

**Impact of feeding distiller's grains on beef tenderness and sensory traits.** D. L. Roeber, R. K. Gill\*, and A. DiCostanzo, *University of Minnesota*.

Knowledge regarding quality and sensory traits of beef from cattle fed distiller's grains (DG) is limited. This study was designed to evaluate effects of feeding DG on color, tenderness, and sensory traits of Holstein steers. This study complements studies conducted at the Univ. of Illinois (Exp. 1) and Iowa State Univ. (Exp. 2) to evaluate feeding wet (WDG) or dry (DDG) DG on feedlot performance. From Exp. 1, treatments were whole corn-corn silage diets supplemented with soybean meal (Control), 12.5% DDG plus urea, 25% or 50% DDG or WDG (DM basis). From Exp. 2, treatments were cracked corn-corn silage-hay diets supplemented with soybean meal (SBM Control) or urea (Urea Control), 10%, 20% or 40% DDG or WDG (DM basis). Within study, one strip loin (n=16/treatment; 45.7% and 66.6% of steers in Exp. 1 and 2, respectively) from each of four steers in each of four replicate pens (pen=experimental unit) per treatment were aged for 13 d at 21°C for color, tenderness, and palatability evaluation. Color of steaks was measured objectively (Hunter Lab Miniscan XE spectrophotometer) and subjectively (trained panel). Tenderness was measured using the Warner- Bratzler shear force on steaks cooked to 70° C. Consumers (n = 95) were recruited to evaluate sensory traits on cooked steaks. Panelists evaluated 14 steak samples using a 9-point, hedonic scale where 1 = dislike extremely and 9 = like extremely. In Exp.1, steaks from steers fed 25% WDG had higher a\* values (P < 0.05) after 138 h than all other treatments except from those steers fed 12.5% DDG. In Exp. 2, a greater (P < 0.05) percentage of steaks from steers fed 40% DDG and 40% WDG were moderately unacceptable. No differences (P > 0.05) were observed in average shear force values (Exp. 1 and 2 were 1.60 ± 1.35 kg and 1.60 ± 1.33 kg, respectively) or taste panel attributes (5.7 ± 2.1, 6.0 ± 1.9, and 5.6 ± 2.1 in Exp. 1, and 6.2 ± 2.1, 6.2 ± 1.8, and 5.8 ± 2.0 in Exp. 2 for tenderness, flavor, and juiciness, respectively). Feeding DG at up to 50% of the diet DM did not affect tenderness or palatability, therefore, DG may be a viable feed alternative.

**Key Words:** Beef, Distiller's grains, Palatability

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