
436 **Effects of diet form and distillers dried grains with solubles (DDGS) on stomach morphology and ulceration scores in growing-finishing pigs.**

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As particle size decreases in swine diets, growth efficiency of pigs increases, but the occurrence of stomach ulcers can also increase. In addition to being an animal health concern, stomach ulcers can reduce the value of pig stomachs as by-products. On average, the stomach of a finisher pig weighs 0.60 kg and is valued at approximately \$0.67/kg. The total value of by-products (drop value) of a pig is currently \$10 to \$15; the stomach represents between 2.5 and 4% of drop value. Therefore, an increase in stomach ulcerations has economic implications for the meat industry. The objectives of this study were to determine differences in stomach morphology and ulceration scores of barrows and gilts fed pelleted or mash diets without or with 30% distillers dried grains with solubles (DDGS). Pigs ($N = 192$) were randomly allotted to 1 of 4 dietary treatments, with 12 replicate pens per diet, and 2 barrows and 2 gilts per pen. The 4 dietary treatments were: pelleted diet with 0% DDGS, pelleted diet with 30% DDGS, mash diet with 0% DDGS, and mash diet with 30% DDGS. A subset of 96 pigs (the heaviest barrow and gilt from each pen) were selected for stomach evaluation. Stomach weight, absolute and as a percentage of live weight, was recorded. Stomachs were scored using a 10 point scale where 0 represented a normal, healthy stomach and 10 represented a stomach with one or more bleeding ulcers and an esophagus opening diameter less than 2 mm. Data were analyzed as a 2×2 factorial arrangement in a randomized complete block design with pen as the experimental unit. For all stomach traits, the interaction of diet form and DDGS inclusion was not significant ($P > 0.44$). Absolute stomach weight was not different among

treatments ($P \geq 0.25$). Stomach weight as a percentage of live weight tended to be increased ($P = 0.07$) 0.02 percentage units in pelleted-fed pigs compared with mash-fed pigs, but was not affected by DDGS inclusion ($P = 0.36$). Pelleting diets increased ulceration scores from 1.27 to 1.79 ($P < 0.01$), but there was no difference in ulceration score between DDGS treatments ($P > 0.10$). Overall, all stomachs in this study were considered healthy, but packers should be aware of potential economic impacts on the value of stomachs as by-products due to dietary particle size of swine diets.

Key Words: pelleting, pigs, ulcers
