

389 Amino acid digestibility and energy content in Dried Fermentation Biomass, Peptone 50, and P.E.P. Two Plus fed to weanling pigs. R. C. Sulabo*¹, J. K. Mathai¹, J. L. Usry², B. W. Ratliff³, D. M. McKilligan³, and H. H. Stein¹, ¹*University of Illinois, Urbana*, ²*Ajinomoto Heartland LLC, Chicago, IL*, ³*TechMix LLC, Stewart, MN*.

Two experiments were conducted to determine the standardized (SID) ileal digestibility of AA (Exp. 1) and the DE and ME content (Exp. 2) in Dried Fermentation Biomass (DFB), Peptone 50 (PEP50), and P.E.P. Two Plus (PEP2+) fed to weanling pigs and to compare these values to those in fish meal. DFB (Ajinomoto Heartland LLC) is a co-product from AA production and PEP50 and PEP2+ (TechMix LLC) are produced from hydrolyzed pig intestines. In Exp. 1, 12 barrows (BW: 11.5 ± 1.1 kg) were allotted to a replicated 6 × 6 Latin square design with 6 diets and 6 periods. One diet was based on SBM as the sole source of AA and 4 additional diets were formulated based on a combination of SBM and DFB, PEP50, PEP2+, or fish meal. A N-free diet was used to calculate endogenous losses of AA. The SID of Lys in DFB were greater (93.8 vs. 87.2%; $P < 0.01$) than in fish meal, but were similar for all other indispensable AA. The SID of Lys was less ($P < 0.01$) in PEP2+ (84.1%) than in DFB, but was similar to those in PEP50 (87.5%) and fish meal. Except for the SID of Thr, PEP50

had similar SID for all indispensable AA compared with fish meal. The SID of all indispensable AA except for Trp was less ($P < 0.05$) in PEP2+ than in any of the other ingredients. In Exp. 2, 40 barrows (BW: 12.8 ± 1.4 kg) were used with 5 diets and 8 replicate pigs per diet. A basal diet consisting of 96.4% corn and 4 diets with corn and DFB, PEP50, PEP2+, or fish meal were formulated. The DE (5,781 kcal/kg DM) and ME (5,560 kcal/kg DM) in DFB were similar to those in PEP2+ (5,300 and 4,959 kcal/kg DM), but were greater ($P < 0.01$) than in PEP50 (5,003 and 4,744 kcal/kg DM) and fish meal (4,586 and 4,180 kcal/kg DM). The DE and ME in PEP2+ were also greater ($P < 0.01$) than in fish meal, but were similar to those in PEP50. The ME in PEP50 was not different from the ME in fish meal. In summary, DFB, PEP50, and PEP2+ had similar AA digestibility, but greater energy value than fish meal.

Key words: alternative feedstuffs, amino acids, pigs