199 Effects of sulfur concentration in distillers dried grains with solubles on feed preference and pig performance. B. G. Kim*[1], Y. Zhang[2], and H. H. Stein[1], [1]*University of Illinois, Urbana*, [2]*National Corn-to-Ethanol Research Center, Edwardsville, IL*.

Four experiments were conducted to examine the effects of dietary S levels on feed palatability and performance of weanling and grow-finishing barrows. In a 10-d feed preference test (Exp. 1), 48 pigs (20.1 kg) were grouped into 8 blocks and allotted to 3 treatments with 2 pigs/pen. A corn-soybean meal control diet (CON) and a diet containing corn, soybean meal, and 20% distillers dried grains with solubles (DDGS) were prepared. A third diet (DDGS+S) was similar to the DDGS diet with the exception that S from calcium sulfate was added to mimic DDGS with 0.9% S. Two diets were provided in each pen. The feed preference for the DDGS diet and the DDGS+S diet vs. CON was 35.2 and 32.6%, respectively ($P < 0.05$). However, feed preference was unaffected by the concentration of S in the DDGS-containing diets. In a 28-d feeding trial (Exp. 2), 90 pigs (10.3 kg) were allotted to 3 treatments, 10 blocks, and 3 pigs/pen. The same diets as in Exp. 1 were used. Pigs fed the CON diet had greater ($P < 0.05$) ADG (497 vs. 423 and 416 g/d) and G:F (0.540 vs. 0.471 and 0.455) compared with pigs fed the DDGS and the DDGS+S diets. Exp. 3 was also a preference test and used 30 individually housed pigs (49.6 kg). Diets were similar as in Exp. 1 except that DDGS was included at 30% in the 2 DDGS-containing diets. The preference for the DDGS diet and the DDGS+S diet compared with CON was 29.8 and 32.9%, respectively ($P < 0.001$). However, the preference was unaffected by the concentration of S in the DDGS-containing diets. In an 84-d feeding trial (Exp. 4) with 120 pigs (34.2 kg), the design was the

same as in Exp. 2, but 30% DDGS was used in the DDGS-containing diets. Pigs fed the CON diet had greater ($P < 0.05$) ADG (1,021 vs. 912 and 907 g) and G:F (0.335 vs. 0.316 and 0.307) than pigs fed the DDGS and the DDGS+S diets. In conclusion, inclusion of 20 to 30% of DDGS in diets fed to weanling and grow-finishing pigs reduced palatability of the diets and negatively affected growth performance. However, the concentration of S in the DDGS-containing diets had no impact on feed palatability or growth performance.

Key Words: distillers dried grains with solubles, feed preference, sulfur