NATIONAL CATTLEMEN'S BEEF ASSOCIATION
1301 Pennsylvania Ave., NW, Suite #300 • Washington, DC 20004 • 202-347-0228 • Fax 202-638-0607

Comments on behalf of the

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Lynn Kosty

NATIONAL CATTLEMEN'S BEEF ASSOCIATION

in regard to

Recent Developments Regarding Beef Products Contaminated With *Escherichia coli* O157:H7; Public Meeting [Docket No. 99-060N]

submitted to

Food Safety and Inspection Service
Mr. Thomas Billy, Administrator

submitted by:
Lynn L. Kosty
Associate Director of Food Policy

April 11, 2000

Initiated in 1898, the National Cattlemen's Beef Association is the marketing organization and trade association for America's one million cattle farmers and ranchers. With offices in Denver, Chicago and Washington D.C., NCBA is a consumer-focused, producer-directed organization representing the largest segment of the nation's food and fiber industry.

On behalf of the National Cattlemen's Beef Association (NCBA) I would like to provide some brief comments in response to Federal Register notice [Docket No. 99-060N] entitled, "Recent Developments Regarding Beef Products Contaminated With *Escherichia coli* O157:H7; Public Meeting." The NCBA did present information at the February 29th meeting, which I have enclosed for your review. NCBA appreciates efforts by the Agency to take all available relevant scientific data into consideration before making policy decisions.

The Food Safety and Inspection Service (FSIS) has asked that the industry address several questions raised in the Federal Register notice issued on Friday, February 11. At this time we would like to address questions related to the USDA's *E. coli* O157:H7 [hereafter referred to as *E. coli*] risk-assessment, the addition of intact {tenderized} products to the *E. coli* policy, and the white paper.

E. coli Risk-Assessment

NCBA is concerned by the way the risk-assessment is being handled. We are frustrated by the inability to access the most current draft risk-assessment on the web site. The only draft available on the web site was developed in October of 1999. It is likely that the current draft is quite different than the one developed in October. This makes providing comments on the draft difficult, and impairs our ability to respond to media inquiries regarding the draft.

The draft risk-assessment was presented in an incomplete manor at the February 29 public meeting on *E. coli*. In December of 1999, FSIS spent an entire day presenting the contents of the risk-assessment developed October 28 to the Microbiological Advisory Committee. Yet in the public meeting on the 29th, less than one hour was reserved for the presentation of the risk-assessment. Due to time constraints only a small portion of the data, specifically on-farm and carcass prevalence data, was presented. **The actual risk of illness to consumers was never mentioned.** This leads NCBA to believe that this is a prevalence study, not an assessment of risk of illness to consumers.

The impression left on those in attendance at the meeting was that the risk of contracting *E. coli* from beef products is very high. This is disturbing because FSIS's own data indicates that the risk of *E. coli* contamination of final products is less than 1%. Presentation of the facts in a misleading manner disrupts consumer confidence and jeopardizes international trade relations.

The risk-assessment is currently built on many assumptions. Many people believe that several of these assumptions are incorrect. The draft risk-assessment states that 89% of grinder loads are contaminated with *E. coli*. This indicates that the prevalence of *E. coli* in combos should be high. FSIS stated in the draft released on October 28 that, "no microbial count of *E. coli* O157:H7 prevalence data for combos ha(s) been acquired."

NCBA has been aggressively sampling combos to determine the best method and technique for combo testing. Combos have been tested using Polymerase Chain Reaction (PCR) technology, the most sensitive test available at a rate of one sample per 9-inch segments (depth). In our sampling, we have failed to detect even one positive. Thus, it seems unlikely that 89% of grinder loads are *E. coli* positive.

The risk-assessment goes on to say that contamination of beef trimmings may be as low as 1 cell per 2000 pounds of beef trimmings. It is important to determine what the real risk is at this point, keeping in mind that *E. coli* does not grow at refrigeration temperatures.

Compilation of incorrect assumptions leads to inaccurate estimates of risk. Risk-assessments may be helpful in making policy decisions in the absence of absolute certainty. However, building federal policies on highly inaccurate risk-assessments is counterproductive. NCBA would like to recommend that FSIS take the time to conduct scientific studies that would fill critical information gaps before releasing a highly presumptive risk-assessment as fact.

Addition of Intact Products

NCBA filed comments on the *E. coli* policy "clarification" in 1999. At that time, we stated that, "NCBA does not support the policy as currently written. However, we would endorse a policy that {does} not include tenderized and non-intact products and encourage{s} voluntary testing of carcasses and trimmings destined for raw ground beef." NCBA continues to support this position.

In NCBA's latest national survey regarding *E. coli*, we found zero positives on numerous products. Similarly, studies conducted by Kansas State University found that non-intact (tenderized) steaks that were inoculated to 10^6 cfu/cm^2 on the top exterior, posed no more of a health risk than did intact steaks. The steaks were cooked using an oven broiler to five different temperatures. It was determined that cooking a steak to 140°F or rare, "provides the necessary thermal lethality required to virtually eliminate this *E. coli* O157:H7 risk in steaks of variable thickness."[1] Tenderized steaks were better conductors of heat and were elevated to higher temperatures in a shorter amount of time than intact steaks prepared in the same manner. Further, the Centers for Disease Control (CDC) have received no reports of individuals contracting foodborne illness through consumption of intact {tenderized} steaks. Thus, in light of the current data on intact steaks, NCBA recommends that intact beef products be removed from the *E. coli* policy. The Food Safety and Inspection Service (FSIS) should conduct a risk-assessment on intact products to determine their effect on public health. If results from the risk-

[1] Phebus, Randall, James Marsden, Harshavardhan Thippareddi, Sarah Sporing, and Tere Ortega, "Escherichia coli O157:H7 Risk Assessment for Production and Cooking of Blade Tenderized Beef Steaks." Kansas State University. As presented at the USDA-FSIS Public Meeting on E. coli O157:H7 Policy February 29, 2000.

assessment indicate that a policy change is in order, FSIS should issue a proposed rule to address the policy change.

The White Paper

The White paper asked several questions. I will address questions relevant to NCBA below.

1) If FSIS finds that *E. coli* occurs with some regularity on hides and carcasses of cattle raised using certain production practices (e.g. feedlot cattle) but not on cattle raised under different production practices (e.g. cull dairy cows), should the pathogen be considered a hazard "reasonably likely to occur" only in slaughter and processing operations that use the former type of cattle? Is *E. coli* a "hazard reasonably likely to occur" in the production of beef products? If so, what is the best HACCP-related guidance that FSIS can provide to such plants for use in their assessment of their HACCP plans? What actions should the Agency take?

***E. coli* is not a "hazard reasonably likely to occur" on beef products.** The meat of animals is sterile. However, during processing it is possible for the carcass to become contaminated by *E. coli* and other microorganisms via hide removal, evisceration, cross-contamination from equipment or employee clothing, aerosols, or environmental contamination. Scientific studies have shown that 99.55% of *E. coli* and 99.99% of all bacteria found on beef carcasses are eliminated when a multiple hurdle system is in place.[2] NCBA supports the use of appropriate interventions within a HACCP system to prevent, clean, or kill all potentially harmful microorganisms that could otherwise contaminate beef products.

Data indicates that there is little difference between prevalence of *E. coli* on cattle raised under different production practices (e.g. cull dairy cows, feedlot cattle, cow/calf operations). Further, there is no evidence that any on-farm management practice is more or less effective than any other in controlling *E. coli*. Therefore, any policy change created by the Agency should apply to all slaughter facilities producing raw non-intact beef products. The best guidance that the Agency can give to beef processors and slaughterers is to reassess their HACCP systems to ensure that appropriate hurdles are in place to minimize risk from microbial hazards, including *E. coli*.

2) Should FSIS redesign its testing program?

Yes, FSIS should redesign its testing program to better protect public health. Testing is a tool for validating the usefulness of HACCP systems and intervention technologies. FSIS should not expand testing, but should work with industry to determine applicable testing and monitoring systems. With the implementation of HACCP completed and the introduction of effective interventions, we are confident that the number of *E. coli* positives will continue to decline. As a result, we feel that FSIS would do more to

[2] Smith, Gary, "Progress in Food Safety: Toward a Safer Beef Supply." Colorado State University:1999.

protect public health by moving testing back in the process, allowing for faster detection and quicker removal of contaminated product from retail chains. Further, FSIS could offer reduced sampling at the ground beef level of production for slaughter/processors with interventions in place, that are willing to test at the carcass level. This would not only offer incentives to incorporate interventions into HACCP plans, but would also encourage retailers to buy from plants manufacturing ground beef with interventions.

3) Should FSIS consider a plant's generic *E. coli* and *Salmonella* results in making its decisions on whether to target a plant's products for *E. coli* O157:H7 sampling?

NCBA is in agreement with the American Meat Science Association. FSIS should not base testing for *E. coli* O157:H7 on results from generic *E. coli* and *Salmonella* results. According to AMSA, Generic *E. coli* and *Salmonella* commonly occur at low levels and **may be used to validate the process control system** designed to improve food safety[3]. However, they are not indicative of pathogens that are randomly distributed and occur at very low incidences.

4) What effect should a plant's testing or verification program have on whether and how FSIS targets its testing in that plant? Should the plant's testing or verification program only be considered sufficient if included as part of HACCP validation?

A plants testing or verification program should be verifying control over their HACCP system. Therefore, appropriate actions should be taken to reinstate process control, if testing results indicate a loss of control over the system.

5) How effective are voluntary producer actions in providing animals with reduced levels of E. coli to plants, and should these voluntary activities, if effective, affect slaughter plants'' strategies and FSIS' policy?

As stated earlier, **there are currently no on-farm management strategies shown to be effective in reducing *E. coli* in live animals.** Cattle producers have contributed more than 7 million dollars over the past 6 years to solve the *E. coli* problem. At the direction of well renowned scientists, they have focused their efforts on developing intervention strategies at the slaughter/processing level to minimize *E. coli*. NCBA members have invested money in on-farm research and support continued research in this area. Greater than 85% of States participate in the Beef Quality Assurance Program to ensure the highest quality of beef possible to fit the needs of consumers. U.S. cattle producers are dedicated to solving the *E. coli* problem and will continue to support research initiatives that will help us reach this goal.

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[3] American Meat Science Association, "Consensus Points – Microbiological Sampling of Beef Products." As prepared for the FSIS Public Meeting on Recent Developments Regarding Beef Products Contaminated with *Escherichia coli* O157:H7, February 29, 2000.

Concluding Remarks

In conclusion, on behalf of the nation's cattle producers, we thank you for the opportunity to contribute valuable information to the development of an effective *E. coli* O157:H7 policy. We are hopeful that a new science-based policy will encourage research and innovation in the area of *E. coli* O157:H7 prevention, rather than discourage it.