

Effect of intermittent feeding of diets containing 40% corn dried distillers grains with solubles (DDGS) to growing-finishing pigs on bacon yield and quality

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This study evaluated the effects of feeding 40% DDGS diets to growing-finishing pigs, as well as, the accuracy of Standardized Ileal Digestible (SID) AA estimates of DDGS sources when fed continuously or intermittently throughout the growing-finishing phase on bacon quality and yields. Crossbred pigs (n = 324) were blocked by initial BW (33.2 ± 3.0 kg), and pens within a block were assigned randomly to 1 of 6 dietary treatments (6 pens/trt; 9 pigs/pen). Diets included a corn-soybean meal control (C), C plus 40% low AA digestible DDGS (Lo), C plus 40% high AA digestible DDGS (Hi), alternating between Lo and C (Lo-C), Hi and C (Hi-C), and Hi and Lo (Hi-Lo). Diet switches coincided with phase changes and pigs were harvested on a single date after 98 d on feed. Carcasses (n = 33) representing pigs fed the Lo, Hi-C, and Hi-Lo 56 treatments (11 per trt) were randomly selected for further processing and analysis. Vertical flex tests were conducted and belly thickness was measured and averaged from 8 locations. Bellies were cured, tumbled, smoked, and sliced (9 slices per 2.54 cm). Weights were obtained pre and post-tumbling, post-smoking, and post-slicing. Sliced slabs were divided into 5 equal sections, and the first 2 slices from the anterior end of each section were removed for shatter analysis using a subjective scale of 1 to 6 (1 = no shatter; 6 = extreme shatter). The next 2 slices serially were evaluated for cook loss, cook shrink and cook distortion and were cooked on a 157°C surface to target $\leq 40\%$ loss of the original weight. Cook shrink was determined by measuring slice length pre and post-cooking. Cook distortion was determined using a subjective scale of 1 to 5 (1 = no distortion; 5 = severe distortion). No differences were observed for belly thickness, green weight, tumble yield, smokehouse yield, slicing yield, shatter analysis, distortion, cook loss, or cook shrink among treatments. Results indicate feeding DDGS had no adverse effect on bacon quality or yield and feeding DDGS at levels up to 40% of the diet should not affect bacon quality.

Key words: DDGS, swine, bacon