
307 Amino acid digestibility in rice coproducts fed
to growing pigs. G. A. Casas^{1,*}, J. Almæida²,
H. H. Stein¹, ¹*University of Illinois at Urbana-*
Champaign, Urbana, ²*Lindenwood University,*
Saint Louis, MO

The objective of this research was to determine the apparent ileal digestibility (AID) and the standardized ileal digestibility (SID) of CP and AA in 2 sources of full fat rice bran (FFRB), 1 source of defatted rice bran (DFRB), and broken rice when fed to growing pigs. Seven finishing pigs with an average initial BW of 70.07 ± 6.3 kg were used. Pigs were surgically fitted with a T-cannula in the distal ileum. Animals were allotted to a 7×7 Latin square design with 7 diets and 7 periods. Seven diets were prepared, but 1 diet was unrelated to this experiment. One diet was based on bakery meal, and 1 diet was based on broken rice. Three additional diets were formulated by mixing bakery meal and each of the 2 sources of FFRB (FFRB-1 and FFRB-2) or DFRB. The last diet was an N-free diet that was used to estimate the basal ileal endogenous losses of CP and AA. The AID of CP and AA in bakery meal and broken rice was calculated using the direct procedure, but the AID of CP and AA in both sources of FFRB and in DFRB was calculated using the difference procedure. The AID and SID of CP and AA in broken rice were greater ($P < 0.05$) than the AID and SID of CP and AA in all other ingredients. The AID of CP and AA was greater ($P < 0.05$) in both sources of FFRB than in DFRB except for Arg, Lys, Phe, Thr, Trp, Asp, Glu, and Cys. The SID of AA was greater ($P < 0.05$) in both sources of FFRB than in DFRB, except for Lys, Thr, Trp, Val, and Gly. The SID for the average of indispensable, dispensable, and total AA in broken rice was greater ($P < 0.05$) than in the other ingredients. The average SID of AA in DFRB was less ($P < 0.05$) than in the other ingredients. The concentrations of standardized ileal digestible CP and indispensable AA in DFRB were greater ($P < 0.05$) than in all other ingredients. In conclusion, the AID and SID of CP and AA in broken rice were greater than in FFRB and DFRB, but the greater concentrations of CP and AA in FFRB and DFRB than in broken rice result in greater concentrations of SID CP and AA in FFRB and DFRB than in broken rice.

Key Words: amino acids, broken rice, defatted rice bran, digestibility, pig, rice bran