



Beef Insight

SDSU researchers are studying the nutritional and marketing aspects of beef.

by *Kindra Gordon*, field editor

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Red meat often gets a bad rap when it comes to a heart-healthy diet, but the South Dakota Beef Industry Council (SDBIC) aims to change that perception through its beef checkoff-funded partnership with a South Dakota State University (SDSU) researcher.

Holly Swee, director of nutrition and consumer information, explains, “The South Dakota Beef Industry Council is focused on funding science-based research to support the benefits of beef’s high-quality protein in a healthful diet.”

With beef council support, Kendra Kattelman, SDSU professor of health and nutritional sciences, evaluated how consuming an additional 7-9 ounces (oz.) of lean beef per week affects iron status. The first two projects tracked a total of 51 physically active females over a 10-week period, while the third looked at 34 collegiate athletes competing in volleyball or cross-country track during an eight-week period. A total of seven graduate students worked on the one-year projects.

The results

Based on this research, Kattelman and her students drew the following conclusions:

- ▶ A high-protein diet does not negatively affect a woman’s bone density. Previous studies had suggested that high protein levels led to lower bone density, but a comparison of data from the first two studies showed no such trend.
- ▶ Long-distance runners who

supplemented their diets with lean beef retained more lean body mass during the season than those who did not consume the extra protein. Even though the amino acids consumed were the same, Kattelman says, “The use of lean beef attenuated the loss of lean tissue.” This was not the case for volleyball players, but Kattelman explains that the aerobic nature of running could account for the difference.

Kattelman’s next project with the beef council will be to evaluate how eating lean beef affects adults at risk for developing heart disease, stroke and type 2 diabetes. She is working with Avera Heart Hospital to recruit and monitor 40 participants for the three-month study, which is being conducted in 2013.

The participants must have at least three of five markers for a condition known as metabolic syndrome, as evidenced by an apple-shaped body, high blood pressure, high fasting blood-sugar level, high triglyceride levels in the bloodstream and low levels of good cholesterol.

Through this research, the beef council seeks to build on a 2012 Pennsylvania State University study. Swee says, “The study found that eating lean beef daily as part of an

overall heart-healthy diet can actually lower cholesterol.”

Swee says she is confident that this new study will help build the case for beef as an important part of anyone’s diet. “We believe this checkoff-funded research will benefit both beef producers and consumers in South Dakota and beyond.”

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— *Holly Swee*

Restaurant research, too

SDSU Extension is also researching beef — specifically the marketing of beef products at non-chain South Dakota restaurants. The South Dakota Beef

Industry Council funded this project, as well.

The project’s goal was to learn more about beef consumption, beef sales and training provided to waitstaff, explains Keith Underwood, SDSU Extension meat scientist. Restaurants surveyed were asked to provide information regarding their menu choices, sales trends and information about their customers.

The menu information obtained from this survey indicated that restaurants in South Dakota offer numerous choices of beef steak products on their menus. These choices included a ribeye steak, sirloin steak, prime rib, filet mignon, beef tips, New York strip steak, chopped steak, bone-in ribeye steak, T-bone steak, and the flat-iron steak.

According to the data gathered, the most common beef products offered in South Dakota restaurants were the ribeye steak,

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sirloin steak, prime rib and ground beef, respectively. The most popular beef cuts sold by restaurants were the sirloin, prime rib, ribeye and filet mignon.

Underwood says it was interesting that the survey revealed only 10% of the South Dakota restaurants surveyed offer flat-iron steaks on the menu. The flat iron is a highly promoted new cut introduced by the beef industry in the past decade. This cut has enjoyed tremendous success recently at chain restaurants and steak houses across the United States, so the SDSU researchers were surprised that it has not become as popular in South Dakota restaurants.

The four most expensive cuts on South Dakota restaurant menus were the filet mignon, followed by prime rib, ribeye and New York strip steaks. This would indicate that traditional steaks from the middle meats are still valued by consumers for their palatability attributes, says Underwood.

When South Dakota restaurants were asked about the month of greatest sales, the study results indicated 31% of the restaurants sold their highest volume of steaks in October, while 24% sold their highest volume of steaks in July, and 21% sold their highest volume of steaks in August.

Underwood says this is supported by seasonal and tourism events that increase sales identified by restaurants, with hunting season as the first, summer vacation as the second, and the Sturgis Motorcycle Rally as the third highest events influencing beef sales.

According to Underwood, restaurants reported that Fridays were the day of greatest steak sales, and their customers value flavor, price and tenderness when selecting steaks. Customers most commonly request their steaks prepared to a medium or medium-rare degree of doneness 63% and 37% of the time, respectively.

When asked why their customers return to the restaurant, high-quality food, repeatability of the quality of food and good customer service were identified as the primary factors by the restaurants. This would indicate that restaurants in South Dakota have a good working knowledge of beef selection and preparation, and the service provided is valued by their customers, Underwood concludes.

Members of the SDSU Extension research team participating in this study with Underwood included SDSU Extension beef field specialists B. Lynn Gordon and Heather Larson.



Editor's Note: *Kindra Gordon is a cattleman and freelance writer from Whitewood, S.D.*

Beef study gleans info on waitstaff training

How do restaurant owners and managers train their waitstaff, specifically in the area of understanding beef and beef products that are featured on the menu?

That was the question to which South Dakota State University (SDSU) Extension sought answers via a survey conducted with restaurant owners and managers during the summer of 2012. The South Dakota Beef Industry Council (SDBIC) funded the project.

Members of the SDSU Extension research team participating in this study included meat scientist Keith Underwood and beef field specialists B. Lynn Gordon and Heather Larson.

The SDSU trio found that many restaurants conduct informal training for their waitstaff, with more of a focus on general training. A majority of this training is centered on providing time for the new waitstaff to shadow and train alongside a more experienced server, testing or review of the menu, acting as food runner to learn the plating process of the food, and understanding the concepts of general customer service techniques and point-of-sale systems.

More than one-third of the waitstaff is not trained to offer advice to customers if the customer inquires about which beef cut to order or the levels of cooking (degrees of doneness), reports Gordon. However, those trained in this area are primarily taught the degrees of doneness (i.e., medium rare) and a general understanding of what cuts are offered on the menu.

Of those restaurants that do offer training, only a limited number go into more in-depth training with their waitstaff about the qualities and characteristics of beef, Gordon explains.

She adds that South Dakota restaurants participating in the survey project indicated their waitstaff would benefit from more training in order to communicate effectively with restaurant clientele, however they identified the challenges of finding time to allocate to training in a workplace setting that is very busy, especially during serving hours and where the majority of their staff is part-time.

Yet, if effective training tools were developed to meet the training needs and styles that were identified in the needs-assessment project, the participating South Dakota restaurants indicated they would be willing to incorporate more training about beef into their waitstaff training program.

Restaurant owners and managers identified the top five content areas needed for waitstaff training on beef and beef cuts as:

- ▶ explanation of the different cuts;
- ▶ characteristics of the cuts and a thorough understanding of degrees of doneness (cooking temps);
- ▶ a general understanding of the aging process of meat and why meat is aged;
- ▶ the different USDA quality grades and how that influences taste and flavor; and
- ▶ knowledge of the concept of tenderness.