1308 (M182) Amino acid digestibility in field peas, fish meal, corn, soybean meal, and soybean hulls.

J. K. Mathai*, and H. H. Stein, *University of Illinois at Urbana-Champaign, Urbana.*

An experiment was conducted to determine the standardized ileal digestibility (SID) of AA in field peas, fish meal, corn, soybean meal, and soybean hulls. Six ileal-cannulated gilts (initial BW: 26.5 ± 0.74 kg) were allotted to a 6 × 6 Latin square design with 6 diets and 6 periods. A N-free diet was formulated to determine basal endogenous losses of AA and CP and to enable the calculation of SID of AA. The remaining diets were formulated with each test ingredient as the sole source of AA, with the exception that the soybean hulls were included in a diet that also contained soybean meal to compensate for the low CP in soybean hulls. The AID and SID values were calculated in the soybean hulls diet using the difference procedure whereas AID and SID in the other ingredients were calculated using the direct procedure. The SID of Lys was greater ($P < 0.05$) in field peas, fish meal, and soybean meal than in corn and soybean hulls (Table 1308). The SID of Trp was greater ($P < 0.05$) in corn than in soybean meal, and greater ($P < 0.05$) in soybean meal than in field peas. The SID of His, Lys, and Trp was less ($P < 0.05$) in soybean hulls than in other ingredients. These data indicate that the SID of AA in most indispensable AA is not different between field peas, fish meal, and soybean meal, whereas the SID of some indispensable AA is less in soybean hulls than in other ingredients.

Key Words: amino acid digestibility, feed ingredients, pigs

Table 1308. Standardized ileal digestibility (SID; %) of AA in field peas, fish meal, corn, soybean meal (SBM), and soybean hulls fed to pigs

	Ingredients					
Item	Field Peas	Fish meal	Corn	SBM	Soybean hulls	*P*-value
His	92.7^{ab}	87.3^{c}	93.3^{a}	90.2^{b}	69.5^{d}	< 0.05
Ile	87.6^{ab}	86.7^{b}	90.7^{a}	87.7^{ab}	83.4^{c}	< 0.05
Lys	90.6^{a}	87.7^{a}	73.1^{b}	86.3^{a}	69.8^{d}	< 0.05
Met	87.9^{bc}	87.2^{c}	92.1^{b}	87.4^{c}	97.1^{a}	< 0.05
Phe	89.2^{b}	86.0^{bc}	92.9^{a}	88.4^{b}	89.2^{b}	< 0.05
Thr	86.9^{ab}	84.3^{b}	89.2^{a}	85.4^{ab}	85.9^{ab}	< 0.05
Trp	85.8^{c}	91.2^{ab}	95.0^{a}	90.6^{b}	76.4^{d}	< 0.05
Val	86.5^{bc}	84.9^{cd}	90.2^{b}	85.9^{c}	100.5^{a}	< 0.05

$^{a-d}$ Means within a row lacking a common superscript letter differ.