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**Consumer Preferences for  
Tennessee Beef**

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## Summary

The Tennessee cattle industry is an important component of the state's agriculture, contributing the largest receipts among all agricultural commodities in 2011. Opportunities may exist for cattle farmers to have cattle harvested and to sell meat directly through on-farm retail outlets, through farmers markets, or to wholesalers. If farmers are able to do so, they may capture a portion of the value added from processing and marketing the beef. However, little research exists regarding Tennessee consumers' preferences for locally raised beef. This study examines Tennessee consumers' preferences for and their willingness to pay a premium for Tennessee beef based upon results from a 2013 telephone survey of randomly selected participants from counties in and around Memphis, Nashville, Chattanooga, Knoxville, and Tri-Cities (Kingsport, Johnson City, Bristol). The willingness to pay is evaluated for two products, ground beef and a boneless ribeye steak. In addition, preferences regarding outlets where they would purchase Tennessee beef, form of the beef, and type of packaging are examined to gain further insights about how Tennessee beef steaks and ground beef might be marketed.

The results from this study suggest that consumers in the metropolitan areas of Tennessee are willing to pay a premium for ribeye steaks and ground beef labeled as TENNESSEE BEEF. Estimates are that a \$2.96 premium would be paid for a ribeye steak and a \$.70 per pound premium would be paid for ground beef labeled as TENNESSEE BEEF. Purchasing TENNESSEE BEEF gives the potential buyers a sense of supporting farmers and the economy within their state. Respondents who selected TENNESSEE BEEF also viewed it as fresher and safer than out of state beef. Respondents expressed a preference for a fresh product over a frozen or frozen then thawed or cooked product. Those choosing a TENNESSEE BEEF product tended to be younger in age, have some farm background, and have higher incomes than the overall set of respondents. Comparison of percentages choosing the TENNESSEE BEEF steak or TENNESSEE BEEF ground beef across demographics showed that those with a farm background or rural residence were more likely to choose a TENNESSEE ground beef product over the base product. In addition, there appear to be some differences across regions in willingness to select a TENNESSEE BEEF product, suggesting that some markets are more accepting of these products. Because freshness, safety, support of local farms, and support of local economies appear to be important to the respondents in making their product selections, marketing programs to promote TENNESSEE BEEF labeled products might emphasize these issues.

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# Consumer Preferences for Tennessee Beef

## Background and Objectives

### *Tennessee Beef Cattle Industry*

In 2011, cash receipts from cattle and calves were \$586.3 million, or about 16.7 percent of all Tennessee agricultural receipts for that year (TDA 2012). Receipts from cattle and calves were the largest among all agricultural commodities. Tennessee ranks ninth in the number of beef cows and 15<sup>th</sup> in all cattle and calves (TDA 2012). Nearly 90 percent of the state's operations are cow-calf operations (USDA/NASS 2007) and some are involved in backgrounding (10 percent), rather than finishing. Backgrounding is raising steers or heifers from weaning until they are ready to enter the feedlot to be finished, generally at 650 to 800 pounds. Neel (2010) estimated that about 750,000 feeder calves in Tennessee are marketed to backgrounding operations and feedlots in the Midwest and High Plains each year.

Opportunities may exist for farmers to have cattle harvested in federally inspected facilities and then sell the meat directly through on-farm retail outlets, through farmers markets, or to wholesalers.<sup>1</sup> If farmers are able to do so, they may be able to capture a portion of the value added from processing and marketing the beef. One potential means by which additional value added may be captured is if consumers are willing to pay a premium for a locally produced and labeled beef product, such as a steak or ground beef.

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<sup>1</sup> If livestock producers want to sell beef through retail markets or wholesale markets, the harvest must take place in USDA inspected harvest facilities. Tennessee Department of Agriculture lists 13 federally inspected facilities in the state that will harvest cattle as of 2011 (TDA 2013).

## ***Objectives***

The purpose of this study is to ascertain Tennessee consumers' preferences for and their willingness to pay a premium for Tennessee beef. The willingness to pay is evaluated for two products, ground beef and a boneless ribeye steak. The counties that are home to the Memphis, Nashville, Chattanooga, Knoxville, and Tri-Cities (Kingsport, Johnson City, Bristol) were targeted for the survey. These metropolitan areas are the five largest population centers across the state, potentially representing the largest customer base. In addition, preferences regarding outlets where they would purchase Tennessee beef, form of the beef, and type of packaging are examined to gain further insights about how Tennessee beef steaks and ground beef might be marketed.

## **Previous Studies**

Several studies have found that there is a preference among consumers for locally produced beef versus beef that is not produced locally (Adalja et al. 2013; Mennecke et al. 2006; Wolf and Thulin 2000; Evans et al. 2011; Maynard, Burdine, and Meyer 2003). Adalja et al. (2013) used stated and revealed preference data from a choice-based conjoint survey instrument to determine willingness-to-pay of Maryland residents for locally produced ground beef. Mennecke et al. (2006) also used the conjoint method, using a national sample of over 1,000 respondents. Wolf and Thulin (2000) evaluated purchase interest to examine the consumer profile of an individual who would purchase a locally branded beef product in California, evaluating purchase interest using an n-point purchase interest scale with each point indicating the likeliness that the consumer would purchase the local beef product. Evans et al. (2011) utilized an in-store variant of the Becker-DeGroot-Marschack (1964) experimental auction method to determine willingness to pay for grass-fed beef in the Appalachian region and found

that local production increased bids for grass-fed beef. Maynard, Burdine, and Meyer (2003) conducted a willingness-to-pay survey of consumers and restaurants and found that consumers were willing to pay premiums for locally produced ground beef and steak, as well as for other meat products such as chicken and sausage.

Many more studies have found a willingness to pay for non-beef products, such as other meats and produce (Ernst et al. 2006; Darby et al. 2006; Willis et al. 2013; Loureiro and Hine 2002; Adams and Adams 2008; Brooker et al. 1988; Nganje, Hughner, and Lee 2011). Ernst et al. (2006) and Darby et al. (2006) performed a consumer-intercept survey and a choice experiment of food shoppers in direct markets and traditional grocery stores then analyzed the data using conjoint methods to estimate the willingness-to-pay for locally grown strawberries in Ohio and found that the consumers were willing to pay a premium for locally produced berries. Willis et al. (2013) used a mixed logit model on data collected from a mail survey with stated choice questions to estimate the premium that consumers were willing to pay for both meat products and produce and studied if consumers' willingness to pay increased if there was a donation to a local food bank associated with the local product. Willis et al. (2013) found that households were willing to pay \$0.17 per pound more for locally grown produce and \$0.33 per pound more for local animal products and that the included food bank donation increased willingness to pay for local products further. Loureiro and Hine (2002) randomly intercepted Colorado shoppers in the produce section of various grocery stores in the state and asked them to answer questions for a questionnaire about potatoes with various attributes and then performed a multiple bounded probit analysis on the data. They found that consumers were willing to pay more for the "Colorado grown" potatoes than for organic or GMO-free attributes but that locally grown must be linked to a certain qualities, such as greater nutrition, for consumers to be willing



to pay the higher premium for the product (Loureiro and Hine 2002). Adams and Adams (2008) intercepted consumers at a farmers' market in Florida and asked how much they would pay for a generic local produce product compared to a non-local product of similar quality, appearance, and freshness and found that the respondents were willing to pay a premium for the local product. Brooker et al. (1988) set up an experiment in a grocery store in Tennessee in which they observed if consumers purchased Tennessee branded tomatoes at various prices instead of generic tomatoes and then distributed surveys to the shoppers. The researchers observed a willingness to pay for locally branded tomatoes (Brooker et al. 1988). Nganje, Hughner, and Lee (2011) intercepted consumers at a traditional supermarket, a higher end grocer, a farmers' market, and a local restaurant selling moderate priced cuisine and asked them to take a survey on preferences for local spinach and carrots.

Still more studies have found a willingness to pay for locally produced processed food products (Batte et al. 2010; Hu, Woods, and Bastin 2009; James, Rickard, and Rossman 2009; Jekanowski, Williams, and Schiek 2000; Onken, Bernard, and Pesek 2011). Batte et al. (2010) mailed a choice-based conjoint analysis survey to residents of Kentucky and Ohio to estimate their willingness to pay for blackberry jam. After conducting a consumer-intercept survey in Kentucky grocery stores, Hu, Woods, and Bastin (2009) found that consumers were willing to pay a premium for processed blueberry products such as blueberry jam, blueberry-lime jam, blueberry yogurt, blueberry fruit rollups, blueberry dry muffin mix, and blueberry raisinettes. James, Rickard, and Rossman (2009) found that Pennsylvania consumers were willing to pay more for locally produced applesauce by conducting a mail survey choice experiment. Jekanowski, Williams, and Schiek (2000) conducted a survey of Indiana consumers and discovered a preference for both local processed food products such as ice cream and wine and

local unprocessed agricultural products such as tomatoes and melons. Onken, Bernard, and Pessek (2011) used a mail survey to conduct a choice experiment of Mid-Atlantic consumers to discover willingness to pay for locally produced strawberry preserves.

Some studies have found that consumers do not exhibit willingness to pay for locally produced foods. Eastwood, Brooker, and Orr (1987) found that consumers were not willing to pay more for locally produced food unless freshness was a factor, as in the case of tomatoes and peaches. Similarly, respondents in a study on willingness to pay for a natural beef product showed no preference for locally produced beef (Grannis, Hooker, and Thilmany 2000). Eastwood, Brooker, and Orr (1987) conducted their survey in 1985 on residents of Knox County, Tennessee in an effort to target urban consumers in a medium-sized metropolitan area where consumers were less likely to have their own gardens and then used probit models to analyze their data. Grannis, Hooker, and Thilmany (2000) surveyed 2,200 primary grocery shoppers in Colorado, Utah, and New Mexico with a mailed questionnaire to determine how they ranked attributes in importance and found that consumers ranked local production as the least preferred attribute when compared to use of hormones, animal-friendly production methods, and environmentally-friendly practices. It is possible that the results of these studies showed no willingness to pay for most local products because of how the surveys were conducted or because of where the consumers were located. Also, because these studies were conducted several years before the majority of those that found willingness to pay for locally produced food, this may suggest that preferences for locally produced food has increased over time.

Consumer age may influence whether or not the consumer is likely to be willing to pay more for locally produced foods. Several studies have found that the older the consumer, the less likely that consumer is to view the locally produced attribute favorably or to purchase locally

produced food (Adalja et al. 2013; Willis et al. 2013; Hu, Woods, and Bastin 2009; Nganje, Hughner, and Lee 2011). Adalja et al. (2013) found that younger consumers were more likely to be willing to pay a premium for locally produced ground beef, while Willis et al. (2013) studied a variety of food products and attained the same result regarding age and willingness to pay. Hu, Woods, and Bastin (2009) examined willingness to pay for processed blueberry products in Kentucky. Nganje, Hughner, and Lee (2011) found older consumers to be less likely to pay premiums for local carrots and spinach. In contrast, James, Rickard, and Rossman (2009) found that consumers over sixty years old were more likely to purchase local applesauce.

Study results have varied in their findings concerning education's role in willingness to pay for local food. Many studies found that higher education tends to result in a greater willingness to pay for local food (Brown 2003; Mennecke et al. 2006; Willis et al. 2013; Govindasamy et al. 2012; Hu, Woods, and Bastin 2009; Nganje, Hughner, and Lee 2011), although in some cases, individuals with higher education were not willing to pay more than less educated consumers for locally grown food (Loureiro and Hine 2002; Brooker et al. 1988; Jekanowski, Williams, and Schiek 2000). In the study by Brooker et al. (1988) the survey was focused on whether or not consumers were influenced by a state brand in their purchasing decisions, and consumers who were high school graduates indicated that they were not affected by the local brand. Similarly, Jekanowski, Williams, and Schiek (2000) concluded that more educated consumers become less susceptible to local branding and were less likely to choose local food products. Therefore, the differences in results between studies may be attributed to differences in the problems being analyzed: willingness-to-pay for locally branded food versus local food that is not part of a branding campaign.

Studies have also examined the influence of income on willingness to pay for local food. The majority of studies found that households with higher incomes exhibit willingness to pay for local food (Willis et al. 2013; Brown 2003; Njanje, Hughner, and Lee 2011). However, Loureiro and Hine (2002) found that wealthier consumers were not willing to pay a premium for locally grown potatoes, and Hu, Woods, and Bastin (2009) found that lower income consumers were more likely to be willing to pay for local blueberry jam.

Gender may influence local purchasing decisions. Many studies have found that females are more likely to purchase local food (Willis et al. 2013; Adams and Adams 2008, James, Rickard, and Rossman 2009; Jekanowski, Williams, and Schiek 2000); however, some studies have found no significant difference in willingness to pay between genders (Hanagriff, Rhoades, and Wilmeth 2008; Loureiro and Hine 2002). Willis et al. (2013) found that females are more likely to be willing to pay more for locally produced food, whether that food is produce or animal products. Adams and Adams (2008) found that females were willing to pay more for local food products as well. Similarly, James, Rickard, and Rossman (2009) found that men were less likely to purchase locally produced applesauce. After analyzing survey data from consumers in Indiana using an ordered probit model, Jekanowski, Williams, and Schiek (2000) concluded that females were more likely to purchase local products. In contrast, Hannagriff, Rhoades, and Wilmeth (2008) found that males and females did not value locally produced beef differently to a significant degree. Likewise, Loureiro and Hine (2002) found no significant difference between the amounts that males and females were willing to pay for locally grown potatoes.

Some studies indicate that the place that a person chooses to shop can affect their willingness to pay for local food (Darby et al. 2006; Adalja et al. 2013; Maynard, Burdine, and

Meyer 2003). Local foods tend to be more available in local independent retail stores than in large supermarket and wholesale chains (Abatekassa and Peterson 2011). Darby et al. (2006) found that consumers intercepted in a grocery store were willing to pay more for local berries than for nonlocal berries, but individuals intercepted at a direct market like a farmers' market were willing to pay more than the grocery store shoppers for locally produced berries. In contrast, Jekanowski, Williams, and Schiek (2000) found that the number of visits to farmers' markets did not significantly impact a consumer's likelihood of purchasing locally produced agricultural products. Similarly, Maynard, Burdine, and Meyer (2003) reported that those who shop in specialty meat stores are more likely to be willing to pay for local meats, but that farmers' market participation did not significantly impact consumers' willingness to pay for local meat. Adalja et al. (2013) found that grocery shoppers were willing to pay more for local food products but that they tended to view local production and favorable production methods (i.e. grass-fed) as substitutes, while consumers who were members of a buying club were not willing to pay as much for local as grocery store shoppers, but they did not view locality and production methods as substitutes.

Several studies have investigated the reasons that people may have for choosing locally produced food. Martinez et al. (2010) found that perceived quality and freshness benefits can influence willingness to pay for local foods, and consumers are more likely to be willing to pay for local foods if they perceive that they have greater product quality or nutritional value, better methods of raising a product and less environmental impact, or more support of local farmers. Govindasamy et al. (2012) found in a phone survey conducted in sixteen East Coast states and Washington, D.C. that thirty-four percent of the ethnic consumers that they surveyed have increased their purchases of locally produced ethnic greens and herbs due to concerns about food

miles. Martinez et al. (2010) report that consumers who value foods produced with low environmental impact and that are of high quality are more likely to be willing to pay premiums for local foods.

Some studies have found that opinions about the quality of local foods can affect willingness to pay for a local food product. In a study conducted by Brooker et al. (1988), respondents who thought that local tomatoes would have better freshness, taste, storage life, and nutrition were more likely to care about where the tomatoes they buy are grown, but respondents who thought that local tomatoes would be priced lower and have better appearance were less likely to care where the tomatoes were grown. Similarly, Jekanowski, Williams, and Schiek (2000) found that respondents who had positive perceptions about the quality level of local food were more likely to purchase local agricultural products; however, they also found that consumers do not expect local products to be any fresher than other products, although they do highly value that quality when making purchase decisions. In contrast, respondents in a consumer intercept survey conducted by Darby et al. (2006) stated that the freshness of local berries was their reason for preferring local.

Valuing support of local businesses may be a consumer attitude that impacts willingness to pay for local foods. Supporting local businesses was the next most frequently cited reason for choosing local in the same study (Darby et al. 2006). In a South Carolina study, it was found that the majority of survey respondents bought local food in order to support farmers in the states or the state's economy (Carpio and Isengildina-Massa 2013). A slightly smaller majority in the same study believed that South Carolina products were of the same or better quality than products from other states (Carpio and Isengildina-Massa 2013).

## Survey Methods and Data Analysis

### *Survey Methods*

To conduct the survey, sample was drawn from two different frames representing the population of the study area (Memphis, Nashville, Chattanooga, Knoxville and Tri-Cities): land-line telephones and wireless phone numbers. The land-line sample consists of a random sample of telephone numbers for households in five metropolitan areas addressed in this study. The wireless sample consists of wireless customers whose contracts are based in the study area. Initial contacts in both sampling frames are screened to verify that the responding individual is at least 18 years old and involved in planning meals or shopping for the household. If no individual in the household met these criteria, no interview was conducted. Initial contacts in the wireless sample frame were also screened for residence location to include only Tennessee households. The study target counties include Shelby, Davidson, Williamson, Hamilton, Knox, Sullivan, and Washington.

A comparison of several demographic measures between the survey respondents and the state of Tennessee and several key counties in the study are shown in Table 1. As can be seen the percent female was higher in the sample than that for the state or any of the key counties. However, this is not unexpected since the person primarily responsible for household food purchase decisions was asked to complete the survey. The percent aged 65 and older was higher than the state or county percentages. However, persons under age 18 were excluded from completing the survey. The average household size of the respondents is somewhat higher than the state average, but below the Shelby county average. The percent of respondents with a Bachelor's degree or higher was higher than the state average or any of the counties, suggesting those with college degrees were more likely to respond to the survey. Household income also appeared to be higher among the respondents than the state and county median measures of

household income. The mean category household income among the respondents was \$60,000-\$69,999, while the median of households in the state was \$44,140.

**Table 1. Demographic Characteristics of the Sample and State/County Comparisons**

Characteristic	Sample	State	Shelby	David- son	Hamil- ton	Knox	Wash- ington
	Percent or Mean						
Female Gender	59.00% (N=1200)	51.2% (2012)	52.3%	51.60%	51.8%	51.3%	51.1%
Percent Age 65 and Over	31.15% (N=991)	14.2% (2012)	10.80%	10.70%	15.20%	13.7%	16.0%
Household Size (Persons)	2.64 (N=997)	2.51 (2008-2012)	2.66	2.37	2.44	2.32	2.31
Bachelor's Degree or Higher	41.00% (N=993)	23.5% (2008-2012)	28.7%	35.00%	27.8%	34.3%	28.9%
Household Income Category for 2012 <sup>a</sup>	6.66 (\$60,000-\$69,999) (N=384)	\$44,140 (2008-2012)	\$46,251	\$46,676	\$46,544	\$47,270	\$42,995

<sup>a</sup> Household Income for 2012-1=Less than \$20,000, 2=\$20,000 to \$29,999, 3=\$30,000 to \$39,999, 4=\$40,000 to \$49,999, 5=\$50,000 to \$59,999, 6=\$60,000 to \$69,999, 7=\$70,000 to \$79,999, 8=\$80,000 to \$89,999, 9=\$90,000 to \$99,999, 10=\$100,000 to \$109,999, 11=\$110,000 to \$119,999, and 12=\$120,000 or more

(Source: United States Census Bureau. *State & County QuickFacts*)

The survey contained questions regarding household beef consumption, as well as reasons for not consuming beef, such as vegetarianism, costs, health reasons, and other reasons (a copy of the survey can be found in the Appendix). The respondents were asked about number of meals consumed at home in a typical week. If the respondent's household did not consume beef, they skipped to a set of opinion and demographic questions at the end of the survey. Among those who had household beef consumption, they were asked number of meals per week at which beef was served, where they purchase beef, and their consumption of ground beef and steak.



If the respondents indicated their household consumed steak, but not ground beef, they skipped to a set of questions regarding steak. If the respondents indicated their household consumed ground beef, but not steak, they skipped to a set of questions regarding ground beef. If they answered that they consumed other cuts of beef, but not ground beef or steak, they were randomly assigned to questions about one of these products. The same procedure was used if the respondent indicated they consumed both steak and ground beef (See Figure 1).

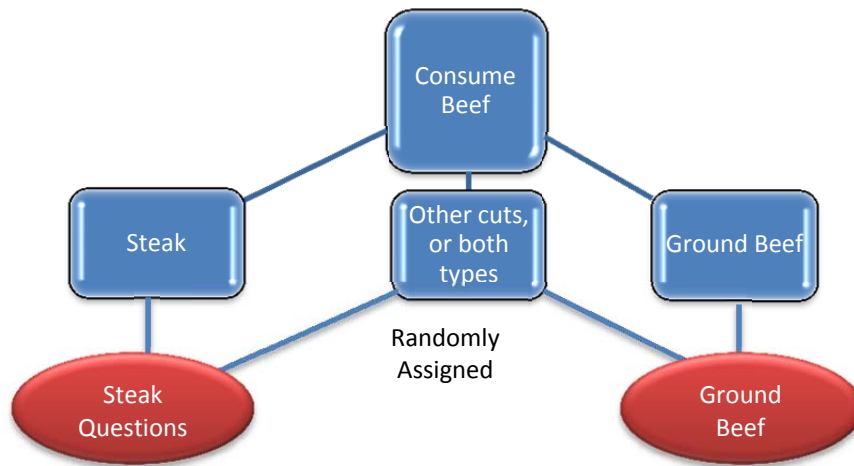


FIGURE 1. ASSIGNMENT OF RESPONDENTS TO STEAK OR GROUND BEEF QUESTIONS

The respondents were then asked about the importance of attributes of steak or ground beef that influence their purchase of these products. These attributes included freshness, flavor, tenderness (texture for ground beef), juiciness, color, leanness, price, and ease of preparation. Other attributes included whether the animal was treated humanely, naturally raised, locally produced, grass fed, or grain fed.

Prior to answering questions about their steak or ground beef choice, the respondents were read a brief description of Tennessee Beef (steak example):

*TENNESSEE BEEF means the animals must have been born, raised, and finished within the borders of the State of Tennessee. I'm now going to ask you to choose between TWO Choice-grade, 12-ounce, Boneless Ribeye Steaks. Before making your decision, consider your household's budget for food, keeping in mind if you spend more on steak, you'll have less money to spend on other food products. Both steaks are the same weight and have IDENTICAL freshness, cut, color, marbling, meat texture, fat, tenderness, juiciness, and flavor.*

A similar description was read for ground beef, except the ground beef was described as 85% meat, 15% fat, with the options being identical in leanness, freshness, color, meat texture, juiciness, and flavor.

After hearing the above description, respondents were asked to select from a base product, a TENNESSEE BEEF product, or neither (Figure 2). For the ribeye steak, the base product price was \$9.25 per pound and for the ground beef it was \$3.36 per pound. The respondents were randomly assigned to four price levels for the TENNESSEE BEEF product. In the case of steak these were \$9.25, \$11.56, \$13.88, and \$16.19. For ground beef, these were \$3.36, \$4.20, \$5.04, and \$5.88. For both products, the scale of prices offered represents the base price, base price + 25 percent of base price, base price + 50 percent of base price, and base price + 75 percent of base price. The price options for each product were based upon USDA, Agricultural Marketing Service retail beef price reports, *USDA Weekly Retail Beef Feature Activity*, at the time the survey was being developed (USDA AMS 2012).

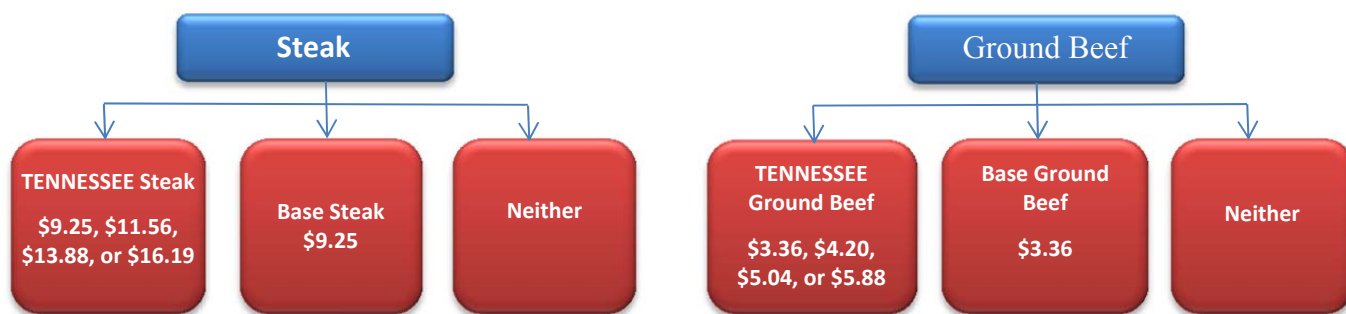


FIGURE 2. CHOICE SETS FOR TENNESSEE BEEF

After making their selection, the respondents who chose the TENNESSEE BEEF product were asked to indicate the reasons that influenced their decision such as quality, helping farmers, environmental, and other reasons. Those who chose not to select the TENNESSEE BEEF product were also asked reasons why they did not select the product. Reasons included unwillingness to pay more, quality concerns, familiarity with beef from beef producing states, and other reasons.

Information was also collected from the respondents regarding the type of outlets where they believed they would purchase TENNESSEE BEEF. Questions were also asked regarding preferences for the product form and packaging. In the final section of the survey, respondents were asked some opinion and demographic questions. Opinions about food prices versus other priorities were asked. Demographic questions included those about gender, age, education, household income, residence location, and other demographics.

### ***Data Analysis and Willingness to Pay (WTP) Modeling***

For data that are continuous, for example age of respondent, means and in some case t-tests are used evaluate the continuous variable across some value. For data that are categorical, for example, whether or not their household consumes beef, the data are summarized as

percentages, and in some cases Chi-squared tests of association are used to test for association between two categorical variables.

A contingent valuation (CV) approach was used to ascertain consumers' willingness to pay for Tennessee beef. The CV approach enables quantification of the values that consumers would assign to a product when faced with a hypothetical situation, in our case, which beef product to select. In the case of this study, consumers were asked whether they would pay a particular price for a boneless ribeye steak or a package of 85%/15% ground beef if these products were labeled as TENNESSEE BEEF or if they would select the base product at a particular price. The CV question was structured as a binary format (Hanemann 1984), where the respondent either selects the base product or the TENNESSEE BEEF product, where the base product price is provided, as well as a price for the TENNESSEE BEEF product. As provided in the description paragraph, respondents were advised that the base and TENNESSEE BEEF products were identical in all respects except for the TENNESSEE BEEF label and the price. The respondent also had the option to select neither product.

Following the Random Utility Theory developed by McFadden (1974), let  $U_{iTN}$  represent the  $i$ th consumer's utility from choosing alternative TENNESSEE BEEF and  $U_{iC}$  be the utility from choosing conventional beef (the base product). The  $i$ th consumer will choose TENNESSEE BEEF (TN) if

$$U_{iTN} > U_{iC} \quad (1)$$

The probability of choosing the alternative, in our case, TENNESSEE BEEF (TN), assuming a logistic probability distribution, becomes (Greene 2012),

$$\text{Prob} [Choice_i = TN] = \frac{\exp(\alpha + \beta P_i)}{1 + \exp(\alpha + \beta P_i)} \quad (2)$$

where  $\alpha$  and  $\beta$  are parameters to be estimated and P is price. Therefore, the probability that a consumer will choose the jth alternative is a function of price of the product. The willingness to pay for the TENNESSEE BEEF product by the ith individual is calculated as

$$WTP_{iTN} = -\frac{\alpha}{\beta}, \quad (4)$$

or the negative of the intercept from the logit model  $\alpha$  divided by the estimated coefficient on price  $\beta$ .

## Results

Researchers completed 1,211 surveys from May to August 2013. Of these, 739 were from the land-line sample frame and 472 were from the wireless frame. Using American Association of Public Opinion Research formulas to calculate response rates and cooperation rates, we achieved a response rate of 28.7% and a cooperation rate of 68.2% among the land-line sample. With the wireless sample frame the response rate was 23.3% and the cooperation rate was 54.3%. The targeted counties are shown in red in Figure 3. Respondents were asked to indicate their county of residence, while each of the targeted counties had respondents, the orange counties also had respondents. These are shown in Figure 3. The blank counties either were not targeted, did not have survey respondents, or did not have respondents who indicated they lived in that county.

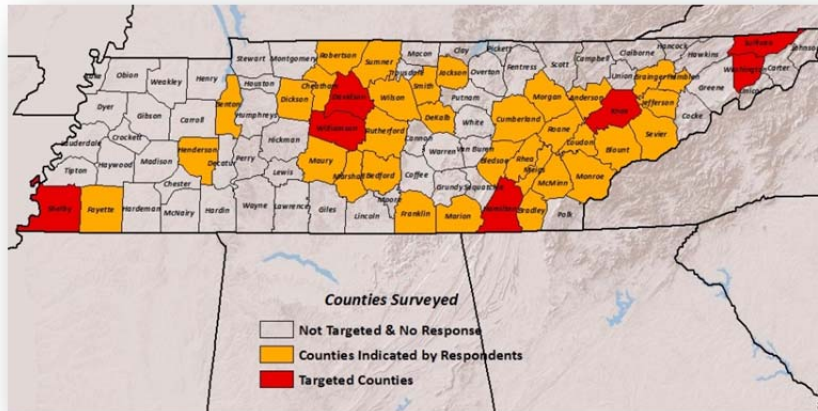


FIGURE 3. COUNTIES SURVEYED FOR TENNESSE BEEF STUDY

A Combined Statistical Area (CSA) is a grouping of adjacent metropolitan and/or micropolitan statistical areas (MSAs) in the United States. The United States Office of Management and Budget (OMB) defines combined statistical areas based on social and economic ties measured by commuting patterns between adjacent MSAs. The Memphis-Forrest City TN-MS-AR Combined Statistical Area (Memphis CSA) includes the Tennessee counties: Tipton, Shelby, and Fayette. The Nashville-Davidson-Murfreesboro-Columbia CSA (Nashville CSA) includes: Cannon, Cheatham, Davidson, Dickson, Hickman, Macon, Maury, Robertson, Rutherford, Smith, Sumner, Trousdale, Williamson, and Wilson counties. The Chattanooga-Cleveland-Athens CSA (Chattanooga CSA) includes the Tennessee counties: Bradley, Hamilton, Marion, McMinn, and Sequatchie. The Knoxville-Sevierville-LaFollette CSA (Knoxville CSA) includes the Tennessee counties: Anderson, Blount, Campbell, Cocke, Grainger, Hamblen, Jefferson, Knox, Roane, Sevier, and Union. The Johnson City-Kingsport-Bristol, TN-VA CSA (Tri-Cities CSA) includes Carter, Greene, Hancock, Hawkins, Johnson, Sullivan, Unicoi, and Washington counties. The percentages of respondents who indicated they resided in their

respective CSA's are shown in Table 2. About 20 percent resided in the Memphis CSA, 19 percent in the Nashville CSA, 15 percent in the Chattanooga CSA, 25 percent in the Knoxville, CSA, and 17 percent in the Tri-Cities CSA. The remaining 3 percent resided in other counties.

**Table 2. Combined Statistical Area in Which Respondent Resides**

Area	Percent (N=911)
Memphis CSA	19.98
Nashville CSA	19.21
Chattanooga CSA	15.37
Knoxville CSA	25.36
Tri-Cities CSA	17.23
Other Counties	2.85

### ***Beef Consumption***

In total, 932 respondents, 76.96 percent, had at least one individual in their household who consumed beef, while 267 resided in households that did not consume beef (Table 3). As can be seen in Table 3, the most common reasons for not consuming beef were health concerns or vegetarianism, followed by taste, costs, and safety concerns. Among those responding who did not consume beef, nearly 46 percent cited health concerns as the reason why their household does not consume beef. This was followed by vegetarianism at just under 35 percent.

**Table 3. Household Beef Consumption and Reasons for Household Not Consuming Beef**

Beef Consumption and Reasons Do Not Consume	Percent
Respondent or others in household consume beef (N=1,211)	76.96
If do not consume beef, reasons (N=267):	
Health Concerns	45.69
Vegetarian	34.46
Taste	15.73
Safety Concerns	7.49
Costs	7.49
Environmental Concerns	5.62
Religion	2.99
Other	1.50

Of 1,001 respondents to the question regarding meals prepared at home, the greatest percentage prepared 14 to 16 meals at home in a typical week (Table 4). Following that were households that prepared 5 to 7 meals per week, 2 to 4, 20 or more, and then 8 to 10.

**Table 4. Number of Meals Prepared at Home in a Typical Week**

Meals	Percent (N=1,001)
1	4.30
2 to 4	12.89
5 to 7	16.28
8 to 10	11.79
11 to 13	9.79
14 to 16	23.98
17 to 19	8.09
20 or more	12.89

Beef consuming households were asked about the number of meals in a typical week that are prepared at home at which beef is served (Table 5). Among these households, the most commonly cited frequency was 2 to 3 meals, followed by 0 meals, then 1 and 4 to 5.

**Table 5. Number of Meals Prepared at Home with Beef Served in a Typical Week Among Beef Consuming Households**

Meals	Percent (N=888)
0	25.56
1	13.74
2 to 3	31.42
4 to 5	13.74
6 to 7	7.88
8 to 9	3.04
10 or more	4.62

When those who resided in households that consume beef were asked about where they had purchased beef in past year, the most commonly cited source was a grocery store, followed by a big box store, warehouse stores, gourmet stores, and then butchers (Figure 4). Only about 6 percent was purchased from farmers markets and just over 5 percent was purchased directly from



farmers in the past year. When asked about where they usually purchase beef, grocery stores was most commonly noted, followed by big box stores, and warehouse stores (Figure 4).

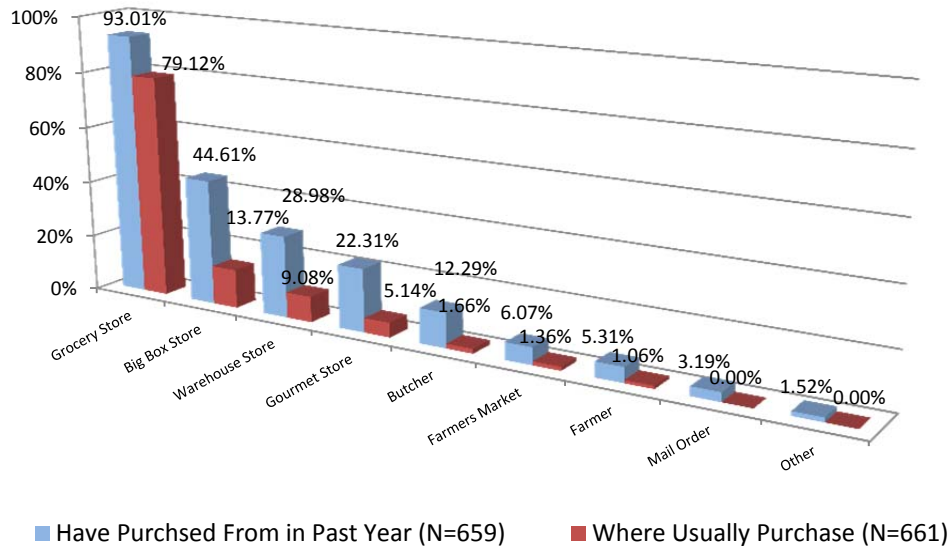


FIGURE 4. TYPES OF VENDORS USED TO PURCHASE BEEF IN THE PAST YEAR

Of the 33 respondents who had bought beef directly from a farmer in the last year, the largest percentage bought bulk beef (a side, quarter, half, or whole animal), this was followed by “other” and then individual cuts (Table 6).

**Table 6. Type of Beef Purchased Directly from Farmer**

Type of Beef	Percent (N=33)
Bulk Beef	57.58
Other	24.24
Individual Cuts	18.18

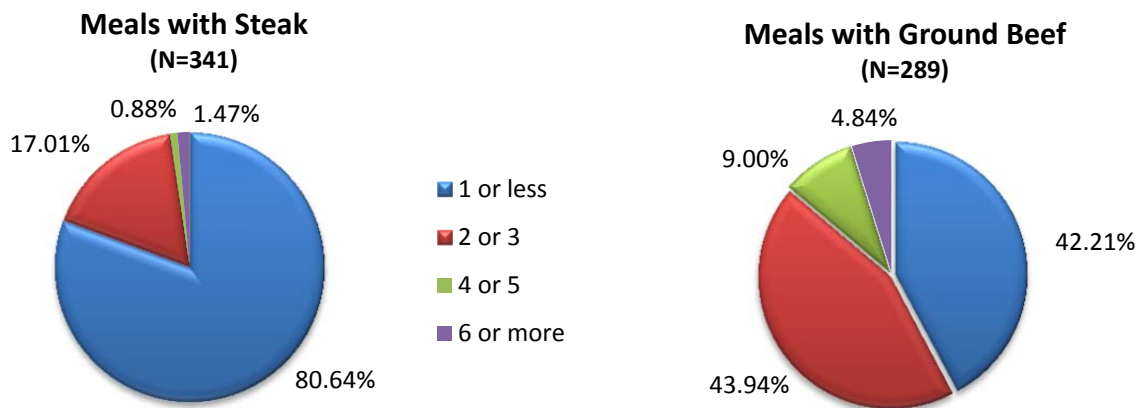
### *Steak and Ground Beef Consumption*

Over 91 percent of beef consuming households had consumed ground beef in the past month (Table 7). Nearly 72 percent had consumed steak, while 63 percent had consumed other cuts of beef, for example roasts or ribs.

**Table 7. Type of Beef Consumed in Past Month Among Beef Consuming Households**

Meals	Percent (N=657)
Ground Beef	91.78
Steak	71.84
Other	63.01

In a typical week, steak was prepared at home once or less by about 81 percent of households that consumed steak at least once in the past month (Figure 5). This was followed by about 17 percent preparing it two to three times in a week. Among households in which ground beef had been consumed at least once in the past month, about 42 percent served it once per week or less, and nearly 44 percent served it two or three times per week. As might be expected, ground beef was more frequently served than steak.



**FIGURE 5. NUMBER OF MEALS PREPARED AT HOME WHERE STEAK OR GROUND BEEF IS SERVED IN A TYPICAL WEEK AMONG HOUSEHOLDS CONSUMING THAT TYPE OF BEEF IN THE PAST MONTH**

When steak and ground beef consuming households were asked about importance ratings of attributes, freshness was rated as being the most important quality when buying either steaks or ground beef to cook at home (Table 8). This attribute was followed in importance by flavor.

For steak, the next most important attributes were tenderness, juiciness, and color, while for ground beef they were color, leanness, and juiciness.

**Table 8. Importance of Various Qualities when Purchasing a Steak or Ground Beef to Cook at Home**

Attribute	Mean Importance Rating	
	Steak (N=329)	Ground Beef (N=270)
Freshness	2.92	2.91
Flavor	2.90	2.84
Tenderness (Texture for Ground Beef)	2.78	2.42
Juiciness	2.71	2.48
Color	2.71	2.77
Leanness	2.46	2.60
Price	2.45	2.45
Ease of Preparation	2.16	2.29

Several product characteristics, including humane treatment, naturally raised, locally produced, grass fed, and grain fed were offered to the respondents for them to rate how important these characteristics were to their steak purchases (Table 9). Humane treatment was rated as the most important characteristic identified on the product label by the 310 respondents, followed by naturally raised (no hormones or antibiotics), and then locally produced. Each of these three characteristics was rated as somewhat to very important.

**Table 9. Importance of Characteristics Identified on Product Label when Purchasing a Steak or Ground Beef**

Attribute	Mean Importance Rating	
	Steak (N=310)	Ground Beef (N=266)
Treated humanely	2.49	2.47
Naturally raised	2.34	2.35
Locally produced	2.11	2.04
Grass fed	1.97	1.90
Grain fed	1.94	1.85

### ***Willingness to Pay for TENNESSEE BEEF Steak***

Those households who had consumed steak in the past month were asked whether they would choose a “base” ribeye at \$9.25 per pound or a TENNESSEE BEEF ribeye which varied in price from \$9.25 to \$16.19. A total of 348 answered the steak choice question, with 21 stating they didn’t know or refused to answer, and 15 said choice, while 179 said they would choose the base steak and 133 stated they would choose the TENNESSEE BEEF ribeye. The percentages among those who chose the TENNESSEE BEEF labeled steak at various prices is shown in Table 10. At \$9.25 for the Tennessee labeled ribeye steak, nearly 96 percent of those offered that price chose the Tennessee labeled ribeye steak. At \$11.56, 35.21 percent chose the TENNESSEE BEEF. As the price offered increases to \$13.88, the percent that chose the TENNESSEE BEEF declines to 32.50 percent, and at \$16.19, the percent dropped to 17.39.

**Table 10. Local Ribeye Steak Choice at Varying Price Levels**

Price Level of Hypothetical TENNESSEE Ribeye Steak (\$/pound)	Percent That would Choose TENNESSEE Ribeye Steak (N=312)
\$9.25	95.65
\$11.56	35.21
\$13.88	32.50
\$16.19	17.39

Among those who stated they would choose neither product, some examples of reasons are that both choices are too expensive, they do not care or think is important, they only buy filet mignon steaks, they only eat Angus or better, their household budget, and that prices offered are too high. Other reasons also include they always buy on sale, the product would need to be antibiotic free, they only eat kosher beef, they raise their own cattle, they would need to look at products, and that the products are the same.

***Willingness to Pay for TENNESSEE BEEF Ground Beef***

Those households who had consumed ground beef in the past month were asked whether they would choose a “base” 85/15 ground beef at \$3.36 per pound or a TENNESSEE BEEF 85/15 ground beef which varied in price from \$3.36 to \$5.88. A total of 289 answered the ground beef choice question, with 13 stating they did not know or refused to answer, and 13 said neither choice. A total of 165 said they would choose the base ground beef and 98 would choose the TENNESSEE BEEF ground beef. The percentages of those who chose the TENNESSEE BEEF labeled ground beef at various prices is shown in Table 11. At \$3.36 for the Tennessee labeled ground beef, over 91 percent of those offered that price chose the Tennessee labeled ground beef. At \$4.20, 30.43 percent chose the TENNESSEE BEEF. At \$5.04, 11.32 percent chose the TENNESSEE BEEF ground beef and at \$5.88, 20.97 percent chose it.

**Table 11. TENNESSEE Ground Beef Choice at Varying Price Levels**

Price Level of Hypothetical TENNESSEE Ground Beef	Percent That would Choose TENNESSEE Ground Beef (N=263)
\$3.36	91.07
\$4.20	30.43
\$5.04	11.32
\$5.88	20.97

Reasons why neither product was chosen was because both products are too expensive, the fat content, they not a label reader, they grew their own beef or purchased beef from someone they know. Other reasons included that they only shop at a certain store, they only purchase grass fed beef, they only purchase kosher beef, or they just buy whatever is available.

The logit models needed to estimate overall willingness to pay are shown in Table 12. As would be expected for both the steak and ground beef models, the estimated coefficient on price is negative and significant. Therefore, as the price of the TENNESSEE BEEF product rises, the probability of a respondent choosing the TENNESSEE BEEF product declines. As was

shown in equation (3), the estimated willingness to pay (WTP) from each model is calculated by taking the intercept divided by the estimated coefficient on price for each model. The average willingness to pay (WTP) for the TENNESSEE BEEF product is listed for each product in Table 12. For steak this estimate was \$12.21 per pound, compared with the base price of \$9.25 per pound, or an average estimated premium of \$2.96 per pound. For ground beef, the estimated WTP was \$4.03, compared with the base price of \$3.36 per pound, or an average estimated premium of \$.70 per pound. For both steaks and ground beef, the premiums were statistically greater than zero at the 95 percent confidence level.

**Table 12. Estimated Logit Models for TENNESSEE and WTP Estimates** <sup>a,b,c</sup>

Estimated Coefficient	Steak	Ground Beef
Intercept	5.9353*** (0.7479)	5.4258*** (0.8508)
Price	-0.4862*** (0.0580)	-1.3374*** (0.1942)
N	312	263
LR Test	93.14***	64.58***
WTP	\$12.21*** (0.2825)	\$4.06*** (0.1148)
Premium	\$2.96*** (0.2825)	\$0.70*** (0.1148)

\*\*\* indicates significant at the 99% confidence level.

### ***Influences on TENNESSEE BEEF Purchases***

The potential reasons influencing selection of TENNESSEE BEEF are examined overall and across steak and ground beef in Table 13. The reason with the highest overall rating of influence was purchasing TENNESSEE BEEF makes the respondent feel like they are supporting farmers in the state. This was followed by support of the state's economy and that the product is perceived as being fresher and better for the environment. The differences in the average ratings across steak and ground beef were compared. The ratings in Table 13 suggest that that the

ground beef consumers were more influenced in their decision to select the Tennessee product by belief that the product is safer and higher quality, than the steak consumers were.

**Table 13. Potential Reasons for Selecting TENNESSEE BEEF**

Potential Reasons for Selecting TENNESSEE BEEF	Mean Influence Rating		
	Overall (N=199)	Steak (N=114)	Ground Beef (N=85)
Purchasing TENNESSEE BEEF makes me feel like I am supporting farmers in my state.	2.78	2.80	2.76
Purchasing TENNESSEE BEEF makes me feel like I am supporting the state's economy.	2.75	2.74	2.76
TENNESSEE BEEF is likely fresher than out-of-state beef	2.59	2.55	2.64
TENNESSEE BEEF has to be transported shorter distances, so it is better for the environment	2.45	2.42	2.49
I know more about where Tennessee beef comes from, so I feel it is safer	2.38	2.27	2.53**
Knowing how the beef was produced	2.37	2.33	2.41
Tennessee beef is likely higher quality than out-of-state	2.29	2.20	2.40*
Price of TENNESSEE BEEF compared with other	2.18	2.11	2.27
Knowing the farmer who produces the beef	2.03	2.00	2.06
The experience purchasing directly from the farmer	2.02	2.02	2.01
Being able to visit the farm where the beef was produced	1.88	1.83	1.95

\*\*Indicates statistically different means at the 95% confidence level, \* at the 90% confidence level.

As seen in Table 14, the most common vendor where respondents would anticipate purchasing TENNESSEE BEEF is the grocery store, followed by big box stores, farmer direct, gourmet stores, butchers, and warehouse stores. The percentages for each type of vendor were similar across ground beef and steak. Somewhat higher percentages of respondents to the steak questions anticipated purchasing TENNESSEE BEEF at warehouse retailers and farmer direct than for those responding to the ground beef questions. However, no statistically significant association between meat type and vendor choice was found.

**Table 14. Types of Vendors Where Would Purchase TENNESSEE BEEF**

Vendor Type	Overall (N=211)	Steak (N=119)	Ground Beef (N=92)
Percent that Would Purchase TENNESSEE BEEF from Vendor Type			
Grocery Store	94.31	93.28	95.65
Big Box Retailer	54.50	57.14	51.09
Warehouse Retailer	41.71	45.38	36.96
Gourmet Stores	44.55	44.54	44.57
Butcher	43.60	44.54	42.39
Internet	6.64	7.56	5.43
Farmers Markets	36.49	37.81	34.78
Farmer Direct	47.39	51.26	42.39

Table 15 displays a summary of types of packaging that respondents would prefer for TENNESSEE BEEF. The largest percentage of respondents (over 40 percent) had no preference between packaging types. However, among those with a preference, the most commonly cited was vacuum packaged followed by shrink wrap for steak and butcher paper for ground beef.

**Table 15. Types of Packaging Would Prefer for TENNESSEE BEEF**

Packaging Type	Percent Preferring Packaging Type		
	Overall (N=221)	Steak (N=125)	Ground Beef (N=96)
Vacuum Packaged	27.60	30.40	23.96
Shrink Wrap	15.84	15.20	16.67
Butcher Paper	16.29	14.40	18.75
No Preference	40.27	40.00	40.63

As shown in Table 16, respondents had a strong preference for fresh meats (over 90 percent would purchase TENNESSEE BEEF in that form). Fresh was followed by frozen at about 60 percent being willing to purchase the product in frozen form. This was followed by fresh-frozen then thawed and cooked. Neither of these latter two types gained a 50 percent share or greater, indicating the majority would not prefer those product forms.



**Table 16. Product Forms Would Purchase for TENNESSEE BEEF**

Packaging Type	Percent Who Would Purchase		
	Overall (N=197)	Steak (N=111)	Ground Beef (N=86)
Fresh	90.95	96.40	97.67
Frozen	63.96	59.46	69.77
Fresh-frozen Then Thawed	30.46	31.53	29.07
Cooked	25.89	24.32	27.91

***Reasons for Not Selecting TENNESSEE BEEF***

Respondents who did not select a TENNESSEE BEEF product were asked to indicate the reasons why they did not select the product. As can be seen in Table 17, the most commonly cited reasons were affordability or not being willing to pay more. Interestingly, only about 15 percent did not believe that TENNESSEE BEEF would be better quality. Less than 10 percent trusted beef more from the major producing states.

**Table 17. Reasons for Not Selecting TENNESSEE BEEF**

Possible Reason	Percent Citing as a Reason (N=260)
Trust beef products from major beef producing states more than locally produced beef	8.46
Don't believe Tennessee beef is better quality	15.00
Prefer corn fed beef over beef that's grazed	24.16
Can afford to pay a higher price for Tennessee Beef, but aren't willing to pay more	60.77
Can't afford to pay more for Tennessee Beef	53.08

***Importance of Food Prices Versus Other Priorities***

All respondents were asked about the importance of keeping food prices low compared with other priorities (Table 18). These other priorities included protecting the environment, ensuring humane treatment of animals used in food production, ensuring that farmers receive a fair income, providing safe, healthy, and nutritious food choices, and supporting the local economy.

For each priority, except protecting the environment, the respondents ranked other priorities higher. Providing a safe, healthy, and nutritious set of food choices received the highest ranking compared with keeping food prices low. Beef consuming households held similar views to all respondents. However, those choosing the TENNESSEE BEEF products tended to have higher rankings for each of the priorities than all respondents. This suggests that consumers who will choose TENNESSEE BEEF are somewhat more influenced by environmental issues, humane treatment of animals, farmers receiving a fair income, a safe food supply, and supporting the local economy.

**Table 18. Low Food Prices Relative to Other Priorities**

	Mean Ranking 1=food prices, 2=about same, 3=other priority		
	All Respondents (N=1,019)	Beef Consuming Households (N=811)	Respondents Choosing TENNESSEE BEEF (N=235)
Keeping Food Prices Low is More Important Than			
Protecting the environment	2.00	1.98	2.09
Ensuring humane treatment of animals used in food production	2.26	2.25	2.39
Ensuring that farmers receive a fair income	2.22	2.22	2.38
Providing safe, healthy, and nutritious food choices	2.38	2.40	2.47
Supporting the local economy	2.11	2.10	2.27

### ***Demographics***

The demographic characteristics of the respondents overall, for beef consuming households, and for those who chose TENNESSEE BEEF are shown in Table 19. About 59 percent of the respondents were female. The average age in years was 53.78 years, while the average age of those choosing TENNESSEE BEEF was 51.9 years. About three quarters of the respondents considered themselves to be the primary food shoppers for their household. Interestingly, about

37 percent considered themselves to have a farm-related background. For those respondents who chose TENNESSEE BEEF, this percentage increases to over 44 percent. About 28 percent of the households had children under 18 in the household. The average level of education was between “some college” and a “college graduate”. The education level for all respondents, those from beef consuming households, and those who chose TENNESSEE BEEF were virtually identical. On average, people considered themselves as living between small town and suburbs. Those who selected TENNESSEE BEEF considered themselves as living in a somewhat more rural area than respondents overall.

**Table 19. Demographic Characteristics**

Characteristic	Overall	Beef Consuming Households	Respondents Choosing TENNESSEE BEEF
	Percent or Mean		
Female Gender	59.00% (N=1200)	57.65% (N=928)	58.37% (N=245)
Age in Years	53.78 (N=991)	54.19 (N=816)	51.90 (N=236)
Household Size	2.64 (N=997)	2.68 (N=822)	2.86 (N=235)
Primary Food Shopper	74.85% (N=1014)	75.45% (N=839)	75.95% (N=237)
Farm Background	37.22% (N=1013)	39.01% (N=838)	44.30% (N=237)
Children Less than 18 Reside in Household	27.90% (N=982)	28.82% (N=819)	33.76% (N=237)
Education Level (1=Less than HS, ..., 5=Postgraduate)	3.15 (N=993)	3.16 (N=825)	3.17 (N=235)
Household Income Category for 2012 <sup>a</sup>	6.66 (N=384)	6.61 (N=342)	7.34 (N=111)
Urbanization of Residence (1=rural, ... 4=urban)	2.77 (N=954)	2.74 (N=798)	2.66 (N=228)

<sup>a</sup> Household Income for 2012-1=Less than \$20,000, 2=\$20,000 to \$29,999, 3=\$30,000 to \$39,999, 4=\$40,000 to \$49,999, 5=\$50,000 to \$59,999, 6=\$60,000 to \$69,999, 7=\$70,000 to \$79,999, 8=\$80,000 to \$89,999, 9=\$90,000 to \$99,999, 10=\$100,000 to \$109,999, 11=\$110,000 to \$119,999, and 12=\$120,000 or more

Table 20 shows the percentages choosing either TENNESSEE steak or TENNESSEE ground beef across several demographics, including gender, farm background, college education, age 50 or older, and rural residence. Chi-square tests of association revealed a significant positive association between farm background and rural residence and willingness to purchase TENNESSEE ground beef. When the reasons for not choosing the TENNESSEE ground beef (see Table 17) were compared across rural residence, urban residents were more likely to cite that they prefer corn fed beef and to say that they could afford the local product but weren't willing to pay any more for it. Being 65 or older had a negative association with willingness to purchase TENNESSEE steak. One reason may be that these consumers are more used to a product from the major producing states. Indeed, a test of association revealed a positive association between being 65 or older and not choosing the TENNESSEE steak for the reason they trusted steaks from the major producing states more than a local product (Table 17).

**Table 20. Choice of TENNESSEE BEEF Across Selected Demographics**

Demographic	Percent With Demographic Choosing TENNESSEE BEEF			
	Steak		Ground Beef	
	No	Yes	No	Yes
Female (N1=311, N2=263) <sup>a</sup>	43.42	41.51	34.34	39.02
Farm Background (N=299, N=257)	39.98	47.54	32.94	45.98**
College Education(N1=298, N2=255)	44.16	40.28	38.06	36.00
Age 65 or Older (N1=295, N2=252)	46.36	34.67*	36.46	41.43
Rural Residence (N1=287, N2=250)	41.49	47.83	33.33	52.17**
2012 Household Income at Least \$60,000(N1=145, N2=115)	37.25	42.55	32.00	43.08

<sup>a</sup> N1 is the number of observations used in the steak calculations, N2 is the number of observations used in the ground beef calculations.

\* indicates significant at the 90% confidence level, \*\* indicates significant at the 95% confidence level.

As can be seen in Table 21, regional differences existed for percentages of respondents who consume beef and who would choose a TENNESSEE steak or ground beef. For example, while in the Memphis region about 33.33 percent would choose the TENNESSEE steak, in Knoxville, Nashville, and Tri-Cities, over 40 percent would choose the TENNESSEE steak. While Nashville had the lowest percent selecting TENNESSEE ground beef at just over 31 percent, both Knoxville and Tri-Cities had over 40 percent selecting the TENNESSEE ground beef.

**Table 21. Choice of TENNESSEE BEEF, by Region**

Region	Percent Choosing TENNESSEE BEEF	
	Steak	Ground Beef
Memphis (N1=54, N2=47) <sup>a</sup>	33.33	38.30
Nashville (N1=54, N2=48)	48.15	31.25
Chattanooga (N1=40, N2=37)	37.50	35.14
Knoxville (N1=75, N2=58)	40.00	41.38
Tri-Cities (N1=53, N2=42)	49.06	50.00

<sup>a</sup> N1 is the number of observations used in the steak calculations, N2 is the number of observations used in the ground beef calculations.

Examining reasons who respondents did not select TENNESSEE BEEF (from Table 17), it appears that those from the Memphis and Chattanooga areas were more likely to trust beef from the major producing states, while those from Knoxville were less likely to trust beef from the major producing states. Nashville respondents were less likely to state preference for corn fed beef as a reason not to buy. Respondents from the Tri-Cities were less likely to believe that TENNESSEE BEEF was not of better quality, however Tri-Cities residents were more likely to state they either could afford to pay more but were not willing to do so or that they were not able to afford paying more for TENNESSEE BEEF.

## Conclusions and Recommendations

The results from this study suggest that consumers in the metropolitan areas of Tennessee are willing to pay a premium for ribeye steaks and ground beef labeled as TENNESSEE BEEF. Estimates are that a \$2.96 premium would be paid for a ribeye steak and a \$.70 per pound premium would be paid for ground beef labeled as TENNESSEE BEEF. Purchasing TENNESSEE BEEF gives the potential buyers a sense of supporting farmers and the economy within their state. Respondents who selected TENNESSEE BEEF also viewed it as fresher and safer than out of state beef. Respondents expressed a preference for a fresh product over a frozen or frozen then thawed or cooked product. Those choosing a TENNESSEE BEEF product tended to be younger in age, have some farm background, and have higher incomes than the overall set of respondents. Comparison of percentages choosing the TENNESSEE BEEF steak or TENNESSEE BEEF ground beef across demographics showed that those with a farm background or rural residence were more likely to choose a TENNESSEE ground beef product over the base product. In addition, there appear to be some differences across regions in willingness to select a TENNESSEE BEEF product, suggesting that some markets are more accepting of these products. Because freshness, safety, support of local farms, and support of local economies appear to be important to the respondents in making their product selections, marketing programs to promote TENNESSEE BEEF labeled products might emphasize these issues.

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## **APPENDIX**

## Telephone Survey for TENNESSEE BEEF

### <Q1>

Beef is the term for meat from cattle. Beef is often eaten as steak, roast, or ground beef. Do you or any other members of your household eat beef?

- 1 Yes
- 0 No
- 8 Don't know / refused

Note: if any member of household eats beef at home, select Yes even if respondent doesn't eat beef

### <Q1health>

Can you tell me whether any of the following reasons influences your household's consumption of beef?

Health conditions (for example, cholesterol or food allergies)

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

### <Q1taste>

[Can you tell me whether this influences your household's consumption of beef?

Beef's taste or texture

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

### <Q1cost>

Can you tell whether this influences your household's consumption of beef?

The price of beef

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

### <Q1vege>

Can you tell me whether this influences your household's consumption of beef?

Are you vegetarian?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

### <Q1relig>

Can you tell me whether this influences your household's consumption of beef?

Your religion?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

**<Q1safety>**

Can you tell me whether this influences your household's consumption of beef?

Food safety concerns?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

**<Q1envir>**

Can you tell me whether this influences your household's consumption of beef?

Concern about the effects of beef production on the environment?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

**Q1other>**

Can you tell me whether this influences your household's consumption of beef?

Any other reason?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

**<Q25>**

If your household has three meals a day, that amounts to 21 meals per week. In a typical week, how many MEALS does your household prepare AT HOME? Stop me when I get to the right number.

- 1 1 meal per week
- 2 2 to 4 meals per week
- 3 5 to 7 meals per week
- 4 8 to 10 meals per week
- 5 11 to 13 meals per week
- 6 14 to 16 meals per week
- 7 17 to 19 meals per week
- 8 20 or more meals per week
- 9 Don't know / refused

NOTE1: 8 is a REAL ANSWER !!!

NOTE2: "Meals" mean events (e.g., a supper), not the number of meals X the number of persons eating the meal

NOTE3: Take out doesn't count. "Brown bag" lunches do count.

**<Q2>**

At how many of those meals is beef served? Stop me when I get to the right number.

- 1 None
- 2 1 meal per week
- 3 2 or 3 meals per week
- 4 4 or 5 meals per week
- 5 6 or 7 meals per week
- 6 8 or 9 meals per week
- 7 10 or more meals per week
- 8 Don't know

Note: "Meals" mean an event (e.g., a supper), not the number of meals X the number of persons eating the meal

**<Q3groc>**

In the past year, have you purchased beef to eat at home from any of these types of vendors?

a Grocery Store?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

NOTE1: WALMARTS and FRESH MARKETS ARE NOT GROCERY STORES

NOTE2: "Purchased beef" includes frozen burgers or meatballs; excludes canned products (e.g., hash, soup) and excludes prepared dinners (e.g., Lean Cuisine or Hungry Man)

**<Q3Wareh>**

In the past year, have you purchased beef to eat at home from any of these types of vendors?

a Warehouse store (e.g., Sam's or Costco)?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

**<Q3BigBox>**

In the past year, have you purchased beef to eat at home from any of these types of vendors?

a "Big Box" store like Walmart or Target superstore?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

**<Q3Gourme>**

In the past year, have you purchased beef to eat at home from any of these types of vendors?  
a Gourmet or organic market, like a Fresh Market or Whole Foods?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

(NOTE: This category includes Earth Fare, Trader Joe's and similar stores. It does not include a "meat only" store like "Mother Earth Meats in Maryville)

**<Q3Mail>**

In the past year, have you purchased beef to eat at home from any of these types of vendors?  
an Internet or mail order service?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

**<Q3Butch>**

[In the past year, have you purchased beef to eat at home  
from...]

a Butcher Shop?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

Note: Includes meat/poultry only stores like Mother Earth Meats

**<Q3FarmM>**

In the past year, have you purchased beef to eat at home from any of these types of vendors?  
a Farmers Market?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

Note: Does not include directly from a farm/ farmer

**<Q3Farmer>**

In the past year, have you purchased beef to eat at home from any of these types of vendors?  
Directly from a farmer, but not at a farmer's market?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused



<Q3Other>

In the past year, have you purchased beef to eat at home from any of these types of vendors?

Any other place?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

<Q3OName> What would that place be?

<Q4>

Of the options just mentioned, at which do you USUALLY purchase beef for your household?

<Q4\_1>

a Grocery Store?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

< Q4\_2>

a Warehouse store (e.g., Sam's or Costco)?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

<Q4\_3>

a "Big Box" store like Walmart or Target superstore?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

< Q4\_4>

a Gourmet or organic market, like a Fresh Market or Whole Foods?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

<Q4\_5>

an Internet or mail order service?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

<Q4\_6>

a Butcher Shop?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

<Q4\_7>

a Farmers Market?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

<Q4\_8>

Directly from a farmer, but not at a farmer's market?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

<Q4\_9>

Any other place?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

IF Q3Farmer==1, IF Q3 Farmer<1 or >1 Skip to Q6

<Q5>

When you purchased beef directly from a farmer, did you buy individual cuts or packages of meat? or did you buy in bulk as in a side, quarter, half or whole animal?

- 1 Individual cuts
- 2 Bulk beef
- 3 Both
- 8 Don't know
- 9 Refused

**<Q6Steak>**

In the past month, has your family consumed

Steak at home?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

Note: Includes: ribeye, porterhouse, sirloin, filet, filet mignon, t-bone, or strip steak  
Excludes: "round" steak

**<Q6Ground>**

In the past month, has your family consumed

Ground beef at home?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

**<Q6Other>**

In the past month, has your family consumed

Other beef cuts, like roast, ribs, or round steak at home?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

IF (Q6steak <= 1 & Q6ground <= 1 & Q6other <= 1) SKIPTO Q21

IF (Q6steak = 1 & Q6ground <= 1) SKIPTO Q7

IF (Q6steak <= 1 & Q6ground = 1) SKIPTO Q11

IF (Q6steak = 1 & Q6ground = 1) ToShow = RANDNUM (1 3)

IF (ToShow = 1 | ToShow = 2) SKIPTO Q7

IF (ToShow = 3) SKIPTO Q11

**<Q7>**

In a typical week, how many meals does your household prepare at home where STEAK is served? Please stop me when I get to the right number.

- 1 1 meal or less per week
- 2 2 or 3 meals per week
- 3 4 or 5 meals per week
- 4 6 or 7 meals per week
- 5 8 or 9 meals per week
- 6 10 or more meals per week
- 8 Don't know

Note: "Meals" mean an event (e.g., a supper), not the number of

meals X the number of persons eating the meal  
Note: Take out food is excluded.

**<Q8Lean>**

There are several factors that you might consider when you purchase a STEAK TO COOK AT HOME. Please tell me how important each of these 8 factors is.

A steak's leanness

Would you say it is

- 1 Not important
- 2 Somewhat important or
- 3 Very important
- 8 Don't know / no opinion

**<Q8Fresh>**

There are several factors that you might consider when you purchase a STEAK TO COOK AT HOME. To you, how important is ... ]

A steak's freshness

Would you say it is

- 1 Not important
- 2 Somewhat important or
- 3 Very important
- 8 Don't know / no opinion

**<Q8Ease>**

There are several factors that you might consider when you purchase a STEAK TO COOK AT HOME. To you, how important is ... ]

Ease of preparation

- 1 Not important
- 2 Somewhat important or
- 3 Very important
- 8 Don't know / no opinion

**<Q8Tender>**

There are several factors that you might consider when you purchase a STEAK TO COOK AT HOME. To you, how important is ... ]

A steak's tenderness

- 1 Not important
- 2 Somewhat important or
- 3 Very important
- 8 Don't know / no opinion

**<Q8Juicy>**

There are several factors that you might consider when you purchase a STEAK TO COOK AT HOME. To you, how important is ... ]

A steak's juiciness

- 1 Not important
- 2 Somewhat important or
- 3 Very important
- 8 Don't know / no opinion

**<Q8Flavor>**

There are several factors that you might consider when you purchase a STEAK TO COOK AT HOME. To you, how important is ... ]

A steak's flavor

- 1 Not important
- 2 Somewhat important or
- 3 Very important
- 8 Don't know / no opinion

**<Q8Color>**

There are several factors that you might consider when you purchase a STEAK TO COOK AT HOME. To you, how important is ... ]

The color of the meat

- 1 Not important
- 2 Somewhat important or
- 3 Very important
- 8 Don't know / no opinion

**<Q8Price>**

There are several factors that you might consider when you purchase a STEAK TO COOK AT HOME. To you, how important is ... ]

The price per pound

- 1 Not important
- 2 Somewhat important or
- 3 Very important
- 8 Don't know / no opinion

**<Q9Natur>**

There are some characteristics of steak that might be IDENTIFIED ON THE PRODUCT LABEL. Please tell me whether these characteristics are not important, somewhat important or very important to you. The label says that the animal from which the steak comes is NATURALLY RAISED, with no antibiotics or hormones used in raising the animal.

- 1 Not important
- 2 Somewhat important
- 3 Very important
- 8 Don't know / no opinion

NOTE: Respondent must assume labeling is 100% accurate

**<Q9Grass>**

There are some characteristics of steak that might be IDENTIFIED ON THE PRODUCT LABEL. Please tell me whether these characteristics are not important, somewhat important or very important to you.

The steak's from an animal that has been GRASS FED, that is, the animal eats grass, but no grain.

- 1 Not important
- 2 Somewhat important
- 3 Very important
- 8 Don't know / no opinion

NOTE: Respondent must assume labeling is 100% accurate

**<Q9Grain>**

There are some characteristics of steak that might be IDENTIFIED ON THE PRODUCT LABEL. Please tell me whether these characteristics are not important, somewhat important or very important to you.

The steak's from an animal that has been GRAIN FED, that is, the animal eats mostly grain.

- 1 Not important
- 2 Somewhat important
- 3 Very important
- 8 Don't know / no opinion

NOTE: Respondent must assume labeling is 100% accurate

**<Q9Local>**

There are some characteristics of steak that might be IDENTIFIED ON THE PRODUCT LABEL. Please tell me whether these characteristics are not important, somewhat important or very important to you.

The animal was LOCALLY PRODUCED

- 1 Not important
- 2 Somewhat important
- 3 Very important
- 8 Don't know / no opinion

NOTE: Respondent must assume labeling is 100% accurate

**<Q9Humane>**

There are some characteristics of steak that might be IDENTIFIED ON THE PRODUCT LABEL. Please tell me whether these characteristics are not important, somewhat important or very important to you.

The animal was TREATED HUMANELY

- 1 Not important
- 2 Somewhat important
- 3 Very important
- 8 Don't know / no opinion

NOTE: Respondent must assume labeling is 100% accurate

PRICESTK = RANDNUM (1 4) price of |  
steak |1=9.25, | 2=11.56, | 3=13.88, | 4=16.19

**<Q10Intro>**

TENNESSEE BEEF means the animals must have been born, raised, and finished within the borders of the State of Tennessee. I'm now going to ask you to choose between TWO Choice-grade, 12-ounce, Boneless

Ribeye Steaks. Before making your decision, consider your household's budget for food, keeping in mind if you spend more on steak, you'll have less money to spend on other food

products. Both steaks are the same weight and have IDENTICAL freshness, cut, color, marbling, meat texture, fat, tenderness, juiciness, and flavor.

Steak 1 is \$9.25 per pound.

Steak 2 is produced in Tennessee, labeled as Tennessee Beef and is PRICESTK PER POUND.

**<Q10>**

Which steak would you choose,

- 1 Steak 1 at \$9.25 or
- 2 Steak 2, the TENNESSEE beef at PRICESTK ?
- 3 Neither
- 8 Don 't know / refused

IF (Q10 = 1) SKIPTO Q20

IF (Q10 = 2) SKIPTO Q15

IF (Q10 = 3) SKIPTO Q10Neith

IF (Q10 = 8) SKIPTO Q20

**<Q10Neith>**

Why would you select neither of the two steak options?

SKIP TO Q21

**<Q11>**

In a typical week, how many meals does your household prepare at home where GROUND BEEF is served? Please stop me when I get to the right number.

- 1 1 meal or less per week
- 2 2 or 3 meals per week
- 3 4 or 5 meals per week
- 4 6 or 7 meals per week
- 5 8 or 9 meals per week
- 6 10 or more meals per week
- 8 Don't know

Note: "Meals" mean an event (e.g., a supper), not the number of meals X the number of persons eating the meal

Note: Ground beef could be prepared in any manner, but excludes frozen dinners and canned products. Frozen hamburger patties and meatballs do count.

Note: Delivery or take out is excluded. "Brown bag" lunches are included.

**<Q12Lean>**

There are several factors that you might consider when you purchase GROUND BEEF TO COOK AT HOME. I'll list 8 factors. Please tell me how important each is to you.

the ground beef's leanness

Would you say it is

- 1 Not important
- 2 Somewhat important
- 3 Very important?
- 8 Don't know / no opinion

**<Q12Fresh>**

There are several factors that you might consider when you purchase GROUND BEEF TO COOK AT HOME. To you, how important is...

the ground beef's freshness

Would you say it is

- 1 Not important
- 2 Somewhat important
- 3 Very important?
- 8 Don't know / no opinion

**<Q12Ease>**

There are several factors that you might consider when you purchase GROUND BEEF TO COOK AT HOME. To you, how important is...

Ease of preparation

Would you say it is

- 1 Not important
- 2 Somewhat important
- 3 Very important?
- 8 Don't know / no opinion

**<Q12Text>**

There are several factors that you might consider when you purchase GROUND BEEF TO COOK AT HOME. To you, how important is...

The ground beef's texture

Would you say it is

- 1 Not important
- 2 Somewhat important
- 3 Very important?
- 8 Don't know / no opinion

**<Q12Juicy>**

There are several factors that you might consider when you purchase GROUND BEEF TO COOK AT HOME. To you, how important is...

The ground beef's juiciness

Would you say it is

- 1 Not important
- 2 Somewhat important
- 3 Very important?
- 8 Don't know / no opinion



**<Q12Flav>**

There are several factors that you might consider when you purchase GROUND BEEF TO COOK AT HOME. To you, how important is...

- The ground beef's flavor
- Would you say it is
- 1 Not important
- 2 Somewhat important
- 3 Very important?
- 8 Don't know / no opinion

**<Q12Price>**

There are several factors that you might consider when you purchase GROUND BEEF TO COOK AT HOME. To you, how important is...

- The price per pound
- Would you say it is
- 1 Not important
- 2 Somewhat important
- 3 Very important?
- 8 Don't know / no opinion

**<Q13Natur>**

There are some characteristics of GROUND BEEF that might be IDENTIFIED ON THE PRODUCT LABEL.

Please tell me whether these characteristics are not important, somewhat important or very important to you.

The label notes that the animal from which the ground beef comes is

- NATURALLY RAISED, with no antibiotics or hormones used in raising the animal.
- 1 Not important
- 2 Somewhat important
- 3 Very important
- 8 Don't know / no opinion

NOTE: Respondent must assume labeling is 100% accurate

**<Q13Grass>**

There are some characteristics of GROUND BEEF that might be IDENTIFIED ON THE PRODUCT LABEL.

To you, is this characteristic is not important, somewhat important or very important.

The GROUND BEEF is from an animal that is GRASS FED, that is, the animal eats grass, but no grain.

- 1 Not important
- 2 Somewhat important
- 3 Very important

8 Don't know / no opinion

NOTE: Respondent must assume labeling is 100% accurate

**<Q13Grain>**

There are some attributes of GROUND BEEF that might be IDENTIFIED ON THE PRODUCT LABEL.

To you, is this characteristic is not important, somewhat important or very important.

The GROUND BEEF is from an animal that has been GRAIN FED, that is, the animal eats mostly grain.

- 1 Not important
- 2 Somewhat important
- 3 Very important
- 8 Don't know / no opinion

NOTE: Respondent must assume labeling is 100% accurate

**<Q13Local>**

There are some attributes of GROUND BEEF that might be IDENTIFIED ON THE PRODUCT LABEL.

To you, is this characteristic is not important, somewhat important or very important.

The ground beef is from an animal that was LOCALLY PRODUCED

- 1 Not important
- 2 Somewhat important
- 3 Very important
- 8 Don't know / no opinion

NOTE: Respondent must assume labeling is 100% accurate

**<Q13Hum>**

There are some attributes of GROUND BEEF that might be IDENTIFIED ON THE PRODUCT LABEL.

To you, is this characteristic is not important, somewhat important or very important.

The ground beef is from an animal that was TREATED HUMANELY

- 1 Not important
- 2 Somewhat important
- 3 Very important
- 8 Don't know / no opinion

NOTE: Respondent must assume labeling is 100% accurate

PRICEGB = RANDNUM (1 4) price of ground beef 1=\$3.36| 2=\$4.20| 3=\$5.04| 4=\$5.88  
SKIPTO Q14Intro

**<Q14Intro>**

TENNESSEE BEEF means the animals must be born, raised, and finished within the borders of the State of Tennessee. I'm now going to ask you to choose between TWO types of GROUND BEEF. Before making your decision, consider your household's budget for food keeping in mind if you spend more on GROUND BEEF, you'll have less money to spend on other food products. Both of the GROUND BEEF options are 85% meat, 15% fat. They are IDENTICAL in leanness, freshness, color, meat texture, juiciness, and flavor.

Ground beef 1 is \$3.35 per pound.

Ground beef 2 is produced in Tennessee, labeled as Tennessee Beef and is PRICEGB PER POUND.

**<Q14>**

Which ground beef would you choose,

- 1 Ground beef 1 at \$3.36 per pound or
- 2 Ground beef 2, the TENNESSEE beef at PRICEGB ?
- 3 Neither
- 8 Don't know

IF (Q14 = 1) SKIPTO Q20

IF (Q14 = 2) SKIPTO Q15

IF (Q14 = 3) SKIPTO Q14Neith

IF (Q14 = 8) SKIPTO Q20

**<Q14Neith>**

Why would you select neither of the two ground beef options?

SKIPTO Q21

**<Q15>**

There are a number of reasons you might choose Tennessee beef. Please tell me if any of these reasons had no influence, some influence, or a great deal of influence on your choice.

**<Q15A>**

Please tell me how much this reason influenced your choice of Tennessee beef.

Tennessee beef is likely higher quality than out-of-state beef.

- 1 No influence
- 2 Some influence
- 3 Great influence
- 8 Don't know/ No opinion

**<Q15B>**

Please tell me how much this reason influenced your choice of Tennessee beef.  
I know more about where Tennessee beef comes from, so I feel it is safer.

- 1 No influence
- 2 Some influence
- 3 Great influence
- 8 Don't know/ No opinion

**<Q15C>**

Please tell me how much this reason influenced your choice of Tennessee beef.  
Purchasing Tennessee beef makes me feel like I am supporting the state's economy.

- 1 No influence
- 2 Some influence
- 3 Great influence
- 8 Don't know/ No opinion

**<Q15D>**

Please tell me how much this reason influenced your choice of Tennessee beef.  
Purchasing Tennessee beef makes me feel like I am supporting farmers in my state.

- 1 No influence
- 2 Some influence
- 3 Great influence
- 8 Don't know/ No opinion

**<Q15E>**

Please tell me how much this reason influenced your choice of Tennessee beef.  
Tennessee beef has to be transported shorter distances, so it is better for the environment.

- 1 No influence
- 2 Some influence
- 3 Great influence
- 8 Don't know/ No opinion

**<Q15F>**

Please tell me how much this reason influenced your choice of Tennessee beef.  
Tennessee beef is likely fresher than out-of-state beef.

- 1 No influence
- 2 Some influence
- 3 Great influence
- 8 Don't know/ No opinion

**<Q15G>**

Are there other reasons you may choose Tennessee beef?

- 1 Yes
- 0 No
- 8 Don't know/ refused

IF (Q15F = 1) SHOW "What are those reasons?" 13 10 24

**<Q16>**

I'm going to read some other considerations you might have had when deciding whether to purchase Tennessee Beef.

**<Q16A>**

Please tell me whether the reason had no influence, some influence or great influence on your choice.

Knowing the farmer who produced the beef.

- 1 No influence
- 2 Some influence
- 3 Great influence
- 8 Don't know/ No opinion

**<Q16B>**

Please tell me whether the reason had no influence, some influence or great influence on your choice.

Knowing how the beef was produced.

- 1 No influence
- 2 Some influence
- 3 Great influence
- 8 Don't know/ No opinion

**<Q16C>**

Please tell me whether the reason had no influence, some influence or great influence on your choice.

The experience of purchasing directly from the farmer.

- 1 No influence
- 2 Some influence
- 3 Great influence
- 8 Don't know/ No opinion

**<Q16D>**

Please tell me whether the reason had no influence, some influence or great influence on your choice.

Being able to visit the farm where the beef was produced.

- 1 No influence
- 2 Some influence
- 3 Great influence
- 8 Don't know/ No opinion

**<Q16E>**

Please tell me whether the reason had no influence, some Influence or great influence on your choice.

The price of Tennessee beef compared with other beef.

- 1 No influence
- 2 Some influence
- 3 Great influence
- 8 Don't know/ No opinion

**<Q17Groc>**

Please tell me whether you would likely shop for Tennessee Beef at these types of outlets.

Would you shop for Tennessee Beef at a grocery store?

- 1 Yes
- 0 No
- 8 Don't know

**<Q17BigBx>**

Would you shop for Tennessee Beef at a

Big Box store, like a Walmart or Target Superstore?

- 1 Yes
- 0 No
- 8 Don't know

**<Q17WareH>**

Would you shop for Tennessee Beef at a

Warehouse store? [like a Sam's or Costco]

- 1 Yes
- 0 No
- 8 Don't know

**<Q17Gourm>**

Would you shop for Tennessee Beef at a

Gourmet or organic market? [like a Fresh Market or Whole Foods]

1 Yes

0 No

8 Don't know

**<Q17Butch>**

Would you shop for Tennessee Beef at a

Butcher shop?

1 Yes

0 No

8 Don't know

**<Q17Inter>**

Would you shop for Tennessee Beef through  
the internet or catalog order?

1 Yes

0 No

8 Don't know

**<Q17FarmM>**

Would you shop for Tennessee Beef at  
a Farmer's Market?

1 Yes

0 No

8 Don't know

**<Q17Farm>**

Would you shop for Tennessee Beef  
directly from a farmer? [but not at a farmers market]

1 Yes

0 No

8 Don't know

NOTE: This would be by contacting the farmer directly or visiting an on-farm market.

**<Q17Other>**

Would you shop for Tennessee Beef  
at any other type of outlet?

- 1 Yes
- 0 No
- 8 Don't know

IF (Q17Other=1) SHOW "Where would that be?"

**<Q18>**

What type of packaging would you prefer for your Tennessee Beef?

- 1 Vacuum packaged
- 2 Shrink wrapped
- 3 Butcher paper wrapped, or
- 4 No preference?
- 8 Don't know

**<Q19Fresh>**

Beef is sold to consumers at different temperatures.

Would you purchase TENNESSEE BEEF it was...

Fresh (never frozen)?

- 1 Yes
- 0 No
- 8 Don't know

**<Q19Froz>**

Would you purchase Tennessee beef it was...

Frozen (fresh frozen)?

- 1 Yes
- 0 No
- 8 Don't know

NOTE: Fresh frozen means there's been no lag between butchering and freezing.

**<Q19Thaw>**

Would you purchase Tennessee beef it was...

Thawed from a fresh frozen product?

- 1 Yes
- 0 No
- 8 Don't know

NOTE: "Thawed..." means beef is at refrigerator temperature when sold to the consumer, but was previously fresh frozen.



**<Q19Cook>**

Would you purchase Tennessee beef it was...

Pre-cooked and ready to eat?

- 1 Yes
- 0 No
- 8 Don't know

NOTE: "Thawed..." means beef is at refrigerator temperature when sold to the consumer, but was previously fresh frozen.

**<Q20>**

There are a number of possible reasons you DIDN'T select the TENNESSEE BEEF product. Please tell me whether these reasons are true of you.

[ENTER 1]

**<Q20A>**

There are a number of possible reasons you DIDN'T select the TENNESSEE BEEF product. Please tell me whether these reasons are true of you.

Would you say you

Trust beef products from major beef producing states more than locally produced beef?

- 1 Yes
- 0 No
- 8 Don't know/no opinion

**<Q20B>**

Would you say you

Don't believe Tennessee beef is better quality?

- 1 Yes
- 0 No
- 8 Don't know/no opinion

**<Q20C>**

Would you say you label var Q9INPUT "Fertilize pastures"

Prefer corn fed beef over beef that's grazed.

- 1 Yes
- 0 No
- 8 Don't know/no opinion

**<Q20D>**

Would you say you

Can afford to pay a higher price for Tennessee Beef, but aren't willing to pay more?

- 1 Yes
- 0 No
- 8 Don't know/no opinion

**<Q20E>**

Would you say you

Can't afford to pay more for Tennessee Beef?

- 1 Yes
- 0 No
- 8 Don't know/no opinion

**<Q21>**

In this last section, I'll ask about you and your opinions. I'll read two factors. Please tell me, in your opinion, which is more important, or whether they're equally important.

<ENTER 1>

**<Q21Env>**

Which is more important, in your opinion?

Keeping food prices low or

Reducing the environmental impact of food production?

- 1 Keeping food prices low
- 2 Second factor
- 3 equally important
- 8 Don't know / no opinion

**<Q21Hum>**

Which is more important, in your opinion?

Keeping food prices low or

Ensuring humane treatment of animals used in food production?

- 1 Keeping food prices low
- 2 Second factor
- 3 equally important
- 8 Don't know / no opinion

**<Q21Inc>**

Which is more important, in your opinion?

Keeping food prices low or

- 1 Keeping food prices low
- 2 Second factor
- 3 equally important
- 8 Don't know / no opinion

**<Q21Safe>**

Which is more important, in your opinion?

Keeping food prices low or

Providing safe, healthy, and nutritious food choices?

- 1 Keeping food prices low
- 2 Second factor
- 3 equally important
- 8 Don't know / no opinion

**<Q21Local>**

Which is more important, in your opinion?

Keeping food prices low or

Supporting your local economy?

- 1 Keeping food prices low
- 2 Second factor
- 3 equally important
- 8 Don't know / no opinion

**<DEMO1>**

To conclude the interview, we have a few background questions to help us understand beef consumer choices. These responses are confidential.

**<GENDER>**

[WHAT IS THE GENDER OF THE RESPONDENT?]

- 1 MALE
- 2 FEMALE
- 8 DON'T KNOW

**<AGE>**

What is your age, please?

Age >>>

[RECORD -98 IF DON'T KNOW]  
[RECORD -99 IF REFUSED]

**<HHSIZE>**

How many people are in your household?

# >>>

[RECORD -98 IF DON'T KNOW]  
[RECORD -99 IF REFUSED]

**<FOODSHOPPER>**

Are you the person primarily responsible for shopping for your household's food?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

**<FARMBKGROUND>**

Were you raised on a farm or have you ever farmed?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

**<EDUCATION>**

What is the highest level of school that you have completed?

- 1 Less than high school
- 2 high school graduate/GED
- 3 some college, an associate's degree or technical school
- 4 college graduate (16 years)
- 5 post-graduate ( $\geq 17$  years)
- 6 other
- 8 Don't know / refused

**<URBANIZ>**

Is the area you live in a

- 1 Rural area
- 2 Small town
- 3 Suburb
- 4 Urban area
- 6 other
- 8 Don't know / refused

**<CNTY>**

What county do you live in?

- 1 Anderson..95 Wilson

**<CHILDLT18>**

Do you have any household members under the age of 18?

- 1 Yes
- 0 No
- 8 Don't know

9 Refused

**<CHILDLT6>**

Do you have any household members under the age of 6?

- 1 Yes
- 0 No
- 8 Don't know
- 9 Refused

**<Qphone>**

Have I reached you on a cell phone or home phone?

- 1 Cell
- 2 Home (includes landline and voice over internet)
- 8 Don't know / refused

IF (Qphone=2) SKIPTO QphoneC

**<QphoneH>**

Do you have a home phone also?

- 1 Yes
- 0 No
- 8 Don't know / refused

NOTE: "home phone" includes landline and voice over internet (VOI) SKIPTO DEMO9

**<QphoneC>**

Do you have a cell phone also?

- 1 Yes
- 0 No
- 8 Don't know / refused

NOTE: A cell phone, where the contract is in their employer's name does not count

**<DEMO9>**

I am going to read a list of income categories for household income from all sources before taxes for the year 2012. Please stop me when I get to yours.

- 1 less than \$20,000
- 2 \$20,000 to \$29,999
- 3 \$30,000 to \$39,999
- 4 \$40,000 to \$49,999
- 5 \$50,000 to \$59,999
- 6 \$60,000 to \$69,999
- 7 \$70,000 to \$79,999
- 8 \$80,000 to \$89,999
- 9 \$90,000 to \$99,999
- 10 \$100,000 to \$109,999
- 11 \$110,000 to \$119,999
- 12 \$120,000 or more
- 99 Don't know / refused

**END OF SURVEY**





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for Profitable Agriculture

