SHELF STABILITY AND QUAILTY OF FRESH GROUND PORK AND PORK SAUSAGE FROM PIGS FED ETHANOL CO-PRODUCTS

Hannah Evans

Dr. Bryon Wiegand, Thesis Supervisor

ABSTRACT

An experiment was performed to evaluate the effects of ractopamine (RAC), conjugated linoleic acid (CLA) and distillers dried grains with solubles (DDGS) on fatty quality and shelf stability of ground pork. Diets were arranged in a 2 x 2 x 2 factorial design within a completely randomized design. Picnic shoulders (n=72) were selected from pigs fed one of eight dietary treatments, consisting of two levels of DDGS inclusion (0 or 20% DDGS), two levels of RAC (0 and 7.4 mg/kg), and two levels of CLA (0 and 0.6%). Picnic shoulder trim from each animal was divided into three sections and each was assigned to one of three processing treatments: A) ground pork, B) fresh pork sausage, or C) fresh pork sausage + rosemary extract. Samples were analyzed for fatty acid profiles, TBARS, and color during retail display. Higher IV were seen with DDGS ($P < 0.0001$) and RAC ($P = 0.004$) inclusion and lower IV with CLA ($P < 0.0001$) and rosemary exhibited a significant antioxidant effect, resulting in lower TBARS values.