



RESEARCH BRIEF PRODUCT QUALITY

BEEF RESEARCH

National Beef Tenderness Survey—2010: Warner-Bratzler Shear Force Values and Sensory Panel Ratings for Beef Steaks from United States Retail and Foodservice Establishments

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Abstract

The tenderness and palatability of retail and foodservice beef steaks from across the United States (12 cities for retail, 5 cities for foodservice) were evaluated using Warner-Bratzler shear force (WBSF) and consumer sensory panels. Subprimal post-fabrication storage or aging times at retail establishments averaged 20.5 days with a range of 1 to 358 days, whereas post-fabrication times at the foodservice level revealed an average time of 28.1 days with a range of 9 to 67 days. Approximately 64% of retail steaks were labeled with a packer/processor or store brand. For retail, the Top Blade had among the lowest ($P < 0.05$) WBSF values, whereas steaks from the Round had the greatest ($P < 0.05$) values. There were no differences ($P > 0.05$) in WBSF values between moist-heat and dry-heat cooking methods for the Top Round and Bottom Round Steaks or between enhanced (contained salt or phosphate solution) and non-enhanced steaks. Foodservice Top Loin and Ribeye Steaks had the lowest ($P < 0.05$) WBSF values compared with Top Sirloin Steaks. Retail Top Blade Steaks and foodservice Top Loin Steaks received among the greatest ($P < 0.05$) consumer sensory panel ratings compared with the other steaks evaluated. USDA Prime grade foodservice Ribeye Steaks received the highest ratings ($P < 0.05$) for overall like, like tenderness, tenderness level, like juiciness, and juiciness level, whereas ungraded Ribeye Steaks received the lowest ratings ($P < 0.05$) for like tenderness and tenderness level. The WBSF values for foodservice steaks were greater ($P < 0.05$) for the USDA Select grade and ungraded groups compared with the USDA Prime, Top Choice, and Low Choice grades. The WBSF values and sensory ratings were comparable to the last Survey in 2005, signifying that no recent or substantive changes in tenderness have occurred.

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