

**140 Energy concentration and amino acid digestibility in a novel source of high-protein distillers dried grain fed to pigs.** B. G. Kim\*, G. I. Petersen, and H. H. Stein, *University of Illinois, Urbana.*

A novel source of high-protein distillers dried grains (HP-DDG) has been produced by Buhler Inc. (Minneapolis, MN). This product contains approximately 45% CP, 1.32% Lys, 1.06% Met, 1.69% Thr, 0.25% Trp, and 5,236 kcal GE/kg (as-fed basis). Two experiments were conducted to measure DE and ME and the standardized ileal digestibility (SID) of AA in this product. The DE and ME in HP-DDG and in corn were measured using 16 growing barrows (24.6 ± 1.66 kg BW). A corn-based basal diet and a diet containing 50% corn and 48.2% HP-DDG were formulated. The total collection method and the difference procedure were used. The concentrations of DE and ME in HP-DDG (91.7% DM) were greater ( $P < 0.001$ ) than in corn (89.1% DM; 4,627 vs. 3,565 kcal/kg and 4,303 vs. 3,493 kcal/kg, respectively; as-fed basis). The SID of AA in HP-DDG and in soybean meal (SBM) was determined using 9 barrows (109.8 ± 2.78 kg BW). Pigs were surgically fitted with a T-cannula in the distal ileum. Pigs were allotted to a triplicated 3 × 3 Latin square design with 3 diets and 3 periods per square. Diets based on HP-DDG or SBM as the only source of AA were formulated. An N-free diet was also included to measure basal endogenous losses of AA. The SID of indispensable AA were less ( $P < 0.01$ ) in HP-DDG than in SBM (Arg, 87.5 vs. 93.9%; His, 76.7 vs. 88.7%; Ile, 76.4 vs. 87.5%; Leu, 77.8 vs. 86.8%; Lys, 75.4 vs. 88.4%; Met, 82.8 vs. 88.4%; Phe, 77.9 vs. 87.3%; Thr, 72.5 vs. 83.5%; Trp, 85.1 vs. 91.0%; Val, 73.3 vs. 88.1%). Based on the SID of AA in HP-DDG, limiting AA in a diet based on corn and HP-DDG were calculated. Lysine, Trp, and Thr were identified as the first, the second, and the third limiting AA when HP-DDG was used as a protein source with corn as an energy source for a 50 kg pig. We conclude that HP-DDG has greater energy values for pigs than corn but lower ileal AA digestibility values than SBM.

**Key Words:** high-protein distillers dried grains, nutritional values, pigs