

## Amino acid digestibility of protein sources fed to weanling pigs

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The standardized ileal digestibility (SID) of AA by weanling pigs was determined in 4 soybean products, fishmeal (FM), and casein. The 4 soybean products were soybean meal (SBM), soy protein concentrate (SPC), soy protein isolate (SPI), and fermented soybean meal (FSBM). Seven weanling barrows (initial BW: 10.9 kg) were fitted with a T-cannula in the distal ileum and allotted to a 7 x 7 Latin square design. Each of the protein sources was included in one diet and a N-Free diet was used to determine endogenous losses. Each period lasted 7 d and digesta were collected from the cannulas on d 6 and 7 of each period. Casein had the greatest ( $P < 0.05$ ) SID for most AA, but the SID for Arg, Lys, Thr, and Trp in SPC and SPI were similar to casein. The SID of Arg, Lys, Thr, and Trp in FM were also similar to casein, but the SID for all other indispensable AA and for the mean of the indispensable AA in FM were lower than in casein ( $P < 0.05$ ). There were no differences in SID for any AA among FM, SPC, and SPI. Except for Lys, the SID for all indispensable AA in FSBM were not different from FM, SPC, and SPI, and there were no differences in SID between FSBM and SBM. However, the SID for all indispensable AA except His, Lys, Thr, and Trp in SBM were lower ( $P < 0.05$ ) than in SPC. The SID for CP and all indispensable AA in SBM except Thr and Trp were also lower ( $P < 0.05$ ) than in SPI, but except for Leu and Thr, no differences between SBM and FM were observed. Results from this experiment showed that the SID for most AA in SPC and SPI are comparable to casein and greater than in FSBM and SBM. The SID for most AA in FSBM are also comparable to the SID for AA in FM.

Standardized ileal digestibility by weanling pigs

Item, %	Diet:	Soybean	Soy protein	Soy protein	Fish		
		meal	concentrate	isolate	PepSoygen	meal	Casein
Ile		82.9 <sup>x</sup>	89.8 <sup>y</sup>	89.6 <sup>y</sup>	85.8 <sup>xy</sup>	87.5 <sup>xy</sup>	95.7 <sup>z</sup>
Leu		82.0 <sup>x</sup>	89.3 <sup>y</sup>	88.9 <sup>y</sup>	85.4 <sup>xy</sup>	88.3 <sup>y</sup>	96.5 <sup>z</sup>
Lys		79.2 <sup>xy</sup>	88.3 <sup>yz</sup>	90.8 <sup>z</sup>	77.2 <sup>x</sup>	87.7 <sup>yz</sup>	97.3 <sup>z</sup>
Met		85.5 <sup>x</sup>	92.2 <sup>y</sup>	91.7 <sup>y</sup>	88.3 <sup>xy</sup>	89.5 <sup>xy</sup>	98.5 <sup>z</sup>
Cys		73.4	85.2	82.0	69.7	76.0	84.6
Phe		84.1 <sup>x</sup>	91.9 <sup>y</sup>	91.7 <sup>y</sup>	87.2 <sup>xy</sup>	87.7 <sup>xy</sup>	97.4 <sup>z</sup>
Thr		77.4 <sup>x</sup>	85.8 <sup>xyz</sup>	85.0 <sup>xyz</sup>	78.5 <sup>xy</sup>	86.9 <sup>yz</sup>	90.9 <sup>z</sup>
Trp		84.8 <sup>x</sup>	87.5 <sup>xy</sup>	87.9 <sup>xy</sup>	83.5 <sup>xy</sup>	88.7 <sup>xy</sup>	92.0 <sup>y</sup>
Val		81.9 <sup>x</sup>	89.5 <sup>y</sup>	89.3 <sup>y</sup>	84.3 <sup>xy</sup>	89.0 <sup>y</sup>	96.8 <sup>z</sup>