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FOOD SAFETY

Inspection of Domestic and Imported Meat Should Be Risk-Based

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GAO/T-RCED-93-10

Madam Chairwoman and Members of the Subcommittee:

We are pleased to be here to respond to your inquiries about the U.S. system for inspecting domestic and imported meat. The adequacy of this inspection system and its ability to protect the public from bacteria harmful to humans (pathogenic microorganisms) has been an issue for more than 15 years. Over these years, little has changed in the inspection system's ability to identify microbial pathogens because the system continues to rely on organoleptic observations--observations limited to sight, smell, and feel. As you know, contaminated ground beef has recently been the cause of extensive illness and two deaths in several western states, once again raising concerns about the adequacy of the U.S. inspection system. The public interest raised by this tragic incident provides another opportunity for the U.S. Department of Agriculture's (USDA) Food Safety and Inspection Service (FSIS) to make changes in the inspection system that are necessary to better protect public health.

Our testimony today is based on our recent reviews of U.S. inspection of Canadian meat and our June 1992 comprehensive report on the federal government's food safety inspection system.[1] In that report we concluded that a uniform, risk-based inspection system could help ensure a safe food supply and thereby improve consumer confidence in the inspection system. Findings of the National Academy of Sciences and USDA's Inspector General, among others, have been consistent with our assessment in that report that the intensity and type of inspection coverage should be determined by the risk a particular food presents. Officials of FSIS, which is responsible for meat and poultry inspection, and scientific experts agree that microbial pathogens are the principal risk associated with meat and poultry.

Specifically, you asked us to describe changes that FSIS implemented last year in its procedures for inspecting Canadian meat and review whether these changes adequately responded to the problems we had previously identified. You also asked for information on the microbiological testing that FSIS conducts on domestic and imported meat products.

In summary, FSIS has addressed most of our recommendations on the inspection of Canadian meat, making several needed improvements. However, FSIS did not agree with one recommendation concerning scientific peer review of its process for determining that two countries' meat inspections systems are equivalent.

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[1]Food Safety and Quality: Uniform, Risk-based Inspection System Needed to Ensure Safe Food Supply (GAO/RCED-92-152, June 26, 1992). App. I contains a list of our reports on related issues.

Furthermore, we continue to believe that, in the long term, the entire federal food safety inspection system needs to be fundamentally restructured and a uniform, risk-based inspection system established. Our current work on the federal inspection of meat and poultry, requested by House Agriculture Subcommittee Chairman Stenholm, provides further evidence of the inefficiencies and inadequacies of the present U.S. inspection system. The current labor intensive inspection procedures drain resources that could be put to better use in a risk-based system. These procedures rely primarily on an inspector's sight, smell, and touch to identify contamination. While inspectors may identify some contamination, they cannot identify microbial pathogens because they cannot be seen, felt, or smelled. Currently, neither FSIS nor the industry is required to routinely test for such pathogens.

Before discussing FSIS's response to our recommendations on Canadian meat inspection and the issue of microbiological testing in more detail, we would like to provide some background on FSIS's inspection procedures for Canadian meat.

BACKGROUND

The Federal Meat Inspection Act requires that meat imports be produced under inspection systems that are equivalent to the U.S. system and that the imports are wholesome; unadulterated; and properly marked, labeled, and packaged. FSIS is responsible for reviewing the inspection systems of exporting countries for equivalency with the U.S. system and for inspecting imported meat items at the port of entry to help ensure product integrity. FSIS often refers to import inspections as reinspections to recognize that imported meat has already been inspected and approved by the exporting country's inspectors.

New "streamlined" inspection procedures for Canadian meat were introduced in January 1989 in response to the 1988 United States-Canada Free Trade Agreement. Before that time, every shipment of Canadian meat was inspected for its general condition; in addition, a sampling of these shipments was inspected for wholesomeness. However, to facilitate commerce between the two countries, the Free Trade Agreement limits inspection of meat and poultry imports to the "spot checks" necessary to ensure compliance with each country's standards and technical regulations. A key FSIS inspection performed on Canadian meat is an organoleptic inspection.

FSIS'S RESPONSE TO GAO'S CONCERNS

Our reports on Canadian meat inspection recommended that FSIS consider several measures to strengthen its reinspection program for meat traded between the two countries while still

meeting the provisions of the Free Trade Agreement. Specifically, we said that FSIS should

-- document its study that concluded the Canadian meat inspection system is equivalent to the U.S. system;

-- eliminate (1) advance notice given to Canadian meat plants on whether their shipments would be inspected and (2) use of Canadian inspectors to draw samples for USDA inspection;

-- equalize the two countries' rates of inspection of products (Canada's inspection rate for U.S. meat was more than twice the U.S. inspection rate for Canadian meat);

-- establish controls over Canadian meat products being transported inland to U.S. inspection locations, and

-- commission a peer review of its equivalency study.

In response to our recommendation that FSIS thoroughly document its determination of the equivalency of the Canadian inspection system, FSIS completed an in-depth study. This study concluded that the Canadian meat inspection system was equivalent to the U.S. system's controls and practices for ensuring wholesome meat. We found that the documentation supporting the study provided evidence of a detailed risk analysis of the Canadian system--the same process FSIS uses to determine the eligibility of other foreign countries that export meat to the United States.

In July 1992, the U.S. and Canada announced plans to revise the streamlined inspection procedures. In August 1992, FSIS and the Canadian agriculture department adopted the measures we had recommended, including having FSIS inspectors control sample selection, aligning U.S. and Canadian sampling criteria and methodology to achieve comparable inspection rates, eliminating the advance notification of inspection, and establishing controls over Canadian meat products before inspection at inland locations. We concluded that in making these changes, FSIS was addressing many of the inherent weaknesses in its inspection program.

However, FSIS disagreed with our recommendation that a peer review was needed of the process it used to determine equivalency between the two inspection systems. FSIS noted that scientists and experts had helped develop the process and that various external groups of nonscientists had reviewed the process, as implemented, and found no problems in it.

We believe our recommendation for a peer review is still valid. Equivalency determination requires scientific and public health judgments, and FSIS will be required to complete equivalency reviews for many countries that export meat products to the United States in the future. Nevertheless, the validity of FSIS's process and the related judgments for determining equivalency were not collaborated in any external, independent assessment by scientific and public health experts. A peer review corroborating and validating FSIS's assessment could help improve consumer confidence and avoid future challenges to FSIS's decisions in this area.

LIMITATIONS OF ORGANOLEPTIC INSPECTION PROCEDURES

The meat inspection system has changed little since it was first instituted in 1906 and is not capable of addressing today's concerns about microbial contamination. In a 1991 report to the Congress, FSIS said that it considers microbiological hazards to be the greatest risk to public health posed by meat and poultry. A dramatic illustration of this point is the recent incident in the western United States where 2 deaths and more than 450 illnesses--a third needing hospitalization--was attributed to the consumption of contaminated hamburger. Researchers at the Centers for Disease Control estimate that there are about 6.5 million cases of food-borne illness and about 9,000 deaths in the United States each year. Most of these cases can be traced to microbial pathogens in meat, poultry, eggs, and seafood.

Under the current system, inspectors check for diseases that make animals sick and that, to a large extent, have been controlled through modern animal husbandry practices. In addition, inspectors look for aesthetic problems like hair, pin feathers, and bruises that make a product unappetizing but not unhealthful. In short, inspectors look, smell, and feel the product, but they cannot see, smell, or touch pathogenic bacteria. Microbial pathogens reside in the gastrointestinal tracts and on external surfaces of animals and cannot be detected by the organoleptic procedures currently used during inspection.

FSIS also does not have a microbiological testing program for raw meat and poultry at individual domestic plants. In-plant inspectors perform no routine microbiological analyses and rarely collect samples of raw meat or equipment surfaces for laboratory analysis of microorganisms.

Furthermore, FSIS does not require meat plants to have microbiological testing programs, although some plants recognize the importance of microbial testing and have established their own programs. For example, one plant we visited started a microbial testing program to check on the effectiveness of the plant's cleaning procedures. Test results indicated that even after cleaning, some surfaces still contained high levels of

bacteria. Therefore, company management revised the cleaning procedures, which reduced bacteria levels. Officials at this plant said the microbial testing program has improved both the plant's cleaning procedures and the safety and quality of its products.

Since 1985, three National Academy of Science studies and reports by us and others have pointed out the need for a risk-based inspection system that includes microbial testing. In a 1992 report on the meat inspection system commissioned by FSIS,[2] an expert panel of microbiologists, veterinarians, and scientists concluded that FSIS is not performing the leadership role in microbiological safety that is to be expected. The panel found that the most innovative contributions to microbiological safety of slaughtered beef products are being made, not by FSIS, but by individual plants. The panel's report highlighted its finding that laboratory testing programs varied widely: Some plants have extensive laboratory programs and other plants have no laboratory monitoring program at all.

In response to the recent tragedy resulting from consumption of contaminated hamburgers, FSIS has put forward a two-track strategy for reducing the potential for this kind of incident. Track one calls for a number of short-term measures to be quickly put into effect, including hiring, as Secretary of Agriculture Espy announced earlier this month, 160 additional inspectors. Track two calls for a longer-term, "revolutionary" approach aimed at revamping the entire inspection system. While we have not had an opportunity to review FSIS's plans, any overhaul of the meat inspection system must be based on the principle of allocating resources to controlling the most serious threats to public health.

CONCLUSIONS

Our work on the inspection program for imported Canadian meat showed that USDA and the Canadian government have improved the inspection procedures and better documented that the Canadian inspection system is equivalent to the U.S. system. However, that system suffers from the same shortcoming as does the U.S. system--the need for fundamental improvement to protect against the greatest food safety risks.

The present meat inspection system relies primarily on organoleptic inspection and is not capable of detecting pathogens, which constitute the greatest risk to public health. Consequently, FSIS must assess the public health benefits of and

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[2]Report of Comparative Review of USDA Streamlined Inspection System for Cattle and Traditional Inspection Methods, Andrulis Research Corporation (Contract No. 53-3A94-0-07, June 5, 1992).

continued need for organoleptic examination. Organoleptic inspection is extremely labor-intensive and drains resources that could be put to better use. In addition, no matter how many USDA inspectors are assigned to the slaughter line, they cannot visually detect pathogenic bacteria.

As noted, we are currently conducting a comprehensive review of FSIS's meat and poultry inspection program and plan to issue our report later this year. At that time, we expect to make recommendations for modernizing the meat and poultry inspection system and ensuring that USDA's limited resources are directed at the most serious threats to public health.

Madam Chairwoman, this completes our prepared statement. We would be happy to respond to any questions.

APPENDIX I

RELATED GAO PRODUCTS

Food Safety and Quality: USDA Improves Inspection Program for Canadian Meat, but Some Concerns Remain (GAO/RCED-92-250, Aug. 26, 1992).

Food Safety and Quality: Uniform, Risk-based Inspection System Needed to Ensure Safe Food Supply (GAO-RCED-92-152, June 26, 1992).

Food Safety and Quality: Inspection of Canadian Meat Imports Under USDA's Streamlined Procedures (GAO/T-RCED-92-18, Oct. 31, 1991).

United States-Canada Open Border Proposal for Meat and Poultry Inspection (GAO/T-RCED-90-96, July 12, 1990).

Food Safety: Issues USDA Should Address Before Ending Canadian Meat Inspections (GAO/RCED-90-176, July 6, 1990).

Food Safety and Inspection Service's Performance-Based Inspection System (GAO/T-RCED-89-53, July 31, 1989).

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