



Beef Safety Research



Our Commitment is to further reduce the risks associated with foodborne pathogens by utilizing scientifically proven production practices and technologies

Annual Beef Industry Safety Summit Informs Industry

Since the early 1990s, the Beef Checkoff has funded safety research focused on every step in the supply chain, both developing and evaluating potential safety-enhancing interventions beginning with the producer and extending through the packer, distributor, retailer, and foodservice provider. This comprehensive body of knowledge would have no impact without continuous efforts to disseminate meaningful information to those in the best position to use the data to increase the safety of U.S. beef. The following timeline highlights the critical role the annual Beef Industry Safety Summit, funded in part by the Beef Checkoff, has played in advancing the industry's quest for the safest possible beef products. To provide context, included among the Summit highlights are those discoveries/events/government regulations which impacted the industry's journey.

1885 *Salmonella* was first isolated by Theobald Smith, a research assistant of Dr. Daniel Elmer Salmon who was the first chief of the Department of Agriculture's Bureau of Animal Industry. Since that time, more than 2,000 subtypes have been identified.

1906 Congress passed the Federal Meat Inspection Act, which included four basic provisions: Mandatory inspection of livestock before slaughter (cattle, sheep, goats, equines, and swine); mandatory postmortem inspection of every carcass; sanitary standards established for meat processing plants; and authorized USDA ongoing monitoring and inspection of harvest and processing operations.

1975 *E. coli* O157:H7 was identified as a human pathogen.

1993 A major *E. coli* O157:H7 outbreak was tied to ground beef served at Jack in the Box restaurants in the northwest.

The Beef Checkoff funded an award-winning Blue Ribbon Task Force of scientists to identify new ways to improve beef safety.

1994 The Food Safety and Inspection Service (FSIS) identified *E. coli* O157:H7 as an adulterant and began a sampling program to test for the pathogen in federally inspected establishments and retail stores. Safe food handling instructions on labels for fresh and frozen meat and poultry were required in retail stores.

The beef industry, with funding support from the Beef Checkoff, initiated research that, over time, would investigate more than 25 different harvest-level beef safety interventions, including organic acid washes, acidified sodium chlorate, steam or thermal pasteurization, and hide washes.

1997 The **Beef Industry Food Safety Council (BIFSCo)** formed. Members of BIFSCo range from farmers and ranchers to processors and retailers who collaborate to solve food safety challenges. The formation of BIFSCo was unprecedented within an industry founded on fiercely competitive principles. The individuals who first came together as part of the Blue Ribbon Task Force recognized the need for BIFSCo to make beef safety an industry goal, not a competitive advantage. From the beginning, BIFSCo's plan was to raise the bar on beef safety standards, thus improving safety efforts throughout the industry.



2003 Funded in part by the Beef Checkoff, BIFSCo hosts its first ***E. coli* Summit** where leaders convened to discuss solutions and refine "best practices" for each segment of the industry. The *E. coli* Summit marks the first time industry safety experts, under normal circumstances considered proprietary competitors, came together in a common forum to discuss emerging safety issues, explore solutions, and employ state-of-the-art science to reduce foodborne pathogen incidence industry-wide.



2004 Four months following the identification of a cow infected with Bovine Spongiform Encephalopathy (BSE) in the United States, the industry convened the **Industry Summit on Bovine Spongiform Encephalopathy** to bring together experts from all segments of the beef industry to identify knowledge voids and establish best practices to strengthen the industry's defenses against BSE.



2005 FSIS published a Federal Register notice requiring establishments processing **mechanically tenderized beef products** to account for *E. coli* O157:H7 in their next annual HACCP assessment.

The **2005 Beef Industry Safety Summit** convened representatives from all industry segments in Orlando, Florida to continue work begun two years earlier at the *E. coli* Summit. At that first meeting in 2003, industry leaders developed best practices to deal with *E. coli* and other food safety issues. Based on 2005 estimates, these recommendations were being used by more than 90 percent of harvest facilities and affecting more than 80 percent of the ground beef processed in the United States.



2006

An official at the United Fresh Produce Association cited the beef industry as a model for other industries to follow during high-profile produce recalls. (Dave Goombas, the senior vice president for food safety and technology for the Washington, D.C.-based United Fresh Produce Association).

2006

The **2006 Beef Industry Safety Summit** included updates on recent research in beef safety with an emphasis on pre-harvest interventions; an opportunity for the production, harvest, processing, retail and foodservice sectors to revise existing best practices documents; and an issues forum to highlight emerging challenges.

2007

Topps Meat Co. recalled 21.7 million pounds of frozen hamburger patties due to *E. coli* O157:H7 contamination. More than 30 illnesses were reported in eight states.

During the **2007 Beef Industry Safety Summit**, participants once more had an opportunity to come together to not only discuss goals that have been met, but to also identify emerging issues, such as the impact of the beef industry on the safety of other commodities, and create a road map to continue to provide the safest beef supply in the world.

2008

BIFSCo hosted the **2008 Beef Industry Safety Summit** and distributed video on best practices for collecting beef samples for *E. coli* testing; the video was sent to 675 processing facilities across the United States. In a unique presentation, attendees had the opportunity to hear firsthand from a panel of consumers who delivered the clear message that maintaining consumer trust is critical to maintaining a market for beef products.

2009

Along with the research update presented at every Summit, the **2009 Beef Industry Safety Summit** included a technical session on ground beef, the impact of recalls, and the definition of adulteration. In addition, participants attended a communications forum to discuss safety communication challenges and the opportunities for proactive outreach.

2010

According to the Foodborne Disease Active Surveillance Network (FoodNet) *E. coli* O157:H7 infections had declined significantly from baseline data and *E. coli* was the only one out of the nine infections tracked, to reach the 2010 national health objective target of less than one case per 100,000 people.

The **2010 Beef Industry Safety Summit** enjoyed the largest attendance ever. Technical sessions at the Summit included an Antibiotics Forum and an Issues Update Forum which focused on the consumer's tendency to lump all issues related to beef, including nutrition, sustainability, and animal welfare, into a safety bucket.

2011

On September 13, 2011, FSIS announced it was taking action to prohibit ground beef, or its precursors, found to contain the *E. coli* serogroups O26, O103, O45, O111, O121 and O145 from entering commerce.

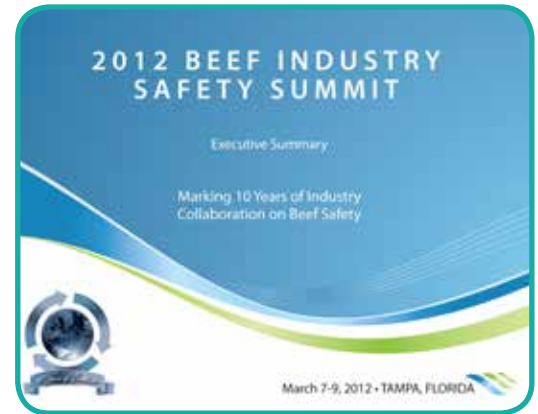
At the **2011 Beef Industry Safety Summit**, researchers collaborated with industry participants to identify some of the newest challenges to beef safety. The emergence of non-O157 Shiga toxin-producing *E. coli* (STEC) with the potential to negatively impact public health was a primary focus of the event.



2012

The **2012 Beef Industry Safety Summit** marked 10 years of collaboration among industry participants. Attendees at the 2012 Summit reaffirmed their commitment to beef safety by signing a pledge to “further reduce the risks associated with foodborne pathogens by utilizing scientifically proven production practices and technologies” similar to the one presented at the first Summit in 2003. Attendees looked back on lessons learned during the 10-year Summit history, but also addressed current issues, such as *Salmonella* and STECs which challenge the industry.

To access executive summaries of Beef Industry Safety Summits, visit www.beefresearch.org



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