Consumer interest in health benefits of forage-finished beef has led to increased product demand. To date, little information is available on sensory characteristics of cooked forage-finished beef. We evaluated sensory acceptability and chemical characteristics of rib-eye steaks from forage-finished steers. Rib-eye steaks from 3 forage-finished steers (S1 [bermudagrass+ryegrass, etc.]; S2 [bermudagrass+barrelbursage, etc.]; S3 [bermudagrass+barrelbursage+forage soybean+brown middling sorghum, etc.]) were cooked by grilling and/or 2-sided grilling, were evaluated for chemical composition and microbial safety. Sensory ratings (Cronbach’s α = 0.79, 0.80, 0.82, 0.85) were obtained from 11 Hispanic consumers. Data were analyzed using PROC MIXED (SAS Institute Inc., Cary, NC). A higher fat (50.2 vs. 23.0-24.9%) and lower protein (49.4% vs. 73.5-74.4%, dry weight basis) contents compared with S1 and S2. S1 and S3 had higher omega-3 (49.0-55% vs. 0.09%), lower omega-6/omega-3 ratio (2.5-28.1 vs. 10.07), and lower PUFA (3.4-31.7 vs. 8.4%) contents than C, thus exhibiting a healthier fatty acid profile.^

The purchase intent of all cooked steaks treatments was greater than 60%. Overall liking of S2 and S3 was negatively affected by the lack of juiciness and/or tenderness. Mean consumer acceptance scores between freshly harvested and 5 days frozen steaks were not significantly different. The overall purchase intent of the rib-eye steaks obtained from forage-finished steers was 67.3% compared to 65.7% of C steaks (both cooking methods) and 65.9% of S3(Grilling) were not significantly different. Purchase intent (after health benefits of forage-finished steaks was informed) increased from 62.0-73.8 to 69.8-85.7%. The mean drop of liking scores was -1.00 to -2.50 to -2.90 on the 5-point OL scale, respectively, when cooked steaks were not juicier and not tenderer enough. Cooked and rib-eye steaks were free of E. coli. This study demonstrated that forage-finished steaks are potentially healthier than grain-fed commercial steaks and have market potential toward Hispanic population.

**Discussion**

**Consumer acceptability of different cooked rib-eye steaks (freshly harvested beef):** For all sensory attributes, no significant difference was found between cooking methods except for C where the grilling method had a higher mean score compared to 2-sided grilling. For overall appearance and overall beef flavor, no significant differences were found (P = 0.05) among steaks treatments regarding the mean consumer acceptance scores. For juiciness, tenderness and overall liking, C (2-sided grilling and grilling) and S3(Grilling) presented higher mean scores compared to other treatments. Differences among forage-finished steaks treatments could be due to differences in sensory panels or quality of the grasses (Kerth et al. 2007). The purchase intent of all cooked steaks treatments was greater than 60%. Overall liking of S2 and S3 was negatively affected by the lack of juiciness and/or tenderness. Conversely, for C, less than 21-23% of the participants considered the steak not juicy enough and less than 16.3% considered the steaks to be not tender enough. The attributes tenderness, juiciness, and overall liking were positively related (r = 0.21-0.41). Overall liking of rib-eye steaks was highly correlated (r = 0.21-0.50) with juiciness and tenderness (r = 0.19-0.51) as well as the primary discriminant function (Table 1) of the linear discriminant functions.

**Conclusions**

Two cooking methods did not cause significant differences in liking scores. Purchase intent was affected by the lack of juiciness and/or tenderness. Mean consumer acceptance scores between freshly harvested and 5 days frozen steaks were not significantly different. The overall purchase intent of the rib-eye steaks obtained from forage-finished steers was 67.3% compared to 65.7% of C steaks (both cooking methods) and 65.9% of S3(Grilling) were not significantly different. Purchase intent (after health benefits of forage-finished steaks was informed) increased from 62.0-73.8 to 69.8-85.7%. The mean drop of liking scores was -1.00 to -2.50 to -2.90 on the 5-point OL scale, respectively, when cooked steaks were not juicier and not tenderer enough. Cooked and rib-eye steaks were free of E. coli. This study demonstrated that forage-finished steaks are potentially healthier than grain-fed commercial steaks and have market potential toward Hispanic population.
Sensory acceptability and chemical characteristics of healthy rib-eye steaks from forage-finished steers

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