

**511 Amino acid digestibility in hydrolyzed feather meal fed to pigs.** F. N. Almeida<sup>\*1</sup>, L. I. Chiba<sup>2</sup>, S. D. Brotzge<sup>2</sup>, R. L. Payne<sup>3</sup>, and H. H. Stein<sup>1</sup>, <sup>1</sup>University of Illinois, Urbana, <sup>2</sup>Auburn University, Auburn, AL, <sup>3</sup>Evonik-Degussa Corp., Kennesaw, GA.

An experiment was conducted to determine the standardized ileal digestibility (SID) of AA in hydrolyzed feather meal (FM) products without or with blood addition when fed to pigs. Eight FM products were obtained from 4 sources with each source providing FM without and with added blood. Ten pigs (initial BW: 23.8 ± 1.3 kg) were allotted to a 10 × 10 Latin square design with 10 diets and 10 periods. One diet contained 36% soybean meal, and the 8 FM diets contained 12% soybean meal and 25% of 1 of the 8 FM products. Soybean meal and FM were the only ingredients contributing AA in these 9 diets. The 10th diet was a N-free diet that was used to determine the basal endogenous losses of AA. Pigs were fed experimental diets for 7 d with ileal digesta being collected during the last 2 d. Values for the SID of AA were calculated for each diet using the direct procedure, and the difference procedure was used to calculate the SID of AA in each FM product. Data were analyzed as a 2 × 4 factorial, with blood addition, FM source, and the interaction between blood addition and FM source as main effects. Differences ( $P < 0.01$ ) in the SID of all indispensable AA were observed among the 4 sources of FM (Table 1). There were also effects ( $P < 0.01$ ) of blood addition on the SID of Ile, Leu, Lys, Phe, and Val, but there was an interaction ( $P < 0.05$ ) between FM source and blood addition, indicating that addition of blood did not have a consistent effect on the SID of AA in the 4 sources of FM. In conclusion, the SID of AA in FM varies among sources, and addition of blood to FM may affect the SID of AA.

**Table 1.** Standardized ileal digestibility (%) of AA in feather meal

Item	FM-1	FM-1	FM-2	FM-2	FM-3	FM-3	FM-4	FM-4	SEM
Blood									
addition: No	Yes	No	Yes	No	Yes	No	Yes	-	
Ile, <sup>1,2,3</sup>	76	66	86	96	82	83	80	72	2
Leu <sup>1,2,3</sup>	71	59	81	81	77	77	75	67	2
Lys <sup>1,2,3</sup>	48	56	59	79	59	71	59	55	3
Met <sup>1,3</sup>	65	58	72	77	63	72	70	63	2
Phe <sup>1,2,3</sup>	74	62	83	84	80	80	77	70	2
Thr <sup>1</sup>	65	56	72	76	70	70	66	60	2
Trp <sup>1</sup>	67	74	85	85	86	82	84	80	3
Val <sup>1,2,3</sup>	72	60	83	83	77	80	78	69	2

<sup>1</sup>Effect of FM source ( $P < 0.01$ ).

<sup>2</sup>Effect of blood addition ( $P < 0.01$ ).

<sup>3</sup>Interaction between FM source and blood addition ( $P < 0.01$ ).

**Key Words:** amino acids, hydrolyzed feather meal, pigs