

Crystalline amino acids in diets do not influence calculated values for amino acid digestibility in feed ingredients fed to pigsS F M Oliveira¹, J J Abelilla¹, K J Htoo² and H H Stein¹¹University of Illinois at Urbana-Champaign; ²Evonik Nutrition & Care GmbH

An experiment was conducted to determine if addition of crystalline amino acids (AA) to diets during the adaptation period or during both adaptation and collection periods influence calculated values for apparent ileal digestibility (AID) or standardized ileal digestibility (SID) of AA in corn and soybean meal (SBM). Seven ileal-cannulated barrows (initial BW = 77.9 ± 2.6 kg) were allotted to a 7 treatment × 7 period Latin square design. Treatments included feeding diets containing corn or SBM without crystalline AA for the entire 7-days period, corn or SBM with crystalline AA for the entire 7-days period, or feeding corn or SBM with crystalline AA during the adaptation period (days 1 to 5) followed by corn or SBM without crystalline AA during the collection period (days 6-7). An N-free diet was also used. The AID and SID of CP and AA were calculated using values determined in corn or in SBM without or with crystalline AA to determine if crystalline AA influenced calculated values for AID or SID of CP and AA. Data were analyzed using the Mixed procedure by SAS. Results indicated that addition of crystalline AA in the adaptation period only or for all 7-days improved ($P < 0.05$) the AID and SID of some AA in corn but not in SBM. No differences in AID or SID of AA in corn or SBM diets were observed as a result of including or not including crystalline AA in the calculation indicating that crystalline AA are 100% absorbed and did not affect AID and SID of AA regardless of inclusion in the diet. Therefore, crystalline AA may be added to experimental diets in digestibility experiments before and during collection periods without affecting results, if crystalline AA are disregarded in the calculation of AID or SID of AA in ingredients.