



## Millennial's Perception of Beef, Pork and Chicken Flavor

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### Objectives

This research was conducted to determine the factors that affect the millennial generation's liking of beef, pork, and chicken and how those factors impact protein consumption.

### Materials and Methods

Differences in beef, pork and chicken flavor attributes were created in beef Top Choice strip loin steaks (58.3°C and 80°C), beef Select outside round flat roasts (58.3°C and 80°C), boneless pork loins (62.7°C and 80°C), pork inside ham roasts (62.7°C and 80°C), chicken breasts (62.7°C and 80°C), and chicken thighs (62.7°C and 80°C) cooked utilizing a food-service flat grill or Crock-pot. An expert trained descriptive sensory attribute panel, a consumer central location test (CLT) and gas chromatography-mass spectrometry-olfactory (GC-MS-O) were utilized to determine flavor attributes and volatile aroma compounds. Texture attributes were evaluated by the expert descriptive attribute and CLT panels. Raw meat fatty acid composition, non-heme iron and myoglobin content, pH, and fat and moisture percentages were determined. Millennials (ages 18 to 34) or non-millennials (ages greater than 34) were selected to be either light (eat beef 2 to 4 times per mo) or heavy beef-eaters (eat beef 3 or more times per wk).

### Results

Cooking method, cut, and internal temperature impacted ( $P < 0.05$ ) meat descriptive flavor and texture attributes of beef, pork and chicken. The Crock-pot-cooked meat had less ( $P < 0.05$ ) positive flavor attributes than the grilled meat. Generation or meat consumption consumer groups did not affect ( $P > 0.05$ ) how consumers rated grill flavor, juiciness and tenderness. Light beef-eaters rated overall, flavor, and species flavor lower ( $P < 0.05$ ) than heavy beef-eaters. Consumers liked beef regardless of generational segment or their consumption of beef. Millennials and non-millennials did not differ ( $P > 0.05$ ) in their response to flavor of beef.

Regression equations for volatile aromatic compounds accounted for 53, 64, 63, 42, 48, 46, 54, 56, and 46% of the variation in beef identity, pork identity, chicken identity, brown/roasted, bloody/serumy, fat-like, metallic, liver-like, and umami, respectively. Overall flavor, tenderness, meat flavor, grill flavor, and juiciness liking accounted for 84% of the variation in overall consumer liking.

### Conclusion

Millennial consumers have similar drivers of liking as non-millennials for beef, pork, and chicken when in a CLT. Additional research needs to be conducted to determine the factors that impact purchase decisions since liking was not different between millennial and non-millennial consumers.