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CRITICAL INFRASTRUCTURE PROTECTION PROGRAM

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AND FOOD SECTOR**

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This issue of *The CIP Report* focuses on the Agriculture and Food Sector, one of the most important critical infrastructure and key resource (CI/KR) sectors to our every day life. Consisting of over two million farms, nearly one million firms, and over one million facilities, it is responsible for approximately one-fifth of U.S. economic activity, according to the Agriculture and Food Sector-Specific Plan (SSP). The sector is well known for its extensive, open nature and diversity. Notably, the majority of infrastructure within the sector is owned and operated by private industry, yet much is regulated by the Federal and State governments.

An overview of the sector and its many initiatives is offered, as well as information on the two Sector-Specific Agencies (SSAs) responsible for its oversight, the U.S. Department of Agriculture (USDA) and the U.S. Food and Drug Administration (FDA), part of the U.S. Department of Health and Human Services. A review of tabletop exercises is provided by the leadership of the Agriculture and Food Sector. FDA’s *Food Protection Plan*, which describes a strategy for prevention, intervention, and response with respect to food safety and food defense, is also offered.

The issue features contributions from two Homeland Security Centers of Excellence, the National Center for Food Protection and Defense (NCFPD) and the National Center for Foreign Animal and Zoonotic Disease Defense (FAZD Center). Additionally, it includes a contribution from the Federal Bureau of Investigation (FBI) on its sector-related activities, such as the Strategic Partnership Program Agroterrorism (SPPA) Initiative, a joint activity with USDA, FDA, and the U.S. Department of Homeland Security (DHS). An article is also provided by the InfraGard National Members Alliance on the InfraGard program, established by the FBI in 1996. Lastly, *Legal Insights* reflects on the need for continued funding of research and development to advance the Nation’s security.

We hope you enjoy this issue and find it informative. We thank you for your support of the CIP Program and, as always, welcome your feedback.



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Agriculture and Food Sector Overview

The Agriculture and Food Sector, also referred to as the Food and Agriculture Sector, is a diverse sector that includes systems and assets “from farm to table.” The systems and assets comprising the sector have long been considered critical infrastructure; they provide us with essential goods and services on which society depends. As noted in *The National Strategy for the Physical Protection of Critical Infrastructures and Key Assets*, and reiterated in the Agriculture and Food Sector-Specific Plan (SSP), the sector includes “supply chains for feed, animals, and animal products; crop production and the supply chains of seed, fertilizer, and other necessary related materials; and the post-harvesting components of the food supply chain, from processing, production, and packaging through storage and distribution to retail sales, institutional food services, and restaurant or home consumption.”

Given the extensive, open nature of the sector, particular attention has been paid to threats of agroterrorism and bioterrorism as well as to food security overall. *Homeland Security Presidential Directive (HSPD)-9: Defense of United States Agriculture and Food* stated that the Nation’s “agriculture and food systems are vulnerable to disease, pest, or poisonous agents that occur naturally, are unintentionally introduced, or are intentionally delivered by acts of terrorism” and that the “best protection possible” is needed to ensure their security. Congress

has continually passed legislation to amplify the security of the sector and protect infrastructure owners and operators through various food and agricultural policy authorizations and reauthorizations, such as the “Farm Bill.” Sector stakeholders have established partnerships, improved information sharing, and continue to perform research in critical areas to ensure that the Nation’s agriculture and food systems are protected.

Public-Private Partnership

Collaborative efforts between public and private partners are necessary to better protect the Nation and its critical infrastructure. Accordingly, the National Infrastructure Protection Plan (NIPP) outlined a sector partnership model consisting of Government Coordinating Councils (GCCs) and Sector Coordinating Councils (SCCs) for each sector, and both public and private cross-sector councils. Formed in 2004, the Food and Agriculture GCC and Food and Agriculture SCC (FASCC) have taken numerous steps to improve sector security.

According to the Agriculture and Food SSP, the GCC’s objective is “to provide effective coordination of Food and Agriculture Sector defense strategies and activities, policy, and communication across government and between the government and the sector to support the Nation’s homeland security mission.” Activities pursued in support

of this objective include:

- Identification of items that need public-private coordination and communication of issues;
- Identification of needs/gaps in plans, programs, policies, procedures, and strategies;
- Acknowledgement and recognition of successful programs and practices; and
- Leveraging of complementary resources within government and between government and industry.

The FASCC represents the interests of private sector partners to the government and encourages intra-sector communication. Due to the diversity of the sector, the FASCC is comprised of representatives from seven sub-councils:

- Agricultural Production Inputs and Services;
- Animals-Producers;
- Plant-Producers;
- Processors-Manufacturers;
- Restaurant-Food Service;
- Retail; and
- Warehousing-Logistics.

This structure allows for greater flexibility in carrying out targeted objectives and sector activities, and aids in more effective outreach to larger numbers of owners and operators, particularly through trade associations.

The many initiatives of the GCC

(Continued on Page 3)

Sector Overview (Cont. from 2)

and FASCC have raised awareness of issues affecting the Nation's food supply and agricultural community. Recent examples of such activities include: participation in the Strategic Partnership Program Agroterrorism (SPPA) Initiative, a collaborative effort led by the U.S. Food and Drug Administration (FDA), U.S. Department of Agriculture (USDA), U.S. Department of Homeland Security (DHS), and Federal Bureau of Investigation (FBI) to partner with States and private entities to conduct vulnerability assessments at food and agriculture facilities; discussions on avian influenza and review of pandemic planning activities; and implementation of initiatives such as ALERT (Assure, Look, Employees, Reports, and Threat), a food defense awareness effort. In addition to these activities, the GCC and FASCC hold joint exercises each year and routinely take part in other sector and cross-sector exercises. Joint meetings are also regularly held to discuss sector activities, both current and proposed, and share information, including accomplishments, best practices, and lessons learned.

Information Sharing and Analysis

While a significant amount of information sharing takes place through GCC and FASCC communications, other information sharing and analysis mechanisms for the sector are in place. A few of these mechanisms currently in use are described below.

The sector utilizes a dedicated, secure portal in the Homeland Secu-

rity Information Network (HSIN), a network maintained by DHS to facilitate information sharing, from general information on sectors and initiatives to situational awareness on potential threats, incidents, and incident response and recovery. In addition to housing a wealth of sector-specific information and links to key topics and cross-sector issues, the portal is able to disseminate announcements and alerts to its members; pertinent information is also shared with members through a monthly newsletter.

DHS established the Homeland Infrastructure Threat and Risk Analysis Center (HITRAC) to gather, analyze, and provide threat information to stakeholders within the various critical infrastructure and key resource (CI/KR) sectors. In addition to periodically releasing sector-specific threat analysis products and sharing analyses of current threats as needs arise, HITRAC also performs Strategic Sector Assessments to assist sector stakeholders in their management of risk and strategic planning for overall preparedness, protection, and response efforts. These products are shared with the sector through HSIN portals as well as other forms of communication.

Sector threat information may also be shared through other sources, such as local law enforcement and the FBI. The FBI maintains Joint Terrorism Task Forces to facilitate the sharing of threat and investigative information between Federal, State, and local law enforcement and other sector security partners. To further promote information

sharing and build on public-private partnerships, it created [InfraGard](#) and Special Interest Groups for certain sectors; individual FBI field offices have also launched sector-specific working groups. Information on various FBI efforts in the sector and on InfraGard can be found on pages [11](#) and [13](#) of this issue of *The CIP Report*, respectively.

[FoodSHIELD](#) is a web-based platform sponsored by the National Center for Food Protection and Defense (NCFPD) with the support of the Association of Food and Drug Officials and grant funding from USDA. It seeks to support regulatory agencies and laboratories with regard to food defense by providing information and tools to enhance preparedness, protection, and response, risk management, communication, and public education. Its website features both public and member-only information. The latter is available through a secure portal and includes directories for agriculture, health, environment, and emergency response agencies and laboratories as well as their associated resources.

Research and Development

The GCC and FASCC established a Joint Committee on Research (JCR) to review and assess sector research needs and goals, identify potential gaps in research and development (R&D) efforts, and provide recommendations for addressing such gaps from a prioritized standpoint. In addition to this and other initiatives pursued through the GCC and FASCC, numerous State and local,

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Overview of the Agriculture and Food Sector-Specific Agencies

The Sector-Specific Agencies (SSAs) assigned responsibility for the Agriculture and Food Sector maintain strong working relationships with government entities as well as private industry. The responsibility for this sector is divided between USDA and FDA, as outlined in *HSPD-7: Critical Infrastructure Identification, Prioritization, and Protection* and National Strategies before it. USDA is the lead agency for production agriculture and shares its food defense responsibilities with FDA. Specifically, USDA oversees approximately 20 percent of food consumed in the United States, including meat, poultry, and frozen, dried, and liquid eggs, and FDA is responsible for the safety of the remaining 80 percent of food consumed. These figures include the United States' domestic and imported food supply. As stated in the Agriculture and Food SSP, neither USDA nor FDA has authority over resources and budgets for the entire sector. As SSAs, these agencies execute numerous infrastructure protection activities and closely collaborate on their many undertakings in order to efficiently manage the Agriculture and Food Sector in accordance with the NIPP.

USDA

USDA has several internal agencies that contribute to the roles and responsibilities of the SSA. Its Homeland Security Office (HSO) serves as the lead in coordinating SSA activities with the different agencies. These internal agencies are listed in the following table:

USDA Internal Agencies

- Agricultural Marketing Service (AMS)
- Agricultural Research Service (ARS)
- Animal and Plant Health Inspection Service (APHIS)
- Center for Nutrition Policy and Promotion (CNPP)
- Cooperative State Research, Education, and Extension Service (CSREES)
- Economic Research Service (ERS)
- Farm Service Agency (FSA)
- Food and Nutrition Service (FNS)
- Food Safety and Inspection Service (FSIS)
- Foreign Agricultural Service (FAS)
- Forest Service (FS)
- Grain Inspection, Packers, and Stockyards Administration (GIPSA)
- National Agricultural Statistics Service (NASS)
- Natural Resources Conservation Service (NRCS)
- Risk Management Agency (RMA)
- Rural Business Service (RBS)
- Rural Housing Service (RHS)
- Rural Utilities Service (RUS)

FDA

FDA has delegated its SSA responsibilities to the Office of Food Safety, Defense, and Outreach (OFSDO) within the Center for Food Safety and Applied Nutrition (CFSAN). OFSDO oversees the activities of the sector, and maintains a partnership with USDA. Other offices within CFSAN are also involved in coordinated efforts with OFSDO to ensure safety within the Agriculture and Food Sector. These offices are listed in the following table: ❖

FDA Offices

- Office of Applied Research and Safety Assessment
- Office of Compliance
- Office of Cosmetics and Colors
- Office of Food Additive Safety
- Office of Management Systems
- Office of Nutritional Products, Labeling and Dietary Supplements
- Office of Plant and Dairy Foods
- Office of Regulations and Policy
- Office of Science
- Office of Scientific Analysis and Support
- Office of Seafood
- Office of the Center Director

Testing Communication and Coordination: Tabletop Exercises in the Food and Agriculture Sector

Over the course of the past two years, tabletop exercises have become a key activity in the Food and Agriculture Sector's efforts to improve preparedness, response, recovery, and communications. In January 2006, members of the Sector's GCC and SCC set the completion of a tabletop exercise as one of their top goals for the year. In response to this widespread interest, the Sector's two SSAs – USDA and FDA – as well as their private sector partners committed to using exercises as a means to improve the Sector's preparedness and resiliency.

Approach

The exercise design process developed by the Sector is symbolic of the collaborative relationship between the government and private sector within the Food and Agriculture Sector. Planners have relied upon the vast array of subject-matter experts from USDA and FDA, State and local representatives, and the private sector in a collaborative effort to design exercises within a framework developed and financially supported by DHS. This framework, the Homeland Security Exercise Evaluation Program (HSEEP), provides funding and staffing for planning, executing, and evaluating exercises. The HSEEP guidelines also provide for an exercise after action report that describes the lessons learned from the exercise. By early 2006, the Sector had established a collaborative exercise production

process, and representatives soon began planning on "Operation Crystal Clear," the first in a series of exercises hosted by the Sector.

exercise, which occurred on September 25-26, 2007. The tabletop included participants from numerous Federal government organizations, represen-

"This exercise [in Harrisburg] presented a great opportunity to have discussions that needed to take place and the participants capitalized on that opportunity. The interesting part was that walking through a non-traditional scenario allowed for identification of communication gaps that I don't think were recognized before now."

- Jessica Fantinato, Deputy Director, USDA Homeland Security Office

Operation Crystal Clear

The North Carolina Department of Agriculture hosted Operation Crystal Clear. The successful exercise examined the decision-making process, communication, and coordination of a multi-agency and private sector response and recovery to a fictitious bottled water contamination incident in the southeastern United States. Exercise coordinators focused participant activities on interagency and private sector communication, emergency response coordination, resource integration, and issue identification and resolution.

Intentional Animal Feed Contamination Exercise

Harrisburg, Pennsylvania was the site of the Sector's 2007 tabletop ex-

ercises from four States (Maryland, Ohio, Pennsylvania, and West Virginia), and private sector partners. The scenario for this exercise focused on the intentional contamination of animal feed that eventually led to contamination in the human food chain.

Going Forward

The next Food and Agriculture Sector exercise is being planned to take place in the Midwest in fall 2008. In addition to the continued effort to leverage lessons learned from previous exercises as planners design future exercises, the Sector will focus more heavily on incident recovery efforts based on suggestions it received from Sector members and exercise participants following the North Carolina and Pennsylvania exercises. ❖

Overview of the FDA Food Protection Plan

FDA published a *Food Protection Plan* that focuses on food safety as well as food defense from intentional and unintentional contamination of domestic and imported products. The *Plan* was released in November 2007 and is integrated with FDA's *Import Safety Action Plan*. Its integrated strategy has three elements of protection: prevention, intervention, and response; below is an outline of these elements along with the principles of the *Plan*. The *Plan* also includes a look at demographics regarding food consumption, our food supply and threats regarding it, and the intent to enhance information technology (IT). Through its various activities, FDA hopes to identify and counter potential hazards and uses risk-based interventions to ensure the effectiveness of food safety efforts.

Elements of Protection:

PREVENT Foodborne Contamination

- Promote increased corporate responsibility to prevent foodborne illnesses
- Identify food vulnerabilities and assess risks
- Expand the understanding and use of effective mitigation measures

INTERVENE at Critical Points in the Food Supply Chain

- Focus inspections and sampling based on risk
- Enhance risk-based surveillance
- Improve the detection of food system "signals" that indicate contamination



RESPOND Rapidly to Minimize Harm

- Improve immediate response
- Improve risk communications to the public, industry, and other stakeholders

Principles:

1. Focus on risks over a product's life cycle from production to consumption.
2. Target resources to achieve maximum risk reduction.
3. Address both unintentional and deliberate contamination.
4. Use science and modern technology systems.

The *Plan* identifies factors that affect food safety and protection and lead to foodborne illnesses. Foodborne illnesses are caused by foodborne pathogens and include viruses, bacteria, parasites, toxins, and a vast number of potential chemical contaminants and metals. One of the factors identified by the *Plan* recognizes that shifting demo-

graphics will leave more of the U.S. population susceptible to foodborne illness. Shifting demographics include:

- In 2007, 20-25 percent of the population was in a high-risk category (young, old, pregnant, immune-compromised). These Americans face a risk of serious illness or death from foodborne illness.
- In 1980, 15 percent of the population was 60 or older. By 2025, the number will be 25 percent.
- Four percent of the population is immune-compromised (transplant patients, people who are HIV positive, people receiving chemotherapy or other immunosuppressive treatments, people with chronic diseases).

Food safety and protection are also affected by convenience trends and consumption patterns. The *Plan*

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National Center for Food Protection and Defense

The ever globalizing food system is the most complicated supply chain known, with over 2 million farms and 30,000 food manufacturing facilities in the United States alone, and over 90,000 foreign manufacturing facilities and tens of millions of farms outside of the United States also engaged in food production. The size, scope, and open operating environment of the food system contribute to its success and increase its potential vulnerability to terrorist actions. The public is aware of this: in a 2005 survey by The Food Industry Center (TFIC) and NCFPD, consumers stated that they felt food defense deserved the greatest share of terrorism defense spending.

To address this vulnerability, NCFPD was established in 2004 through a competitive grant process. Led by the University of Minnesota, NCFPD is a research consortium with the goal of defending the safety of the food system through research

and education. The Center's investigators are leading projects that focus on reducing the vulnerability of the nation's food system to terrorist attack by contamination with biological, chemical, or radiological agents at any point along the food supply chain, from primary production through transportation and food processing to retail (supermarkets and restaurants) and food service operations. The research projects strengthen the food system's preparedness and resiliency to threats, disruption, and attacks, and mitigate the potentially catastrophic public health and economic effects of food system attacks with effective preparedness, response, and recovery.

To leverage expertise and resources programmatically, NCFPD and its investigators across more than two dozen participating universities work in close partnership with federal and state regulatory agencies, state and local health and agriculture departments, first responder communities, professional organizations, other DHS Centers of Excellence, the national laboratories, and private sector stakeholders. A cornerstone of the private sector engagement is NCFPD's Industry Work Group with over 30 food industry experts who serve as advisors, providing technical advice, critical end-user feedback, and strategic oversight.

NCFPD has more than 60 current and completed projects that fall under several themes:

Agent Behavior — Developing innovative detection, decontamination, and inactivation technologies using research on the fundamental behaviors of chemical or biological threat agents in food. Current projects in this theme include the development of biosensors for detecting *Botulinum Neurotoxin* in food (Principal Investigator: Eric Johnson, University of Wisconsin-

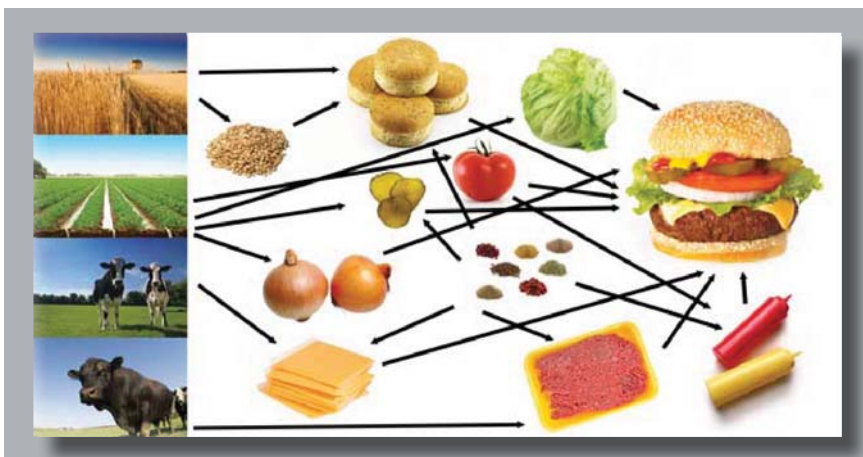


Figure 1: The complexity of the food system is demonstrated through a supply chain for a hamburger.

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NCFPD (Cont. from 7)

Madison); and developing methods for decontaminating food processing equipment and facilities that have been deliberately contaminated with *Bacillus anthracis* spores (Principal Investigator: Peter Slade, National Center for Food Safety and Technology, Illinois Institute of Technology).

Event Modeling — Developing dynamic, real-world models of food contamination events, public health responses, and private sector systems. These models enable investigation of different intervention, mitigation, and response strategies for food system events from private sector, public health,

and food system regulatory agencies perspectives. Importantly, the models incorporate detailed data on food distribution, food consumption, agent behavior, medical/public health system response, and outbreak epidemiologic studies. An example of one project in this theme is BTSafety’s Consequence Management System (CMS; see Figure 2), a computer simulation of food events developed with realistic data on infrastructure, movement, and public health intervention that provides training, awareness, and an intervention assessment toolkit. A version of CMS was used in the 2008 Bioterrorism Assessment for the President, replacing earlier

models lacking private sector data and detailed food system information.

Risk Communication — Encompassing basic and translational research, risk communicator training, and rapid response deployment. These activities are defined by best practices in effective risk communication for active engagement of multiple audiences prior to, during, and after potentially catastrophic food system events. An example of one project in this theme is the development of an online repository of risk communication training resources, such as those available at

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Figure 2: Consequence Management System simulation.

The FAZD Center: Reducing the risk of exotic animal diseases to America's health and economy

The FAZD Center is the integrated, full-spectrum center protecting America from exotic animal diseases that threaten public health and economic stability. Its specific mission is to create products that will protect against the introduction of high-consequence foreign animal and zoonotic diseases (FAZDs) into the United States, with an emphasis on prevention, surveillance, intervention and recovery. These products offer the dual benefit of also reducing the risks from natural or accidental outbreaks of these diseases.

FAZDs pose a clear threat to U.S. interests in terms of:

- Public health — Nine of the 10 highest priority biological agents that threaten human health are zoonotic: diseases that may be transmitted from animals to humans.
- Economic stability — Food and agriculture provide almost 13 percent of U.S. jobs with an annual economic activity approaching \$1 trillion per year.

This was recognized at the federal level in January 2004 with Homeland Security Presidential Directive 9, which states in part: "America's agriculture and food system is an extensive, open, interconnected, diverse, and complex structure providing potential targets for terrorist attacks. We should provide the best protection possible against a successful attack on the United States

agriculture and food system, which could have catastrophic health and economic effects."

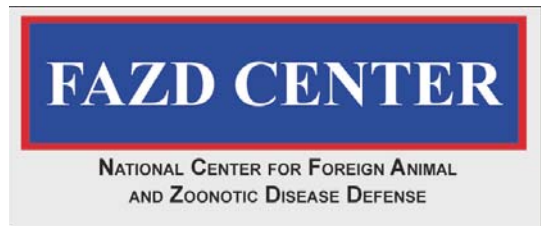
The FAZD Center was established on Oct. 1, 2004 by DHS as the result of a competitive bidding process. DHS has extended the center's funding through fiscal year (FY) 2008, and has indicated an extension through FY09, pending availability of funds. The center operates on a core budget of \$5 million in FY08, with an additional \$5 million approved for FY09, plus other competitive bids from DHS.

Major partners for the center are Texas A&M University, the University of California at Davis, the University of Southern California, The University of Texas Medical Branch, Georgetown University, Plum Island Animal Disease Center and other National Laboratories, plus nine Minority Serving Institutions.

The FAZD Center develops its products through projects divided along three thematic categories: Biological Systems, Information Analysis Systems and Education & Outreach Systems.

Biological Systems are designed to satisfy DHS's goals of detection, diagnosis, prevention and recovery. These products include:

- Vaccines for Rift Valley fever and avian influenza: There is a



critical need for improved vaccines for zoonotic diseases of economic and public health applications, such as Rift Valley fever (RVF) and avian influenza (AI). In addition to safety, efficacy and the ability to manufacture sufficient quantities of vaccine, FAZD Center investigators are using modern recombinant technologies to incorporate genetic "markers" into RVF and AI vaccines to make it possible to distinguish vaccinated livestock from infected livestock. In an outbreak, this property will prevent unnecessary slaughter of animals and avert further damage to the economy through trade restrictions. It will also lessen challenges to the capacity for carcass disposal. Candidate vaccines are ready for initial field testing.

- Anti-viral protection against foot and mouth disease: Standard vaccines for foot and mouth disease (FMD) require up to 10 days before becoming effective, creating an immunity gap during which livestock remain vulnerable to one of the

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FAZD Center (Cont. from 9)

most contagious of viral diseases. A new antiviral from the FAZD Center promotes “natural killer cells” that attack the FMD virus, providing protection within three days. Research in this area contributes to vaccine development at Plum Island Animal Disease Center.

- **Rapid detection tests for use at chute site:** After an outbreak of FMD has been confirmed, the emergency response program to eradicate the disease involves sometimes massive culling of infected or exposed herds. The FAZD Center is developing rapid, accurate, inexpensive field tests that will distinguish between infected and uninfected animals at chute site within minutes. This will eliminate unnecessary loss of uninfected animals, saving hundreds of thousands of animals in large outbreaks.

Information Analysis Systems improve the ability of decision makers to respond to outbreaks of animal disease. These products include:

- **Assessment of impact of FMD outbreak in feedlots:** The impact of outbreaks of FMD into randomly selected feedlots has been assessed in a nine county area of the High Plains of Texas that contains a high concentration of large concentrated animal feeding operations (CAFOs). The FAZD Center’s economic researchers are evaluating the economic impacts of the various mitigation strategies that were simulated. Early detection is a

very important facet in limiting the spread of FMD after introduction and the epidemiologic and economic impact. Vaccination as a means of containing the disease was effective only in selected scenarios. The early availability of vaccine was important in its efficacy.

- **Risk assessment for exotic and zoonotic disease:** DHS has provided special funding to the NCFPD and FAZD Center for a study to compare and evaluate the various models now used for risk assessment and to explore their utility for FAZDs. This study, which is being initiated now, involves comparison of existing models and identification of gaps in both data and modeling ability. This study will provide an important next step in organizing the existing array of related models for estimating the impact of either intentional or unintentional introduction of animal disease in the United States.
- **Models and databases to assess consequences:** The ability to examine the molecular intricacies of infectious agent-host processes is critical to the development of new protection, detection and therapeutic strategies. The FAZD Center has worked with multiple partners including several national laboratories to develop a suite of molecular analytical tools that has provided valuable and often unanticipated insight into select agent disease

pathways, and is now being employed for the study of other important agents.

Education & Outreach Systems are providing the next generation of science power for homeland security. These products include:

- **Avian influenza training for early responders:** In the event of an outbreak of Avian Influenza H5N1, a lack of training among early responders will lead to delayed detection and ineffective reactions. The FAZD Center’s Avian Influenza School trains the trainers and provides training modules for use by extension agents, veterinarians, researchers and farmers – for prevention, intervention and recovery from outbreaks. Sessions have been held in Texas, California and Minnesota, and in Africa, and are in demand in the developing world.
- **Stakeholder workshops on mass animal mortality:** If a pandemic or a catastrophe resulted in the death of U.S. livestock in large numbers, current environmental policy and regulations would severely hamper carcass disposal. FAZD Center workshops in California and Texas brought together major stakeholders from the livestock industry: industry representatives, policymakers, scientists and regulators. The workshops brought together players with diverse and divergent involvement,

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The FBI's Role in Safe-Guarding the Food and Agriculture Sector*

by Linda Lee and Peter de la Cuesta, FBI

"Agriculture ranks among the most crucial of our nation's industries; yet its reliability and productivity are often taken for granted."

- President George W. Bush

The Federal Bureau of Investigation (FBI) is involved in the mitigation of threats to national security within an enormous variety of situations; however the security of the agriculture sector is especially challenging. Agriculture is unlike any other critical infrastructure. While all other critical infrastructures may be protected to some degree by guards, gates, and guns, the agriculture system extends from farm to fork, across diverse commodities and industries, and has considerable sector inter-dependencies such as with the transportation and water sectors.

But you may wonder, "Why should I be concerned?"

- People expect their food to be safe.
- Agriculture is a large system with much vulnerability.
- Food and agriculture industries are considered soft targets.
- In the US, the economic impact of an attack against our food supply is daunting. 12.3% of the GDP is based on agriculture and 1 in 6 jobs in the US are tied to the food industry, including agriculture, suppliers, wholesalers, transportation, and food service.

The threat of agroterrorism is a real threat. Although there is no known

or articulated threat to US agriculture or food, the FBI takes a proactive stance in the protection of our food supply. To this end, the FBI has numerous programs in partnership with the United States Department of Agriculture (USDA), the Food and Drug Administration (FDA), the Department of Homeland Security (DHS), state and local agencies, and the private sector to assist in preparedness efforts and to prevent an agroterrorism attack.

Strategic Partnership Program Agroterrorism

The Strategic Partnership Program Agroterrorism (SPPA) Initiative is a public-private cooperative effort established by the FBI, DHS, USDA, and FDA in partnership with state and industry volunteers. The intent of the initiative is to collect the necessary data to identify sector-specific vulnerabilities, develop mitigation strategies, identify research gaps and needs, and increase awareness and coordination between the food and agriculture government and industry stakeholders. To accomplish this, the SPPA brings together Federal, state, local, and industry partners to collaboratively conduct a series of assessments of food and agriculture industries. Each assessment is specific to a single

commodity and provides in-depth analysis of all aspects of that specific process, providing detailed information both to the government to assist in preparedness planning and to the industries involved to help them minimize any vulnerabilities revealed by the assessment.

SPPA assessments are conducted on an entirely voluntary basis between one or more industry representatives for a particular product or commodity, their trade associations, and Federal and state government agricultural, public health, and law enforcement officials. Together, they conduct a vulnerability assessment of that industry's production process using the CARVER + Shock tool. The acronym "CARVER" stands for the factors assessed throughout each commodity's production process: Critically, Accessibility, Recuperability, Vulnerability, Effect, Recognizability, and Shock.

This initiative started in November 2005 and will continue through September 2008. Approximately 50 assessments of specific industries or commodities within the food and agriculture sector will be conducted by that time. At the conclusion of each assessment, a report is gener-

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FBI Safe-Guarding (Cont. from 11)

ated detailing the vulnerabilities of the commodity, possible migration strategies, and indicators and warnings of a potential attack for use by the participating industries and for government planning purposes.

These assessments support the requirements for a coordinated food and agriculture infrastructure protection program as stated in the National Infrastructure Protection Plan (NIPP), Sector Specific Plans (SSP), and Homeland Security Presidential Directive-9 (HSPD-9), *Defense of US Agriculture and Food*.

Below is a sampling of the assessments that have already been conducted:

- Yogurt
- Grain-Export Elevators
- Bottled Water
- Baby Food
- School Kitchens
- Swine Production
- Frozen Food
- Ground Beef Production
- Dairy Cattle Farm
- Corn-Growers
- Juice Industry
- Egg Production
- Fresh-Cut Produce
- Infant Formula
- Poultry Processing
- Fluid Dairy
- Cattle Feedlot
- Live Auction Markets
- Soybean-Growers
- Retain Fluid Dairy Milk

Any industry wishing to be involved in future assessments by the SPPA program or seeking further information about assessments already conducted in their sector is welcome to contact the FBI or our partner agencies for specific information.

Agroterrorism Full Scale Exercise

The FBI Headquarters and FBI Seattle Division hosted an Agroter-

rorism Comprehensive Integrated Field Exercise on September 24-28, 2007 in Seattle, Washington. The goal of this training was to increase awareness of agroterrorism, test response activities to a terrorist attack on the agriculture sector, and engage FBI field agents, veterinarians, public/environmental health officers, and local law enforcement officers in responding to an actual agroterrorism event.

The exercise was conducted in three stages. First, two and a half days of classroom training discussed the various agencies' roles and responsibilities in a potential agroterrorism event as well as existing agroterrorism response protocols

and programs. Next, a table top exercise was conducted using a mock scenario involving the intentional introduction of a foreign animal disease in a large dairy by a group with ties to an international terrorist organization. Finally, a full scale field exercise was conducted at three different sites to correspond to various learning objectives for potential responders to an agroterrorism response. The three sites

focused on evidence collection, clandestine laboratory assessment and take-down, and prevention of an incident at a major public event. The participants who were not actively involved in the field exercise served as observers at the location of their choice, which allowed for broad cross training across the various disciplines who were present.

Regional Agroterrorism Workshops

The FBI has hosted a series of Regional Agroterrorism Workshops this year. The purpose of these workshops is to provide cross training within specific geographical regions of the United States to improve interagency coordination and private sector participation. The trainings served to open dialogue between the FBI, USDA, FDA, public health, and our partners in the private sector. The workshops continue to foster a greater understanding of roles and responsibilities each organization may carry in the event of a criminal or terrorist incident. The training is based largely on the Agroterrorism Criminal Investigative Handbook which was a joint FBI, FDA, and USDA publication and as an extension of the Agroterrorism Working Groups which are in place in our field offices through the FBI's WMD Coordinators.

Six regional workshops were held in 2007, and plans are in place to conduct six more in 2008 across the country. Information about upcoming workshops in your region can be found at www.agroterrorismworkshop.org/.

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InfraGard: Building Trust Among Experts on CIP

by Dr. Phyllis A. Schneck, VP, Research Integration, Secure Computing Corporation, and
Chairman, Board of Directors, InfraGard National Members Alliance

In my personal experience as a private sector executive and InfraGard member, FBI agents whom I met through InfraGard have asked me to explain things that I see in the cyber security and academic/research world, potentially to educate them on a specific topic that would help them with a case or, better yet, to catch one more “bad guy.” Those conversations were based purely on trust, where the FBI agents were people I knew well, and they knew I would provide as much knowledge as I could in my area of expertise. That type of information exchange could never occur over a listserv, portal, or other technology-driven means. In another case, an FBI agent had some information he wanted to share with key leaders in the financial sector, and, once again based on trust, we connected that agent to the correct people. At that point, technology plays a key role in disseminating the information to appropriate parties, but the true motivator for information sharing is not a portal – it is a person.

The FBI’s InfraGard program is designed to replicate this type of interaction: it is designed to build relationships and to foster trust among critical infrastructure subject

matter experts (SMEs) in the private sector and between those SMEs and their colleagues in all levels of government and law enforcement and across all CI/KR sectors. Many of these relationships are formed at meetings or events where people get together in person, perhaps hear

a prominent speaker, and have the opportunity to engage and maintain contact with those of like interests.

InfraGard is unique in its ability to reach into local communities, and engage local and State government and law enforcement with business leaders and local critical infrastructure SMEs focused on the interests of hundreds of communities nationwide.

InfraGard is the only organization that has a vetted CIP SME membership, reaching local communities and connecting all areas of our country to local, State, and Federal law enforcement and government through trusted relationships.

InfraGard Structure

InfraGard, started by the FBI in 1996, is a collaborative effort

between the FBI and local communities. InfraGard is an association of government and business leaders that meet regularly and freely share their ideas and expertise to better protect America’s infrastructures. InfraGard has over 23,000 members as of February 2008, comprising 86

chapters nationwide. All members are vetted by the FBI, but local chapter affiliation (i.e., choosing which particular chapter to join) is the choice of the member once accepted by the FBI. The FBI establishes the criteria for membership. In general, any U.S. citizen who is committed to the protection of our Nation’s critical infrastructure may join.

The InfraGard program is governed at the national level collaboratively by the FBI and the InfraGard National Members Alliance (INMA). The INMA is incorporated as a not-for-profit corporation (501(c)(3)), consisting of 12 Directors and 8 Officers of the Corporation. Each local InfraGard Members Alliance (IMA) is also incorporated as a not-for-profit 501(c)(3), and is governed by a private sector Board

(Continued on Page 14)

The core of “public-private partnership” is trust. We are all human, and humans work, socialize, and share knowledge with those that they trust.



InfraGard (*Cont. from 13*)

and Officers. Each IMA has its own set of Bylaws, as does the INMA. This structure allows the private sector leadership in each community to engage with other organizations and even obtain funding/sponsorships without representing the FBI.

An InfraGard “chapter” is made up of the local IMA and FBI Field Office, and a group of InfraGard members. The chapter and the IMA also may include other government affiliates such as DHS Protective Security Advisors (PSAs). Chapter membership ranges from 50 to 700, based most often on the concentration of critical infrastructure in a community and the proximity of the closest chapter. Some states have more than one chapter – distribution depends on several factors including the geographic location of people who want to participate and the variety of industries in the state. For example, Florida has six chapters while Alaska has only one. The current membership is primarily made up of the business leaders from industries that represent critical infrastructures (transportation, energy, water, etc.) and government agencies.

All PSAs are InfraGard members and serve as a DHS connection for the local InfraGard membership in the communities they serve. The private sector is also developing chapter liaisons from the U.S. Marines, National Guard, and Department of Justice. The INMA has Memoranda of Understanding (MOUs) with several agencies such as DHS, FEMA, and the Bureau of Alcohol, Tobacco, Firearms, and Explosives (BATFE).

Membership Benefits

Members benefit by meeting and interacting with people from industries outside of their own as well as with government representatives (FBI, DHS, State Homeland Security, etc.). In addition, members have access to the FBI’s InfraGard secure network. It is important to note that InfraGard networks and meetings do not involve any classified information. The information on the InfraGard network is unclassified critical infrastructure protection information that the FBI has elected to share with the vetted membership based on the premise that the trusted relationships formed in the local chapters and communities will enable that information to be used or even augmented and modified to better protect our country.

Membership Costs

InfraGard membership is free. Some IMAs/chapters, however, may choose to assess a local fee that goes toward conducting meetings, paying for speakers, etc. For example, the Los Angeles IMA charges an annual fee of \$50. Some funds come from the FBI through the local FBI Coordinator. Other funds come from grants or sponsorships to the IMA. Most funds are represented by “in kind” contributions of volunteer time or services (meeting space, speaking, etc.).

Our Meetings

Chapters generally host a guest speaker who presents on topics that are of interest to chapter members. These topics include, for example,

pandemic outbreaks, cyber vulnerabilities, and continuity planning. Additionally, time is allowed for the members to interact with each other for informal discussions. Meeting attendance depends on the chapter, the topic, etc. Generally, about 25% to 50% of the total local membership attends any one given meeting. In addition, FBI agents and local FBI management may attend these meetings, as well as the local DHS PSA and other State and local government representatives.

In general, InfraGard meetings are open. Some chapters, however, may opt to have members-only meetings. Local chapter leaders determine the culture of their chapter and gatherings based on the community culture. Some chapters meet quarterly, some meet bi-monthly, some meet monthly. It depends on the activity level of the particular chapter. Much of the value of the meetings is joining the private sector SMEs with government counterparts and building the relationships that eventually lead to working together based on trust.

Our Vision

InfraGard is working closely within the NIPP model as a resource for cross-sector SMEs, and as a reach to local communities for planning, response, and national exercises. In our recent past, we have created lines of communication and extended the network of SME relationships to a variety of organizations. A good example is a meeting hosted in August 2006 in Atlanta, bringing together DHS/GFIRST, the U.S.

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LEGAL INSIGHTS

Protecting Food and Agriculture: DHS S&T Should Boost Basic Research Support, and Leverage Capabilities of Other Science Agencies

by Timothy P. Clancy, JD, Principal Research Associate for Law

This month's column should be labeled *science policy insights* — for when it comes to the food and agriculture sector I'm far from an expert. But I can speak with at least some confidence about the state of federal homeland security research. And when it comes to food and agriculture, sustained leading edge research is vital for the United States to counter the complex and varied threats to our food supply and system of agriculture.

This edition of *The CIP Report* highlights the work of the two university-based Homeland Security Centers of Excellence focused on agriculture and food security: the FAZD Center and NCFPD. Both of these centers are consortia of universities and are funded through DHS, Science and Technology (S&T) Directorate, Office

of University Programs. Each center is competitively awarded and new centers can receive up to \$2 million per year for four to six years, according to DHS.

These centers provide integrated, multi-disciplinary, long-term, basic research needed in the fight against complex animal diseases, food-borne pathogens and other threats. These centers have attracted numerous private sector partners including major food packaging and production companies.

However, beginning in 2006, DHS/S&T and the Office of University Programs in particular have suffered budget reductions due to congressional displeasure with DHS/S&T management practices.¹ New DHS/S&T Under Secretary Adm. Jay Cohen responded to these

concerns by significantly reorganizing the Directorate's budget, improving staffing and instituting strategic planning.² These moves have mollified congressional critics at least for now³ but an unfortunate side effect has been a severe reduction in funding for university centers to \$44 million down from a high of over \$70 million in 2005.⁴

In FY 2007, an analysis by the American Association for the Advancement of Science (AAAS) found DHS/S&T funding for university-based research — leading performers of federal basic research — was only \$33 million, a mere fraction of the total S&T budget of \$1.1 billion.⁵ Under Secretary Cohen recently testified before the House Committee on Science and

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¹ *U.S. Homeland Security: Congress Dials Back Research on Understanding Terrorism*, Yudhijit Bhattacharjee, *Science*, August 4, 2006: Vol. 313. No. 5787, p. 610, DOI: 10.1126/science.313.5787.610.

² Statement of the Hon. Jay M. Cohen, Under Secretary for Science and Technology, Department of Homeland Security, before the Subcommittee on Technology and Innovation, Committee on Science and Technology, U.S. House of Representatives, March 6, 2008, http://democrats.science.house.gov/Media/File/Commdocs/hearings/2008/Tech/06march/Cohen_Ryan_Testimony.pdf.

³ "The Committee is pleased with the rapid progress S&T appears to be making toward resolving past deficiencies. The new Under Secretary has restructured the directorate's programs, worked to obligate resources in a timely fashion, and instituted a capable budget office able to deliver timely, accurate, and comprehensible documents. Only time will tell if this new enterprise is on course to produce useful scientific and technological solutions to threats to the homeland." Senate Report 110-084 - Department of Homeland Security Appropriations Bill, 2008.

⁴ *AAAS Report XXXIII: Research and Development FY 2009*, Preliminary Analysis of the Department of Homeland Security R&D Budget, <http://www.aaas.org/spp/rd/prel09p.htm>.

⁵ *AAAS Report XXXII: Research and Development FY 2008*, Chapter 11, Department of Homeland Security R&D Budget, <http://www.aaas.org/spp/rd/dhs08p.htm>.

Legal Insights (Cont. from 15)

Technology that in the FY 2009 request before Congress, the S&T Directorate's investments in basic research will increase to roughly 20% of the total S&T portfolio. It remains to be seen if Congress takes up this budget request or delays action until the next administration takes office.

Also, regardless of its own basic research efforts, DHS/S&T continues to struggle with how to orient its research with efforts of other science funding agencies. The House Appropriations Committee recently called for a review of homeland security research across the federal agencies, fearing that DHS is "duplicating [efforts of other agencies] or failing to draw upon them."⁶

In the food and agriculture sector, USDA in particular is a major source of basic research funding. Both USDA and DHS share responsibility for activities at the

Plum Island Animal Disease Center (PIADC), the location of research on high-consequence biological threats involving zoonotic and foreign animal diseases such as foot and mouth disease (FMD). This joint arrangement was the result of a peculiar twist found in the Homeland Security Act of 2002. The Act transferred ownership and operation of Plum Island to DHS from USDA but did not transfer funded research programs — research continues to be supported mainly by the USDA's Agricultural Research Service (ARS).⁷ This joint responsibility created by statute has forced DHS and USDA to cooperate much more closely on research goals and needs — whether the agencies liked it or not.⁸

Clearly, there is a long way to go if DHS/S&T is going to spur leading edge basic research innovations on par with fellow science agencies.⁹ Despite a rocky start, DHS/S&T

is taking steps to change course and expand cooperation with other more established agencies. A good next step would be for DHS/S&T to co-fund more merit-based, peer-reviewed individual investigator grants with agencies like the National Science Foundation and USDA. Without such future competitive funding opportunities, DHS will not receive full return on its initial investment in the Centers of Excellence. ❖

⁶ "INTERGOVERNMENTAL RESEARCH: Congress mandated that the Department of Homeland Security support U.S. leadership in science and technology. To do so, S&T conducts and funds research in various areas to support the Department's component agencies, to develop countermeasures to potential threats, and to work on cross-cutting initiatives. The Committee is concerned that DHS, and in particular S&T, may be insufficiently aware of research efforts by other Federal agencies in areas related to homeland security and, as a result, may be duplicating those efforts or failing to draw upon them. In addition, the Committee is concerned that the research agendas of other Federal agencies may be influenced by homeland security goals in a way that displaces important research not directly connected to homeland security. The Committee believes that an independent review is necessary to determine whether Federal resources are being adequately and efficiently used in DHS and other Federal agencies to address homeland security needs, as well as to identify opportunity costs that may result from the increasing prominence of homeland security priorities in Federal research portfolios outside of the Department. The Committee provides up to \$1,300,000 for S&T to contract with the National Academy of Public Administration (NAPA) for such a review and expects the contract to be awarded within two months of the enactment of this Act. This funding has been provided within the transition program." House Report 110-181 - Department of Homeland Security Appropriations Bill, 2008.

⁷ This arrangement will continue at the future National Bio and Agro-Defense Facility (NBAF), successor to Plum Island. For more information on NBAF, see *The National Bio- and Agro-Defense Facility: Issues for Congress*, Congressional Research Service, CRS Report RL34160, Updated November 15, 2007.

⁸ *Plum Island Animal Disease Center: DHS and USDA Are Successfully Coordinating Current Work, but Long-Term Plans Are Being Assessed*, United States Government Accountability Office, GAO-06-132, December 2005.

⁹ See: Domestic Nuclear Detection Office/National Science Foundation Academic Research Initiative (ARI), <http://www.nsf.gov/pubs/2008/nsf08534/nsf08534.htm>.

Sector Overview (Cont. from 3)

private, and academic entities perform R&D to help improve the security of the Nation's food and agriculture industries and supply chains. The Federal government also sponsors research facilities throughout the Nation in addition to its own agency research centers.

Information from two Homeland Security Centers of Excellence, [NCFPD](#) and the National Center for Foreign Animal and Zoonotic Disease Defense ([FAZD Center](#)), is featured in this issue on pages [7](#) and [9](#), respectively. The National Alliance for Food Safety and Security (formerly the National Alliance for Food Safety), established in 1998, is a network of 20 universities and contains five national centers of excellence. The National Center for Food Safety and Technology is a research consortium consisting of representatives of the FDA Center for Food Safety and Applied Nutrition (CFSAN), Illinois Institute of Technology, and industry. The University of Minnesota's Center for Animal Health and Food Safety is yet another center dedicated to the study of issues affecting the Agriculture and Food Sector. The aforementioned centers are only a few examples of the many organizations working to better protect the Nation's food supply and agricultural community from all hazards and to enhance sector resilience.

For additional information on the sector, please see the Agriculture and Food SSP, available at <http://www.dhs.gov/nipp> ❖

GCC and SCC Membership

DHS established the Critical Infrastructure Partnership Advisory Council (CIPAC) to help facilitate improved information sharing and enhanced coordination between public and private stakeholders. CIPAC membership consists of member organizations of the GCCs and SCCs. According to [CIPAC's webpage](#), membership of the Food and Agriculture Sector Councils is as follows:

Food and Agriculture GCC

- American Association of Veterinary Laboratory Diagnosticians
- Association of Public Health Laboratories
- Association of State and Territorial Health Officials
- National Assembly of State Animal Health Officials
- National Association of County and City Health Officials
- National Association of State Departments of Agriculture
- National Oceanic and Atmospheric Agency
- National Science Foundation
- The National Plant Board
- The Navajo Nation
- United States Department of Agriculture
- United States Department of Commerce
- United States Department of Defense
- United States Department of Health and Human Services
- United States Department of Homeland Security
- United States Department of the Interior
- United States Department of Justice
- United States Environmental Protection Agency

Food and Agriculture SCC*

- Agricultural Retailers Association
- American Farm Bureau Federation
- American Frozen Food Institute
- CF Industries, Inc.
- CropLife America
- Food Marketing Institute
- Food Processors Association
- Grocery Manufacturers Association/Food Products Association
- International Association of Refrigerated Warehouses
- International Dairy Foods Association
- International Flight Services Association
- International Food Service Distributors Association
- International Warehouse Logistics Association
- Kraft Foods Global, Inc.
- McCormick & Company, Inc.
- National Association of Convenience Stores
- National Cattlemen's Beef Association
- National Corn Growers Association
- National Food Service Security Council
- National Grain and Feed Association
- National Milk Producers Federation
- National Pork Board
- National Pork Producers Association
- National Restaurant Association
- National Retail Federation
- United Fresh Fruit & Vegetable Association
- United Fresh Produce Association
- USA Rice Federation

* This list reflects only sub-council leadership, those who serve on the FASCC, not full sub-council membership.

FBI Safe-Guarding (Cont. from 12)

Agroterrorism Working Groups

Agroterrorism Working Groups were initiated in June 2005 to enhance the FBI's ability to detect, deter, assess, and respond to potential terrorist threats or attacks targeting the food and agriculture sectors in a manner coordinated regionally throughout the country. These working groups are comprised of Federal, state, and local government counterparts in food and agriculture, appropriate local, county, state and/or Federal law enforcement personnel, and public health personnel.

Along with regular meetings, the FBI provides a secure means of communication to members of the Agroterrorism Working Groups through the use of the Food and Agriculture InfraGard portal within the InfraGard system. This portal is also available to other members of the food and agriculture community.

Food-Agriculture InfraGard

The Food-Agriculture InfraGard Special Interest Group (SIG) is a resource dedicated to the safeguarding of the food and agriculture sectors of both private industry and government through information-sharing networks and a private secure portal of communication. The Food and Agriculture InfraGard SIG is intended to enhance the sharing of information among private sector stakeholders who can be called on to assist the FBI in agriculture sectors of our nation's critical infrastructures. It aims to be a consortium of agriculture security

professionals and law enforcement officials with the common goal of protecting America's farmland, food products, animals, and industry.

Assessments, news, relevant links, and up-to-date information on protection issues related to the agriculture community are available to Food and Agriculture InfraGard SIG members. Members may submit articles for posting on the site, and communicate on the message board about food and agriculture sector issues in a secure environment. The site is also broken into areas specific to law enforcement, industry, food/agriculture agencies, animal/human health organizations, and academia. The Food and Agriculture InfraGard SIG offers a unique opportunity to belong to the fastest growing network dedicated to agriculture-specific information sharing, driven to protect the food and agriculture infrastructure of the United States.

Participation in the Food and Agriculture InfraGard SIG requires membership in the national InfraGard Program and affiliation with the agriculture industry. Currently there are over 18,500 members of InfraGard and 900 members in the Food and Agriculture InfraGard SIG. To belong to the Food and Agriculture InfraGard SIG, visit www.infragard.net.

International Symposium on Agroterrorism

The FBI's Weapons of Mass Destruction Directorate supports the FBI Kansas City Division's International Symposium on Agroter-

rorism (ISA), to be held next on April 22-24, 2008. The three-day symposium attracts approximately 800 international and domestic attendees including individuals from Federal, state, and local law enforcement, public health, industry, and academia. The symposium is designed to increase global awareness and provide the global perspective on agroterrorism issues, to establish and strengthen liaison relationships at the international, Federal, state, and local levels, and to better integrate industry regarding the protection of the food and agriculture sector.

For more information on the upcoming 2008 ISA and to register to attend, please visit www.fbi-isa.org.

The FBI is dedicated to its mission and its role in the food and agriculture sector and preparing against an agroterrorist attack with our current and future partners.

Linda Lee is an Intelligence Analyst in the FBI's WMD Directorate, WMD Operations Unit. Peter de la Cuesta is a Supervisory Special Agent with the FBI's WMD Directorate, WMD Countermeasures Unit. He is also the program manager of the Infrastructure Team. For more information on the FBI's WMD Directorate and its programs, please visit www.fbi.gov/hq/nsb/wmd/wmd_home.htm.

* A version of this article previously appeared in *The Guardian*, an InfraGard publication. ❖

NCFPD (Cont. from 8)

the International Food Information Council website: <http://www.ific.org/riskcommunication/index.cfm>.

System Strategies — Establishing innovative prevention, response, and recovery strategies to minimize both the probability of a terrorist attack on the food system and the resulting health and economic consequences. The Systems Strategies theme continues to develop approaches to prioritize interventions and countermeasures based on their effectiveness and economic utility, importantly including complementary benefits beyond food defense. For instance, a benchmarking tool designed by the team led by Jean

Kinsey at the University of Minnesota and TFIC allows companies at different points in the supply chain to compare their security practices to industry averages and industry leaders. (See Figure 3) The tool is available online at <http://foodindustrycenter.umn.edu/Food Defense Diagnostic Tool.html>.

Education — NCFPD’s educational program is thematically overarching, focusing on enhancing expertise in food defense through the development and expansion of specific programs of study for graduate and undergraduate students, postdoctoral students, and mid-career professionals in the public and private

sector. More than one hundred graduate students and postdoctoral research trainees have worked across nearly all NCFPD research and education projects. This notably demonstrates the capability of the academic research community to respond flexibly and rapidly to the need for professional expertise in all aspects of food protection and defense. By educating both current and future leaders and developing critical expertise in food defense, NCFPD helps to ensure the protection of tomorrow’s food supply. ❖

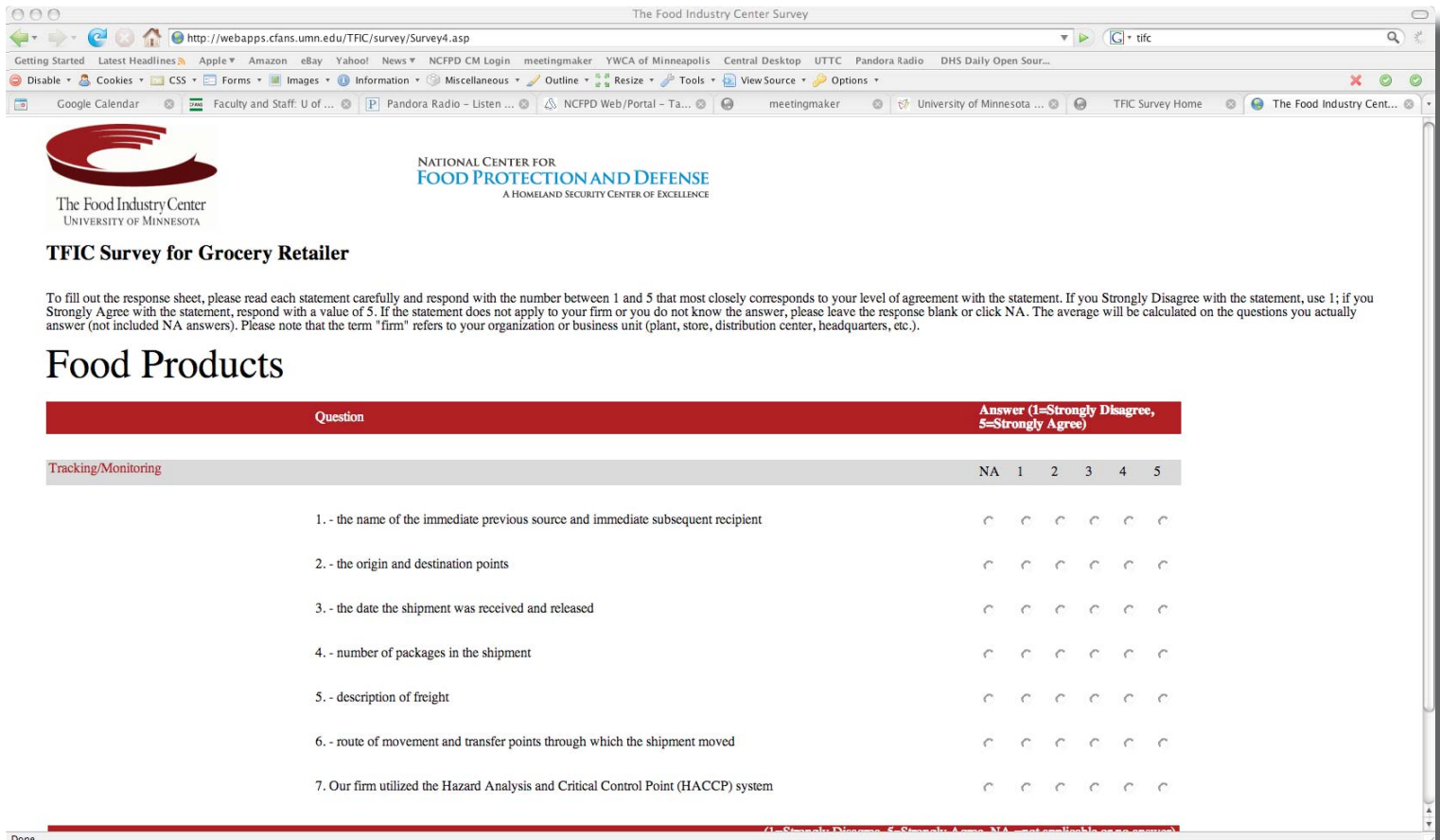


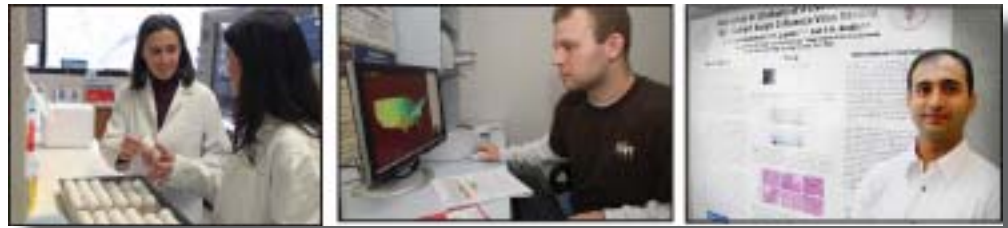
Figure 3: TFIC and NCFPD’s benchmarking tool for food companies’ defense assessment.

FAZD Center (Cont. from 10)

often for the first time. They examined policy and suggested changes to improve response and recovery, and established working relationships.

- Risk communications training on FAZD issues: The FAZD Center sponsored a two-day “train the trainer” workshop focused on how to handle risk communications during an outbreak of an animal disease that threatens the public health or the economy. Twenty-eight communicators participated in the workshop, representing Texas A&M University, Texas Tech University, Ohio State University, Iowa State University, Purdue University, Kansas State University, the University of Arizona and the University of Georgia. The program is designed to give communicators the tools and training they need to provide instruction to communicators in their regions.

This approach results in a stream of products of high impact that are useful and relevant to a wide range of customers in government and industry, including:



As a full-spectrum center, the FAZD Center conducts research that leads to vaccines, diagnostics, epidemiologic models, economic models, risk analysis, graduate education curricula, stakeholder workshops and training programs, all designed to contribute to the nation’s defense against catastrophic animal diseases that threaten humans as well as livestock.

- The DHS Office of Health Affairs.
- The DHS Office of National Protection & Programs.
- The National Biodefense Analysis & Countermeasures Center.
- The U.S. Department of Agriculture.
- The Centers for Disease Control and Prevention.
- Emergency response agencies at the state level.
- The U.S. agriculture industry. ❖

InfraGard (Cont. from 14)

Secret Service (USSS) Electronic Crimes Task Force, and the INMA in conjunction with the Atlanta chapter of InfraGard. That local meeting featured presentations from USSS headquarters on the Real-ID program, DHS on the NIPP, and sufficient “social” time for the combined audiences from all of the organizations to meet.

Meetings such as this, anchored with InfraGard and engaging the expertise and members of complementary organizations, are happening all over the country, from LA to NY Metro. As InfraGard grows, we strive to engage our membership to build alliances and relationships with the parts of their community that need to connect in order to

protect critical infrastructure.

InfraGard will continue to complement and assist the efforts of other organizations, both private sector and government, securing infrastructures, one trusted relationship at a time. ❖

FDA Protection Plan (Cont. from 6)

discusses the issue of cross-contamination and contamination from food workers as a result of more convenience foods being consumed by Americans. There is also a greater variety of foods being eaten year-round, including consumption of exotic foods whose safety hazards are not well understood.

The global food supply is another important factor to consider in food safety. According to the *Plan*, the United States trades with over 150 countries/territories and 15 percent of the overall U.S. food supply by volume is imported. This puts a great deal of importance on the regulatory systems of other countries.

The *Plan* discusses enhancing IT systems related to both domestic and imported foods. This will help the efficiency of more rapidly identifying food importers, and maintaining, updating, and searching records on food facilities and shipments. IT systems are also expected to more accurately identify firms involved in the food import supply chain during the import screening and review processes.

While FDA has identified its approach and integrated plan to food safety and protection, there is still progress to be made. This past January, the United States Government Accountability Office (GAO) reported on its assessment of the *Plan*. The GAO report stated that, while several positive first steps are intended to enhance food safety, the lack of a clear description of resources and strategies makes it difficult to assess the likelihood of its success. The report did acknowledge that the *Plan* indicated an important shift in FDA's focus to prevention of foodborne illness instead of intervention of after-contamination and resulting illnesses that occur.

For more information on the *Food Protection Plan*, please visit <http://www.fda.gov/oc/initiatives/advance/food.html>. ❖

The CIP Program works in conjunction with James Madison University and seeks to fully integrate the disciplines of law, policy, and technology for enhancing the security of cyber-networks, physical systems, and economic processes supporting the Nation's critical infrastructure. The CIP Program is funded by a grant from The National Institute of Standards and Technology (NIST).

The CIP Report is published by Zeichner Risk Analytics, LLC (ZRA) on behalf of the CIP Program. ZRA is the leading provider of risk and security governance knowledge for senior business and government professionals. ZRA's vision is to be a consistent and reliable source of strategic and operational intelligence to support core business processes, functions, and assurance goals.

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