



**Statement of Beef Industry Food Safety Council Members
Presented at
“Shiga Toxin-Producing *E. coli*:
Addressing the Challenges, Moving Forward with Solutions”
April 10, 2008
Washington, D.C.**

Food safety is nothing new to the beef industry. Beef safety is more than an expectation, more than the effort of one single entity — it is the sum of the entire beef production system, from farm to table.

The industry and the scientific community realize that further improvements can be made through a collaborative effort. The beef industry believes that the optimal system of food safety assurance relies upon a food safety net extending from farm to consumer. To this end, the Beef Industry Food Safety Council (BIFSCo) is composed of industry executives, beef producers, university, government and industry scientists, industry association executives and experts that represent each segment in the beef food chain. This cooperative effort clearly displays a deep commitment for further action to enhance the safety of the beef supply. These enhancements can be made through a collaborative effort based upon:

- The use of science-based pathogen intervention strategies to enhance sanitary processes that include effective Hazard Analysis Critical Control Point (HACCP) Programs and microbiological testing protocols to verify process control. BIFSCo Best Practices have been in place since 2003 and are available for all segments of the beef industry for use free of charge and can be accessed on multiple association websites. Experts are available to assist with technical questions. The documents are dynamic and continuously updated to include the latest science and technology. The most recent Best Practice document produced was Best Practices for Microbiological Sampling. This document will assist with the industry-wide use of the N60 sampling protocol. In addition, a demonstrational video will soon be available for use in training personnel.
- An understanding, shared by each segment of the beef food chain, of the risks involved and the steps needed to ensure a safe beef experience. The annual Beef Industry Safety Summit provides the opportunity for information sharing among all industry sectors as well as discussion on current and emerging safety challenges.

- The principles of prevention and risk reduction from farm to table, including effective monitoring and intervention strategies. These strategies must be based on data collected through research. The Best Practices developed by BIFSCo and embraced by industry follow this model by inclusion of interventions and systems validated through research.
- The notice for today’s meeting included the statement “FSIS will discuss growing evidence that may support a determination that raw beef products such as primal cuts and boxed beef contaminated with *E. coli* O157:H7 are adulterated”. Based on available research, the prevalence of *E. coli* O157:H7 on the surface of subprimals is rare. In two studies funded by The Beef Checkoff that examined 1,200¹ and 1,014² beef samples from multiple processing facilities, the incidence of *E. coli* O157:H7 on the surface of the subprimals was zero and two, respectively. The levels of *E. coli* O157:H7 in the two positive samples in the latter study were <0.375 colony-forming units per cm². The results indicated that *E. coli* O157:H7 is not a common contaminant on the surface of subprimals, and if it is present, it is at extremely low levels.
- Expansion of the adulteration policy for *E. coli* O157:H7 to all intact beef products is not warranted due to the lack of supporting scientific evidence and because interventions and processes exist for application to such products entering further processing. Steaks and roasts from intact beef have not been implicated in foodborne illness. Existing regulations and policies and industry best practices are currently in place to address the use of trim intended for ground beef production from intact primals. Existing policies and industry best practices that effectively address the hazard of *E. coli* O157 are also in place for non-intact beef primals. These facts, combined with research that indicates the very low prevalence and very low quantitative levels found on the surface of intact primals show that this policy expansion is unwarranted.

¹ Kennedy, J. F., S. K. Williams, T. Brown, and P. Minerich. 2006. Prevalence of *Escherichia coli* O157:H7 and indicator organisms on the surface of intact subprimal beef cuts prior to further processing. *J. Food Prot.* 69:1514-1517.

² Heller, C.I., J.A Scanga, J.N. Sofos, K.E. Belk, W. Warren-Serna, G.R. Bellinger, R.T. Bacon, M. L. Rossman, and G. C. Smith. 2007. Decontamination of beef subprimal cuts intended for blade tenderization or moisture enhancement. *J. Food Prot.* 70: 1174-1180.

- The expansion of the adulteration policy to all non-O157 STEC is also unwarranted based on data that exists as a result of the most current research. This position is based largely upon the scientific literature and on public health data. Studies were conducted to determine prevalence and characterization of non-O157 STEC on pre- and post- intervention carcasses and in ground beef. 10,159 samples (carcass, trim and ground beef) were analyzed and only 15 isolates match one of the top 6 CDC STEC serotypes. A fraction of these have the ability to cause disease. This data does not support making all STECs adulterants in raw ground beef. At the public meeting held in October 2007, CDC reported no outbreaks linked to non-O157 STEC from beef. The scientific literature clearly indicates that not all serotypes of STEC are pathogenic to humans and much is still unknown concerning virulence factors and their relationship to human disease. FSIS has no published, validated and accepted laboratory protocol for determining pathogenic STEC in beef and many analytical challenges remain related to adapting laboratory methodology for industry use. Given these facts, declaration of all non-O157 STEC as adulterants is not technologically feasible nor would it be a wise use of food safety resources. **The best course of action is for industry and government to continue targeting *E.coli* O157:H7 with validated interventions and appropriate testing since this is the serogroup that is most virulent and most often associated with severe human disease. Broad spectrum interventions currently in place will have a correlated effect on other serogroups beyond O157.** This was demonstrated in a study conducted by USDA scientists that showed a sevenfold reduction in carcass contamination by STEC through the use of interventions³.
- Plant re-assessments were recently conducted which resulted in many changes to plant processes and policies. The effects of these changes, therefore, cannot be evaluated since results from these adjustments have yet to be measured. The use of data to track microbiological trends is a valuable tool used by the beef industry but this tool must utilize data that is collected over time and is not effective when used as a snapshot. We must allow the enhanced systems to operate for a substantial period of time before a judgment is made on the effectiveness of the changes.

³ Arthur, T. M., G. A. Barkocy-Gallagher, M. Rivera-Betancourt and M. Koolmaraie. 2002. Prevalence and characterization of non-O157 shiga toxin-producing *Escherichia coli* on carcasses in commercial beef cattle processing plants. Appl. Environ. Microbiol. 68: 4847-4852.

- Review of the Pulse Net and CDC data does not show a public health crisis for beef related *E. coli* O157 illnesses in the past year. In fact, review of the trends in FoodNet data from CDC shows a dramatic and impressive downward trend since the baseline years of 1996-1998. This downward trend is no accident. The alarm sounded by FSIS in late 2007 due to increased incidence rates and associated increased recalls should come as no surprise. **Both FSIS and Industry have been making critical improvements in beef sampling techniques, changes in laboratory methods that increase detection accuracy, and implementing more comprehensive programs and procedures for surveillance and prevention. Again - it is no surprise that there was an increase in samples positive for *E. coli* O157:H7 and recall outcomes based on these findings.** In fact - this is exactly what should have happened in light of the system improvements that were employed in 2006-2007. The increase in FSIS positive samples is not due to unknown disturbances or industry backsliding, but rather, is a function of system enhancements. Additional regulations are unjustified.

Beef safety has been, and will continue to be, a dominant feature of the beef industry; however, food safety cannot be addressed without considering the route that beef makes to the consumer's table. This food chain begins on the farm and extends through processors, distributors and ends with retail and food service establishments having direct contact with consumers. While important food safety trends are impacting the entire beef production system, the final dimension in ensuring beef safety takes the form of optimizing the use of interventions and control points, not only within individual segments, but within the entire system as well.

For these reasons, the entire beef industry is committed to enhancing the current science-based, industry-wide approach. Every segment of the beef industry is united behind effective programs designed to solve microbiological problems, including *E. coli* O157:H7 in the beef supply, and aimed at long-term solutions for the problems presented by other hazards already existing or those that may evolve in the future.

In summary:

- Expansion of the adulteration policy to include non-O157 STECs is not warranted
- Expansion of the *E. coli* O157:H7 adulteration policy to include intact beef products is not supported by science
- Effects of recent applications of new technology and knowledge must be evaluated after an appropriate period of data collection
- The beef industry is committed to enhancing current systems using a science-based approach
- The Beef Industry is committed to working with FSIS to discuss safety frameworks in the context of sound science

BIFSCo, representing the farm to retail production and distribution of beef, would welcome the participation of USDA officials representing the government's responsibility to provide a regulatory framework for food safety to work collaboratively on improvements that are science-based and technologically feasible. Again, we strongly believe that there is no evidence at this time to support new regulatory determinations with respect to adulteration of beef products.

Respectfully submitted,

AB Foods, LLC
American Feed Industry Association
American Foodservice Corp.
American Meat Institute
Chad Company
Coleman Natural Foods
John Soules Foods
International Center for Food Industry Excellence
International HACCP Alliance
In-N-Out Burger
National Beef Packing Company, LLC
National Cattlemen's Beef Association
National Meat Association
National Renderers Association
North American Meat Processors Association
Southwest Meat Association
Standard Meat Company
Tyson Foods
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