A Comparison of American Grass-Fed Brands on Strip Loin Quality Grade and Consumer Acceptance

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**Introduction**
- Grass-fed beef in the U.S. is a fast-growing consumer phenomenon that is starting to attract the attention of more cattle producers and food companies.
- There is a lack of coherent information on how the market works.
- Consumer preference.
- Consumer perceptions are subjective.

**Methodology**
- Seven different product samples were collected for analysis.
- 7.62 cm.
- Trimmed of fat, connective tissue, and secondary muscles, such that only LM remained.
- 48 – 60 h 2°C
- Silex clamshell grill
- T set 204°C and internal T° 71°C
- Overall tenderness.
- Overall juiciness.
- Beef flavor ID.
- Browed/roasted.
- Fat-like.
- Meaty-like.
- 1 by 5 cm slice was removed parallel to the muscle fibers on the lateral end.
- Sheared perpendicular to the muscle fibers
- Crosshead speed: 500 mm/min, load capacity: 50 kg
- Completely randomized design.
- R statistical software.

**Purpose**
- To determine the market’s preference towards the characteristics of Grass Fed Beef.

**Hypothesis**
- Consumer preference is subjective, they can not easily identify the differences between the key characteristics of the different brands available on the market.

**Results**

**Shear Force:**
- P < 0.01
- Consumers were unable to detect.

**Beef Flavor/Fat-Like:**
- A was greater than D, F, G.
- P < 0.01

**Tenderness:**
- Trained panelists did not detect a difference in tenderness.
- 2.54 < 4.4 (Kg)

**Conclusion**
- A’s beef rated the greatest for positive beef flavor notes and the lowest for negatively associated flavor notes, including grassy/hay-like, relative to its competitors.
- A was more juicy and fat-like than the grain-fed products (B,C).
- In the marketplace product E would be the primary competitor of product A as both products perform very similar.
- Sensory ratings for overall tenderness and shear force values of A were acceptable among industry standards, without compromising the flavor profile.
- Competitors may be aging product for a greater than 21 days, which may contribute to a tenderness advantage and different flavor profiles in these alternate brands.

**Recomendations**
- Conduct similar research using the same aging periods to reduce bias.

**Bibliography**