

February 2003

FOOD-PROCESSING SECURITY

Voluntary Efforts Are
Under Way, but
Federal Agencies
Cannot Fully Assess
Their Implementation





Highlights of [GAO-03-342](#), a report to Senators Richard J. Durbin and Tom Harkin

FOOD-PROCESSING SECURITY

Voluntary Efforts Are Under Way, but Federal Agencies Cannot Fully Assess Their Implementation

Why GAO Did This Study

The events of September 11, 2001, have placed added emphasis on ensuring the security of the nation's food supply. GAO examined (1) whether FDA and USDA have sufficient authority under current statutes to require that food processors adopt security measures, (2) what security guidelines FDA and USDA have provided to industry, and (3) what security measures food processors have adopted.

What GAO Recommends

This report recommends that the Secretaries of the Departments of Health and Human Services and Agriculture study their agencies' existing statutes to identify what additional authorities they may need relating to security measures at food-processing facilities to reduce the risk of deliberate contamination of the food supply. On the basis of these studies' results, the agencies should seek additional authority from the Congress, as needed.

GAO also recommends that the agencies provide training for all food inspection personnel to enhance their awareness and ability to discuss security measures with plant personnel.

USDA agreed with this report's recommendations. FDA agreed with the recommendation to provide training for all food inspection personnel but took no position on GAO's other recommendation.

www.gao.gov/cgi-bin/getrpt?GAO-03-342.

To view the full report, including the scope and methodology, click on the link above. For more information, contact Lawrence J. Dyckman at (202) 512-3841 or dyckmanl@gao.gov.

What GAO Found

Federal food safety statutes give the Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA) broad authority to regulate the safety of the U.S. food supply but do not specifically authorize them to impose security requirements at food-processing facilities. However, these agencies' food safety statutes can be interpreted to provide authority to impose certain security measures. FDA believes that its statutes authorize it to regulate food security to the extent that food security and safety overlap but observes that there is little overlap between security and safety. USDA believes that it could require food processors to adopt certain security measures that are closely related to sanitary conditions inside the facility. USDA also believes that the statutes, however, cannot be interpreted to authorize the regulation of security measures that are not associated with the immediate food-processing environment, such as requiring fences, alarms, and outside lighting. Neither agency believes that it has the authority to regulate all aspects of security at food-processing facilities.

Both FDA and USDA issued voluntary security guidelines to help food processors identify measures to prevent or mitigate the risk of deliberate contamination. Because these guidelines are voluntary, neither agency enforces, monitors, or documents their implementation. Both FDA and USDA have asked their inspectors to be vigilant and to discuss security with managers at food-processing facilities, but the agencies have stressed that inspectors should not enforce the implementation of security measures or document any observations because of the possible release of this information under the Freedom of Information Act and the potential for the misuse of this information.

Since FDA and USDA do not monitor and document food processors' implementation of security guidelines, the extent of the industry's adoption of security measures is unknown. According to officials of trade associations and the five facilities we visited, however, food processors are implementing a range of security measures. In addition, the FDA and USDA field inspectors we surveyed indicated that most facilities have implemented some security measures, such as installing fences. However, the inspectors were less able to comment on security measures that were not as obvious, such as accounting for missing stock and implementing proper mail-handling practices. The inspectors also noted that while USDA has provided some of its field supervisory personnel with security training on the voluntary security guidelines it issued, it has not provided most of its inspectors with such training. FDA has not provided its staff with any training on the security guidelines. Without training on the security guidelines, inspectors are limited in their ability to conduct informed discussions regarding security with managers at food-processing facilities.

Contents

Letter		1
	Results in Brief	3
	Background	5
	Existing Food Safety Statutes Do Not Provide Sufficient Authority to Regulate All Aspects of Security at Food-Processing Facilities	9
	FDA and FSIS Issued Voluntary Security Guidelines to Food Processors but Do Not Track or Document the Extent to Which They Are Being Implemented	11
	Food Processors Are Implementing a Range of Security Measures, but Extent of Implementation Is Largely Unknown to FDA and FSIS	15
	Conclusions	22
	Recommendations for Executive Action	23
	Agency Comments and Our Evaluation	23
Appendix I	Scope and Methodology	26
Appendix II	FDA Survey Results	28
Appendix III	FSIS Survey Results	33
Appendix IV	Comments from the U.S. Department of Agriculture	43
Appendix V	Comments from the Food and Drug Administration	44
Appendix VI	GAO Contacts and Staff Acknowledgments	47
Table		
	Table 1: State Officials' Satisfaction with Federal, State, and Industry Efforts to Safeguard Food Products from Deliberate Contamination	22

Figures

Figure 1: Examples of Security Measures Contained in FDA and FSIS Guidelines	12
Figure 2: Percentage of Survey Responses Indicating Observation or Knowledge of More Visible Security Measures	19
Figure 3: Percentage of Survey Responses Indicating Observation or Knowledge of Less Visible Security Measures	20

Abbreviations

CDC	Centers for Disease Control and Prevention
EPA	Environmental Protection Agency
FBI	Federal Bureau of Investigation
FDA	Food and Drug Administration
FSIS	Food Safety and Inspection Service
GAO	General Accounting Office
HACCP	Hazard Analysis and Critical Control Point
ISAC	Information Sharing and Analysis Center
USDA	U.S. Department of Agriculture

This is a work of the U.S. Government and is not subject to copyright protection in the United States. It may be reproduced and distributed in its entirety without further permission from GAO. It may contain copyrighted graphics, images or other materials. Permission from the copyright holder may be necessary should you wish to reproduce copyrighted materials separately from GAO's product.



G A O

Accountability * Integrity * Reliability

United States General Accounting Office
Washington, DC 20548

February 14, 2003

The Honorable Richard J. Durbin
Ranking Democratic Member
Subcommittee on Oversight of
Government Management,
the Federal Workforce,
and the District of Columbia
Committee on Governmental Affairs
United States Senate

The Honorable Tom Harkin
Ranking Democratic Member
Committee on Agriculture, Nutrition
and Forestry
United States Senate

Ensuring the safety of the nation's food supply—protecting the food supply from unintentional contamination—is a key objective of the Department of Health and Human Service's Food and Drug Administration (FDA) and the Food Safety and Inspection Service (FSIS) of the U.S. Department of Agriculture (USDA). Since the terrorist attacks of September 11, 2001, however, ensuring food security—that is, protecting the food supply from deliberate contamination—has also become a heightened concern of these agencies. Bioterrorism experts, government officials, and scientists at the Centers for Disease Control and Prevention (CDC) and the National Academies warn that U.S. food-processing facilities are vulnerable to terrorist attack and that the deliberate introduction of biological and chemical agents into food supplies could sicken large numbers of people and possibly cause many deaths. Some experts note that terrorist groups could introduce infectious disease agents and chemicals into the food supply to confuse public health officials into believing that outbreaks were naturally occurring, thus delaying detection and action. Recognizing this risk, on October 8, 2001, the President added the agriculture and food industries to the list of critical infrastructure sectors needing protection from terrorist attack.

Although the U.S. food supply has been mostly secure from deliberate contamination, a few such incidents have occurred. In 1984, for example, a cult group poisoned salad bars in some Oregon restaurants with *Salmonella* bacteria, and about 750 people became ill. Some large

naturally occurring outbreaks of foodborne illness that result from accidental contamination illustrate how widespread and costly the effects of deliberate contamination could be. In 1994, for example, 224,000 people nationwide were infected with *Salmonella enteritidis* after eating a national brand of ice cream. This outbreak was estimated to have cost about \$18.1 million, including \$6.9 million for medical care and \$11.2 million in time lost from work.

The intentional contamination of the food supply could have severe consequences for the economy and the health of the American public. Security measures that could minimize the risk of such an event at food-processing facilities range from restricting visitor access, securing hazardous chemicals, and restricting access to in-plant laboratories to conducting employee background checks, building fences around facilities, and designating a food security management coordinator.

In this context, you asked us to determine (1) the extent to which federal statutes can be effectively used to regulate food security at food-processing facilities; (2) what actions FDA and USDA have taken to help food processors prevent or reduce the risk of deliberate food contamination and how these agencies determine the extent to which food-processing facilities are implementing security measures; and (3) the extent to which industry is implementing security measures to better protect food products against deliberate contamination. While experts acknowledge that a terrorist attack could be aimed also at livestock and crops on farms or at foods at retail stores, this review focused on the food-processing segment of the farm-to-table food continuum—that is, from the farm gate to the retail level. Also, we confined our review to domestic food processors, although we recognize that both FDA and USDA have intensified their efforts to enhance the oversight of imported foods at U.S. ports of entry.

In conducting our work, we sought the cooperation of industry associations to survey a representative number of food-processing facilities. We also sought permission to visit some food-processing facilities to discuss the extent to which they are implementing security measures, although we acknowledge that industry is not obligated to respond to our inquiries. We were unsuccessful in our attempts to survey a representative number of food-processing facilities because companies were concerned about sharing information on security measures; however, we were able to secure visits to five companies. To obtain a broader overview of the security measures being adopted, we also surveyed FDA and USDA food inspectors to obtain their views on the

extent of security they have observed at food-processing facilities they inspect across the country. We also asked state audit offices in all 50 states to interview a selected number of state food safety regulatory officials concerning their food security activities, if any. Eleven agreed to participate. Appendix I contains the details of our scope and methodology. We conducted our review from February through December 2002 in accordance with generally accepted government auditing standards.

Results in Brief

Federal food safety statutes provide FDA and USDA with broad authority to regulate the safety of the U.S. food supply but do not specifically authorize them to impose security requirements at food-processing facilities. However, while these agencies' food safety statutes can be interpreted to provide authority to impose certain security requirements, as opposed to food safety requirements, neither agency believes it has the authority to regulate all aspects of security. FDA believes that its authorities under the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act would extend to the regulation of facility security measures to prevent the intentional contamination of food products to the extent that they overlap with food safety. However, FDA observes that there is little overlap between safety and security. USDA believes that the Federal Meat, Poultry Products, and Egg Products Inspection Acts can be construed to authorize it to require food processors to adopt certain security measures that are closely related to sanitary conditions inside food-processing plants. In addition, USDA believes that the statutes cannot be interpreted to authorize the regulation of security measures that are not associated with the immediate food-processing environment. As a result, USDA does not believe it has the authority to require that food processors adopt measures to ensure security outside the premises, such as installing fences, or to require that food processors conduct employee background checks.

Both FDA and USDA have issued voluntary guidelines to help food processors identify measures they can implement to prevent or mitigate the risk of deliberate contamination. Because these guidelines are voluntary, neither agency monitors or documents their implementation. Also, FDA and FSIS have instructed their food safety inspectors to be familiar with the agencies' guidelines as they conduct regular food safety inspections and to discuss, but not interpret, the security guidelines with facility personnel. The agencies have told inspectors not to document the existence or lack of security measures because of the possible release of this information under the Freedom of Information Act and the potential for the misuse of this information. As a result, FDA and FSIS do not have

information on the extent of security at food-processing facilities or whether gaps in security may exist in specific industry sectors.

FDA and USDA lack comprehensive information on the extent to which food-processing companies are adopting security measures. However, officials from the food trade associations that we contacted believe that food processors are voluntarily implementing a range of security measures, including those in the federal guidelines—from limiting access to facilities to evaluating plant security. Although we found this to be the case at the five food-processing facilities we visited, we could not verify the extent to which industry has adopted security measures nationwide—in part, because food-processing facilities prefer not to share information about their security measures with federal agencies. They are concerned that this sensitive information could be released to the public under the Freedom of Information Act. In particular, the industry is worried that if security gaps at food-processing facilities were made public they could provide a road map for terrorist groups. FDA and FSIS officials also cited this concern as a factor that limits the amount of information they believe they can collect. In addition, according to FDA and FSIS food inspectors we surveyed, the food-processing facilities they regularly inspect are voluntarily implementing a range of security measures and most facilities have implemented measures to enhance perimeter fencing and lighting. On the other hand, these inspectors were less able to comment on less-visible security measures, such as accounting for missing stock and implementing proper mail-handling practices. The inspectors also indicated that larger food-processing facilities are implementing more security measures than smaller ones. Finally, the FDA inspectors that we surveyed stated that they had not received training on food security even though the agency encourages them to discuss security matters with plant personnel. FSIS has provided training to its supervisory field inspection personnel, who reported that it would be beneficial if the field inspectors—who are most directly involved with daily processing activities at each plant—were also trained on security measures.

This report recommends that the Secretary of the Department of Health and Human Services and the Secretary of Agriculture study what additional authorities their agencies may need relating to security measures at food-processing facilities to reduce the risk of deliberate contamination of the food supply. On the basis of the results of these studies, the agencies should seek additional authority from the Congress, as needed. The report also recommends executive action aimed at ensuring that the agencies' field personnel are provided with training on food security measures.

We provided FDA and USDA with a draft of this report for their review and comment and received written and oral comments from both agencies on the report's contents and its recommendations. The agencies also provided technical comments, which we incorporated into the report as appropriate. USDA agreed with the two recommendations made in this report. FDA agreed with our recommendation that it provide all food inspection personnel with training on security measures. FDA did not have an opinion on our recommendation that the agency study what additional authorities it may need relating to security measures at food-processing facilities. USDA's comments are contained in appendix IV, and FDA's comments are provided in appendix V.

Background

Under the Federal Meat Inspection Act, the Poultry Products Inspection Act, and the Egg Products Inspection Act, USDA, through FSIS, is responsible for ensuring the safety of meat, poultry, and certain egg products. Under the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act, FDA is responsible for all other foods, including fruits and vegetables; dairy products; seafood; and certain canned, frozen, and packaged foods. The food-processing sector is generally described as the middle segment of the farm-to-table continuum—it extends from the time livestock and crops leave the farm for slaughter and processing into food until it reaches retail establishments.

FDA and FSIS work to ensure the safety of food products processed in the United States through a regulatory system of preventive controls that identifies hazards early in the production process to minimize the risk of contamination. Known as the Hazard Analysis and Critical Control Point (HACCP) system, it makes food-processing facilities responsible for developing a plan that identifies harmful microbiological, chemical, and physical hazards that are reasonably likely to occur and establishes critical control points to prevent or reduce contamination.¹ Through their inspection programs, FDA and FSIS verify that food processors are implementing their HACCP plans. FDA inspects over 57,000 food facilities every 5 years on average, and USDA inspects over 6,000 meat and poultry slaughter and processing facilities daily. Individual states also conduct yearly inspections of about 300,000 food-processing facilities, including small firms with fewer than 10 employees and large corporations with thousands of employees and multiple processing plants located in many

¹FDA's HACCP program applies only to seafood and juice, not to all FDA-regulated food.

states. Both FDA and FSIS have the authority to take enforcement actions as necessary to ensure that facilities meet the agencies' safety and sanitation regulatory requirements. As we reported in 2001, in fiscal year 1999, the latest year for which such information was available, FDA, FSIS, and the states spent a total of about \$1.3 billion on food safety activities.²

Following the events of September 11, 2001, the federal government intensified its efforts to address the potential for deliberate contamination of agriculture and food products. On October 8, 2001, the President issued an executive order establishing the Office of Homeland Security, which added the agriculture and food industries to the list of critical infrastructure systems needing protection from terrorist attack. In addition, the Congress provided FDA and USDA with emergency funding to prevent, prepare for, and respond to potential bioterrorist attacks through the Department of Defense Appropriation Act of 2002: \$97 million for FDA and \$15 million for FSIS. For the most part, FDA has used the emergency funds to enhance the security of imported food by hiring new inspectors and increasing inspections at U.S. ports of entry. FSIS has used its emergency funds to support its food security activities, which include, among other things, providing educational and specialized training. FDA's fiscal year 2003 budget builds upon funding received from the fiscal year 2002 appropriation plus the fiscal year 2002 emergency supplemental funding of \$97 million to counter terrorism. FDA plans to seek additional funding in the future for food safety activities and security activities related to terrorism. FSIS is asking for an additional \$28 million. The Congress also enacted the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, which contains numerous provisions designed to enhance the safety and security of the food, drug, and water industries.³

In addition, both FDA and USDA have taken many actions to better protect the food supply against deliberate contamination. For example, FDA has hired 655 new food safety investigators and laboratory personnel in the field. In addition, it has participated in several exercises at the

²See U.S. General Accounting Office, *Food Safety: Overview of Federal and State Expenditures*, [GAO-01-177](#) (Washington, D.C.: Feb. 20, 2001).

³This act contains provisions that provide FDA with new authority to detain products that are believed to present a serious health threat. It also authorizes FDA to debar importers who have been convicted of certain food import violations, which results in the denial of delivery of products to those importers.

federal and state levels to enhance emergency response procedures. Furthermore, FDA is working with CDC to initiate and implement a nationwide Laboratory Response Network for foods to identify laboratory capacity for testing agents that could be used to deliberately contaminate food. It has also provided additional laboratory training for food safety personnel and sought stakeholders' input to develop regulations that are required by the new bioterrorism legislation. Moreover, FDA worked with the Office of the Surgeon General, U.S. Air Force, to adapt a version of the Operational Risk Management approach to examine the relative risks of intentional contamination during various stages of food production and distribution.⁴ Within the Department of Health and Human Services, both FDA and CDC have worked closely with federal, state, and local agencies to enhance their surveillance of diseases caused by foodborne pathogens. FDA's efforts to reduce food security risks also include working with other federal agencies, trade associations, and the Alliance for Food Security.

USDA has formed a Homeland Security Council to develop a Department-wide plan to coordinate efforts between all USDA agencies and offices. The Department has also established the FSIS Office of Food Security and Emergency Preparedness to centralize the Department's work on security matters. USDA has also coordinated with other government agencies, such as the Office of Homeland Security, the Federal Bureau of Investigation (FBI), and FDA, to develop prevention, detection, and response procedures to better protect the nation's food supply.⁵ USDA will be increasing the number of import inspectors by 20. These inspectors will place special emphasis on food security in addition to their traditional food safety role. In addition, USDA has participated in several exercises at the federal and state levels to enhance response procedures and has conducted risk assessments for domestic and imported food. Since this review began, USDA has conducted three simulation exercises at the Department and agency level to test the Department's response to a terrorist attack and is planning three additional simulations for the spring of 2003. USDA has also conducted preparedness-training sessions for veterinarians and circuit supervisors. (Circuit supervisors supervise the

⁴Operational Risk Management is an approach to risk assessment that increases operational effectiveness by anticipating hazards and reducing the potential for loss.

⁵On November 25, 2002, President Bush signed the Homeland Security Act of 2002, which created the Department of Homeland Security. The Department will replace the Office of Homeland Security.

work of in-plant inspection personnel and discuss the security guidelines with them.)

Experts from government and academia generally agree that terrorists could use food products as a vehicle for introducing harmful agents into the food supply. Just recently, the National Academies reported that terrorists could use toxic chemicals or infectious agents to contaminate food production facilities and that, although much attention has been paid to ensuring safety and purity throughout the various stages of processing and distribution, protecting the food supply from intentional contamination has not been a major focus of federal agencies.⁶ Among other things, the report says that FDA should act promptly to extend its HACCP methodology so that it could be used to deal effectively with the deliberate contamination of the food supply. In February 2002, CDC reported that although the food and water systems in the United States are among the safest in the world, the nationwide outbreaks due to unintentional food or water contamination demonstrate the ongoing need for vigilance in protecting food and water supplies.⁷ All of the bioterrorism experts whom we consulted from academia agreed that the food supply is at risk.

⁶See National Research Council of the National Academies, *Making the Nation Safer: The Role of Science and Technology in Countering Terrorism* (Washington, D.C.: June 2002).

⁷See Centers for Disease Control and Prevention, *Public Health Assessment of Potential Biological Terrorism Agents, Emerging Infectious Diseases* (Atlanta, Ga.: February 2002).

Existing Food Safety Statutes Do Not Provide Sufficient Authority to Regulate All Aspects of Security at Food-Processing Facilities

The food safety statutes do not specifically authorize FDA or USDA to require food processors to implement any type of security measures designed to prevent the intentional contamination of the foods they produce.⁸ While these agencies' food safety statutes can be interpreted to provide authority to impose certain security requirements, as opposed to food safety requirements, neither agency believes it has the authority to regulate all aspects of security.

Counsel in the Department of Health and Human Service's Office of the Assistant Secretary for Legislation advised that FDA's authorities under the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act provide FDA with tools to adopt measures to control insanitary preparation, packing, and holding conditions that could lead to unsafe food; detect contamination of food; and control contaminated food. However, Counsel also advised that FDA's food safety authorities do not extend to the regulation of physical facility security measures. FDA's counsel provided a similar assessment, telling us that, to the extent that food safety and security overlap, FDA might be able to require the industry to take precautionary steps to improve security but observed that there is little overlap between safety and security. One area where safety and security do overlap is in the handling of hazardous materials. FDA's existing safety regulations specify that hazardous chemicals should be stored so that they cannot contaminate food products. This requirement overlaps with FDA's food security guidelines advising that hazardous chemicals be stored in a secure area and that access to them be limited.

USDA, on the other hand, has a somewhat more expansive view of the extent to which its statutory authority allows it to require food processors to adopt certain security measures. USDA's general counsel concluded that to the extent that security precautions pertain to activities closely related to sanitary conditions in the food preparation process, FSIS has the authority to require food processors to implement certain security

⁸FDA, under the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act, and USDA, under the Federal Meat Inspection Act, Poultry Products Inspection Act, and the Egg Products Inspection Act, have broad authority to regulate food safety. These laws require that food products be processed under sanitary conditions, be unadulterated, and be properly labeled.

measures.⁹ The general counsel concluded that FSIS could require facilities to develop and maintain a food security management plan concerning their response to an actual threat involving product tampering, since this is directly related to food adulteration. Such a plan could be added to a current HACCP plan or it could be entirely separate. USDA also believes that FSIS has authority to mandate its “inside security” guidelines, such as controlling or restricting access to certain areas, monitoring the operation of equipment to prevent tampering, and keeping accurate inventories of restricted ingredients and hazardous chemicals. Similarly, USDA believes that many of its security measures that address shipping and receiving food products or protecting water and ice used in processing products also could be made mandatory. These measures include putting tamper-proof seals on incoming and outgoing shipments and controlling access to water lines and ice storage.

On the other hand, USDA believes that the “outside security” measures included in its guidelines, such as securing plant boundaries and providing guards, alarms, and outside lighting, have little to do with sanitation in the facility or the immediate food-processing environment and, therefore, could not be made mandatory under existing authorities. With respect to the guidelines’ personnel security measures, USDA noted that FSIS has limited authority over personnel matters at food-processing facilities and could not require facilities to perform personnel background checks before hiring.

⁹USDA’s view on its authority to impose security requirements that are closely related to sanitary conditions is derived from the food safety laws’ prohibitions against adulteration. Adulterated food is virtually identically defined in the Federal Food, Drug, and Cosmetic Act and the Federal Meat, Poultry Products, and Egg Products Inspection Acts as food that has been “prepared, packed, [“packaged” in the egg inspection act] or held under insanitary conditions whereby it may have become contaminated with filth, or whereby it may have been rendered injurious to health.” See 21 U.S.C. 342(a)(4), 21 U.S.C. 601(m)(4), 21 U.S.C. 453(g)(4) and 21 U.S.C. 1033(a)(4).

FDA and FSIS Issued Voluntary Security Guidelines to Food Processors but Do Not Track or Document the Extent to Which They Are Being Implemented

In response to the nation's growing concerns regarding the potential for deliberate contamination of the food supply, FDA and USDA issued guidelines to the food-processing industry suggesting measures to enhance security at their facilities. Among other things, the guidelines suggests conducting a risk assessment, developing a plan to address security risks at plants, and adopting a wide range of security measures inside and outside the premises. Food-processing facilities are not required to adopt any of the security measures but are encouraged to adopt those that they feel are best suited for their operations. Although both agencies have alerted their field inspection personnel to be vigilant about security issues, they have also told the inspectors that they are not authorized to enforce these measures and have instructed them not to document their observations regarding security because of the possible release of this information under the Freedom of Information Act and the potential for the misuse of this information. As a result, FDA and USDA currently do not know the extent to which food security measures are being implemented at food-processing facilities. In contrast, the Congress directed medium-size and large-size community water systems, which are privately or publicly owned, to assess their vulnerability to terrorist attacks and to develop an emergency response plan to prepare for such an event. The act also authorized funding to be used for basic security enhancements, such as the installation of fencing, gating, lighting, or security cameras. This approach enables the Environmental Protection Agency (EPA) to monitor the water industry's security efforts and could be a possible model for the food safety agencies.

Industry's Compliance with Security Guidelines Is Voluntary

In 2002, FDA and FSIS each issued voluntary security guidelines to the food-processing industry to help federal- and state-inspected plants identify ways to enhance their security.¹⁰ The agencies encouraged food processors, among others, to review their current operations and adopt those security measures suggested in the guidelines that they believed would be best suited for their facilities. Officials from both FDA and FSIS told us that there was little or no coordination between the two agencies in developing these guidelines. The FDA guidance contains over 100 recommended security measures covering seven areas of plant operation, such as managing food security, physical (outside) security, and computer security. FSIS's guidelines contain 68 security measures and cover seven

¹⁰FDA was first to issue guidelines in January 2002; FSIS subsequently issued its guidelines in May 2002.

areas of plant operation. Figure 1 summarizes key aspects of both agencies' voluntary security guidelines for industry. FDA and FSIS have made the guidelines available on the Internet.¹¹ These guidelines are very similar—one difference is that FSIS's contain security measures for slaughter facilities.

Figure 1: Examples of Security Measures Contained in FDA and FSIS Guidelines

- **Security procedures for visitors** –Visitors, guests, and other nonplant employees should provide proof of identity and be restricted to nonproduct areas unless accompanied by a responsible employee.
- **Laboratory security** –In-house laboratory facilities should have comprehensive and validated security and disposal procedures in place, such as restricting access to the lab and controlling pathogens.
- **Mail-handling security**– Mail handling should be done in a separate area, and mail should be screened for anything out of the ordinary.
- **Shipping and receiving security** –Inspection of all incoming shipments for signs of tampering and any irregularities in products or labels should be investigated immediately.
- **Personnel security** –A system of positive identification should be established, new hires should be subject to screenings and background checks, entry to plant should be controlled, and personal items should be restricted.
- **Computer system security** –Procedures for backing up critical data systems should be reviewed, and access to computer systems should be restricted to those with proper clearances.
- **Hazardous chemical security** –Hazardous chemical storage areas or rooms should be secured and isolated from other parts of the plant, access to these areas should be controlled, and all irregularities in stock should be investigated immediately.
- **Outside security** –Outside lighting should be sufficient to detect unusual activities; all access to the establishment should be monitored and controlled; parking areas for visitors should be a safe distance from the facility; and all doors, windows, roof openings, vent openings, and storage areas should be secured.

Source: FDA and FSIS.

Some state governments have also acted to protect food products from deliberate contamination. We learned from 11 state auditing offices that food safety regulatory officials from most of these states are providing industry or state inspectors with guidelines, either in the form of the FDA and FSIS guidelines or guidelines developed by the state officials

¹¹See www.cfsan.fda.gov/~dms/secguid.html for FDA and www.fsis.usda.gov/oa/topics/securityguide.htm for FSIS.

themselves.¹² In addition, three states have enacted new legislation or regulations addressing the security of food products.

FDA and FSIS Instruct Their Inspectors to Be Observant

Although FDA and FSIS do not assess the extent to which food processors are implementing security measures, the agencies have asked their field inspection personnel to be on heightened alert and to discuss, but not interpret, the security guidance with facility officials during their routine food safety inspections.¹³ However, both FDA and USDA have instructed their field inspection personnel to refrain from enforcing any aspects of the security guidelines because the agencies generally believe that they lack such authority. They have also instructed their field personnel not to document plants' security measures because they are concerned that such information would be subject to Freedom of Information Act requests.

More specifically, FDA's instructions to its field personnel specify that they should neither perform a comprehensive food security audit of the establishment nor conduct extensive interviews to determine the extent to which preventive measures suggested in the guidelines have been adopted. The goals, according to FDA, are to heighten industry's awareness of food security practices, facilitate an exchange of information between FDA and industry on the subject of food security, and encourage plant management to voluntarily implement those preventive measures that they believe are most appropriate for their operation. In short, FDA inspectors are encouraged to discuss food security concerns with plant management and to provide them with copies of the guidelines. Although the exact details of such discussions are not to be recorded, inspectors are required to document in their inspection reports that such discussions took place and that they gave a copy of the guidelines to facility management.

Similarly, FSIS has informed its field inspectors that they have no regulatory duties regarding the enforcement of the guidelines. Initially, the agency instructed its inspectors to refer any questions from facility

¹²Eleven of the 50 state audit offices we contacted for assistance in interviewing their food regulatory officials responded to our request. The participating state auditing offices were Arizona, Florida, Maryland, Michigan, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Tennessee, and Texas. Because the state auditors collected information from only 11 states, these observations cannot be generalized.

¹³According to an FSIS memorandum to its field personnel, "heightened alert" is defined as identifying and reporting any suspicious activities that could adversely affect our nation's security.

managers to USDA's Technical Service Center in Omaha, Nebraska.¹⁴ Recently the agency modified its position regarding direct discussions of food security and now allows inspectors to discuss, but not interpret, security with facility management. Inspectors are still instructed not to document these conversations or enforce the adoption of any security measure.

Officials from both agencies expressed concerns about gathering security information from facilities because it could be subject to public disclosure through Freedom of Information Act requests. If terrorists gained access to this information, it could give them a road map to target the most vulnerable areas in a food-processing plant.

Water Security Provisions in the 2002 Bioterrorism Act Are a Possible Model for the Food Safety Agencies

Recent congressional efforts to better protect the nation's drinking water from terrorist acts may offer a model for FDA and USDA to help monitor security measures adopted at food-processing facilities as well as to identify any security gaps that may exist at these facilities. Although there are differences in how the government regulates drinking water and food, food and water are essential daily consumption elements, and both are regulated to ensure their safety.

In June 2002, the Congress enacted the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, which, among other things, amended the Safe Drinking Water Act. The Bioterrorism Act requires medium-size and large-size community water systems (those serving over 3,300 people), which are privately and publicly owned, to certify to EPA that they have assessed their vulnerability to a terrorist attack and developed emergency plans to prepare for and respond to such an attack. These water systems serve 91 percent of the United States' population. Each community's water system is required to conduct a vulnerability assessment and submit a copy of the assessment to EPA.¹⁵ The act specifies that the vulnerability assessment is exempt from disclosure under the Freedom of Information Act, except for the identity

¹⁴The Technical Service Center provides field inspection personnel with technical assistance, advice, and guidance regarding the implementation of national policies, programs, and procedures. The center also serves as a central point for reporting and responding to suspicious activities related to food security.

¹⁵The vulnerability assessment must include, among other things, a review of pipes and constructed conveyances; physical barriers; and water collection, pretreatment, treatment, storage, and distribution facilities.

of the community water system and the date on which it certifies compliance. Community water systems are also required to prepare an emergency response plan that incorporates the results of their vulnerability assessments. In addition, the act authorizes funding for financial assistance to community water systems to support the purchasing of security equipment, such as fencing, gating, lighting, or security cameras.

Food Processors Are Implementing a Range of Security Measures, but Extent of Implementation Is Largely Unknown to FDA and FSIS

FDA and FSIS lack comprehensive information on the extent to which food-processing companies are adopting security measures. However, officials from the majority of the food trade associations that we contacted believe that their members are implementing a range of measures to enhance security at their facilities. We found that the five food-processing facilities we visited in various geographic regions around the country are also implementing an array of security measures that range from developing risk assessment plans to hiring security contractors.¹⁶ Furthermore, our survey of FDA and FSIS inspectors indicates that, generally, food-processing facilities are implementing a range of security measures. The survey responses indicate, however, that the inspectors were more aware of those security measures that were the most visible to them during the course of their regular food safety inspections.¹⁷

Trade Association Officials Indicate That Industry Is Implementing Various Security Measures

According to trade association officials, food processors are voluntarily taking steps to prevent the deliberate contamination of their products, including adopting many of the measures suggested by FDA and FSIS, such as installing fences, requiring that employees wear identification, and restricting access to certain plant areas. Association officials told us that most large food-processing facilities already have ample security plans that include many of the recommendations made by FDA and FSIS. One trade association recently conducted a survey of its members and asked for their opinions about FSIS's Guidelines. Most of the respondents

¹⁶The facilities vary in size from 100 to 800 employees.

¹⁷We surveyed 50 FSIS Circuit Supervisors (obtained responses from 45) who oversee the activities of the agency's field inspectors and 150 FDA investigators (obtained responses from 128) who perform the inspections of food-processing facilities to ask about the security measures they have observed at the plants they inspect. Our survey included questions about outside security, visitor access, employee screening, and shipping and handling, among others. The methods used and results from these surveys are contained in appendixes II and III.

indicated that they were aware of the guidelines; they believed the guidelines were for the most part practical and workable; and they used them in their security plans. However, these officials were unable to provide data on the extent to which the food-processing industry is implementing security measures to prevent or mitigate the potential deliberate contamination of food products.¹⁸

Trade association officials also said that they provided FDA and FSIS with comments on the voluntary guidelines and, in some cases, have also issued their own food security guidelines to their members. Although the officials generally believe that the agencies' guidelines are reasonable, they do not want the government to regulate food security. They also feel that some companies, especially small facilities with limited resources, are unable to implement all the measures in the guidelines. Therefore, these officials believe it is important for the guidelines to remain voluntary.

The industry is involved in improving food security in other ways as well. For example, the food industry associations formed the Alliance for Food Security to facilitate the exchange of information about food security issues. The Alliance is composed of trade associations representing the food chain, from commodity production through processing, packaging, distribution, and retail sale, as well as government agencies responsible for food and water safety, public health, and law enforcement. Similarly, led by the Food Marketing Institute, the food industry and FBI established the Information Sharing and Analysis Center (ISAC), which serves as a contact point for gathering, analyzing, and disseminating information among companies and the multiagency National Infrastructure Protection Center based at FBI headquarters. Through ISAC, FBI officials have notified food manufacturers of warnings and threats that the Center deems to be credible. ISAC also provides a voluntary mechanism for reporting suspicious activity in a confidential manner and for developing solutions.

Five Processing Facilities Provide Some Indication about Industry's Efforts

We visited five food-processing facilities, including a slaughter plant and facilities that produce beverages and ready-to-eat products. Although these facilities are not in any way representative of all food-processing plants nationwide, they provide some information about the types of

¹⁸The National Food Processors Association is in the process of evaluating the results from its food security survey of its members, but not all of the results were ready in time to be included in this report.

security measures that some facilities are implementing. All five facilities had conducted risk analyses and, on the basis of the results, had implemented a number of security measures similar to those suggested in the FDA and FSIS guidelines. For example, all five facilities limited access to the facility through such means as requiring visitors to enter through a guard shack and to provide identification. In addition, employees at three of the facilities could enter the facility only by using magnetic cards.

However, managers at the five facilities offered differing opinions about personnel security. Although all of the facilities we visited performed background checks on their employees that included verification of social security numbers, only some verified prior work experience, criminal history, and level of education. One company also required that its contractors, such as construction companies working in the facility, perform employment, education, and criminal checks of their own employees. The facilities also used different protocols for employee access to different areas within the plant. For example, at four of the facilities, employees were limited to those areas of the plant in which they worked.

While the managers at these facilities generally complimented FDA's and USDA's security guidelines, they said that they do not want the agencies to regulate security. Rather, they believe that the agencies should develop a nonprescriptive framework or strategy for industry and then leave them to decide how to meet their individual requirements. One manager believes that food security responsibilities should be moved to the Department of Homeland Security.

Finally, our discussions with trade association officials and food-processing industry officials revealed that the industry is very concerned about sharing security information with federal agencies because of the possibility that it could provide a road map for terrorist groups if it were released under the Freedom of Information Act. Although the act exempts from public release certain national security, trade secret, and commercial or financial information, industry officials are generally skeptical about the government's ability to prevent the release of sensitive security information at food-processing facilities. FBI officials told us that they have cited these exemptions when assuring ISAC members that security information shared with them will be protected from public release. These officials explained that the courts have generally ruled that the commercial information exemption protects those who voluntarily provide

the government with information if the information is of a kind that the provider would not ordinarily release to the public.¹⁹ However, the FBI officials we interviewed believe that the government should find some way of assuring industry that sensitive security information is protected from public release.

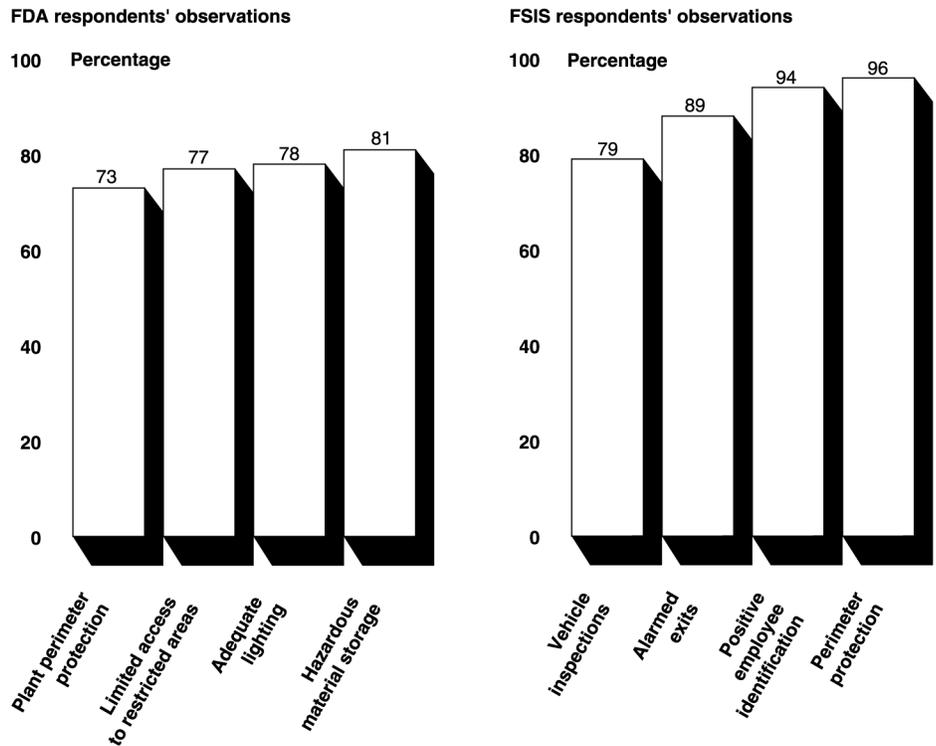
FDA and FSIS Survey Respondents Indicate That Processing Facilities Are Implementing a Range of Security Measures

FDA and FSIS survey respondents observed a range of security measures being implemented at food-processing facilities, although both FDA and FSIS respondents were able to provide more information about those security measures that were most visible during the course of their normal inspection duties. Figure 2 shows selected categories of security measures recommended in the FDA and FSIS security guidelines that were most visible to inspectors.²⁰ The majority of the FDA survey respondents said they were able to observe security measures, such as fencing around the plants' perimeter, limiting access to restricted areas, securing hazardous materials, and providing adequate interior and exterior lighting. Likewise, most of FSIS's circuit supervisors were able to observe outside security measures including alarmed emergency exits, plant perimeter protection, positive employee identification, and the inspection of incoming and outgoing vehicles.

¹⁹See, for example, *Critical Mass Energy Project v. Nuclear Regulatory Commission*, 975 F. 2d 871 (D.C. Cir. 1992) (en banc) *cert. denied*, 507 U.S. 984 (1993) (information in safety reports voluntarily provided to the Nuclear Regulatory Commission by nuclear safety groups was confidential and thus exempt from disclosure under the Freedom of Information Act's exemption for financial or commercial information).

²⁰Security measures listed in FDA's and FSIS's food security guidelines are somewhat different. The agencies developed their guidelines in January and May 2002, respectively, and did not coordinate their efforts.

Figure 2: Percentage of Survey Responses Indicating Observation or Knowledge of More Visible Security Measures

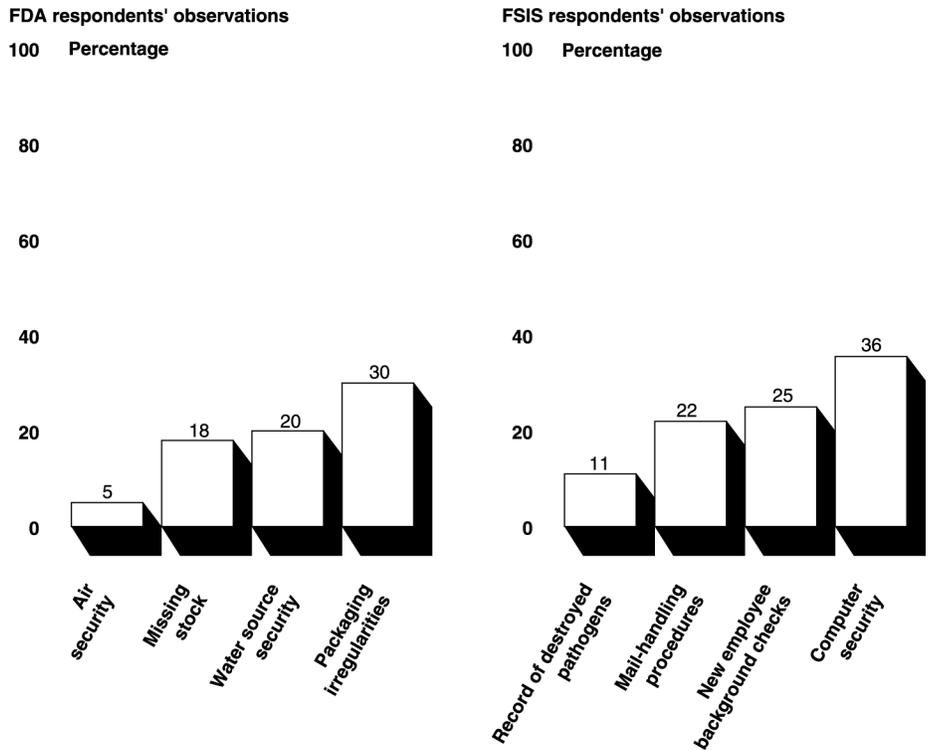


Source: GAO.

Note: GAO survey of FDA and FSIS inspectors.

Survey respondents provided fewer observations regarding other types of security measures included in the FDA and FSIS guidelines—in some instances because these measures were less visible to them. For example, FDA respondents were less able to comment on whether they noticed or knew of the presence of security measures designed to account for missing stock or for other finished product irregularities. (See fig. 3.) Similarly, FSIS respondents were less unable to comment on the extent to which facilities were performing background checks on new employees or implementing proper mail-handling practices.

Figure 3: Percentage of Survey Responses Indicating Observation or Knowledge of Less Visible Security Measures



Source: GAO.
 Note: GAO survey of FDA and FSIS inspectors.

More than half of FSIS’s survey respondents stated that large plants—those with at least 500 employees—had implemented a range of security measures, including the areas of outside security, storage, slaughter and processing, and personnel security. Fewer of these respondents observed these security measures at smaller plants. Some FDA and FSIS respondents provided additional comments that the very small firms typically lack the financial resources to implement many of the security measures suggested in the government guidelines. Similarly, some respondents commented that many of the security measures might not be necessary at smaller establishments.

Additionally, most of the FDA respondents reported that they had not received training on food security; while nearly all of the FSIS respondents reported that they had recently received such training. Some of the FSIS respondents further stated that although they had received food security

training, further training was greatly needed in the field. Such training would be beneficial because field personnel are encouraged to discuss security measures with managers at the facilities they inspect.

Finally, responses to our survey showed that FDA and FSIS respondents have different levels of “satisfaction” with or “confidence” in the efforts of the processing facilities they inspect to ensure the protection of food from acts of deliberate contamination.²¹ While nearly half of the FSIS respondents said they were somewhat or very confident of the efforts made by the food processors they inspect, slightly over one-fourth of the FDA respondents were satisfied or very satisfied with the efforts made by the food processors they inspect.

Regulatory Officials from 11 States Indicate Some Level of Satisfaction with Security Efforts

Thirty-seven food regulatory officials interviewed by state auditors in 11 states provided opinions on their overall level of satisfaction with federal, state, and industry efforts to protect food from intentional contamination. Table 1 shows that nearly half of the state regulatory officials interviewed expressed satisfaction with the efforts made by federal, state, and industry to safeguard food products—though these results cannot be generalized to all state regulatory officials.

²¹FDA preferred that we ask about the level of “satisfaction,” while FSIS wanted us to ask about the level of “confidence.”

Table 1: State Officials’ Satisfaction with Federal, State, and Industry Efforts to Safeguard Food Products from Deliberate Contamination

Questions asked of 37 state food safety regulatory officials (11 states)	Percentage of officials very satisfied or satisfied	Percentage of officials neither satisfied nor dissatisfied	Percentage of officials dissatisfied or very dissatisfied
How satisfied are you with the federal government’s efforts?	43.3	32.4	24.3
How satisfied are you with the state government’s efforts?	56.8	29.7	13.5
How satisfied are you with industry’s efforts?	43.2	45.9	10.8

Source: State audit offices.

Notes: Combined state survey of 37 state regulatory officials.

Percentages may not total 100 because of rounding.

Finally, most of the state officials interviewed by state auditors believed it was either “important” or “very important” for states to monitor whether companies have adopted security measures to prevent acts of deliberate contamination; 3 of the 11 states are already requiring their inspectors to do so.

Conclusions

The vulnerability of the food supply to potential acts of deliberate contamination is a national concern. The President addressed this concern in the October 8, 2001, executive order establishing the Office of Homeland Security and adding the agriculture and food industries to the list of critical infrastructure systems needing protection from terrorist attack. The National Academies have also concluded in a recently released report that infectious agents and toxic chemicals could be used by terrorists to contaminate food-processing facilities. Among other things, the report says that FDA should act promptly to extend its Hazard Analysis and Critical Control Point methodology so it might be used to deal effectively with deliberate contamination of the food supply. The Centers for Disease Control and Prevention also reported recently on the need to better protect our nation’s food and water supplies.

These assessments underscore the need to enhance security at food-processing facilities. Although FDA and FSIS recognize that need and have taken action to encourage food processors to voluntarily adopt security measures, these actions may be insufficient. Because the agencies believe that they generally lack authority to mandate security measures and are concerned that such information would be subject to Freedom of Information Act requests, they do not collect information on industry’s

voluntary implementation of security measures. The agencies are, therefore, unable to determine the extent to which food processors have voluntarily implemented such measures. Both FDA and USDA have completed risk assessments. However, without the ability to require food-processing facilities to provide information on their security measures, these federal agencies cannot fully assess industry's efforts to prevent or reduce the vulnerability of the nation's food supply to deliberate contamination. Similarly, they cannot advise processors on needed security enhancements. Furthermore, lacking baseline information on the facilities' security condition, the agencies would be unprepared to advise food-processing facilities on any additional actions needed if the federal government were to go to a higher threat alert.

Finally, the lack of security training for FDA food inspectors on the voluntary security guidelines issued for food processors and the limited number of FSIS inspectors that have so far received training on the voluntary security guidelines hamper the inspectors' ability to conduct informed discussions regarding security measures with facility personnel as they are currently instructed to do.

Recommendations for Executive Action

In order to reduce the risk of deliberate contamination of food products, we are recommending that the Secretary of Health and Human Services and the Secretary of Agriculture study their agencies' existing statutes and identify what additional authorities they may need relating to security measures at food-processing facilities. On the basis of the results of these studies, the agencies should seek additional authority from the Congress, as needed.

To increase field inspectors' knowledge and understanding of food security issues and facilitate their discussions about the voluntary security guidelines with plant personnel, we are also recommending that the Secretary of Health and Human Services and the Secretary of Agriculture provide training for their agencies' field staff on the security measures discussed in the voluntary guidelines.

Agency Comments and Our Evaluation

We provided FDA and USDA with a draft of this report for their review and comment. We received written and clarifying oral comments from each agency. The agencies also provided technical comments, which we incorporated into the report as appropriate. FDA agreed with our recommendation that it provide all food inspection personnel with training on security measures. Subsequently, FDA officials told us that the agency

did not have an opinion on our recommendation that it study what additional authorities it may need relating to security measures at food-processing facilities. In its written comments, FDA stated that the report is factual and describes accurately the events and actions that FDA has taken on food security. FDA also commented that one of the goals of its voluntary guidance to industry is to heighten awareness of food security practices and that the role of its investigators is first and foremost food safety. FDA also said that it does not have sufficient security expertise to provide industry with consultation in this area. FDA further commented that although HACCP and other preventive controls are appropriate measures to enhance food safety, HACCP does not afford similar advantages for addressing deliberate contamination, tampering, and/or terrorist actions related to the food supply. Our report underscores that the role of FDA's investigators is primarily one of food safety. Nevertheless, we believe that it is also crucial for cognizant agencies to have information about industry's security efforts so that they can assess the extent to which the risk of deliberate contamination is being mitigated. We also believe that possessing such information is important if it becomes necessary to advise food processors on needed security enhancements. With regard to HACCP, our report does not take a position on the feasibility of using HACCP as a means to control deliberate contamination; instead, we report on the opinion of the National Academies. FDA's comments are presented in appendix V.

In its written comments, USDA agreed with the contents of our report. Subsequently, USDA's food safety officials confirmed that the agency also agrees with the report's recommendations. In its letter, USDA commented that it has already conducted a comprehensive risk assessment of the food supply without plant security information and that knowing whether a plant employed one or several security measures was not needed to assess the risk. Our report acknowledges that USDA has conducted a comprehensive risk assessment, but we believe that it is crucial for cognizant agencies to have information about industry's security efforts so that they can assess the extent to which the risk of deliberate contamination is being mitigated. USDA's comments are presented in appendix IV.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to the Secretaries of Agriculture and Health and Human Services; the Director of the Federal Bureau of Investigation; the Director, Office of Management and Budget;

and other interested parties. We will also make copies available to others upon request. In addition, the report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you have any questions about this report, please contact Maria Cristina Gobin or me at (202) 512-3841. Key contributors to this report are listed in appendix VI.



Lawrence J. Dyckman
Director, Natural Resources
and Environment

Appendix I: Scope and Methodology

To determine the extent to which the current federal food safety statutes can be effectively used to regulate security at food-processing facilities, we analyzed the Food and Drug Administration's (FDA) and the U.S. Department of Agriculture's (USDA) existing statutory authorities. We discussed these authorities with FDA and USDA counsel and requested a legal opinion to determine the extent to which each agency believes its existing authorities allow it to regulate food security. We then independently reviewed these authorities to draw our own conclusions.

To describe the actions that FDA and USDA have taken to help food processors prevent or reduce the risk of deliberate food contamination, we met with staff from FDA and FSIS to review the voluntary guidelines issued by each agency. To better understand the provisions of the guidelines, we met with agency program staff responsible for issuing the guidelines and for receiving industry comments on it. To learn how the guidelines would be implemented, we met with FDA and USDA's Food Safety and Inspection Service (FSIS) officials responsible for field operations and with staff from field offices in Atlanta, Georgia, and Beltsville, Maryland. Finally, to gather additional information about the vulnerability of the food supply to acts of deliberate contamination, we contacted nine experts from academia, including experts in food safety and in bioterrorism.

To describe how the government is determining the extent to which food-processing companies are implementing security procedures, we asked FDA and FSIS program officials about the nature of the information they are collecting about industry security measures. We also conducted surveys of agency field personnel to obtain their observations about and knowledge of food security measures taken at facilities they regularly inspect for food safety. Our FDA survey, which was Web-based, was administered to all 150 field investigators who recorded 465 or more hours for domestic food inspection from June 1, 2001 to May 31, 2002. Our survey of FSIS staff was a telephone survey of a randomly selected stratified sample of 50 circuit supervisors. Our response rate for these surveys was higher than 85 percent for FDA and 90 percent for FSIS, and respondents included participants from all the agencies' geographic regions. Before administering the surveys, we discussed with and obtained input from FDA and FSIS program officials. We also pretested the surveys at field locations to ensure that our questions were valid, clear, and precise and that responding to the survey did not place an undue burden on the respondents. In addition, we contacted state audit offices in all 50 states to collect information about state government actions designed to prevent the deliberate contamination of food products. Of the 50 state

audit offices we contacted, only 11 agreed to help us collect this information: Arizona, Florida, Maryland, Michigan, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Tennessee, and Texas.

To determine the extent to which the food-processing industry is implementing security measures to better protect its products against deliberate contamination, we contacted officials from 13 trade associations representing, among others, the meat and poultry, dairy, egg, and fruits and vegetables industries and the food-processing industry. We discussed the guidelines that their organizations have issued, and they described what actions their constituents are taking to protect their products. We also visited five food-processing facilities in various geographic regions to ask corporate and plant officials about the actions they have taken to protect their products and facilities against intentional contamination. These facilities included a slaughter plant as well as facilities that produce beverages and ready-to-eat products. We recognize that the efforts of these five facilities are not necessarily representative of the whole food-processing industry. To identify the concerns that the industry has about sharing sensitive information with federal agencies, we spoke with industry representatives as well as officials from the Federal Bureau of Investigation's National Infrastructure Protection Center.

We conducted our review from February through December 2002 in accordance with generally accepted government auditing standards.

Appendix II: FDA Survey Results

We surveyed the full census of eligible FDA investigators using a web-based survey. We considered investigators who had billed at least half of their time in the inspection of food facilities to be eligible for this census. This yielded 152 investigators who billed 465 or more hours in domestic food inspection between June 1, 2001 and May 31, 2002. Two investigators were randomly selected from the field to participate in the pre-testing development of the web-based survey instrument. Of the remaining 150 investigators, 128 surveys were completed between September 11, 2002 and October 15, 2002 for an overall response rate of 85%. All of the percentage estimates from the FDA survey shown in the results reported below have sampling errors of +/- 3.3 percentage points or less (unless otherwise noted) with a 95% level of confidence, and illustrate the possible variability in the responses due to the survey non-response rate. The completed interviews included food investigators from all FDA regions (Table 1).

Table 1 Completed FDA Investigator Surveys by Field Office

Field Office	Web Surveys		Total
	Completed	Not completed	
Atlanta	2	3	5
Baltimore	4		4
Chicago	6		6
Cincinnati	2	1	3
Dallas	7		7
Denver	3	1	4
Detroit	7	2	9
Florida	8	2	10
Kansas City	2		2
Los Angeles	3	2	5
Minneapolis	14	3	17
New England	14		14
New Jersey	8	1	9
New Orleans	13	1	14
New York	5	2	7
Philadelphia	5	1	6
San Francisco	11	1	12
Seattle	14	2	16
TOTAL	128	22	150

Appendix II: FDA Survey Results

FDA Web Survey

When we use the phrase "food security" in this survey, we specifically mean any security measures that address the protection of the food supply from acts of deliberate contamination. Measures designed to protect the food supply from deliberate contamination may involve the physical security inside and outside of food processing facilities; the handling of raw materials, packaging, and finished products; the management of personnel; or measures that are specific to in-house laboratories.

We understand that FDA's Food Security Preventive Measures Guidance (referred to as "the Guidance" throughout the survey) is voluntary for the industry. Your response to these questions will in no way be used to assess your performance. If there are any questions in this survey that you prefer not to answer, just skip to the next question.

Some response percentages for survey items do not add up to 100% due to item non-response, or cases where individuals left an item blank.

This section includes some questions about your roles and responsibilities with regard to food security and the protection of the food supply from acts of deliberate contamination. In May 2002, FDA issued field instructions describing how food regulatory officials are to use the Guidance during regular inspections/audits of food establishments. First, we'd like to ask some general questions about the Guidance.			
Have you had the opportunity to read the Guidance? n=128	<i>Yes</i>	<i>No</i>	
	90.6%	9.4%	
How often have you provided the Guidance to at least one private sector official at each plant during your inspections? n=127	60.2 % All the time 15.6 % Most of the time 2.3 % About half the time 7.0 % Some of the time 11.7 % Rarely or Never 2.3 % No basis to judge		
To what extent, if at all, have your roles and responsibilities changed as a result of the Guidance? Have they changed to a: n=126	0.0 % Very great extent 2.3 % Great extent 18.0 % Moderate extent 39.1 % Some extent 34.4 % Little or no extent 4.7 % No basis to judge		
Please check any of the following new roles and responsibilities that apply to you since the Guidance was issued: <i>(Check all that apply.)</i>	<i>Percent that checked item</i>		
Look for the presence of the security measures mentioned in the Guidance when I am inspecting food facilities. n=128	36.7%		
Conduct informal conversations with plant operators on security issues. n=128	47.7%		
Spend more time becoming familiar with food security issues (for example, by talking with other agency officials, looking up material on the WEB, etc.). n=128	14.8%		
Informally discuss food security issues with my supervisor or with other investigators. n=128	16.4%		
Other new roles and responsibilities (please specify below). n=128	3.1%		
No new roles and responsibilities as a result of the new Guidance. n=128	0.8%		
Have you received any training with regard to the new food security Guidance? n=127	<i>Yes</i>	<i>No</i>	<i>Other</i>
	14.8%	77.3%	7.0%
Have you been informed that you will receive training in the future with regard to the new food security Guidance? n=126	8.6%	86.7%	3.1%
To what extent do you understand your roles and responsibilities relative to the new food security Guidance? Do you understand your roles and responsibilities to a: n=124	7.8 % Very great extent 21.9 % Great extent 27.3 % Moderate extent 19.5 % Some extent 17.2 % Little or no extent 3.1 % Other		

Appendix II: FDA Survey Results

<p>In this section, we'd like to ask you some questions about security measures that you may have seen at food facilities that you inspect. We understand that FDA's Guidance is voluntary for the industry. Nevertheless, we are interested in knowing what security measures listed in the Guidance you may have noticed in the food facilities that you inspect. If you haven't noticed these security measures, that's OK. Your responses to these questions will in no way be used to assess your performance. We are not asking for a comparison of security measures that are in place before and after the events of September 11, 2001. We would like your professional judgment about security measures you know about or have noticed in food facilities regardless of when they were put in place.</p>			
<p>First, we would like to ask you a little background information on your experience as an FDA investigator. How long have you been an FDA investigator? n=128</p>	<p>18.0 % 1 to 3 years 32.0 % 4 to 7 years 27.3 % 8 to 12 years 22.7 % 13 years or longer</p>		
<p>Approximately how many food processing facilities (including warehouses, commissaries, etc.) have you inspected during the last 12 months? n=128</p>	<p>0.8 % 0 facilities 10.2 % 1 to 12 facilities 21.9 % 13 to 24 facilities 39.8 % 25 to 36 facilities 20.3 % 37 to 60 facilities 7.0 % 61 or more facilities</p>		
<p>Are you an Interstate Travel Program Specialist (ITPS, formerly Interstate Travel Specialist)? n=128</p>	<p><i>Yes</i> 10.9%</p>	<p><i>No</i> 89.1%</p>	
<p>Let's start with physical security. Please focus on the physical security measures suggested in the Guidance. Based on your visits to the food facilities that you have inspected in the past 12 months, have you had the opportunity to notice or otherwise be aware of the following physical security measures:</p>	<p><i>Yes</i></p>	<p><i>No</i></p>	<p><i>No basis to judge</i></p>
<p>Perimeter access protection, such as fencing? n=126</p>	73.4%	20.3%	4.7%
<p>Limited access to restricted areas? n=126</p>	77.3%	14.8%	6.2%
<p>Adequate interior and exterior lighting? n=125</p>	78.1%	10.2%	9.4%
<p>Any other physical security measures in the food facilities that you inspect? n=116</p>	39.1%	40.6%	10.9%
<p>In general, for the food facilities that you have inspected, how many have physical security measures like the ones you just indicated? n=128</p>	<p>3.9 % All of them 20.3 % Almost all of them 45.3 % Some of them 24.2 % Few of them 2.3 % None of them 3.9 % No basis to judge</p>		
<p>Now we'd like to turn your attention to the section of the voluntary guidance related to the packaging and handling of raw materials. Based on your visits to the food facilities that you have inspected in the past 12 months, have you had the opportunity to notice or otherwise be aware of the following packaging and handling of raw materials measures:</p>	<p><i>Yes</i></p>	<p><i>No</i></p>	<p><i>No basis to judge</i></p>
<p>Supervision of off-loading of incoming ingredients, packaging, and labels? n=127</p>	60.9%	29.7%	8.6%
<p>Destruction of outdated or discarded product labels? n=127</p>	21.9%	62.5%	14.8%
<p>Investigation of packaging or paperwork irregularities associated with the receipt of ingredients? n=127</p>	30.5%	48.4%	20.3%
<p>Any other security measures related to the packaging and handling of raw materials in the food facilities that you inspect? n=111</p>	18.8%	52.3%	15.6%
<p>In general, for the food facilities that you have inspected, how many have security measures related to the packaging and handling of raw materials like the ones you just indicated? n=127</p>	<p>2.3 % All of them 18.8 % Almost all of them 31.2 % Some of them 20.3 % Few of them 15.6 % None of them 10.9 % No basis to judge</p>		

Appendix II: FDA Survey Results

Now we'd like you to think about the section of the voluntary guidance related to inside security. Based on your visits to the food facilities that you have inspected in the past 12 months, have you had the opportunity to notice or otherwise be aware of the following inside security measures:			
	<i>Yes</i>	<i>No</i>	<i>No basis to judge</i>
Monitoring of the quality of water sources? n=128	64.8%	30.5%	4.7%
Monitoring of the security of water sources? n=128	19.5%	68.0%	12.5%
Monitoring of the quality of air sources? n=127	16.4%	71.9%	10.9%
Monitoring of the security of air sources? n=127	4.7%	80.5%	14.1%
Securing storage areas for hazardous chemicals? n=127	81.2%	13.3%	4.7%
Limiting access to hazardous chemicals storage areas? n=128	68.0%	26.6%	5.5%
Any other measures addressing inside security in the food facilities that you inspect? n=108	13.3%	55.5%	15.6%
In general, for the food facilities that you have inspected, how many have inside security measures like the ones you just indicated? n=126	3.1 % All of them 31.2 % Almost all of them 32.8 % Some of them 21.1 % Few of them 7.8 % None of them 2.3 % No basis to judge		
Next we'd like you to think about the section of the voluntary guidance related to finished products. Based on your visits to the food facilities that you have inspected in the past 12 months, have you had the opportunity to notice or otherwise be aware of the following finished products measures:			
	<i>Yes</i>	<i>No</i>	<i>No basis to judge</i>
Investigation of missing or extra stock, or any other irregularities? n=128	18.0%	59.4%	22.7%
Random inspections of storage facilities, vehicles, and product containers? n=128	48.4%	39.8%	11.7%
Locking and sealing vehicles, containers, or rail cars? n=128	52.3%	32.8%	14.8%
Any other measures addressing the security of finished products in the food facilities that you inspect? n=104	7.0%	53.9%	20.3%
In general, for the food facilities that you have inspected, how many have security measures for finished products like the ones you just indicated? n=128	2.3 % All of them 17.2 % Almost all of them 34.4 % Some of them 17.2 % Few of them 18.0 % None of them 10.9 % No basis to judge		
Now please take a moment to think about the section of the voluntary guidance related to personnel at food production facilities. We are aware that FDA is currently revising the Guidance sections addressing the process for performing criminal background checks and reviewing immigration status. However, we'd like to ask some general questions about personnel security in the food facilities you have visited. Based on your visits to the food facilities that you have inspected in the past 12 months, have you had the opportunity to notice or otherwise be aware of the following personnel security measures:			
	<i>Yes</i>	<i>No</i>	<i>No basis to judge</i>
A system of positive ID and recognition (for example issuing photo IDs or color-coding badges)? n=128	60.9%	32.0%	7.0%
Limiting employee access to certain parts of the plant? n=128	61.7%	32.0%	6.2%
Restricting the personal items that are allowed in the plant? n=128	63.3%	25.0%	11.7%
Providing food security training to all or some employees? n=128	34.4%	47.7%	18.0%
Any other general personnel security measures in the food facilities that you inspect? n=104	9.4%	53.1%	18.8%

Appendix II: FDA Survey Results

In general, for the food facilities that you have inspected, how many have general personnel security measures like the ones you just indicated? n=127	5.5 % All of them 18.8 % Almost all of them 35.2 % Some of them 28.9 % Few of them 5.5 % None of them 5.5 % No basis to judge		
Now we'd like to ask some questions about the section of the voluntary guidance related to in-house plant laboratories.	<i>Yes</i>	<i>No</i>	<i>No basis to judge</i>
First, have you inspected any food processing food facilities with an in-house laboratory (used for water or bacterial testing, for instance) in the past 12 months? n=127	64.1%	35.2%	
Based on your visits to the food facilities that you have inspected in the past 12 months which had an in-house lab, have you had the opportunity to notice or otherwise be aware of the following in-house laboratory measures: <i>Note: Respondents who answered 'No' to the previous question are included in the next four items in the "No basis to judge" category.</i>			
Restricting access to the laboratory and to sensitive materials? n=128	41.4%	21.1%	37.5%
Restricting laboratory materials to the laboratory? n=128	39.8%	15.6%	44.5%
Any other in-house plant laboratory security measures in the food facilities that you inspect? n=108	4.7%	35.2%	44.5%
In general, for the food facilities that you have inspected, how many have in-house plant laboratory security measures like the ones you just indicated? n=125	7.0 % All of them 9.4 % Almost all of them 11.7 % Some of them 18.0 % Few of them 12.5 % None of them 39.1 % No basis to judge		
Now please think about sections of the voluntary guidance related to general security. Based on your visits to the food facilities that you have inspected in the past 12 months, have you had the opportunity to notice or otherwise be aware of the following general security measures:	<i>Yes</i>	<i>No</i>	<i>No basis to judge</i>
Restricting access to the plant's critical data systems to those with appropriate clearance? n=128	60.2%	19.5%	20.3%
Restricting entry to the establishment, especially food handling and storage areas? n=128	71.9%	22.7%	5.5%
Monitoring areas that may be vulnerable to tampering? n=128	37.5%	50.0%	12.5%
Encouraging all staff to be alert for any signs of tampering with products or equipment? n=128	38.3%	40.6%	21.1%
Any other general security measures in the food facilities that you inspect? n=100	3.9%	56.2%	18.0%
In general, for the food facilities that you have inspected, how many have general security measures like the ones you just indicated? n=127	4.7 % All of them 28.9 % Almost all of them 25.8 % Some of them 25.0 % Few of them 7.0 % None of them 7.8 % No basis to judge		
Keeping in mind the food security measures you have just indicated in your answers on the survey: How satisfied are you with the efforts of these food facilities to ensure the protection of food processed in the United States from acts of deliberate contamination? n=128	3.9 % Very satisfied 25.0 % Satisfied 34.4 % Neither satisfied nor dissatisfied 26.6 % Dissatisfied 7.0 % Very dissatisfied 3.1 % No basis to judge		

Appendix III: FSIS Survey Results

We randomly selected a stratified sample of 50 USDA circuit supervisors based on a probability procedure to assure that the sample was representative of all circuit supervisors (149) and USDA circuits (15). (Two additional circuit supervisors were randomly selected from the field to participate in the pre-testing development of the survey instrument.) Our sample is one of a number of samples that we might have drawn from the total population of USDA circuit supervisors, with potentially different results. We express our confidence in our particular results as 95 percent confidence intervals—bounded by lower and upper confidence limits. These are intervals that would contain the actual population values for 95 percent of the samples we could have drawn, and are shown in parentheses following the weighted results of the USDA survey below. We can say we are 95 percent confident that each of the confidence intervals presented in this report include the true values in the study population. We completed 45 surveys using a computer-assisted telephone interviewing method for an overall response rate of 90% between September 30, 2002 and October 9, 2002. The completed interviews included circuit supervisors from all USDA circuits (Table 1).

Table 1 Completed USDA Circuit Supervisor Interviews by Circuit

Circuit	Interviews		Total
	Completed	Not Completed	
Alameda	4	0	4
Albany	2	1	3
Atlanta	4	1	5
Beltsville	2	0	2
Boulder	4	0	4
Chicago	2	2	4
Dallas	3	0	3
Des Moines	3	0	3
Jackson	4	0	4
Lawrence	2	0	2
Madison	2	1	3
Minneapolis	2	0	2
Philadelphia	4	0	4
Raleigh	4	0	4
Springdale	3	0	3
TOTAL	45	5	50

USDA Telephone Interview

Good morning/afternoon. Thank you for taking the time to call today. My name is [] and I will be speaking with you today about the types of security practices that you may have noticed at the food processing plants that in your circuit as well as your roles and responsibilities with respect to food security.

Let me tell you a little about the survey. FSIS management has participated in the development of the survey. GAO understands that the FSIS Security Guidelines for Food Processors are voluntary for the industry. Your responses to these questions will in no way be used to assess your performance and your name will not be disclosed. If you have not witnessed or have no knowledge of

Appendix III: FSIS Survey Results

a particular security measure I mention in this survey, it is no problem - simply answer, "I don't know" and we'll move on to the next question. Do you have any questions before we begin?

Since it is important that we follow the format for the rest of our interview, please hold any other questions or comments until the survey is completed.

Note: Some response percentages for survey items do not add up to 100% due to item non-response, where individuals did not respond to an item.

Let's begin the first section of the survey on your food security roles and responsibilities. Have you received any training with regard to the new food security guidelines?	Yes 93.2% (81.8, 98.5%)	No 4.6% (0.6, 15.2%)	Other 2.2% (0.1, 11.5%)
Do you expect to receive any training in the future regarding the new food security guidelines?	67.4% (52.0, 80.5%)	11.1% (3.7, 23.8%)	21.5% (10.8, 36.1%)
In September 2001, all FSIS field personnel were asked to be on heightened alert in identifying and reporting suspicious activities. We are interested in your understanding of what it means to be on heightened alert. As I read the following items, please tell me if they reflect your understanding of being placed on heightened alert or not by responding "Yes" or "No." You may select any of the items from the list that apply.	Yes	No	No answer/ Did not reply
Report suspicious activity to the Technical Center.	86.4% (73.7, 94.4%)	2.0% (0.1, 10.7%)	2.0% (0.1, 10.7%)
Report suspicious activities that you feel have occurred or are in progress to the local law enforcement authorities.	86.6% (74.0, 94.6%)	1.8% (0.1, 10.6%)	0.0% (0.0, 5.8%)
Report suspicious activities to plant management.	78.22% (64.3, 88.6%)	7.95% (2.2, 19.2%)	4.25% (0.6, 14.1%)
Report suspicious activities to your supervisor.	93.5% (82.2, 98.7%)	4.5% (0.6, 15.0%)	2.0% (0.1, 11.5%)
Do you have any other understanding of being placed on heightened alert?	52.6% (41.1, 64.1%)	37.7% (24.4, 52.5%)	0.0% (0.0, 5.8%)
Has your circuit experienced any incidents of possible bio-terrorism that were reported to local authorities?	12.3% (4.5, 25.3%)	87.7% (74.7, 95.5%)	
How many incidents in your circuit were reported to local authorities?	6 circuit supervisors reported 1 incident in their circuit.		
To what extent, if at all, have your responsibilities changed since the issuance of the FSIS Security Guidelines for Food Processors? Have your responsibilities changed to a:	1.9% Very great extent (0.1, 11.5%) 24.3% Great extent (12.9, 39.2%) 40.4% Moderate extent (26.2, 55.9%) 28.8% Some extent (16.4, 44.0%) 4.6% Little extent (0.6, 15.2%) 0.0% Not at all (0.0, 6.3%) 0.0% No basis to judge (0.0, 6.3%)		
Please briefly describe how your responsibilities have changed to a [] extent.			
To what extent do you understand your roles and responsibilities relative to the new food security Guidance? Do you understand your roles and responsibilities to a:	12.5% Very great extent (4.6, 25.6%) 45.2% Great extent (30.5, 60.5%) 26.0% Moderate extent (14.2, 41.1%) 16.3% Some extent (7.1, 30.2%) 0.0% Little extent (0.0, 6.3%) 0.0% Not at all (0.0, 6.3%) 0.0% No basis to judge (0.0, 6.3%)		
Now I have some questions about the plants that are in your circuit.			
About how many plants are in your circuit?	Responses ranged from 7 to 136 (median=30.0)		
About how many of these plants are large, with 500 or more employees?	Responses ranged from 0 to 13 (median=4.0)		
About how many of these plants are small, with between 11 and 499 employees?	Responses ranged from 0 to 95 (median=10.0)		
About how many of these plants are very small, with less than 11 employees?	Responses ranged from 0 to 98 (median=11.0)		
Thank you for the background information. Now, let's begin a discussion of security measures. I will cover ten areas of a plant where security measures are recommended according to the FSIS food security guidelines. Again, we realize that these security measures are voluntary and that you are not required to monitor or enforce them. For each area, I will list several specific security measures suggested in the guidelines. Please tell me whether you	Yes	No	Don't Know/ Cannot Say

Appendix III: FSIS Survey Results

<p>have had the opportunity to notice or otherwise be aware of each security measure based on the plants in your circuit. We are not asking for a comparison of security measures that were in place before and after the events of September 11, 2001. We would like your professional judgment about security measures you know about or have noticed in plants regardless of when they were put in place.</p> <p>Let's start with the area of outside security. Based on your knowledge and observations in the plants in your circuit, have you had the opportunity to notice or otherwise be aware of the following outside security measures?</p>			
Monitoring the integrity of the plant perimeter to prevent unauthorized entry?	95.6% (85.1, 99.5%)	4.4% (0.5, 14.9%)	0.0% (0.0, 6.3%)
Alarmed emergency exits?	88.8% (75.9, 96.1%)	6.9% (1.5, 18.4%)	4.4% (0.5, 14.9%)
Positive identification for entry?	86.9% (74.3, 94.8%)	3.8% (0.4, 13.4%)	0.0% (0.0, 5.8%)
The protection of shipping and receiving areas?	73.6% (58.5, 85.5%)	21.8% (11.0, 36.5%)	4.5% (0.6, 15.1%)
An updated list of plant personnel with open/restricted access maintained at security office?	37.1% (23.3, 52.6%)	33.1% (20.0, 48.5%)	29.8% (17.2, 45.1%)
The inspection of all incoming and outgoing vehicles?	78.5% (63.9, 89.2%)	17.1% (7.6, 31.1%)	4.4% (0.5, 14.9%)
The verification of truck deliveries?	76.7% (61.9, 87.9%)	10.3% (3.3, 22.9%)	13.0% (4.9, 26.2%)
Monitoring of hazardous materials or water supply storage tanks?	57.5% (42.1, 72.0%)	17.7% (8.0, 31.7%)	24.8% (13.3, 39.8%)
Do you know of any other outside security measures in the plants in your circuit?	43.4% (34.2, 52.5%)	46.8% (37.1, 56.6%)	0.0% (0.0, 5.8%)
In general, how many of the LARGE plants in your circuit would you say have implemented these outside security measures?	63.3% All of them (47.8, 77.0%) 13.7% Almost all of them (5.4, 27.1%) 7.7% Some of them (1.9, 19.5%) 4.2% Few of them (0.5, 14.6%) 0.0% None of them (0.0, 6.3%) 0.0% Don't know/ Cannot say (0.0, 6.3%) 11.1% Does not apply (3.7, 23.8%)		
In general, how many of the SMALL plants have implemented these outside security measures?	9.1% All of them (2.6, 21.3%) 11.6% Almost all of them (4.0, 24.4%) 21.6% Some of them (10.8, 36.2%) 49.5% Few of them (36.5, 62.4%) 4.2% None of them (0.5, 14.6%) 0.0% Don't know/ Cannot say (0.0, 6.3%) 4.2% Does not apply (0.5, 14.6%)		
In general, how many of the VERY SMALL plants have implemented these outside security measures?	4.4% All of them (0.5, 14.9%) 0.0% Almost all of them (0.0, 6.3%) 4.2% Some of them (0.5, 14.6%) 25.8% Few of them (14.1, 40.9%) 50.7% None of them (39.0, 62.4%) 0.0% Don't know/ Cannot say (0.0, 6.3%) 14.9% Does not apply (6.1, 28.5%)		
In general, for the plants you are aware of that have implemented these outside security measures, what size plants are they? Are they: (check all that apply)	76.2% Large plants (500 or more employees) (62.0, 87.1%) 33.5% Small plants (11 - 499 employees) (20.8, 48.3%) 9.9% Very small plants (< 11 employees) (3.3, 21.7%) 0.0% Don't know/ Cannot say (0.0, 5.8%) 0.0% Does not apply (0.0, 5.8%)		
Moving to the area of shipping and handling security. Based on your knowledge and observations in the plants in your circuit, have you had the opportunity to notice or otherwise be aware of the following Shipping and Handling Security measures?			<i>Don't Know/ Cannot Say</i>
Tamper proof packaging?	Yes 52.8% (37.5, 67.7%)	No 30.1% (17.5, 45.4%)	17.1% (7.6, 31.1%)

Appendix III: FSIS Survey Results

Inspection of suspicious shipping documents?	39.3% (25.8, 54.1%)	23.7% (12.8, 37.8%)	27.5% (15.8, 41.9%)
Special arrangements for off-hour deliveries?	38.8% (24.8, 54.3%)	32.4% (19.3, 47.8%)	28.8% (16.4, 44.0%)
Inspection of incoming shipments for tampering?	67.7% (52.3, 80.7%)	14.8% (6.1, 28.3%)	17.6% (7.9, 31.6%)
Advance notification from suppliers for incoming deliveries?	38.1% (24.2, 53.6%)	16.5% (7.2, 30.4%)	45.5% (30.7, 60.8%)
Do you know of any other shipping and handling security measures in the plants in your circuit?	19.6% (9.4, 34.0%)	80.4% (66.0, 90.6%)	0.0% (0.0, 6.3%)
In general, how many of the LARGE plants in your circuit would you say have implemented these shipping and handling security measures?	47.8% All of them (32.8, 63.0%) 26.7% Almost all of them (14.7, 41.8%) 6.0% Some of them (1.1, 17.1%) 2.0% Few of them (0.1, 11.5%) 0.0% None of them (0.0, 6.3%) 6.5% Don't know/ Cannot say (1.4, 17.9%) 11.1% Does not apply (3.7, 23.8%)		
In general, how many of the SMALL plants have implemented these shipping and handling security measures?	9.3% All of them (2.8, 21.6%) 8.5% Almost all of them (2.3, 20.5%) 22.6% Some of them (11.6, 37.3%) 36.2% Few of them (22.6, 51.7%) 8.5% None of them (2.3, 20.6%) 10.7% Don't know/ Cannot say (3.5, 23.4%) 4.2% Does not apply (0.5, 14.6%)		
In general, how many of the VERY SMALL plants have implemented these shipping and handling security measures?	8.8% All of them (2.5, 20.9%) 4.2% Almost all of them (0.5, 14.6%) 4.9% Some of them (0.7, 15.6%) 28.6% Few of them (16.3, 43.9%) 28.1% None of them (15.9, 43.3%) 10.9% Don't know/ Cannot say (3.6, 23.6%) 14.5% Does not apply (5.9, 28.0%)		
In general, for the plants you are aware of that have implemented these shipping and handling security measures, what size plants are they? Are they: (check all that apply)	76.2% Large plants (500 or more employees) (62.0, 87.1%) 33.3% Small plants (11 - 499 employees) (20.6, 48.0%) 22.4% Very small plants (< 11 employees) (11.9, 36.4%) 8.0% Don't know/ Cannot say (2.3, 19.3%) 2.0% Does not apply (0.1, 10.7%)		
Now, I'd like for you to think about measures used to address inside security. Based on your knowledge and observations in the plants in your circuit, have you had the opportunity to notice or otherwise be aware of the following Inside Security measures?	<i>Yes</i>	<i>No</i>	<i>Don't Know/ Cannot Say</i>
Clearly marked and secured restricted areas within the establishment?	69.3% (54.0, 82.0%)	26.2% (14.3, 41.2%)	4.5% (0.6, 15.1%)
Controlled access to centralized airflow, water systems, electricity and gas?	47.4% (32.5, 62.6%)	35.1% (21.6, 50.6%)	17.5% (7.9, 31.5%)
Airflow systems with provisions for the isolation of contaminated areas?	23.7% (12.4, 38.5%)	37.0% (23.2, 52.5%)	39.3% (25.3, 54.8%)
An updated plant layout scheme?	80.1% (65.8, 90.4%)	15.3% (6.4, 28.9%)	4.6% (0.6, 15.2%)
Controlled access to in-plant ice-making equipment?	28.1% (16.3, 42.6%)	48.0% (36.5, 59.4%)	14.6% (6.3, 27.5%)
Procedures for the regular inspection of water lines used in food processing areas?	43.2% (28.7, 58.6%)	39.6% (25.5, 55.1%)	17.2% (7.7, 31.2%)
Controlled access to production or laboratory areas?	80.2% (65.8, 90.5%)	17.6% (8.0, 31.7%)	2.2% (0.1, 11.5%)
Do you know of any other inside security measures in the plants in your circuit?	30.3% (17.6, 45.6%)	69.7% (54.4, 82.4%)	0.0% (0.0, 6.3%)

Appendix III: FSIS Survey Results

In general, how many of the LARGE plants in your circuit would you say have implemented these inside security measures?	47.9% All of them (32.9, 63.1%) 18.0% Almost all of them (8.2, 32.1%) 12.6% Some of them (4.6, 25.7%) 6.4% Few of them (1.3, 17.7%) 4.2% None of them (0.5, 14.6%) 0.0% Don't know/ Cannot say (0.0, 6.3%) 11.1% Does not apply (3.7, 23.8%)		
In general, how many of the SMALL plants have implemented these inside security measures?	7.1% All of them (1.6, 18.7%) 2.0% Almost all of them (0.1, 11.5%) 19.4% Some of them (9.2, 33.7%) 48.2% Few of them (36.6, 59.8%) 15.1% None of them (6.2, 28.7%) 0.0% Don't know/ Cannot say (0.0, 6.3%) 8.2% Does not apply (2.2, 20.2%)		
In general, how many of the VERY SMALL plants have implemented these inside security measures?	6.1% All of them (1.3, 16.7%) 0.0% Almost all of them (0.0, 5.8%) 5.7% Some of them (1.1, 16.1%) 29.4% Few of them (17.3, 43.9%) 36.0% None of them (22.9, 50.8%) 0.0% Don't know/ Cannot say (0.0, 5.8%) 13.5% Does not apply (5.5, 26.1%)		
In general, for the plants you are aware of that have implemented these inside security measures, what size plants are they? Are they: (check all that apply)	76.2% Large plants (500 or more employees) (62.0, 87.1%) 31.2% Small plants (11 - 499 employees) (18.9, 45.9%) 16.4% Very small plants (< 11 employees) (7.5, 29.6%) 2.0% Don't know/ Cannot say (0.1, 10.7%) 2.0% Does not apply (0.1, 10.7%)		
Let's talk a little about security measures used to protect storage facilities. Based on your knowledge and observations in the plants in your circuit, have you had the opportunity to notice or otherwise be aware of the following Storage Security measures?	Yes	No	Don't Know/ Cannot Say
Controlled access for all product and ingredient storage areas?	68.6% (53.3, 81.5%)	28.8% (16.4, 44.0%)	2.5% (0.1, 12.1%)
Regularly scheduled security inspections?	31.8% (18.9, 47.2%)	42.0% (27.6, 57.5%)	26.2% (14.3, 41.2%)
Daily inventories of hazardous chemicals?	35.0% (21.5, 50.5%)	27.5% (15.4, 42.6%)	37.5% (23.7, 53.0%)
Secured facilities for hazardous chemicals?	81.2% (67.0, 91.2%)	12.5% (4.6, 25.6%)	6.3% (1.3, 17.6%)
Do you know of any other security measures used to protect storage facilities in the plants in your circuit?	14.2% (5.9, 26.9%)	76.3% (62.1, 87.2%)	0.0% (0.0, 5.8%)
In general, how many of the LARGE plants in your circuit would you say have implemented these storage security measures?	54.4% All of them (43.0, 65.9%) 18.0% Almost all of them (8.6, 31.5%) 3.9% Some of them (0.4, 13.5%) 0.0% Few of them (0.0, 5.8%) 3.9% None of them (0.4, 13.5%) 0.0% Don't know/ Cannot say (0.0, 5.8%) 10.2% Does not apply (3.5, 22.1%)		
In general, how many of the SMALL plants have implemented these storage security measures?	11.2% All of them (3.8, 24.0%) 12.6% Almost all of them (4.7, 25.7%) 22.4% Some of them (11.4, 37.1%) 32.3% Few of them (19.2, 47.7%) 15.2% None of them (6.3, 28.8%) 2.2% Don't know/ Cannot say (0.1, 11.5%) 4.2% Does not apply (0.5, 14.6%)		
In general, how many of the VERY SMALL plants have implemented these storage security measures?	8.5% All of them (2.3, 20.5%) 1.9% Almost all of them (0.1, 11.5%) 11.1% Some of them (3.7, 23.8%) 33.4% Few of them (20.2, 48.8%) 30.6% None of them (17.9, 45.9%) 2.0% Don't know/ Cannot say (0.1, 11.5%) 12.5% Does not apply (4.6, 25.6%)		

Appendix III: FSIS Survey Results

In general, for the plants you are aware of that have implemented these storage security measures, what size plants are they? Are they: (check all that apply)	76.2% Large plants (500 or more employees) (62.0, 87.1%) 28.2% Small plants (11 - 499 employees) (16.4, 42.7%) 17.8% Very small plants (< 11 employees) (8.5, 31.3%) 4.0% Don't know/ Cannot say (0.5, 13.8%) 2.0% Does not apply (0.1, 10.7%)		
Now, please think about security measures used with regard to mail handling. Based on your knowledge and observations in the plants in your circuit, have you had the opportunity to notice or otherwise be aware of the following Mail Handling Security measures?	<i>Yes</i>	<i>No</i>	<i>Don't Know/ Cannot Say</i>
Locating mail handling in a facility that is separate from the food production operation?	65.5% (50.0, 78.9%)	17.7% (8.1, 31.8%)	16.8% (7.4, 30.7%)
Training mail handlers in the recognition of suspicious mail?	20.6% (10.5, 34.4%)	23.9% (13.0, 38.1%)	45.9% (34.7, 57.2%)
Do you know of any other security measures used with regard to mail handling in the plants in your circuit?	16.0% (6.9, 29.8%)	79.7% (65.2, 90.1%)	4.4% (0.5, 14.9%)
In general, how many of the LARGE plants in your circuit would you say have implemented these mail handling security measures?	30.7% All of them (17.9, 46.0%) 4.2% Almost all of them (0.5, 14.6%) 15.7% Some of them (6.7, 29.5%) 12.9% Few of them (4.8, 26.1%) 6.3% None of them (1.3, 17.6%) 8.4% Don't know/ Cannot say (2.2, 20.4%) 21.8% Does not apply (11.0, 36.5%)		
In general, how many of the SMALL plants have implemented these mail handling security measures?	8.0% All of them (2.3, 19.3%) 7.3% Almost all of them (1.9, 18.3%) 10.2% Some of them (3.4, 22.1%) 14.4% Few of them (6.1, 27.2%) 24.6% None of them (13.5, 38.8%) 10.1% Don't know/ Cannot say (3.4, 21.9%) 15.7% Does not apply (6.9, 28.7%)		
In general, how many of the VERY SMALL plants have implemented these mail handling security measures?	5.9% All of them (1.2, 16.4%) 5.6% Almost all of them (1.1, 16.0%) 6.0% Some of them (1.3, 16.6%) 8.0% Few of them (2.3, 19.3%) 35.3% None of them (22.4, 50.1%) 6.0% Don't know/ Cannot say (1.2, 16.5%) 21.3% Does not apply (11.0, 35.2%)		
In general, for the plants you are aware of that have implemented these mail handling security measures, what size plants are they? Are they: (check all that apply)	58.7% Large plants (500 or more employees) (48.5, 68.8%) 21.5% Small plants (11 - 499 employees) (11.1, 35.4%) 19.5% Very small plants (< 11 employees) (9.7, 33.2%) 21.8% Don't know/ Cannot say (11.4, 35.7%) 8.0% Does not apply (2.2, 19.2%)		
Now, let's deal with the area of computer systems security. Based on your knowledge and observations in the plants in your circuit, have you had the opportunity to notice or otherwise be aware of the following Computer Systems Security measures?	<i>Yes</i>	<i>No</i>	<i>Don't Know/ Cannot Say</i>
Computer systems security, like the use of network firewalls and virus detection systems, etc.?	35.6% (22.1, 51.1%)	19.1% (9.0, 33.4%)	45.2% (30.5, 60.6%)
Do you know of any other security measures used to protect computer systems in the plants in your circuit?	30.4% (17.7, 45.8%)	45.5% (30.7, 60.8%)	24.1% (12.7, 39.0%)
In general, how many of the LARGE plants in your circuit would you say have implemented these computer systems security measures?	15.1% All of them (6.3, 28.8%) 13.8% Almost all of them (5.4, 27.2%) 7.0% Some of them (1.6, 18.5%) 2.0% Few of them (0.1, 11.5%) 10.8% None of them (3.6, 23.5%) 30.2% Don't know/ Cannot say (17.6, 45.5%) 21.1% Does not apply (10.5, 35.7%)		

Appendix III: FSIS Survey Results

In general, how many of the SMALL plants have implemented these computer system security measures?	8.4% All of them (2.4, 19.7%) 6.4% Almost all of them (1.4, 17.1%) 3.9% Some of them (0.4, 13.5%) 1.8% Few of them (0.1, 10.6%) 18.3% None of them (8.8, 31.7%) 36.4% Don't know/ Cannot say (23.2, 51.2%) 15.3% Does not apply (6.7, 28.3%)		
In general, how many of the VERY SMALL plants have implemented these computer system security measures?	6.0% All of them (1.3, 16.6%) 2.4% Almost all of them (0.1, 11.2%) 0.0% Some of them (0.0, 5.8%) 2.2% Few of them (0.1, 11.0%) 24.2% None of them (13.2, 38.4%) 28.5% Don't know/ Cannot say (16.7, 43.0%) 27.3% Does not apply (15.6, 41.7%)		
In general, for the plants you are aware of that have implemented these computer system security measures, what size plants are they? Are they: (check all that apply)	36.9% Large plants (500 or more employees) (23.7, 51.7%) 11.0% Small plants (11 - 499 employees) (3.9, 23.0%) 8.4% Very small plants (< 11 employees) (2.4, 19.7%) 34.1% Don't know/ Cannot say (21.3, 48.9%) 19.4% Does not apply (9.6, 33.1%)		
Now, think about any measures used to secure slaughter and processing facilities. Based on your knowledge and observations in the plants in your circuit, have you had the opportunity to notice or otherwise be aware of the following Slaughter and Processing Security measures?	<i>Yes</i>	<i>No</i>	<i>Don't Know/ Cannot Say</i>
The monitoring of production equipment?	71.3% (56.1, 83.7%)	18.0% (8.3, 32.2%)	10.6% (3.5, 23.3%)
Trace-back and trace-forward tracking of raw materials?	96.2% (85.9, 99.6%)	0.0% (0.0, 6.3%)	3.8% (0.4, 14.1%)
The timely segregation of all products in case of deliberate contamination?	76.4% (61.6, 87.7%)	8.2% (2.2, 20.2%)	15.3% (6.4, 29.0%)
The comparison of the projected and actual use of restricted ingredients?	74.1% (59.8, 85.5%)	4.5% (0.7, 14.5%)	11.8% (4.4, 24.0%)
Verification of the integrity of packing materials before use?	87.0% (73.8, 95.1%)	2.4% (0.1, 11.8%)	10.6% (3.5, 23.2%)
Accurate inventory of finished products?	88.7% (75.9, 96.1%)	2.2% (0.1, 11.5%)	9.1% (2.7, 21.4%)
Do you know of any other measures used to secure slaughter and processing facilities in the plants in your circuit?	14.2% (5.7, 27.7%)	85.8% (72.3, 94.3%)	0.0% (0.0, 6.3%)
In general, how many of the LARGE plants in your circuit would you say have implemented these slaughter and processing security measures?	73.7% All of them (58.7, 85.6%) 4.7% Almost all of them (0.7, 15.4%) 6.5% Some of them (1.4, 17.9%) 0.0% Few of them (0.0, 6.3%) 3.9% None of them (0.4, 14.2%) 0.0% Don't know/ Cannot say (0.0, 6.3%) 11.1% Does not apply (3.7, 23.8%)		
In general, how many of the SMALL plants have implemented these slaughter and processing security measures?	46.1% All of them (31.3, 61.4%) 6.9% Almost all of them (1.5, 18.4%) 19.5% Some of them (9.3, 33.8%) 17.0% Few of them (7.6, 31.0%) 4.1% None of them (0.5, 14.5%) 0.0% Don't know/ Cannot say (0.0, 6.3%) 6.4% Does not apply (1.3, 17.7%)		
In general, how many of the VERY SMALL plants have implemented these slaughter and processing security measures?	32.9% All of them (19.8, 48.3%) 8.9% Almost all of them (2.5, 21.0%) 17.8% Some of them (8.1, 31.9%) 17.4% Few of them (7.9, 31.5%) 8.3% None of them (2.2, 20.3%) 0.0% Don't know/ Cannot say (0.0, 6.3%) 14.7% Does not apply (6.0, 28.2%)		

Appendix III: FSIS Survey Results

In general, for the plants you are aware of that have implemented these outside security measures, what size plants are they? Are they: (check all that apply)	80.4% Large plants (500 or more employees) (66.7, 90.2%) 52.8% Small plants (11 - 499 employees) (41.4, 64.3%) 49.3% Very small plants (< 11 employees) (37.7, 61.0%) 0.0% Don't know/ Cannot say (0.0, 5.8%) 0.0% Does not apply (0.0, 5.8%)		
Please take a moment to think about the area of personnel security. Based on your knowledge and observations in the plants in your circuit, have you had the opportunity to notice or otherwise be aware of the following Personnel Security measures?	<i>Yes</i>	<i>No</i>	<i>Don't Know/ Cannot Say</i>
A system of positive identification of all personnel?	93.8% (82.5, 98.8%)	4.1% (0.4, 14.4%)	2.2% (0.1, 11.5%)
Procedures for controlled entry during working and non-working hours?	97.8% (88.5, 99.9%)	0.0% (0.0, 6.3%)	2.2% (0.1, 11.5%)
Background checks?	25.5% (13.8, 40.5%)	10.6% (3.5, 23.2%)	63.9% (48.4, 77.5%)
Regularly provided orientations on security procedures?	47.4% (32.5, 62.7%)	11.0% (3.7, 23.8%)	41.5% (27.2, 57.0%)
Established procedures for allowing personal items in production areas?	78.4% (63.8, 89.1%)	12.8% (4.8, 25.9%)	8.8% (2.5, 21.0%)
Do you know of any other measures used in personnel security in the plants in your circuit?	18.7% (9.1, 32.2%)	71.5% (57.0, 83.4%)	0.0% (0.0, 5.8%)
In general, how many of the LARGE plants in your circuit would you say have implemented these personnel security measures?	60.2% All of them (44.7, 74.3%) 18.0% Almost all of them (8.2, 32.1%) 6.6% Some of them (1.4, 18.0%) 2.0% Few of them (0.1, 11.5%) 2.2% None of them (0.1, 11.5%) 0.0% Don't know/ Cannot say (0.0, 6.3%) 11.1% Does not apply (3.7, 23.8%)		
In general, how many of the SMALL plants have implemented these personnel security measures?	25.9% All of them (14.1, 40.9%) 11.5% Almost all of them (4.0, 24.3%) 32.5% Some of them (19.5, 47.9%) 17.6% Few of them (8.0, 31.7%) 8.3% None of them (2.2, 20.3%) 0.0% Don't know/ Cannot say (0.0, 6.3%) 4.2% Does not apply (0.5, 14.6%)		
In general, how many of the VERY SMALL plants have implemented these personnel security measures?	21.6% All of them (10.9, 36.2%) 10.7% Almost all of them (3.5, 23.4%) 8.6% Some of them (2.4, 20.7%) 16.2% Few of them (7.0, 30.0%) 27.9% None of them (15.7, 43.1%) 2.5% Don't know/ Cannot say (0.1, 12.1%) 12.5% Does not apply (4.6, 25.6%)		
In general, for the plants you are aware of that have implemented these personnel security measures, what size plants are they? Are they: (check all that apply)	76.2% Large plants (500 or more employees) (62.0, 87.1%) 42.8% Small plants (11 - 499 employees) (32.3, 53.2%) 40.6% Very small plants (< 11 employees) (29.6, 51.6%) 0.0% Don't know/ Cannot say (0.0, 5.8%) 2.0% Does not apply (0.1, 10.7%)		
Now I'd like to ask some questions about the section of the guidance related to in-house plant laboratories.	<i>Yes</i>	<i>No</i>	<i>Don't Know/ Cannot Say</i>
First, are there any plants in your circuit with an in-house laboratory? An in-house laboratory may be used for water or bacterial testing, for instance.	88.4% (76.2, 95.7%)	0.0% (0.0, 5.8%)	
Based on your knowledge and observations in the plants with labs in your circuit, have you had the opportunity to notice or otherwise be aware of the following In-house Laboratory Security measures?			
Controlled entry to in-house labs by lab personnel only?	69.7% (54.4, 82.3%)	15.4% (6.5, 29.1%)	14.9% (6.1, 28.5%)
Inventory control of pathogens?	8.2% (2.2, 20.2%)	10.7% (3.5, 23.3%)	81.1% (66.8, 91.1%)
Equipment to destroy pathogens after testing?	42.4% (28.0, 57.9%)	8.0% (2.0, 19.8%)	49.6% (37.2, 62.0%)
The maintenance of records of destroyed pathogens?	11.1% (3.7, 23.8%)	12.6% (4.6, 25.6%)	76.4% (61.6, 87.6%)

Appendix III: FSIS Survey Results

The controlled transport of pathogens to restricted areas only?	8.5% (2.3, 20.6%)	10.3% (3.3, 22.9%)	81.2% (66.9, 91.2%)
Do you know of any other in-house plant laboratory security measures in your circuit?	10.4% (3.6, 22.3%)	73.8% (59.4, 85.2%)	4.0% (0.5, 13.8%)
In general, how many of the LARGE plants with labs in your circuit would you say have implemented these in-house laboratory security measures?	48.4% All of them (37.4, 59.4%) 10.8% Almost all of them (3.6, 23.5%) 6.5% Some of them (1.4, 17.9%) 8.2% Few of them (2.1, 20.1%) 0.0% None of them (0.0, 6.3%) 12.8% Don't know/ Cannot say (4.8, 25.9%) 13.2% Does not apply (5.1, 26.5%)		
In general, how many of the SMALL plants with labs have implemented these in-house laboratory security measures?	15.4% All of them (6.5, 29.1%) 0.0% Almost all of them (0.0, 6.3%) 4.1% Some of them (0.4, 14.4%) 13.5% Few of them (5.2, 26.8%) 17.3% None of them (7.7, 31.3%) 10.4% Don't know/ Cannot say (3.4, 23.0%) 39.3% Does not apply (25.3, 54.8%)		
In general, how many of the VERY SMALL plants with labs have implemented these in-house laboratory security measures?	0.0% All of them (0.0, 5.8%) 2.0% Almost all of them (0.1, 10.7%) 0.0% Some of them (0.0, 5.8%) 0.0% Few of them (0.0, 5.8%) 27.9% None of them (16.2, 42.4%) 4.0% Don't know/ Cannot say (0.5, 13.8%) 56.7% Does not apply (44.8, 68.7%)		
In general, for the plants you are aware of that have implemented these in-house laboratory security measures, what size plants are they? Are they: (check all that apply)	68.4% Large plants (500 or more employees) (53.7, 80.8%) 20.5% Small plants (11 - 499 employees) (10.4, 34.3%) 2.0% Very small plants (< 11 employees) (0.1, 10.7%) 13.8% Don't know/ Cannot say (5.7, 26.5%) 2.0% Does not apply (0.1, 10.7%)		
Finally, think about measures used to address the overall management of security in plants. Based on your knowledge and observations in the plants in your circuit, have you had the opportunity to notice or otherwise be aware of the following measures addressing the Overall Management of Security?	<i>Yes</i>	<i>No</i>	<i>Don't Know/ Cannot Say</i>
An active food security team or food security coordinator?	46.2% (31.4, 61.5%)	31.2% (18.4, 46.6%)	22.6% (11.6, 37.3%)
The establishment and review of food security plan procedures for notifying law enforcement or public health officials when appropriate?	41.7% (27.3, 57.2%)	21.4% (10.7, 36.0%)	36.9% (23.2, 52.4%)
Management support for employees to monitor and report unusual events?	63.0% (47.5, 76.8%)	8.6% (2.4, 20.7%)	28.4% (16.1, 43.6%)
Do you know of any other measures used to address the overall management of security in the plants in your circuit?	6.7% (1.5, 18.2%)	91.1% (79.0, 97.5%)	2.2% (0.1, 11.5%)
In general, how many of the LARGE plants in your circuit would you say have implemented measures addressing the overall management of security?	36.6% All of them (22.9, 52.1%) 15.1% Almost all of them (6.2, 28.7%) 11.7% Some of them (4.1, 24.6%) 2.0% Few of them (0.1, 11.5%) 6.5% None of them (1.3, 17.8%) 14.8% Don't know/ Cannot say (6.0, 28.3%) 13.4% Does not apply (5.2, 26.7%)		
In general, how many of the SMALL plants have implemented measures addressing the overall management of security?	11.5% All of them (4.0, 24.3%) 8.5% Almost all of them (2.3, 20.6%) 14.7% Some of them (6.0, 28.3%) 20.2% Few of them (9.8, 34.6%) 17.3% None of them (7.7, 31.3%) 17.0% Don't know/ Cannot say (7.5, 30.9%) 10.9% Does not apply (3.6, 23.6%)		

Appendix III: FSIS Survey Results

<p>In general, how many of the VERY SMALL plants have implemented measures addressing the overall management of security?</p>	<p>6.6% All of them (1.4, 18.0%) 6.4% Almost all of them (1.3, 17.7%) 0.0% Some of them (0.0, 6.3%) 12.4% Few of them (4.6, 25.5%) 36.1% None of them (22.5, 51.6%) 19.3% Don't know/ Cannot say (9.2, 33.6%) 19.2% Does not apply (9.1, 33.5%)</p>		
<p>In general, for the plants you are aware of that have implemented measures addressing the overall management of security, what size plants are they? Are they: (check all that apply)</p>	<p>60.4% Large plants (500 or more employees) (45.6, 73.9%) 20.9% Small plants (11 - 499 employees) (10.7, 34.7%) 9.9% Very small plants (< 11 employees) (3.3, 21.7%) 15.7% Don't know/ Cannot say (6.9, 28.7%) 8.2% Does not apply (2.3, 19.5%)</p>		
<p>Keeping in mind the food security measures you have just indicated in your answers on the survey and that you are not responsible for enforcing them: In your opinion, how confident are you in the efforts of these plants to ensure the protection of food processed from acts of deliberate contamination?</p>	<p>11.0% Very confident (3.7, 23.7%) 36.6% Somewhat confident (22.9, 52.0%) 16.1% Neither confident or not confident (6.9, 29.9%) 26.2% Not very confident (14.3, 41.2%) 10.2% Not at all confident (3.3, 22.8%) 0.0% Don't know/ Cannot say (0.0, 6.3%)</p>		
<p>In your opinion, do you feel that field inspectors should monitor the food security measures proposed in the FSIS Security Guidelines to Food Processors?</p>	<p align="center"><i>Yes</i></p> <p align="center">64.7% (49.3, 78.2%)</p>	<p align="center"><i>No</i></p> <p align="center">32.8% (19.7, 48.3%)</p>	<p align="center"><i>Don't Know/ Cannot Say</i></p> <p align="center">2.4% (0.1, 11.9%)</p>

Appendix IV: Comments from the U.S. Department of Agriculture



United States
Department of
Agriculture

Food Safety
and Inspection
Service

Washington, D.C.
20250

JAN 24 2004

Mr. Lawrence J. Dyckman
Director, Natural Resources and Environment Team
Food and Agriculture Issues
United States General Accounting Office
441 G Street, NW, Room 2T23
Washington, DC 20548

Dear Mr. Dyckman:

Thank you for the opportunity to review and comment on the GAO Draft Report (GAO-03-342), "FOOD SECURITY: Voluntary Efforts Are Underway, but Federal Agencies Cannot Fully Assess Their Implementation" draft report. We generally agree with the contents of this report. However, please consider the following comment.

On page 22 GAO concluded that the "...federal agencies cannot fully assess the vulnerability of the nation's food supply, or advise processors on needed security enhancements. Restate sentence to read: "...federal agencies may have a difficult time assessing the vulnerability of the nation's food supply..."

FSIS, as acknowledged on page 7 of the report, has completed a risk assessment of the food supply from farm to table. However, FSIS did not require information on the plant security measures to conduct its risk assessment. FSIS made the assumption that plant security measures could be overcome by a determined terrorist and that certain commodities or processes could be more at risk than others to an attack. Security measures could lessen the risk, but the risk would still exist. The risk assessment evaluated which agents could be used on the food supply, which agents are easy to obtain or produce, and assessed whether the food-processing product had any mitigation factors that would prevent or lessen an intentional attack. These assumptions were then used to develop a risk model. Knowing whether a plant employed one or several security measures was not needed to assess the risk.

We have enclosed a few editorial comments for your consideration.

Sincerely,

Garry L. McKee, Ph.D., M.P.H.
Administrator

Enclosure

Appendix V: Comments from the Food and Drug Administration



DEPARTMENT OF HEALTH & HUMAN SERVICES

Food and Drug Administration
Rockville MD 20857

January 22, 2003

Mr. Lawrence J. Dyckman
Director, Natural Resources and Environment
United States General Accounting Office
441 G Street, NW
Washington, DC 20548

Dear Mr. Dyckman:

Please find the enclosed comments from the Food and Drug Administration on the GAO draft report entitled, FOOD SECURITY: Voluntary Efforts Are Underway, but Federal Agencies Cannot Fully Assess Their Implementation (GAO-03-342). The Agency provided extensive technical comments directly to your staff.

We appreciate the opportunity to review and comment on this draft report before its publication as well as the opportunity to work with your staff in developing this report.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark B. McClellan".

Mark B. McClellan, M.D., Ph.D.
Commissioner of Food and Drugs

Enclosure

General Comments by the Department of Health and Human Service's Food and Drug Administration (FDA) on General Accounting Office's (GAO) Draft Report, *FOOD SECURITY: Voluntary Efforts Are Underway, but Federal Agencies Cannot Fully Assess Their Implementation (GAO-03-342)*

FDA appreciates the opportunity to comment on GAO's draft report. The report is factual and describes accurately the events and actions taken by FDA related to food security as well as the sensitive nature of the information related to security measures taken by the food-processing industry.

GAO also accurately acknowledges efforts taken by FDA and other government agencies to enhance safety and security of regulated products. These efforts, in conjunction with the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, are primarily directed toward imported products.

The draft report discusses the different views between USDA and FDA on its authorities to address security concerns. In point of fact, our positions are very similar and any slight difference is more an issue of semantics rather than of substance.

FDA would like to stress that the goal of its voluntary guidance to industry on security is not only to facilitate an exchange of information between FDA and industry on the subject of food security but also to heighten awareness of their food security practices. FDA does not possess sufficient resources in security expertise per se to provide consultation to the industry in this area. However, if we heighten awareness of security issues, the industry can consult with security experts to review their facility and adopt appropriate procedures. The role of the FDA investigator is first and foremost food safety and, as an ancillary role, to observe food security measures as they relate to the food safety investigation. FDA is only obliged to observe and comment when certain measures are not easily visible and do not link up and when they coincide with the primary purpose of the investigation.

In addition, FDA agrees with GAO that Hazards Analysis Critical Control Points (HACCP) and other preventive controls are appropriate measures to reduce and or eliminate food safety contamination but do not believe HACCP affords similar advantages to deliberate contamination, tampering and or terrorist actions to the food supply. Accordingly, and in cooperation with the U.S. Air Force, FDA employed the Operational Risk Management approach to identify and minimize food security risks.

GAO's Recommendations for Executive Action

1. In order to reduce the risk of deliberate contamination of food products, we are recommending that the Secretary of Health and Human Services and the Secretary of the Agriculture study their existing statutes and identify what additional authorities they may need relating to security measures at food-processing facilities. Based on the results of the study, the agencies should seek additional authority from the Congress, as needed.

FDA response:

FDA believes that its authorities under the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act would extend to the regulation of facility security measures to prevent the intentional contamination of food products to the extent they overlap with food safety.

As we have previously reported, the General Counsel in the Department of Health and Human Service's Office of the Assistant Secretary for Legislation advised that FDA's authorities under the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act provide FDA with tools to adopt measures to control insanitary preparation, packing, and holding conditions that may lead to unsafe food, detect contamination of food, and control contaminated food. However, HHS counsel also advised that FDA's food safety authorities do not extend to the regulation of physical facility security measures to prevent intentional contamination of food products. FDA counsel believes that to the extent that food safety and security overlap, FDA might be able to require industry to take steps to improve security depending on the particular measure at issue, but observed that there is likely to be little overlap between safety and security in various areas, e.g., background checks of employees.

2. To increase field inspectors' knowledge and understanding of food security issues and facilitate their discussions about the voluntary security guidelines with plant personnel, we are also recommending that the Secretary of the Department of Health and Human Services and the Secretary of Agriculture provide training for the agency's field staff on the security measures discussed in the voluntary guidelines.

FDA response:

FDA plans to conduct "formal" training on the guidance to industry on food security in addition to the formal instructions previously provided to FDA field staff on the guidance. We agree that the training FDA delivers to field staff will:

- Discuss the content of the guidance and how food security activities are integrated into a food safety inspection;
- Address food security as it relates to the guidance to industry as an ancillary function of a food safety inspection and/or investigation;
- Encourage inspectors not to delve beyond those facility operations that are directly a part of a food safety investigation; and
- Not be considered to confer expert credentials for security upon FDA investigators but simply improve their abilities to heighten awareness of facility management on food security at the time of the food safety investigation.

Appendix VI: GAO Contacts and Staff Acknowledgments

GAO Contacts

Lawrence J. Dyckman, (202) 512-3841
Maria Cristina Gobin, (202) 512-8418

Acknowledgments

In addition to those named above, John Johnson, John Nicholson, Jr., Stuart Ryba, and Margaret Skiba made key contributions to this report. Nancy Crothers, Doreen S. Feldman, Oliver Easterwood, Evan Gilman, and Ronald La Due Lake also made important contributions.

GAO's Mission

The General Accounting Office, the audit, evaluation and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through the Internet. GAO's Web site (www.gao.gov) contains abstracts and full-text files of current reports and testimony and an expanding archive of older products. The Web site features a search engine to help you locate documents using key words and phrases. You can print these documents in their entirety, including charts and other graphics.

Each day, GAO issues a list of newly released reports, testimony, and correspondence. GAO posts this list, known as "Today's Reports," on its Web site daily. The list contains links to the full-text document files. To have GAO e-mail this list to you every afternoon, go to www.gao.gov and select "Subscribe to daily E-mail alert for newly released products" under the GAO Reports heading.

Order by Mail or Phone

The first copy of each printed report is free. Additional copies are \$2 each. A check or money order should be made out to the Superintendent of Documents. GAO also accepts VISA and Mastercard. Orders for 100 or more copies mailed to a single address are discounted 25 percent. Orders should be sent to:

U.S. General Accounting Office
441 G Street NW, Room LM
Washington, D.C. 20548

To order by Phone: Voice: (202) 512-6000
 TDD: (202) 512-2537
 Fax: (202) 512-6061

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: www.gao.gov/fraudnet/fraudnet.htm

E-mail: fraudnet@gao.gov

Automated answering system: (800) 424-5454 or (202) 512-7470

Public Affairs

Jeff Nelligan, managing director, NelliganJ@gao.gov (202) 512-4800
U.S. General Accounting Office, 441 G Street NW, Room 7149
Washington, D.C. 20548