



# Developing Infrastructure for Food Defense

Protecting the Middle East Food Supply  
from Intentional Contamination

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## Overview

- **What is meant by developing food defense infrastructure?**
  - Developing the underlying base or framework for effectively defending the food supply against attack
- **Government Strategies for Developing Food Defense Infrastructure:**
  - Set National policy
  - Establish food defense responsibilities within Federal, State, local government agencies
  - Conduct key food defense activities: surveillance, vulnerability assessments; countermeasures; emergency response; outreach & training; research; communication
  - Partner with industry and academia



# U.S. National Food Defense Policy

- **Statutes: Homeland Security Act**
- **Homeland Security Presidential Directives (HSPDs):**
  - **HSPD-9, *Defense of U.S. Agriculture & Food***
    - Established to defend U.S. agriculture and food against terrorist attacks, disasters
  - **HSPD-7, *Critical Infrastructure Protection/National Infrastructure Protection Plan (NIPP)***
    - Established national policy to protect critical resources (agriculture, food, water) from terrorism
- **Federal Plans:**
  - **National Response Framework (NRF)**
    - Doctrine, principles, and architecture by which U.S. prepares for and responds to all-hazard disasters



## Governmental Organization

- Food & water defense responsibilities located in many federal agencies, also state and local government
- Established individual offices of food & water defense as appropriate (e.g.):
  - U.S. Department of Agriculture, Food Safety and Inspection Service--Office of Food Defense and Emergency Response
  - U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition--Office of Food Defense, Communication, and Emergency Response
  - U.S. Environmental Protection Agency—Office of Water, Water Security Division



## Key Food Defense Activities

- **Surveillance**
- **Vulnerability assessments**
- **Development of countermeasures (i.e. mitigation strategies)**
- **Manage food defense and food safety emergencies (i.e. response planning & recovery)**
- **Outreach and training**
- **Research**
- **Communication**



## Government strategies to meet goals: Surveillance

- Coordinate with intelligence and law enforcement agencies
- Include food defense in government inspection of critical “nodes” in facilities
  - e.g., USDA Food Defense Verification Procedures
- Test for threat agents in food
  - Expand government laboratory capabilities for non-traditional microbial, chemical, radiological contaminants
  - e.g., Food Emergency Response Network (FERN): Integrates existing Federal and State food-testing lab resources into nationwide laboratory network; provides a national surveillance program for early detection of threat agents in the U.S. food; provides significant surge capacity
- Develop surveillance information technology systems
  - e.g., Consumer Complaint Monitoring System (CCMS) - Integrates state and local consumer complaint data into national database
    - permits early detection and response to potential hazards in food supply



# Vulnerability Assessments

- **Identify:**
  - **Vulnerable products**
  - **Likely threat agents**
  - **Potential sites (“nodes”) of contamination that are most attractive targets**
  - **Countermeasures to minimize or reduce potential risks**
- **Use CARVER + Shock method**
- **Focus limited resources on foods/ agents of greatest concern**



# Vulnerability Assessments

- ***FSIS has assessed/ is assessing vulnerabilities in conjunction with US FDA, AMS, FNS and DOD***
  - Meat, poultry and egg products
  - Legally imported food/ Illegal imports/ MRE
  - Food service
- ***FDA has assessed/ is assessing vulnerabilities in conjunction with USDA***
  - All foods not regulated by USDA
  - Retail
  - Food service
- ***Strategic Partnership Program on Agroterrorism (SPPA)***
  - Initiative with industry and other govt. agencies (FDA, FBI, DHS, state and local) to do vulnerability assessments
  - Voluntary participation
  - Over 30 commodities/systems assessed



# Countermeasures

- **Surveillance**
  - **Coordinate with intelligence and law enforcement**
  - **Include food defense in government inspection activities**
  - **Laboratory testing for threat agents**
- **Vulnerability Assessments**
- **Outreach/ training**
  - **Guidance, awareness training, etc.**
- **Research**



# Emergency Response

- **Emergency Management:**
  - **Develop standard operating procedures (SOPs) and response plans**
  - **Establish management response team (e.g., Emergency Management Committee)**
- **Food Defense Exercises:**
  - **Test preparedness and response procedures; practice response to attack on food supply; improve public health communication**
  - **Federal, State, local government; industry**
- **Food Disposal and Facility Decontamination Guidelines for Industry (developed jointly U.S. FSIS, EPA, and FDA)**
  - **Disposal guidelines for food contaminated with threat agents**
  - **Decontamination guidelines for food processing facilities contaminated with threat agents**



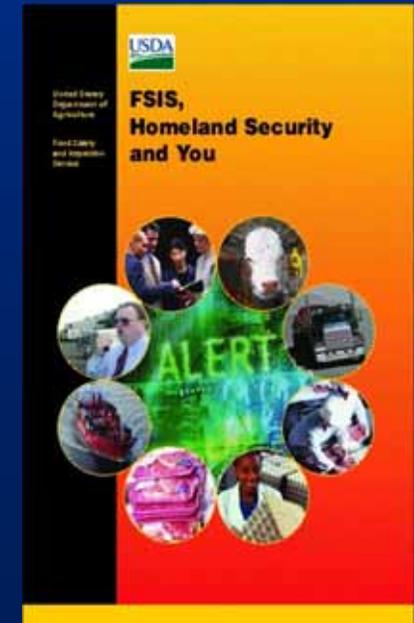
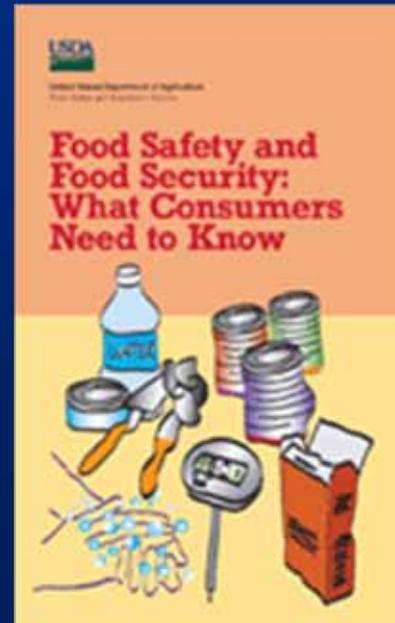
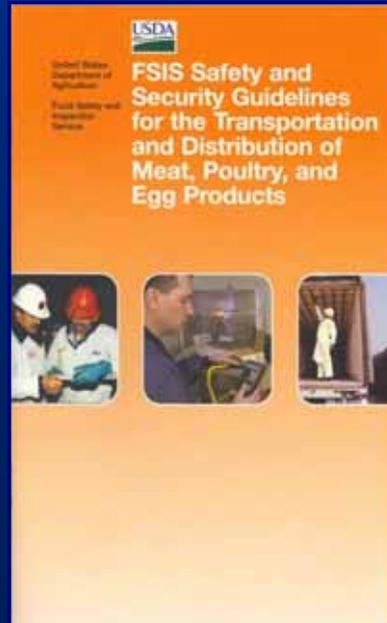
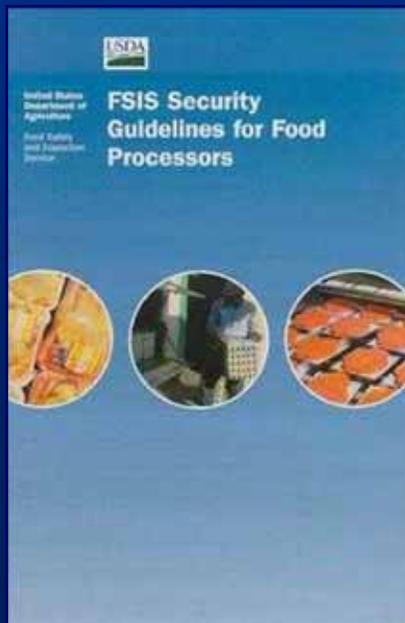
# Outreach and Training

- ***Food Defense Awareness Training***
  - Developed jointly with USDA, FDA, AMS, FNS
  - 14 face-to-face sessions nationwide (1,200 attendees)
- ***Model Food Defense Plans***
  - Provide industry-specific guidance for developing plans
- ***Industry Self-Assessment Checklist/Tools***
  - Tool that allows establishments to assess the security of their operations – available on website
- ***ALERT***
  - Initiative to raise food defense awareness with industry, and state/local governments



# USDA Guidance Documents

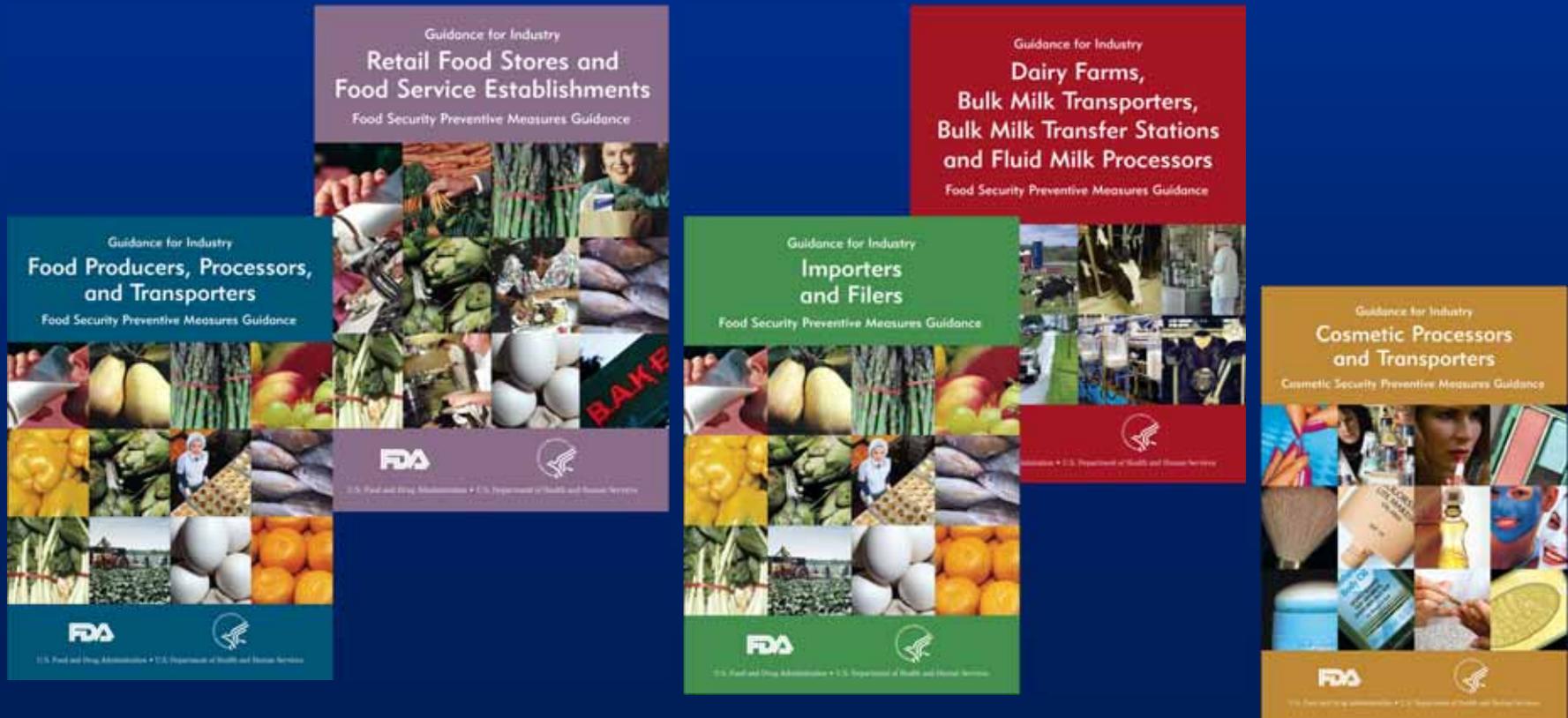
- USDA FSIS has provided food defense guidance to food processors, importers, transporters, and distributors.





# FDA Guidance Documents

FDA CFSAN has provided food defense guidance to: food producers, processors and transporters; importers and filers; retail food stores and food service establishments; dairy industry; and cosmetic processors and transporters.





## **Outreach and Training** *International activities*

- **Workshop with G8 countries on conducting vulnerability assessments (*Athens, GA, April 2005*)**
- **Workshop on conducting vulnerability assessments (*Ottawa, Canada, March, 2006*)**
- **Workshop on conducting vulnerability assessments for APEC Economies, (*Bangkok, Thailand, November, 2006*)**
- **Follow on workshop developing food defense infrastructure for APEC (*Hanoi, Vietnam, June 2007*)**



# Research

- **New Methods**
  - Development of rapid, reliable methods to detect, enumerate and identify potential agents in foods
- **Prevention Technologies**
  - Technologies to improve safety of foods
  - Provide “shields” in the event of contamination of foods
- **Agent Characteristics**
  - Ability of threat agents to survive and grow in foods, and means to inactivate
- **Dose Response/Threat Assessments**
  - Ability of foodborne threat agents to cause mass casualties



# Communication

- **Strengthen relationships**
  - **With industry**
  - **With consumers**
  - **Among Federal agencies**
  - **Among States/ local authorities**
  - **With academia**
  - **Internationally**



## Sector Partnerships

- **Food and Agriculture Sector Coordinating Council (FASCC) established**
  - **Forum for private sector to discuss infrastructure protection issues**
  - **Communicates with government through corresponding Government Coordinating Council (GCC)**
- **Food and Agriculture Government Coordinating Council (GCC) established**
  - **Federal & State government officials: USDA, FDA, EPA, Department of Homeland Security (DHS), etc.**
  - **Facilitate communication among government and with private sector**



## **Improved communication strategies with consumers**

- **Look for evidence of tampering**
- **USDA Meat and Poultry Hotline at 1-888-MPHotline (1-888-674-6854)**
- **FSIS – Office of Food Defense and Emergency Response, staffed 24 hours a day (1-800-333-1284)**
- **FDA – Office of Emergency Operations, staffed 24 hours a day (1-301-443-1240)**
- **Contact your local health department**
- **Projects underway to develop new, more effective communication messages**



## Improved communication strategies with Federal agencies

- **FDA and FSIS**
  - Sharing information on activities, research
- **DHS**
  - SPPA, funding research, illegal imports
- **State Dept**
  - International outreach activities
- **Intelligence agencies**
  - Now looking for food related suspicious activities
- **Law enforcement**
  - Increasing awareness for first responders



## **Improved communication strategies with State and local agencies**

- **Emergency response at local/ state level**
- **Strengthen relationships with first responders**
- **State and local government involved in tabletop exercises**
- **Coordinate public messages**



## Improved communication strategies with academia

- Share research findings
  - Reduce potential for redundancy
- Share data to allow development of new models
- Academia/ consultants using our documents as training aids
- FSIS uses risk communication messages developed by academia
  - Effective communication tools



## Summary

- **Strategies for developing infrastructure for food defense include:**
  - **Set National Policy**
  - **Establish responsibilities for food defense within Federal, State, and local government agencies**
  - **Conduct food defense activities: surveillance, vulnerability assessments, countermeasures, emergency response, outreach & training**
- **Because majority of food is produced by private companies, important to strengthen public-private partnerships to address food defense**
- **Communication with all stakeholders is key to success**
- **It is in everyone's mutual interest to develop cooperative strategies to protect the food supply.**