

**Differences in apparent and standardized crude protein and amino acid digestibility coefficients
among low phytate corn, normal corn, and soybean meal in growing pigs.**

R. A. Bohlke, H. H. Stein, A. R. Wirt, and R. C. Thaler

South Dakota State University.

Nine crossbred growing barrows (BW=29.3 ± 1 kg) were fitted with T-cannulas in the distal ileum to determine crude protein (CP) and amino acid (AA) digestibility coefficients of low phytate corn (LPC), normal corn (NC), and soybean meal (SBM). Three diets containing either LPC, NC, or SBM as the sole source of CP and AA were formulated, as was a nitrogen-free diet (N-free). Chromium oxide was included in each diet as an inert marker. Each diet was fed to the pigs for nine days with digesta being collected from 0800 to 2000 on d 8 and d 9. At the end of the experiment, apparent (AID) and standardized ileal CP and AA digestibility coefficients (SID) were calculated for each ingredient. The AID for CP and all indispensable AA except leucine (Leu) and methionine (Met) were higher ($P < 0.05$) for SBM compared to NC and LPC. The AID of arginine (Arg), lysine (Lys), and valine (Val) were higher ($P < 0.05$) in LPC than in NC, but no differences ($P > 0.05$) were found for CP and the other indispensable AA. The SID were calculated by correcting the AID for the endogenous losses of CP and AA determined after feeding the N-free diet. The SID of isoleucine (Ile), Lys, phenylalanine (Phe), and threonine (Thr) were higher ($P < 0.05$) in LPC than in NC. Likewise, a tendency for higher ($P < 0.07$) SID in LPC than in NC was observed for CP, and Val, while no differences ($P > 0.05$) were observed for the remaining indispensable AA. The SID for CP, Thr, Lys, histidine (His), Arg, Ile, and tryptophan (Trp) were higher ($P < 0.05$) in SBM than in NC, but when comparing SBM to LPC, differences ($P < 0.05$) were found only for Lys and His. In conclusion, the results of the current experiment demonstrate that both apparent and standardized ileal AA digestibility coefficients are at least as high in LPC as they are in NC.