UF-Gainesville Beef Cattle News Corner

Knowledge about beef nutritional attributes and consumers' willingness-to-pay (Part 2)

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Nutritional value impacts consumers' purchasing decisions of food products. Beef is a nutrient-rich foodstuff excelling in protein, vitamins, and minerals. There is growing controversy regarding the fat content of beef and its healthfulness in the diet. Although much of the fatty acid content in beef is considered "healthy fats," many consumers are confused about the different classifications of fatty acids. Research regarding fatty acid composition of beef at the University of Florida showed there is variation among cattle for polyunsaturated and saturated fatty acids, with a more favorable fat composition as amount of *Bos indicus* breed percentage increases (see "Part 1" of this series in the previous issue of The Florida Cattleman & Livestock Journal). The objectives of this study, funded by the Florida Beef Council, were to determine consumers' knowledge about the nutritional value of beef and its importance in purchasing decisions, and to gain a better understanding about preferences for changes in fatty acids composition. Objectives of the study were completed through two consumer studies: 1) an online survey; and 2) a taste panel auction. In this magazine issue, the results of the online survey will be discussed. The results of the taste panel auction will be discussed in the next issue of The Florida Cattleman & Livestock Journal.

Online Survey. A national survey, funded by The Florida Beef Council, was administered online to 1,020 respondents. Respondents were first asked to choose between two strip steaks that varied by polyunsaturated and saturated fatty acid levels, iron content, and price. Respondents were also asked to categorize "Trans Fat," "Saturated Fat," "Monounsaturated Fat," and "Polyunsaturated Fat," as either "Healthy Fats" or "Unhealthy Fats." After completing these questions, respondents were given information explaining the fatty acid classifications: monounsaturated and polyunsaturated are healthy fats while trans and saturated are unhealthy fats. After receiving the educational component, respondents were re-asked the steak choice questions and the fat-categorization question. Respondents were then asked the most important and least important factors to them when purchasing beef, how often they consume beef, their desired cooking level of beef, and their preference of fat source when cooking in general.

Results. The results from the survey indicate many consumers are confused about the differences in beef nutritional value, specifically fatty acids content. Initially, only 66.40%, 69.05%, 79.14% and 79.24% of respondents correctly categorized the monounsaturated,

polyunsaturated, saturated, and trans fat, respectively. However, a favorable shift occurred and more than 90% of respondents correctly categorized the various fatty acids once provided the educational. Furthermore, after better understanding the differences in "healthy" and "unhealthy" fatty acids in beef, respondents were willing-to-pay a premium for a product of improved fatty acids composition (**Table 1**). Prior to information regarding fatty acids, respondents preferred steaks with higher iron content, especially compared to better fatty acids composition, but these preferences reversed after the educational figure was provided and respondents better understood that not all fat in beef is bad. After respondents better understood fatty acids composition, they were willing to pay $3.00-$4.20 more for increased healthful fat content.

Table 1: The premiums/discounts in U.S. Dollars respondents are willing-to-pay per pound of steak before and after the educational excerpt.

	Premiums/discounts (USD)	
Nutritional Improvement	Before information	After information
50% more favorable fat composition	-$1.00	$3.00
100% more favorable fat composition	-$1.40	$4.20
50% iron content increase	$0.20	$0.10
100% iron content increase	$1.30	-$0.50

Respondents were asked to classify which attributes, besides price, are most important and least important when purchasing beef. They were provided a list of 12 attributes: brand name of product, breed of animal, marbling level, nutrient content, taste/eating experience, USDA grade of product, visual appearance, where/how animal was raised, growth promotants, antibiotics, grass fed, organic. The top three most important attributes by percentage of respondents were "Grade," "Taste," and "Appearance," the top three least important attributes by percentage of respondents were "Brand," "Breed," and "Organic." It is interesting to note that despite the popularity of "Certified Angus Beef," "Breed of animal" is ranked as one of the least important attributes to respondents. This perhaps suggests consumers do not exactly correlate the "CAB" stamp or simple term "Angus" to a specific breed of animal. Furthermore, "USDA grade of product" was ranked as one of the most important attributes, however, marbling level was not. This could suggest consumers do not necessarily recognize what "marbling" means, and its correlation to USDA grades such as choice and prime.

Most respondents (38.32% of the population) said they consume beef 2-3 times per week, (**Figure 1**) and most (53.72%) said they prefer either a medium or medium rare degree of doneness (**Figure 2**).

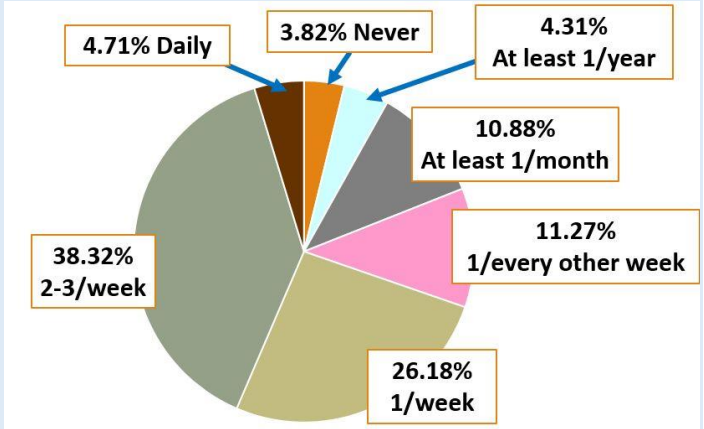

Figure 1. How often respondents consume beef as percentage of population surveyed.

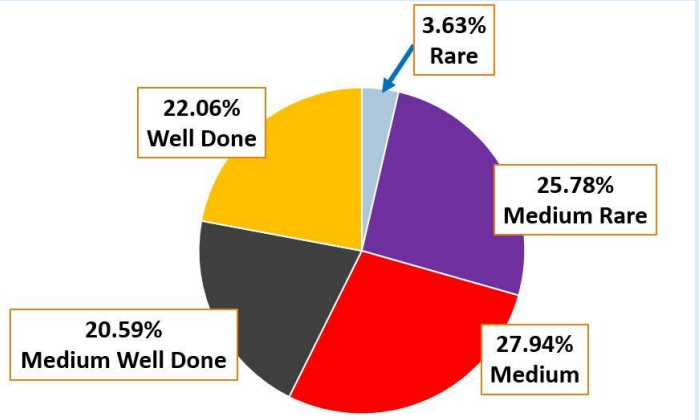

Figure 2. Respondents' desired cooking level of beef as percentage of population.

When respondents were asked what their preference of fat source when cooking in general, the majority of the respondents said either olive oil (54.22%) or vegetable oil (35.29%). It should be noted that the main fatty acids type in these two oils is monounsaturated fatty acids, or healthy fat, which has led to the popularity of these fat sources. In the same time, it is important to emphasize that nearly 50% of the fat content of beef is also monounsaturated fatty acids. This suggest that consumers recognize there are healthy fat sources and unhealthy fat sources, but it is not widely recognized that the majority of fat in beef is healthy.

These results provide insight for the promotion and marketing of beef, especially to the increasing population of health-conscious consumers. Controversy surrounding fat content of red meat and its role in the diet led to many health professionals recommending cutting such food from the diet. The results from the survey indicate many consumers are confused about the differences in beef nutritional value, specifically fat composition. Once respondents better understood the healthfulness of fatty acids in beef, respondents were willing-to-pay a premium for a product of improved fatty acids composition. Stay tuned for next month's issue ("Part 3") which will include the results from the taste panel auction, and how the results compared to those of the survey.

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