

Evaluation of corn distillers dried grains with solubles and a polyclonal antibody on growth performance and the ability of pigs to resist an infection from *Salmonella Typhimurium*. M. Spiehs*, G. Shurson, L. Johnston, and K. Seifert, *University of Minnesota*.

A two part study was conducted to determine if growth performance and the incidence of *Salmonella* shedding were influenced by the inclusion of 50% corn distillers dried grains with solubles, or a polyclonal antibody (IMT+TM, CAMAS, Inc) in the diets of growing and finishing pigs. For Part 1, 135 pigs (14 kg initial BW) were blocked by weight and randomly allotted within block to one of three dietary treatments: corn-soybean meal control (C), C+ a polyclonal antibody (PCA), or a corn-soybean meal diet containing 50% corn distillers dried grains with solubles (DDGS). Diets were formulated to contain equivalent ME, apparent digestible Lys, total Ca, and available P across all diets in each of 5 phases. Overall ADG and ADFI for pigs fed the DDGS diets (690 and 1870 g/d, respectively) were less ($P < 0.05$) than pigs fed the PCA diets (780 and 1970 g/d, respectively) or C diets (740 and 1960 g/d, respectively). Overall G:F for the pigs fed the DDGS diets (0.37) was less ($P < 0.01$) than pigs fed PCA diets (0.39) and tended to be less ($P = 0.09$) than pigs fed the C diet (0.38). Pigs fed the C and PCA diets had similar ADG, ADFI, and G:F. Part 2 of the study began on d 105 and involved randomly selecting 40 pigs (109 kg BW) for a disease challenge. Thirty pigs (10 C, 10 PCA, and 10 DDGS) were inoculated with *Salmonella Typhimurium* at d 7, 14, and 33. Ten pigs were not inoculated (NC). Overall *Salmonella* infection was low after each of the 3 inoculations. There were no differences between challenged and NC pigs, or among challenged pigs fed the three dietary treatments in *Salmonella* prevalence of fecal or tissue samples, or serum haptoglobin, α 1-glycoprotein, IgM, and IgG concentrations. These results indicate that growing-finishing pigs fed diets containing 50% DDGS will have decreased ADFI and ADG compared to pigs fed C or PCA diets. The disease challenge model used in this study was unsuccessful in producing an acute salmonellosis infection in finishing pigs inoculated with *Salmonella Typhimurium*.

Key Words: Salmonella, Distillers grains, Polyclonal antibody

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