New National Beef Market Basket Survey data show changes in retail cut composition

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Summary

Historically, the nutritional focus on beef has been its fat content. Health professionals and the media repeatedly criticize beef as having more fat – and sometimes too much fat – when compared to other proteins. Nutritionists, the media and consumers have been misled about beef’s role as a source of dietary fat because frequently, beef nutrition perceptions are based on faulty information. Since 1991, the beef industry has regularly conducted National Beef Market Basket Surveys to provide more accurate data.

Background

Government data drives nutrition policy

The U.S. Department of Agriculture (USDA) updates and revises its nutrient data with information from universities, agricultural experiment stations, government laboratories and industry. The beef portion of this historic database – Agriculture Handbook No. 8, “Composition of Foods: Beef Products; Raw, Processed Prepared” (commonly known as Agriculture Handbook 8-13) – has been revised four times, most recently in 2005. USDA’s Nutrient Data Laboratory now publishes the information online as the National Nutrient Database for Standard Reference.

Different food products are added or updated regularly with the most recent data published in 2006 in Standard Release 19. The current beef data was added in 2005 in Standard Release 18. Because this information affects nutritional recommendations and national nutrition policies, it must be based on the most accurate and current data available.

Until 1986, data published in the Handbook was based on the same fat trim levels – 1.27 centimeters (0.5 inch) or less – that were used in the 1963 version of the Handbook. When the Checkoff-funded 1991 National Beef Market Basket Survey demonstrated that beef cuts were even leaner than expected, the nutrient database was updated with data on beef retail cuts revised to account for 0.63 cm (about 0.24 inch) of external fat.

Consumer demand and the findings from this study helped reduce fat trim specifications at retail to no more than 0.63 cm. This initial study demonstrated the need for future research, conducted at regular intervals, to reassess beef cuts at retail and determine to what extent retailers are trimming beef cuts.

Table 1: Fat thickness of retail cuts according to primal or section of origin

<table>
<thead>
<tr>
<th>Primal or section</th>
<th>Number of cuts</th>
<th>Fat thickness, cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chuck</td>
<td>2,017</td>
<td>0.17</td>
</tr>
<tr>
<td>Rib</td>
<td>1,508</td>
<td>0.36</td>
</tr>
<tr>
<td>Loin</td>
<td>2,630</td>
<td>0.36</td>
</tr>
<tr>
<td>Round</td>
<td>2,325</td>
<td>0.15</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>1,630</td>
<td>0.12</td>
</tr>
<tr>
<td>Total</td>
<td>10,110</td>
<td>0.24</td>
</tr>
</tbody>
</table>

2005 survey updates data on retail beef cuts

Researchers at Texas A&M University collaborated with researchers from California Polytechnic State University, Oklahoma State University, Pennsylvania State University, South Dakota State University, Texas Tech University, the University of Florida and the University of Missouri to complete the 2005 National Beef Market Basket Survey. The 2005 Survey had two main objectives:

- To assess the current composition of raw beef cuts sold in retail throughout the United States; and
- To compare data acquired through this project with that contained in the National Nutrient Database for Standard Reference in order to assess appropriate revisions.

Researchers sampled beef from 82 retail stores in 11 U.S. cities: Seattle, Los Angeles, San Francisco, Denver, Houston, Chicago, Kansas City, Atlanta, Tampa, Philadelphia and New York City. Two retail chains in each city, representing at least one-third of total market share in their area, were sampled by auditing up to four stores per chain.

The first phase of the survey occurred at the store level, where retail cuts were identified, counted and measured for external fat thickness using a ruler at three different locations on each cut. These measurements were then used to calculate the average external fat thickness for each steak and roast. Other information, such as package weight, price...
per kilogram, total package price and declared fat/lean ratio were recorded.

The second phase consisted of detailed compositional analysis of retail cuts. An assortment of 94 cuts, representing various locations across the carcass, were purchased from each store and shipped to Texas A&M University for analysis. These cuts were dissected into separable lean (beef muscle tissue only), external fat, seam fat, bone and heavy connective tissue between muscles (waste). Initial weight and post-dissection weights of all components were recorded to determine its percentage contribution to the overall cut.

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The research also found that boneless, closely trimmed cuts tend to produce a higher percentage of separable lean, and steaks produce a higher percentage of separable lean than roast counterparts, due to increased trimming during fabrication. These cuts contain more edible muscle and are more appealing to today’s diet- and health-conscious consumer. In addition, the mean extractable fat percentages for nine of the 12 ground beef products studied were lower than the percentages declared on the package label.

Research IDs need to update government data

The 2005 Beef Market Basket Survey also compared the retail composition data with that reported in the National Nutrient Database for Standard Reference and identified important differences. The new survey data show the actual mean percent separable fat for a retail bone-in ribeye steak was 13.4 percent lower than what is reported in the National Database. The mean separable fat was 29.53 percent lower for four cuts from the loin, and 66.95 percent lower for three cuts from the round, when compared to the values currently found in the National Database. Data for some of the cuts sampled in the study could not be compared because they were not available in the National Database.


Key Points

- In 2005, researchers conducted a follow-up of the Checkoff-funded National Beef Market Basket Survey. It is important to research the composition of beef sold in retail outlets because the data affect nutrition recommendations and policy.

- Researchers sampled an assortment of 94 cuts at 82 retail stores in 11 cities across the country to determine external fat thickness and composition. The research found that overall, the external fat on retail cuts averages slightly less now than it did in the last Market Basket Survey.

- The 2005 survey also compared the retail cut data to those reported in the National Nutrient Database for Standard Reference and found important discrepancies.