

ABSTRACT

PSV-29 Influence of Akaushi Genetics on Color and Sensory Attributes of Beef from Grain and Grass-finishing systems

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The effects of beef genetics and finishing system on color and sensory attributes of longissimus dorsi steaks were evaluated. Steaks were from Red Angus (RA, n = 30) and RA x Akaushi (AK, n = 30) fed with a mixed-species pasture forage (GRASS) or a total mixed feedlot ration (GRAIN). Animals were slaughtered at 18 (GRAIN) and 26 (GRASS) mo. Rib sections (11th and 13th) were collected 48 h postmortem from the left side of each carcass, cut into two 2.54 cm-thick steaks, vacuum packaged, and aged 14 d. One steak was frozen until water holding capacity and Warner Bratzler shear force (WBSF) analysis. The other fresh steak was evaluated for instrumental color and cooked for consumer panelists (n = 105) to evaluate flavor, texture, juiciness, and overall acceptability using a 9-point hedonic scale (1 = dislike extremely and 9 = like extremely). There was no difference between beef genetics. GRASS had higher chroma (more color saturation) and a* values (redder) compared to GRAIN treatment. There was genetics x diet interaction for hue angle and L* values, where RA had greater hue angle than AK in GRAIN (P = 0.01) and AK had greater L* (lighter, P < 0.01) than RA in GRASS. The GRASS-finishing reduced beef steaks thawing (-20 %) and cooking (-12.8 %) loss compared to GRAIN-finishing (P < 0.05). There were no differences (P > 0.05) in WBSF between finishing systems. Steaks from GRAIN received the greatest ratings (P < 0.01) for flavor, texture, juiciness, and overall acceptability compared to GRASS. Results indicate that the color attributes were influenced by finishing system. Furthermore, beef finishing system had a marked impact on steaks' sensory attributes and consumer acceptability. The favorable results for texture and juiciness in GRAIN, which likely impacted overall acceptability, may be related to high marbling.

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