

Beef Day 2021

Influence of beef carcass chilling rate on steak case life and quality traits

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Objective

To determine if beef carcass weight influences chilling rate, pH decline, beef color, case life and tenderness of steaks from the round, loin, rib and chuck.

Study Description

Twelve feedlot cattle were harvested at the SDSU Meat Lab. Carcasses were allocated into two treatment groups ($n = 6/\text{treatment}$) based on hot carcass weight (HCW): heavyweight (HCW = 992 ± 13 lbs) and lightweight (HCW = 769 ± 22 lbs). Data logging thermometers were placed into the round, loin, rib, and chuck. Sample pH was measured over the first 48 hours postmortem in the round, loin, rib, and chuck. Carcass data was collected 48 hours postmortem. Denver cut, ribeye, New York strip and eye of round steaks were collected for further quality analysis.

Take Home Points

Hot carcass weight did not influence pH, lightness, redness, and yellowness in the chuck, rib and loin ($P > 0.05$). Lightweight carcasses had overall decreased pH values in the round ($P < 0.05$). Additionally, lightweight carcasses had increased ($P < 0.05$) lightness and yellowness values in eye of round steaks. Data analysis is ongoing for other quality traits.

Acknowledgements

This project was supported by the Beef Checkoff through the South Dakota Beef Industry Council (Award # 3X0395) and USDA NIFA (Accession # 1025033).

