
267 Young Scholar Presentation: Nutritional Value of Rice Coproducts Fed to Pigs. G. A. Casas^{*1,2}, H. H. Stein², ¹*Universidad Nacional de Colombia, Bogota, Colombia*, ²*University of Illinois at Urbana-Champaign, Urbana, IL*

Four experiments were conducted to determine digestibility of AA, GE, and P, and concentrations of ME in rice coproducts. Two additional experiments were conducted to test the hypothesis that increasing inclusion levels of full fat rice bran (FFRB) or defatted rice bran (DFRB) does not affect growth performance of weanling pigs or growing-finishing pigs. Results from these experiments indicate that the standardized ileal digestibility of CP (97.2%) and Lys (94.5%) in broken rice is greater ($P < 0.05$) than in other rice coproducts, but the concentration of digestible Lys in FFRB (6 g/kg DM) is greater than in broken rice or DFRB. The concentration of ME in FFRB was also greater ($P < 0.05$) than in DFRB when fed to weanling pigs, growing pigs, or gestating sows (3,856 vs. 2,936; 3,971 vs. 2,933; and 4,119 vs. 3,228 kcal/kg DM, respectively). The digestibility of P in FFRB increased ($P < 0.05$) from 26.4% to 41.3% if microbial phytase was used. In weanling pigs from 10 to 20 kg, the ADG increased (quadratic, $P < 0.05$) if 10, 20, or 30% of FFRB or DFRB was included in a balanced diet (i.e., 539, 506 and 479 g for FFRB and 537, 530, and 499 g for DFRB vs. 517 g for the control diet). The G:F was not affected by the inclusion of DFRB in the diet, but increased (quadratic, $P < 0.05$) from 0.643 for the control diet to 0.676, 0.682, and 675 for diets containing 10, 20, or 30% FFRB. In growing-finishing pigs, for the overall experimental period from 28 to approximately 120 kg, ADG was not influenced by inclusion of up to 30% FFRB or DFRB in the diets. However, ADFI decreased from 2.60 to 2.61, 2.49, and 2.42 kg (linear, $P < 0.05$) and G:F increased linearly ($P < 0.05$) from 0.368 to 0.370, 0.386, and 0.388 for pigs fed diets with 0, 10, 20, or 30% FFRB. The ADFI of pigs fed diets containing DFRB increased linearly ($P < 0.05$) from 2.60 to 2.54, 2.73, and 2.73 kg, but G:F decreased (linear, $P < 0.05$) from 0.368 to 0.367, 0.349, and 0.342 for pigs fed diets containing 0, 10, 20, or 30% DFRB. In conclusion, rice coproducts may provide energy, P, and AA in diets for pigs and FFRB and DFRB may be included at 10 to 30% without affecting growth performance of weanling or growing-finishing pigs.

Key Words: Rice coproducts, digestibility, growth performance