

Homeland Food Security

OBJECTIVES

The objectives for this module are:

1. Identify how FSIS has changed to meet the challenges of food security since “9/11.” Be able to describe changes in the organization. Be familiar with various initiatives: planning, surveillance and monitoring, laboratories, Directives, continuity of operations, education and international areas.
2. Identify key weapons of mass destruction and biological threat agents that could be used to attack the food supply.
3. Identify the food security monitoring and reporting responsibilities of frontline supervisors when there is a Homeland Security threat condition.
4. Define how FSIS is promoting the adoption of preventive strategies for industry and consumers. Be familiar with the types of voluntary guidelines industry and consumers must consider in order to be better prepared to prevent and respond to terrorism.

REFERENCES

1. “Perspectives on Food Security,” FSIS News and Notes, Dr. Elsa Murano, 10/31/2003.
2. Directive 5420.1 - Homeland Security Threat Condition Response – Food Security Monitoring Procedures.
3. Directive 5420.2 - Homeland Security Threat Condition Response: Handling of FSIS Laboratory Samples.
4. Protecting America’s Meat, Poultry and Egg Products: A Report to the Secretary on the Food Security Initiatives of the FSIS, January 31, 2003.
5. Security Guidelines for Food Processors, USDA, FSIS publications.
6. Security Guidelines for the Transportation and Distribution of Meat, Poultry and Egg Products and Consumers, USDA, FSIS publications.

INTRODUCTION

This module will address food security activities in FSIS. First, we’ll cover an overview of what food security means and what activities FSIS has taken to ensure that meat, poultry, and egg products are protected from intentional harm. Then, we’ll talk about your role and inspection activities that are related to food security.

Let’s start by reviewing the mission and vision of FSIS, because it’s this infrastructure that has been called to task to address food terrorism. As you know, FSIS is USDA’s public health regulatory agency that ensures meat, poultry and egg products are safe,

wholesome, and accurately labeled. These products account for one third of consumer spending for food with an annual retail value of \$120 billion.

The FSIS infrastructure is extensive. We have over 7,600 inspectors including approximately 1,100 veterinarians present, at 6,500 slaughter and processing establishments every day; as well as, import stations throughout the nation. We have an enormous responsibility to ensure that we provide the safest food possible for the American public.

Prior to September 11, FSIS was focused on protecting meat, poultry, and egg products from unintentional harm. The events of September 11, 2001, brought the issue of the vulnerability of our food supply to the forefront. We must accept the fact that an attack on our food supply is plausible. This meant that FSIS had to add functions to protect the food supply against intentional harm.

Food security encompasses a broader range of considerations. Dealing with issues involving the possible intentional contamination of food due to a terrorist act requires addressing these factors:

- Physical security of buildings,
- Surveillance and monitoring activities to identify and help prevent intentional acts intended to disrupt the food supply,
- Personnel security, and
- Emergency response.

Senator Bill Frist, the only medical doctor in the Senate, and one of the original sponsors of the Bioterrorism Preparedness Act signed into law in 2002, has indicated that "...as we consider bioterrorism, we are most vulnerable in our food supply." We in FSIS must no longer conduct business as usual, but must consider the unusual everyday, every way.

Overview of Food Security Awareness

Before we cover some specifics about your responsibilities for protecting meat, poultry, and egg products from intentional harm, let's cover some basics of food security awareness. Being aware of what terrorists do, how they do it, when and where they do it can help us be more effective in identifying and preventing their activities.

High density population areas represent tempting terrorist targets. Most lack even rudimentary monitoring capabilities. Some examples include:

- Urban population centers,
- Business centers,
- Transportation nodes,
- Special events (e.g., political conventions, inauguration, Super Bowl, Olympics, etc.), or
- Agrobusiness and national food supply infrastructure.

Terrorists can exploit multiple pathways. They can introduce biological, radiological, chemical, or other types of harmful agents into the population in a variety of ways; including:

- Air dispersion (line and point source),
- Public transportation,
- Water supplies,
- Food distribution systems, and
- Mail distribution systems.

Here are the reasons why the food supply is a plausible and possible target:

- With low security of facilities and personnel, it could be an easy target.
- 100% of our population eats 100% of the time.
- Food terrorism can cause sickness and death.
- Food terrorism can cause disruptions in the food supply without deaths.
- Food terrorism can destroy brand names.
- It can be used for economic gains on the futures markets.
- It may be difficult to distinguish between intentional, deliberate contamination that is designed to harm people; and, the situations which occur unintentionally.

Recent Examples of Attacks on the Food Supply

Recent history has shown that terrorists can, and will, use food as a weapon. Let's trace some of these incidents:

In 1972, members of a U.S. fascist group called Order of the Rising Sun were found in possession of 30-40 kilograms of typhoid bacteria cultures, with which they planned to contaminate water supplies in Chicago, St. Louis, and other Midwestern cities.

In 1984, two members of an Oregon cult headed by Bhagwan Shree Rajneesh cultivated *Salmonella* (food poisoning) bacteria, and used it to contaminate restaurant salad bars in an attempt to affect the outcome of a local election. Although some 751 people became ill, and 45 were hospitalized; there were no fatalities.

In a study by Anne Dawson, Sarah Hassenpflug and James Sloan of the Monterey Institute of International Studies (Monterey California), found that the med fly poses perhaps the single greatest pest-related threat to California's multi-billion dollar agriculture export industry. The pest is responsible for the mass destruction of a wide variety of crops, and continues to plague farmers and growers throughout the world.

In early March 1989 someone created a scare that grapes from Chile imported into the USA would be contaminated with cyanide. On March 11, the United States Food and Drug Administration (FDA) spotted three suspicious-looking grapes on the docks in Philadelphia, in a shipment that had just arrived from Chile. Two of the grapes had puncture marks. They were tested and found to contain low levels of cyanide. The FDA impounded 2 million crates of fruit at ports across the country and warned consumers not to eat any fruit from Chile; which included most of the peaches, blueberries, blackberries, melons, green apples, pears, and plums that were on the market at the time.

In October 1996, Diane Thompson, at the St. Paul Medical Center in Dallas, pleaded guilty to engaging in her own personal act of food-borne terrorism by intentionally contaminating pastries. She had access to the highly toxic bacteria, *Shigella dysenteriae*, stored in the laboratory; and, she sent a bogus E-mail message from her supervisor's computer. Her activities were discovered when she tried to alter hospital records to cover her tracks.

For an individual to successfully tamper with food, they must have the following:

- Have access to the food for a sufficient amount of time to tamper with it;
- Be technically capable of introducing a contaminant;
- Be able to perform the operation without discovery; and
- Be competent enough to avoid detection of the adulterated product down stream in the production's distribution life cycle.

Terrorists often use Weapons of Mass Destruction. These include chemical, biological, radiological agents, and high yield explosives. Some examples of chemical weapons used by terrorists are arsenic, cyanide, and pesticides. Examples of biological weapons that terrorists use include anthrax, botulinum, and toxin. Radiological weapons examples used by terrorists include Cesium-137, Strontium-90, and Cobalt-60. When Weapons of Mass Destruction are used, there are four possible areas of impact. They include harm to the economy, disruption of society, psychological disturbance, and political disturbance.

Types of Agents used by Terrorists

Biological agents:

You should be aware of some of the typical ways in which the biological agents used by terrorists affect the human body. Here are some examples:

Vesicants: Terrorists may use a biological agent that acts as a vesicant; such as, a powder. These agents burn and blister the skin or any other part of the body they contact. They act on the eyes, mucous membranes, lungs, skin and blood-forming organs. They damage the respiratory tract when inhaled and cause vomiting and diarrhea when ingested. Examples of biological agents that have this effect are: *Sulfur mustard* in its pure state is colorless and odorless. It is extremely toxic to the unprotected eyes, skin, and respiratory system. If a victim survives the initial encounter, the mustard continues to destroy the body's immune defenses and can complicate treatment of acquired infection. *Nitrogen mustards* are more toxic than sulfur mustards and are easily manufactured. Lewisite placed on the skin causes immediate burning sensation, and its odor is readily apparent. Severe damage to the eyes occurs almost immediately after exposure. Lewisite vapors irritate the mucosa of the nasal and upper respiratory system. Lewisite is absorbed into the body, and distributed as a systemic poison to various organs.

Blood: Biological agents also affect the blood. A typical effect of a biological agent is that they prevent blood from carrying O₂ effectively. For example, *arsenic* can be reacted with zinc and sulfuric acid to form arsine, which is a

colorless gas with an unpleasant odor similar to garlic. Arsine is a blood agent but it is referred to as a nerve poisoning due to its secondary effects. Arsine causes the destruction of red blood cells and subsequently the tissues of the kidney, liver, and spleen. Arsine is used today for industrial processing of gallium arsenide chips in the semiconductor industry.

Choking/Pulmonary: These type of biological agents cause choking and affect the pulmonary system in humans; but, they are not food related.

Incapacitating: Some biological agents that can be introduced in food can incapacitate the individuals affected. For example, *BZ*, 3-quinuclidinyl benzylate, is a member of the belladonna group of compound (glycolates) that includes atropine, scopolamine, and many others.

Chemical Agents: Here are the effects of chemical agents on the human body:

Emetics: In many cases, chemical agents, when ingested or inhaled, induce vomiting. Among the vomiting agents that have the most significant effects are diphenylchlorarsine (DA), diphenylcyanoarsine (DC), and adamsite (DM). These agents can be dispersed as aerosols and produce their effects by inhalation. Some minor eye irritation also might occur. Emetics produce a feeling of pain and sense of fullness in the nose and sinuses. This is accompanied by a severe headache, intense burning in the throat, tightness and pain in the chest, irritation of the eyes and lacrimation. Coughing is uncontrollable, and sneezing is violent and persistent. Nausea and vomiting are prominent. Mild symptoms, caused by exposure to very low concentrations, resemble those of a severe cold. The onset of symptoms may be delayed for several minutes after initial exposure; especially, with DM. Therefore, effective exposure may occur before the presence of the smoke is suspected. If a protective mask is available and put on by an individual after these symptoms are noticed, the symptoms will increase for several minutes, despite adequate protection. As a consequence, the victim may believe the mask to be ineffective, and by removing it, cause further exposure. On leaving the scene of the attack, the victim's symptoms subside rather rapidly, and the severe discomfort vanishes after about one-half hour. At high concentrations, effects may last for several hours. Because of their arsenical properties, when these chemical agents are introduced, the affected foods become poisonous.

Tearing: The chemical agents used for terrorism that cause tearing are not typically introduced through food.

Nerve agents: Some of the nerve agents that can be used by terrorists to affect food products include the following:

- Tabun (GA) - volatile, liquid/vapor
- Sarin (GB) - volatile, liquid/vapor
- Soman (GD) - volatile, liquid/vapor
- VX - low volatility, liquid
- Pesticides - methyl parathion, malathion, diazinon

All of these agents are cholinesterase inhibitors when they are ingested or inhaled. Cholinesterase is an enzyme needed for the proper functioning of the nervous systems of humans, other vertebrates, and insects. They are all pesticides, which act like organophosphates and carbamates to inhibit cholinesterase. Nerve agents are the most toxic and rapidly acting of the known chemical warfare agents. They are similar to pesticides called organophosphates in terms of how they work, and the kinds of harmful effects they cause. However, nerve agents are much more potent than organophosphate pesticides.

Heavy metals: Heavy metals can also be used by terrorists to affect food products. The most dangerous ones include the following:

- Arsenicals
- Mercury
- Cyanide
- Thallium

Arsenic: The primary symptoms of acute inorganic arsenic poisoning in humans are painful dysesthesias, decreased deep tendon reflexes, decreased pain, touch, and temperature sensation. Individuals who have arsenic poisoning may also experience nausea, anorexia, vomiting, epigastric and abdominal pain, and diarrhea. These symptoms are so severe that they often end in death. Chronic exposure to low levels of arsenic has led to nasal septum perforation, dermatological symptoms (lesions, necrosis, etc.), and an increase in the incidence of lung and lymphatic cancers.

Mercury: The heavy metal mercury is not well absorbed by the human gastro intestinal tract, but there is good pulmonary absorption of mercury vapors; especially, methyl mercury.

Cyanide: Cyanide is rapidly absorbed from the stomach, lungs, mucosal surfaces, and unbroken skin. Cyanide is a rapidly acting poison that can exist in various chemical forms. Examples of simple cyanide compounds include hydrogen cyanide, sodium cyanide and potassium cyanide. Hydrogen cyanide is a colorless gas with a faint, bitter, almond-like odor. Sodium cyanide and potassium cyanide are both white solids with a bitter, almond-like odor in damp air. Cyanide and hydrogen cyanide are used in electroplating, metallurgy, the production of chemicals, photographic development, making plastics, fumigating ships, and some mining processes. Effects begin within seconds of inhalation and within 30 min of ingestion. A bitter almond odor may be detected on the breath. Later effects include coma, convulsions, paralysis, respiratory depression, pulmonary edema, arrhythmias, bradycardia, and hypotension. Antidotal therapy : Amyl nitrite, sodium nitrite, and sodium thiosulfate with high-dose oxygen should be given as soon as possible.

Thallium: Thallium is a toxic heavy metal. Most cases of thallium toxicity occur after oral ingestion. Gastro intestinal decontamination, activated charcoal, and Prussian blue (potassium ferric hexacyanoferrate) are recommended in thallium ingestion.

Biological agents and toxins

The Centers for Disease Control (CDC) divides biological agents and toxins into three categories.

- Category A - High priority
- Category B - Second highest priority
- Category C - Third highest priority

Be aware that the CDC changes the agents listed in these categories as additional information becomes available. Let's discuss each of these in more detail.

The biological agents and toxins that fall into Category A can be easily disseminated, or transmitted person-to-person. They cause high mortality, with potential for major public health impact. Their introduction might result in public panic, and social disruption. They require special action for public health preparedness. Following are the agents and toxins that are currently listed in Category A:

- Anthrax (*Bacillus anthracis*)
- Botulism (*Clostridium botulinum* toxin)
- Plague (*Yersinia pestis*)
- Smallpox (*Variola major*)
- Tularemia (*Francisella tularensis*)
- Viral hemorrhagic fevers (e.g., Ebola)

The biological agents and toxins that fall into Category B are moderately easy to disseminate. They cause moderate morbidity, and low mortality. They require specific enhancements of the CDC's diagnostic capacity, and enhanced disease surveillance. The following agents and toxins are in Category B:

- Brucellosis (*Brucella* spp)
- Epsilon toxin (*Clostridium perfringens*)
- Food threats (*Salmonella*, *E. coli* O157:H7, *Shigella*)
- Glanders (*Burkholderia mallei*)
- Melioidosis (*Burkholderia pseudomallei*)
- Psittacosis (*Chlamydia psittaci*)
- Q Fever (*Coxiella burnetii*)
- Ricin toxin (castor beans)
- Staphylococcal enterotoxin
- Typhus (*Rickettsia prowazekii*)
- Viral encephalitis (VEE, WEE, EEE)
- Water safety threats (*Vibrio cholera*, *Cryptosporidium parvum*)

The agents that fall into Category C include emerging pathogens that could be engineered for mass dissemination in the future because of availability, ease of production and dissemination, the potential for high morbidity and mortality rates, and major health impact. Following are the agents that fall into Category C:

- Nipah virus

- Hanta virus

Radiological/Nuclear agents

“Nuclear” involves a fission reaction (nuclear weapon, nuclear power plant, satellites, and waste processing facility). It requires special nuclear material, such as plutonium and/or uranium. “Radiological” involves radionuclides, which can be dispersed or deposited. Accidents such as; the reactors at Three Mile Island in Pennsylvania (small release) and Chernobyl in Russia (large catastrophic release), have taught us about the effects on the agriculture and the food supply. Those lessons focus on making decisions to evacuate if plant conditions worsen or remain unstable. Additionally, the federal government has extensive plans, and practices emergency response around nuclear facilities in the U.S.

Federal Efforts to Address Food Security

Following is an overview of federal activities related to food security:

Presidential level: The Homeland Security Presidential Council has oversight of all homeland security issues, including food security. It is responsible for issuing all Presidential Directives related to homeland security. Food and agriculture is a subgroup represented on the council through the Interagency Food Working Group.

Department of Homeland Security: The mission of the Department of Homeland Security includes preventing terrorist attacks within the U.S, reducing America’s vulnerability to terrorism, minimizing damage, and ensuring recovery from attacks that do occur.

FSIS observes the Homeland Security Advisory System, which categorizes threat conditions for the public and enforcement agencies. These conditions include Low, Guarded, Elevated, High, and Severe. Each condition has a color that signifies the risk level involved. The threat conditions are updated based on intelligence information on terrorist activities.

The Low condition indicates a low risk of terrorist attacks. The color associated with the Low condition is green. The following protective measures may be applied:

- Refining and exercising preplanned protective measures,
- Ensuring personnel receive training on government-wide, departmental, or agency-specific protective measures; and
- Regularly assessing facilities for vulnerabilities, and taking measures to reduce them.

For example, in FSIS, we may provide training or exercise our Continuity of Operations Plans (COOP). The plant may have its own plans or measures for which it conducts training of its employees, or exercises, on a regular basis. An example of a preplanned protective measure in a plant setting is identification being required of all plant employees, or background checks being done on employees hired to work at the plant.

The Guarded condition represents a general risk of a terrorist attack. The color associated with the Guarded condition is blue. In addition to the previously outlined protective measures, the following measures may be applied in reaction to the Guarded condition:

- Checking communications with designated emergency response or command locations;
- Reviewing and updating emergency response procedures; and
- Providing the public with necessary information.

The Elevated condition represents circumstances that indicate a significant risk of terrorist attacks. The color associated with the Elevated condition is yellow, which tells us to proceed with caution. In addition to the previously outlined protective measures, the following may be applied in reaction to the Elevated condition:

- Increasing surveillance of critical locations;
- Coordinating emergency plans with nearby jurisdictions;
- Assessing further refinement of protective measures within the context of the current threat information; and
- Implementing, as appropriate, contingency and emergency response plans.

In FSIS, we begin to conduct special surveillance activities along with normal inspection activities. The plant may also implement specialized surveillance activities.

The High condition indicates that there is a high risk of terrorist attacks. The color associated with High condition is orange. In addition to the previously outlined protective measures, the following may be applied:

- Coordinating necessary security efforts with armed forces or law enforcement agencies;
- Taking additional precaution at public events;
- Preparing to work at an alternate site or with a dispersed workforce; and
- Restricting access to essential personnel only.

The Severe condition represents a severe risk of terrorist attacks. The color associated with the Severe condition is red. In addition to the previously outlined protective measures, the following may be applied:

- Assigning emergency response personnel and pre-positioning specially trained teams;
- Monitoring, redirecting or constraining transportation systems;
- Closing public and government facilities; and
- Increasing, or redirecting personnel to address critical emergency needs.

FSIS Directives

Now, let's talk more specifically about your duties related to food security. Your duties are covered in FSIS Directives. There are eight homeland security Directives:

- 5420.1 — Homeland Security Threat Condition Response: Food Security Monitoring Procedures
- 5420.2 — Homeland Security Threat Condition Response: Handling of FSIS Laboratory Samples
- 5420.3 — Homeland Security Treat Condition Response: Monitoring and Surveillance of Products in Commerce
- 5420.4 — Homeland Security Treat Condition Response: Emergency Procedures for the Office of International Affairs Import Inspection Division
- 5420.5 — Homeland Security Treat Condition Response: Intelligence Reports and Communications
- 5420.6 — Homeland Security Treat Condition Response: Information Technology Monitoring Procedures
- 5420.7 — Homeland Security Treat Condition Response: Human Health Monitoring and Surveillance
- 5420.8 — Homeland Security Treat Condition Response: Communication and Public Affairs Procedures

The first two Directives that FSIS developed outline the duties that are relevant to the PHV during orange and red alerts. The other six Directives cover the duties of program investigators and other FSIS Offices in: distribution, communications, information technology, human health monitoring, public affairs, and import re-inspection. Let's look at the first two directives in more detail.

FSIS Directive 5420.1 states that when the threat conditions of orange or red exists, the FSIS Office of Food Security and Emergency Preparedness will issue an e-mail letter to all employees notifying them on the heightened threat condition. In summary, you'll be asked to take these actions:

- Orange or red threat condition without threat to the food supply: The IIC will continue to monitor establishment operations for any unusual activity that may be related to food security.
- Orange threat condition with a threat to agriculture or foods: After notifying the District Office, the IIC immediately informs the establishment management, and performs food security monitoring procedures explained in the Directive.
- Red threat condition with food implication: The IIC will receive specific instructions from the District Office under these conditions.

Here are some examples of the food security monitoring procedures outlined in the Directive:

- Observe the perimeter of the establishment. Is it secure?
- Observe incoming raw materials. Can you verify these?
- Observe live animals arriving. Do they exhibit any unusual signs?
- Observe use and storage of hazardous materials in the establishment. Have they been controlled? Are the plant's logs current?
- Observe products in storage areas. Is there any evidence of tampering?
- Observe employee behavior. Are there any unusual signs?

Report any potential breaches immediately to the District Office, to the Technical Service Center and to establishment management.

FSIS Directive 5420.2 states that when a threat condition of orange or red exists with a specific threat to food supply or a particular product or process, laboratories will activate an Emergency Response and will increase testing for possible food security risks. The Emergency Response Plan includes precautions for sample security, special transport of samples to the laboratories, and reporting of laboratory reports.

Public Health Security and Bioterrorism Act of 2002 – Section 332

This new legislative measure has allowed FSIS to enhance our existing authorities. FSIS may utilize existing authorities, such as those provided by the Bioterrorism Act of 2002, to give high priority to enhancing and expanding the capacity to conduct activities to enhance the ability of the agency to inspect and ensure the safety/wholesomeness of meat & poultry products.

Operation Liberty Shield

An example of applying the principles of Section 332 occurred at the beginning of the war in Iraq when the federal government was on heightened orange alert. We had real concern that our nation would be the subject of a terrorist attack in retaliation for the war. “Liberty Shield” was the code word for the government’s heightened alert reactions. During that time, FSIS put into effect a number of “prevention” measures that would be the basis of our future actions and response to changes in threat conditions. For example, in-plant IIC’s initiated new security-based inspection measures as part of PBIS. Import inspectors also increased security oversight. Laboratory sampling was increased so that 50% of all samples included analysis for a threat agent, and the consumer complaint monitoring system increased its coverage. FSIS’s epidemiologists enhanced their surveillance efforts for human illnesses, looking for possible links to unusual disease signs.

During Operation Liberty Shield, instructions were provided to field Public Health Veterinarians and inspectors to replace certain inspection tasks that were not related to food safety with targeted inspection and sampling for a dozen or so biological, chemical or radiological agents. Since then, FSIS continues to randomly test for these agents on an ongoing basis to maintain surveillance and monitoring for terrorism. This is different from Homeland Security Advisory System. It involved a temporary enhancement of the Homeland Security Advisory System. Details of the activities are classified.

FSIS Food Security Initiatives

FSIS conducts food security initiatives in each of these areas.

- Food Security and Emergency Preparedness
- Employee Safety and Health
- Continuity of Operations (COOP)
- Communications and Awareness
- Laboratory Capability
- Training and Education

- International Food Security

For food security and emergency preparedness, FSIS has conducted vulnerability assessment (similar to a risk assessment) for domestic and imported products. FSIS has also developed strategies for the prevention and detection of threat agents. The Emergency Response Team (ERT) has also been established.

For employee health and safety, FSIS has identified and developed response plans to exposure to bioterrorism agents and procured analytical detection equipment.

FSIS managers follow a Continuity of Operations/COOP plan that enables other parts of the agency to take over headquarters' or other key offices' duties. The goals of a COOP are to secure alternative headquarters site, maintain essential/mission critical functions and capabilities, and maintain communications and cyber security.

In communication, FSIS has produced educational and awareness materials; and, participated in national, State, and local conferences to improve collaboration. We have also established backup communication abilities to maintain operations in case of emergency.

In the labs, FSIS has conducted security assessments, improved security and obtained screening equipment and methods for threat agents. FSIS is developing a Biosafety Level 3 laboratory to be able to test for threat agents in food products (such as Mycobacterium Tuberculosis, St. Louis encephalitis, and Bacillus anthracis).

Training and education initiatives include the "Food Security Guidelines for Food Processors," the "Food Security Guidelines for Transportation," and the "Food Security Guidelines for Consumers." Tabletop exercises have been conducted for headquarters and field staff to improve readiness to respond to a biosecurity event.

For FSIS workforce training, a food security training program was delivered by a contractor. It took a unique approach because it presented topics that familiarized participants with techniques to prevent terrorist activities, rather than responding to an event. The training covered a multi-dimensional team approach to homeland security – involving the interaction of personnel at the local, state, federal, and private sector; and, reinforced reporting lines for suspicious activities. It also focused on our field employees.

The three day training was provided for individuals at the district office level. The one day training was for employees in the plant. We included our local partners within that district, such as State, FDA, and APHIS representatives, as well as local first responders in this training. The training was completed in September 2004. However, on-going food security training is being done for FSIS employees.

For international food security, the following activities are underway:

- Upgrading import reinspection (including 20 new Import Surveillance Liaison Inspectors).
- Conducting a vulnerability assessment of imported products.

- Participating in the Federal-wide International Trade Data System (ITDS), a multi-department, multi-agency initiative to establish a single, automated system for sharing data on the inspection and certification of products moving in foreign commerce.

FSIS also has a number of surveillance activities underway. For example, FSIS has implemented, and continues to enhance, its national Consumer Complaint Monitoring System (CCMS). The CCMS is a surveillance system that monitors and tracks food-related consumer complaints. It is a potentially powerful tool in serving as a sentinel system for terrorist attacks on the food supply. FSIS also participates in FoodNet, and maintains a regulatory sampling database. FSIS has a liaison at the CDC in Atlanta. Many of these activities were established for food safety reasons, but are used for food security as well.

The field-based Epidemiology Officers offer another source for surveillance. The Epidemiology Officers located in various District Offices have taken on an important surveillance and response role for food security, as part of their responsibilities. They conduct regular surveillance activities, and have specialized roles to respond to food security emergencies.

FSIS has also developed publications to promote food security activities by all food businesses. These publications encourage industry to take steps to ensure the security of their operations. For example, the “FSIS Security Guidelines for Food Processors,” was created to assist Federal and State inspected plants that produce meat, poultry, and egg products in identifying methods to strengthen their biosecurity protections and procedures. While many plants may utilize guidelines from other government and private sector organizations and agencies, businesses and plants that do not have access to this specialized security-planning advice should find these guidelines helpful in improving and preparing food security plans. These guidelines are currently voluntary, but plant officials will be well served by adopting and implementing them because they are developed to meet the particular needs of meat, poultry, and egg producing plants. FSIS has provided these guidelines to its field employees; who will assist in directing plants that seek further clarification or advice.

FSIS has also issued the, “Guidelines for Transportation and Distribution of Meat, Poultry, and Egg Products.” Similar to the “FSIS Security Guidelines for Food Processors,” these guidelines are voluntary and designed to assist small shippers and distributors by providing a list of safety and security measures that these entities should take to strengthen their food safety and food security plans.

Protecting food during transportation and storage is a critical component in our defense against all types of foodborne contaminants. These guidelines address points in the transportation and distribution process where potential contaminants could be introduced, including loading and unloading, and in-transit storage. FSIS encourages shippers, transporters, distributors and receivers to develop and implement controls to prevent contamination of products through all phases of distribution, and to have plans in place in the event of accidental or deliberate contamination. Both of these guidelines are available on the FSIS website in several languages.

Summary

As FSIS employees, you must be aware that your duties include protecting the public not only from foodborne illnesses, which is essential to our mission, but also to ensure the security of our food, a vital component of homeland security. Food safety and security is the responsibility of everyone in the food supply chain. Everyone along the farm-to-table continuum needs to do their part.

You should have learned the following from this module:

1. Identify how FSIS has changed to meet the challenges of food security since "9/11." Be able to describe changes in the organization. Be familiar with various initiatives: planning, surveillance and monitoring, laboratories, Directives, continuity of operations, education and international areas.
2. Identify key weapons of mass destruction and biological threat agents that could be used to attack the food supply.
3. Identify the food security monitoring and reporting responsibilities of frontline supervisors when there is a Homeland Security threat condition.
4. Define how FSIS is promoting the adoption of preventive strategies for industry and consumers. Be familiar with the types of voluntary guidelines industry and consumers must consider in order to be better prepared to prevent and respond to terrorism.

WORKSHOP I - FSIS FOOD SECURITY GUIDELINES TO INDUSTRY

Approximate time for this unit: 1 hour

INSTRUCTIONS:

Break up into small groups (e.g., 5-6 persons). First, individually review the Workshop checklist. Take about 15 minutes to complete it with one specific plant in mind. As you complete the checklist, think about how you would share the information on the checklist with a plant representative. Remember that the Food Security Guidelines are voluntary. They are not required by regulation. Then, as a group take about 15 minutes to discuss how you would share the information on the checklist with a plant representative. For example, give your group members a brief description of the plant you had in mind when completing the checklist. Then, pick 1-3 areas to discuss with the plant representative. Share ideas about how you would encourage plant management to take steps to adopt measures outlined in the Food Security Guidelines.

(See checklist in the training materials.)

Note: The checklist is intended to be used as a training tool. It is not an official Agency form.

WORKSHOP II - PLANT INCIDENT SCENARIO

Approximate time for this unit: 1 hour

Working in small groups of 5-6 people each, you are going to be read a scenario about a reported in plant incident. This scenario is realistic, in that something very much like this has happened in an FSIS-regulated plant. Then, each group will develop their response. Someone in each group should record group decisions, and be prepared to report them for the group.

You have 20 minutes to answer these questions in your group:

Regardless of whether you were talking to the inspector on the phone, or in the plant with the inspector:

What questions would you ask?

What actions would you advise the inspector to take, or if you were there, what actions would you take?

WORKSHOP III- QUESTIONS

1. Food security is:
 - a. intentional contamination of food
 - b. planning to protect physical facilities, surveillance and monitoring activities, personal and emergency procedures
 - c. making sure people are happy
 - d. giving all FSIS officials secret powers to enforce food safety

2. The Centers for Disease Control and Prevention (CDC) has:
 - a. three categories of biological agents: 1, 2 and 3
 - b. put those biological agents that are easily disseminated from person-to-person, result in high mortality and have a potential for major public health impact in Category A
 - c. put Brucellosis, Glanders, Q-Fever, Staphylococcal enterotoxin, Salmonella, E. coli O157:H7 and Shigella in the highest category for biological threat agents
 - d. categorized emerging pathogens that can be engineered for mass dissemination as Category C (e.g., Nipah and Hanta viruses)

3. FSIS has food security initiatives in the following areas:
 - a. works closely with the White House and Department of Homeland Security to coordinate food security efforts
 - b. has three laboratories and one special microbial outbreak laboratory that ensure proper chain of custody and other controls on all samples taken at official establishments
 - c. been training the entire workforce on how best to prevent terrorists activities rather than responding to an event after the fact
 - d. conducted Operation Liberty Shield and replaced certain inspection tasks that were not related to food safety with targeted inspection and sampling for approximately a dozen biological, chemical and/or radiological agents and continues to randomly test for these agents on an on-going basis
 - e. All of the above.

4. Which of the following should Veterinarians in Charge should do in a Homeland Security Threat Red with food implicated?
 - a. Tell the plant that everyone must go home to protect themselves.
 - b. Report potential breaches to the Technical Services Center, the District Office and establishment management.
 - c. Observe incoming animals for unusual signs and report it to APHIS only because they are in charge of animal health and not FSIS.
 - d. Conduct a full range of food security monitoring procedures inside and outside the establishment as directed in FSIS Notices and Directives.