

Nonruminant Nutrition: Nutritional Values II

than diets 2 (0.23 kg) and 3 (0.30 kg), but not different from PC (0.35 kg). On wk 1–3, ADG and G:F was greater ($P < 0.05$) for pigs fed the PC diet than pigs fed the other diets, and pigs fed diet 4 had greater ($P < 0.05$) ADG and G:F than pigs fed the NC diet (0.44 vs. 0.35 kg and 0.48 vs. 0.44, respectively). In Exp. 2, 144 pigs (9.9 kg BW) were allotted to 4 diets with 8 replicate pens per diet. Diets (corn-SBM-DDGS based) were formulated using the concepts described for Exp. 1, except that HD DDGS (autoclaved at 130°C for 60 min; 22% inclusion) but not HD SBM was used in diets. On wk 1, G:F of pigs fed diet 4 (0.36) was better ($P < 0.05$) than diets 2 (0.28) and 3 (0.32), but not different from PC (0.38). On wk 1–3, ADG was not affected but G:F was greater ($P < 0.05$) for pigs fed the PC diet than pigs fed the other diets mainly attributed to a greater ADFI in pigs fed diets containing HD DDGS. In conclusion, negative effects of heat damage in SBM or DDGS on performance of weaned pigs can be ameliorated at least during wk 1 if the reduction in concentration and the digestibility of AA are adjusted for the impact of heat damage.

Key Words: distillers dried grains with solubles, soybean meal, weaned pig

724 Effects of adjusting the standardized ileal digestible (SID) amino acids in heat damaged soybean meal (SBM) or distillers dried grains with solubles (DDGS) in diets on performance of weaned pigs. F. N. Almeida*¹, J. K. Htoo², J. Thomson³, and H. H. Stein¹, ¹University of Illinois, Urbana, ²Evonik Industries, Hanau, Germany, ³Evonik Degussa Corporation, Kennesaw, GA.

Two experiments were conducted to determine if adjustments of the SID of AA in heat damaged (HD) SBM or HD DDGS in diet formulation ameliorates performance reduction by heat damage in weaned pigs. In Exp. 1, 4 corn-SBM diets were formulated. The positive control (PC) diet, containing conventional SBM (35.1%), was formulated on the basis of analyzed AA and published SID values. Diet 2, negative control (NC), was like the PC but conventional SBM was replaced (1:1) with HD SBM (autoclaved at 125°C; 60 min). Diet 3 contained HD SBM but was based on analyzed AA and published SID values. Diet 4 also contained HD SBM, but was formulated on analyzed AA and by adjusting the SID of AA for HD SBM based on values derived from a previous study. Pigs (160; 10.4 kg BW) were allotted to 4 diets with 8 replicate pens per diet. On wk 1, ADG of pigs fed diet 4 (0.33 kg) was better ($P < 0.05$)