-cannula in the distal ileum. Pigs were allotted to a replicated 6 × 6 Latin square design with 6 diets and 6 periods per square. Five diets were prepared using each of the soybean meals as the only source of AA in the diet. An N-free diet was also included to measure basal endogenous losses of AA. The 2 cold-processed FFSB had lower ($P < 0.05$) SID values for all indispensable AA than the 2 extruded FFSB and SBM. The SID values for all indispensible AA except Trp were greater ($P < 0.05$) in the cold-processed low-Kunitz FFSB than in the cold-processed conventional FFSB. The SID values for AA in the 2 extruded meals and in SBM were not different. These results indicate that trypsin inhibitors reduce AA digestibility in cold-processed FFSB, but a reduction in the concentration of the Kunitz trypsin inhibitor is not sufficient to ameliorate this situation.

Table 1. Digestibility (%) of AA in cold-processed conventional and low-Kunitz soybeans (CP-CV and CP-LK), extruded conventional and low-Kunitz soybeans (E-CV and E-LK), and in SBM

Item	CP-CV	CP-LK	E-CV	E-LK	SBM	SEM
Ile	55.3[c]	68.4[b]	89.8[a]	92.3[a]	92.4[a]	2.14
Lys	57.5[c]	71.0[b]	90.7[a]	92.5[a]	90.6[a]	2.38
Met	58.7[c]	71.9[b]	90.8[a]	93.8[a]	94.0[a]	2.07
Thr	56.4[c]	66.5[b]	86.4[a]	88.0[a]	88.3[a]	2.74
Trp	66.9[b]	71.9[b]	91.8[a]	92.8[a]	91.6[a]	2.38
Val	54.7[c]	67.5[b]	88.1[a]	90.0[a]	90.6[a]	2.52

[a,b,c]Means within a row lacking a common superscript letter are different ($P < 0.05$).

Key Words: amino acid digestibility, soybeans, trypsin inhibitors