2017 Reciprocal Meat Conference – Consumer Topics

Meat and Muscle Biology™

Consumer Perception of Beef Palatability Altered by Brand Recognition

H. Voegele[1]*, O. S. Ron[1], A. J. Garmyn[1], T. G. O'Quinn[2], J. C. Brooks[1], and M. F. Miller[1]

[1]Animal & Food Science- Meat Science, Texas Tech University, Lubbock, TX, USA;
[2]Animal Sciences and Industry, Kansas State University, Manhattan, KS, USA

Objectives

The objective of this study was to evaluate the differences of beef palatability trait scores when consumers were made aware of brands representing various production systems.

Materials and Methods

Strip loins were selected to represent a Grain-Fed Natural (Natural), Certified Angus Beef (CAB), Local Grass Fed (LGF), USDA Select (Select), and USDA Certified Organic (Organic) production systems. After 21 d of storage, strip loins were cut into 2.5 cm thick steaks and stored at –20°C until analysis. Thawed samples were cooked on a belt grill to a medium degree of doneness (71°C) and evaluated by consumers (n = 120) for tenderness, juiciness, flavor liking, and overall liking. Each trait was rated on a 100 mm verbally anchored line scale. Each panelist was served two, 1 cm × 1 cm, pieces per sample. Panelists were served steaks representing the 5 production system treatments without any knowledge of their identity (blind). Next, panelists were served 5 samples but were read a short description of each production system treatment before each sample (known). Differences between the results from the blind group responses and the known responses were calculated for the various palatability traits. Data were analyzed using the GLIMMIX procedure of SAS (version 9.4; SAS Inst. Inc., Cary, NC) with treatment as the fixed effect and panel as the random effect ($\alpha = 0.05$).

Results

During the blind panels, differences were found among production system treatments for tenderness, flavor and overall liking (P < 0.01). Natural and CAB samples were scored higher than all other treatments for tenderness, flavor and overall liking (P < 0.05). Organic was scored less for tenderness than both Select and LGF (46.25 vs. 52.83 and 52.52, respectively; P < 0.05), while both LGF and Organic were rated higher than Select for flavor and overall liking (P < 0.05). After treatment descriptions were read to the panelists, panelists increased their scores for all palatability traits for Natural and CAB, with each treatment scoring higher than any other production system. Additionally, LGF and Select rated higher in tenderness, flavor and overall liking than Organic (P < 0.05). When consumers were aware of the production system of the beef they were consuming, scores for tenderness and juiciness did not fluctuate from the blind panels (P = 0.39 and P = 0.23, respectively). However, CAB was rated 11.9 and 11.3 units greater (P < 0.01) for flavor liking and overall liking, respectively, when the treatments were known. Likewise, consumers scored LGF 6.0 and 7.0 units greater (P < 0.05) for flavor liking and overall liking, respectively. Moreover, scores for Natural overall liking increased (P < 0.05) by 5.8 units when consumers knew the treatments.

Conclusion

These results indicate brand recognition may have significant impact on consumer perception of beef palatability. Most notably, Natural and CAB rated the highest among treatments during the blind panel, and benefited the most from treatment disclosure. Overall, verbal descriptions tended to increase consumer acceptability, particularly for flavor and overall liking. The Select treatment group was the only treatment with negative impacts.