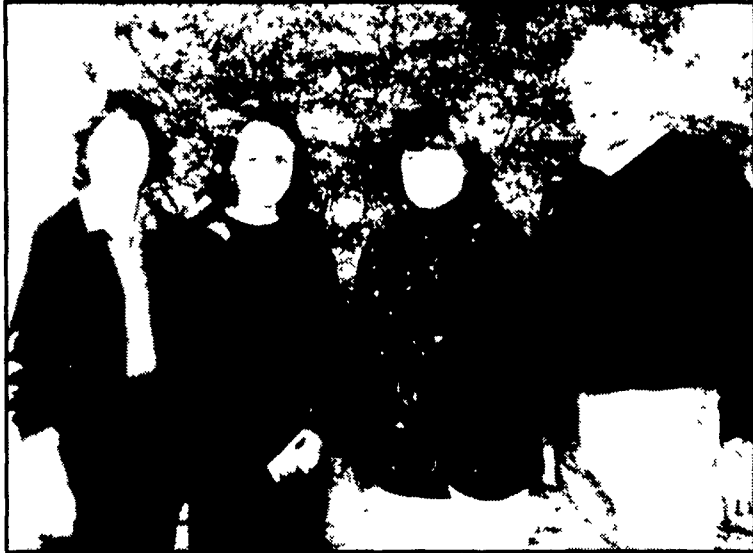


# Seminar Details Beef Safety, Marketing Issues



Speakers during this week's "Beef 100" include, from left, Paula Leuenberger, director of nutrition and health at the Pennsylvania Beef Council (PBC); Carrie Bomgardner, promotions director at PBC; Catherine Cutter, department of food science at Penn State; and William Henning, extension meat scientist.

## MICHELLE KUNJAPPU Lancaster Farming Staff

LANCASTER (Lancaster Co.) — "Beef 100," a one-day seminar to instruct extension agents, drew 17 participants who watched a cooking demonstration, sampled beef, and were educated about beef nutrition, food safety, case-ready beef, foodservice and retail trends, and diseases.

Conducted at the Farm and Home Center Monday, the speakers presented the program again on Tuesday at the Westmoreland County extension office in Greensburg.

The event is conducted "every few years to bring everyone up to speed on the new beef safety and marketing issues," said William Henning, extension meat scientist at Penn State.

### Beef Nutrition

During the morning session Paula Leuenberger, director of nutrition and health at the Pennsylvania Beef Council, cited several studies to show beef's importance in diet and also pointed out several nutrition resources available.

Nutrition and science facts re-

lated to beef are available at [www.beefnutrition.org](http://www.beefnutrition.org). Food safety, recipes, and selection, preparation, and cooking information are located on the site.

The [www.teachfree.com](http://www.teachfree.com) site is a site for teachers who can order online or download information and resources, especially for preschool through 12th grade educators.

The [www.burgertown.com](http://www.burgertown.com) site caters to children's interests with games, nutrition fun facts and recipes shared by other children.

Important beef nutrition considerations were also part of Leuenberger's program. She cited a study that illustrated that lean beef can be effectively incorporated into a low-fat diet plan to lower blood cholesterol. The study showed no advantage for substituting chicken and fish for lean beef within the context of a low-fat diet.

### Case-Ready Beef

William Henning, extension meat scientist, discussed new developments in meat packaging and merchandising. Henning opened by presenting his "case for case-ready beef," a method of

bringing beef to the grocery store already cut, packaged, and ready to be merchandised.

Case-ready comes through two avenues, said Henning — centralized cutting centers or Modified Atmosphere Packaging (MAP). Chain grocery stores are looking at the benefits of having a central facility to cut, wrap, and even price the beef for all stores.

In the future, said Henning, meat cutters would be available to answer questions and provide meal solutions to consumers. In addition stores would be able to use the space to display additional products and cut down on the cost of meat-cutting equipment at each location.

The "modified atmosphere" in the package is achieved through evacuating all air from the package and flushing it with oxygen, nitrogen, or carbon dioxide combinations.

Two options are a high amount (80 percent) of oxygen to keep the fresh-looking red bloom of the meat and a smaller amount (20 percent) of carbon dioxide, which deters bacterial growth.

A MAP package such as this would have a shelf life of 14 days.

Currently, most MAP meat is ground beef, said Henning. Another MAP option is the package which has exclusively nitrogen and carbon dioxide. The package has an oxygen-permeable clear overwrap that is pulled off at the grocery store, allowing oxygen to enter and cause the familiar red bloom in the beef.

### Beef pH

Since color is one of the most important sensory characteristic that makes beef desirable as food, that makes it worth attention, according to Henning.

Knowing the temperature beef should be cooked prevents consumers from "throwing beef on the grill until it is brown. Having a thermometer is a good way to prevent overcooking — you'll gauge it a lot better than just by eye," said Henning.

As a rule, pH in a carcass de-

clines after slaughter. The extent and rate of a pH decline, said Henning, affects quality. A slow, steady decline is desirable to produce a darker color and higher water-holding capacity.

If the beef has a pH of 7.0 or higher, it can stay pink even at 165 degrees fahrenheit, so consumers cannot always apply the "cook until juices run clear" recommendation.

### Meat Enhancing

A practice common to pork is now being used in beef, said Henning. "Enhanced beef" is beef that is injected with water and low levels of salt, and phosphate, which aids in water retention, to improve tenderness and compensate for overcooking.

Additionally, injecting beef improves shelf-life, color stability, and water holding capacity. If the cut is enhanced it must be noted on the label, he said.

This adds greater variety to beef selections for consumers, since a greater amount of cuts will be more tender and can be prepared in different styles.

### Connecting With The Consumer

Carrie Bomgardner, promotions director at the Pennsylvania Beef Council, spoke about consumer trends in retail and foodservice channels.

"If we're going to move beef, we need to focus on convenience and nutrition," said Bomgardner.

Citing NCBA recent research, Bomgardner taught the audience about "the convenience revolution" that has occurred since nearly 60 percent of America's women are not only working, but working longer hours than in years past.

According to research, fewer dinners are being made from scratch and recipe use is declining. Also fewer homemade items and fresh foods are appearing on the table.

For trends in the retail channel, Bomgardner pointed out that for beef, the protein's share per capita expenditures has nearly doubled in the last 50 years when

people eat out.

"As we look at all these trends, convenience has been identified as a major driver of beef consumption, and we take that cue from chicken," said Bomgardner. Convenience, she said, can be a marinated tenderloin or full-assembled kabobs, not necessarily just a precooked product.

In the foodservice sector, the restaurant market is growing. Half of the U.S. food dollar is now spent in restaurants, said Bomgardner. Beef accounted for 7.2 billion beef servings in commercial restaurants in 1999.

### Beef Safety

Catherine Cutter, from the department of food science at Penn State, discussed pathogens in slaughter and the meat industry's efforts to produce a safe product.

Trimming, chemical dehairing, spray washing, a steam vacuum sanitizer, and steam pasteurization are all methods of reducing or eliminating contamination.

Ninety-five percent of carcass contamination comes from the hide.

Dehairing the carcass with sodium sulfide, a water rinse, a neutralizer (hydrogen peroxide) and a final water rinse reduces visible contamination and is inhospitable to bacteria growth. The process, which takes 10-15 minutes per carcass, results in improved hides and lowered contamination, but may cost more for the processor.

Spray washing cleanses the carcass with an antimicrobial water and mist. A steam vacuum sanitizer throws 165-degree water and steam at the same time onto the carcass and vacuums the moisture. Steam pasteurization, a \$1 million system, is a fast steam, followed by cold water, process to kill bacteria.

Irradiation, hydrostatic pressure, electric fields, pulsed light, microwaves, and antimicrobial incorporated films in packaging are other technologies used to decontaminate carcasses.

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