

I am pleased to be here to discuss Federal and State collaborative efforts with respect to food and agriculture bio-security. This is an issue of importance to our Nation, and one we take seriously at the United States Department of Agriculture (USDA). As you are aware, I testified before the Senate Committee on Agriculture, Nutrition, and Forestry in July 2005 on food and agriculture security issues. My testimony today updates much of that information, but also includes more discussion of Federal-State collaborative research efforts. USDA considers food and agriculture bio-security issues essential to its mission of providing leadership on food, agriculture, natural resources, and related issues based on sound public policy, sound science, and efficient management. The success of USDA's efforts is dependent on the coordinated work of a broad range of Federal, State, local, and private sector partners. Food and Agriculture in the Context of Homeland Security Agricultural exports were \$62.4 billion in fiscal year (FY) 2005 and are expected to reach a record-high \$64.5 billion in FY 2006 - with agricultural trade being a positive addition to our overall balance of trade. Agricultural imports are also significant with a value of \$57.7 billion in FY 2005. Our nation's food and fiber system contributes approximately \$1.24 trillion dollars, over 12 percent, to our gross domestic product and it employs about 17 percent of our entire workforce. We face many challenges in protecting this important infrastructure. The agricultural industry is particularly concerned about security because diseases and pathogens--whether they occur naturally, are unintentionally introduced or are intentionally delivered--do not respect geo-political borders. The interconnected nature of the global food system contributes to our economic strength by improving production and marketing efficiency and providing timely responses to consumer needs. But, this integration is also a challenge in the event of attack or natural disease outbreak. The fact is, products move quickly from State to State and nation to nation; a pest, disease or other agent could spread just as quickly. Since September 11, 2001, USDA has made great strides in expanding our mission to better include security. We remain steadfast in our belief that the threat to agriculture is very real. The Department has been working closely with its Federal, State, and local government partners, as well as with industry stakeholders, to address these concerns via a sector-wide strategy based on White House guidance. We are relying upon guidance provided in Homeland Security Presidential Directive (HSPD)-7, Critical Infrastructure Identification, Prioritization, and Protection, and HSPD-9, Defense of U.S. Agriculture and Food, which address our preparedness for intentional acts of terrorism and the unintentional introduction of agents, pests, and diseases that could harm our sector.

HSPD-7: Critical Infrastructure Identification, Prioritization, and Protection

USDA has worked in coordination with the Department of Homeland Security (DHS) and our partners at the Department of Health and Human Services' (HHS) Food and Drug Administration (FDA) to ensure that we develop a coordinated approach toward implementing HSPD-7 for the food and agriculture sector. Central to this directive are the requirements for the government to collaborate with the private sector for infrastructure protection and to create an overarching framework and unique sector plans for protecting key assets and resources. Since August 2003, USDA, DHS and HHS have worked with Federal, State, local, and private sector participants to establish a formal entity for sharing sensitive information, new policies, best practices and vulnerability assessments on a regular basis to help ensure the protection of the U.S. food and agriculture sector. The government entity, the Food and Agriculture Government Coordinating Council, is led jointly by DHS, USDA, and HHS, and includes Federal, State, and local officials. The private sector entity, the Food and Agriculture

Sector Coordinating Council, is comprised of two leadership officials and an alternate from each of seven sub-councils representing the farm-to-table continuum. The two Councils meet quarterly and regularly hold individual and joint calls to discuss issues of mutual interest, such as sector vulnerability assessments and Federal research and development plans. As a result of the joint sessions, the Councils create working groups to address specific issues and report recommendations.

HSPD-9: Defense of United States Agriculture and Food.

In January 2004, the White House issued HSPD-9, which set forth the framework for a national strategy for preparing, protecting, and enhancing the security of the Nation's agriculture and food infrastructure. HSPD-9 states that a national policy must include programs addressing:

- ? Awareness and Warning;
- ? Vulnerability Assessments;
- ? Mitigation Strategies;
- ? Response Planning and Recovery; ?
- Outreach and Professional Development;
- ? Research and Development; and,
- ? Coordinated Budgets.

At this point, I would like to address each of these program areas, giving specific examples of how the Department is working toward a national policy of strengthening our preparedness for intentional terrorist acts, and enhancing current programs designed for the prevention or control of the unintentional introduction of harmful pathogens to our Nation's food and agriculture.

Awareness and Warning One of USDA's key goals is to expand our surveillance and monitoring systems to provide early detection and tracing of diseases and outbreaks. In addition to expanding our systems, it is important to integrate them at a high level--identify aberrations across mission areas and sectors. Intelligence is also essential to awareness and warning so that we are knowledgeable of our enemy's intent and capabilities. We use intelligence to prioritize many surveillance and monitoring activities. As such, USDA is forging new relationships and enhancing existing relationships to improve upon our preparedness and early warning capabilities. Other efforts are ongoing in the Intelligence Community, such as the ARGUS Project, under development in the Intelligence Technology Innovation Center. Argus is a global biosurveillance system that captures and integrates massive amounts of data from many disparate sources to provide an early warning of potentially catastrophic bioevents. Our USDA programs and ARGUS will both provide feeds to the Department of Homeland Security's National Biosurveillance Detection System to help form an integrated picture of developments in this critical area.

Animal Health Surveillance Efforts

By utilizing an integrated Federal-State system of collecting animal diagnostic samples to detect diseases at statistically significant levels, state-of-the-art laboratory networks to test samples, and analyzing data, USDA's Animal and Plant Health Inspection Service (APHIS) is able to

anticipate new or emerging threats, and to quickly eliminate or contain already-identified threats. APHIS is enhancing its animal health surveillance systems by collaborating with its counterparts in the Canadian and Mexican governments. As an example, the North American Animal Health Committee, which includes experts from the United States, Canada, and Mexico, considers surveillance methods for detecting a foreign animal disease and engages in collaborative efforts to develop harmonized approaches that reduce trade disruptions. In addition, USDA partners with HHS's Centers for Disease Control and Prevention (CDC) and FDA, the U.S. Geological Survey (National Wildlife Health Center), the Southeast Cooperative Wildlife Disease Study, the National Assembly of State Animal Health Officials, and the National Association of State Public Health Veterinarians in the Interagency Working Group for the Coordination of Zoonotic Disease Surveillance (ZDWG). The ZDWG meets by teleconference monthly to address zoonotic disease surveillance issues. Surveillance for Avian Influenza With growing attention to the threat of avian influenza (AI), USDA has further strengthened its already extensive efforts on the disease, including surveillance, enhanced bio-security of poultry farms, controlling the movement of birds and products, and encouraging industry practices that reduce risk. The supplemental appropriation recently enacted as part of the FY 2006 Defense Appropriations Act contains funding important to bolstering this effort. As part of our overarching program for AI, USDA conducts ongoing surveillance in numerous ways. USDA works closely with State Agriculture Departments, universities, and industry representatives to increase surveillance and testing within the commercial poultry population, live bird markets, and migratory bird flyways. USDA is also capitalizing on our Exotic Newcastle Disease (END) surveillance program in backyard flocks by testing the END samples for AI as well.

For the last several years APHIS has conducted an outreach campaign called "Biosecurity for the Birds." The campaign places informational materials directly into the hands of commercial poultry producers, as well as those raising poultry in their backyards. All of the brochures and fact sheets are available in several languages and emphasize the need for good bio-security and disease surveillance programs to reduce the possibility of bringing any disease, not just AI, on the farm or into their back yard. USDA and CDC continue to coordinate domestic AI diagnosis and response efforts. I would be remiss if I did not also note that the U.S. poultry industry has been extremely vigilant in its efforts to ensure that any disease is detected, contained and eradicated quickly. Plant Pest Detection The APHIS Pest Detection program coordinates a nationally directed survey program through the Cooperative Agricultural Pest Survey network. The program works with State and university cooperators through national, regional, and State-level committees to prioritize survey projects and provides funds for State cooperators to conduct the agreed upon surveys. The program also trains and equips State cooperators to conduct national surveys. Offshore Pest Surveillance APHIS maintains the Offshore Pest Information System (OPIS). OPIS is a structured, risk-focused process designed to collect, synthesize and analyze, and communicate relevant offshore agricultural pest and disease information. APHIS plant and animal health specialists located overseas monitor and track agricultural pest and disease situations for OPIS reporting. This information is used to prevent, or prepare for, the possible introduction of pests or diseases into the country.

Food Testing for Threat Agents

Several agencies within USDA collaborate to test for threat agents within the food supply. USDA's Food Safety and Inspection Service (FSIS) conducts surveillance to provide ongoing verification of food safety processes and a quick alert to contamination or an outbreak related to meat, poultry, or egg products.

FSIS has expanded its longstanding regulatory sampling program to test for harmful chemical, biological, and physical hazards in these products. The proportion of samples tested for threat agents depends on the DHS threat condition. These activities, as well as FSIS' daily presence in facilities, help protect the food supply from intentional contamination. In addition to FSIS' activities, USDA's Agricultural Research Service (ARS) is developing new tests for the detection of foodborne pathogens and toxins and is validating those tests in food matrices, which is essential to ensure that detection methods actually work in foods, not just in a test tube. The Small Business Innovation Research program administered by USDA's Cooperative State Research, Education and Extension Service (CSREES) funds small business research and development projects, including several that address agricultural bio-security threats. Notable among these are several projects that focus on detection of food borne bio-security threats including: Salmonella, E. coli, Listeria, Hepatitis, and foreign contaminants. CSREES is also funding work at the University of Minnesota to implement a national interactive web-based communication and coordination system to facilitate Federal, State and local collaboration in food protection and defense. This project, which is based on an Association of Food and Drug Officials (AFDO) prototype, leverages the resources and expertise from the DHS-funded National Center for Food Protection and Defense, the AFDO, and the National Food and Agriculture Laboratory Committee. Consumer Complaint Monitoring System FSIS' Consumer Complaint Monitoring System (CCMS) is a national system to monitor and track food-related consumer complaints. The system is triaged daily by public health nurses who look for common patterns and trends that could serve as an early warning of an outbreak or an intentional contamination event. An example of building upon existing safety tools to also include security goals, CCMS is used as a real-time, early-warning system of a potential attack on our food supply. Consumers report food safety complaints by calling USDA's Meat and Poultry Hotline (1-888-MPHotline) or reporting to FSIS District Offices. The CCMS database also contains food safety complaints made to other Federal agencies, such as FDA, and State and local health departments. FSIS is working with State and local partners to include their data, thereby improving communication and data-sharing capabilities to increase detection and provide more efficient intervention. FSIS is also building a system to support and improve the agency's incident response capabilities to natural disasters and acts of terrorism. Specifically, the Non-Routine Incident Management System (NRIMS) will provide FSIS with the ability to meet the expectations laid out in the National Response Plan (NRP). The NRIMS will maintain a unified approach to incident management that supports the incident command structure, and in the event of a major incident, will optimize collaboration with other USDA agencies, the State, and other Federal government emergency support functions.

Electronic Commodity Ordering System expansion Similarly, USDA's Food and Nutrition Service's (FNS) Electronic Commodity Ordering System (ECOS) program also builds on an existing program to enhance safety or security. Adapting the ECOS to include a commodity

food safety complaint component is the first step in implementing a rapid alert and notification system to reach State and local commodity recipients with up-to-the-minute food safety information. This change allows local schools to report defective foods in a timely manner and enables USDA to see trends in complaints and 'connect the dots' should an intentional contamination appear in different places at the same time. Laboratory Networks Detecting pests, disease outbreaks or contamination quickly enables us to determine the origin, respond, and mobilize sooner, which reduces the impact of an event. Therefore, our laboratories are important surveillance tools. To enhance our detection ability and our response capabilities, we have established national networks of Federal and State laboratories with the capacity to test animal, plant, and food samples for threat agents in the event of a terrorist attack. USDA is also part of a consortium of laboratory networks including animal, plant, food, public health, defense and environmental interests. CSREES works closely with APHIS and other partners to coordinate the National Animal Health Laboratory Network (NAHLN) and the National Plant Diagnostic Network (NPDN). Both networks have the ability to respond to biological agents whether intentionally or unintentionally introduced.

The NAHLN is a joint effort among CSREES, APHIS's Veterinary Services and the American Association of Veterinary Laboratory Diagnosticians to create a functional national network from existing animal diagnostic laboratories. At the end of FY 2005, the NAHLN consisted of 49 State and university laboratories in 41 States. Surveillance for transmissible spongiform encephalopathies (including bovine spongiform encephalopathy, chronic wasting disease and scrapie) is occurring in 26 NAHLN labs. A surveillance plan for classical swine fever (CSF) was developed and is being implemented in States with a high risk for introduction of CSF. Twelve NAHLN labs will be testing CSF samples and 18 other NAHLN labs will assist with sample collection and processing. Assays for AI and END have been deployed in 38 labs throughout the United States. The support and development of the NAHLN network is a strong weapon against bio- and agro-terrorism. Similar to NAHLN, the NPDN is a joint effort between CSREES and APHIS Plant Protection and Quarantine to create a national network from the existing plant diagnostic laboratories. Recently, the NPDN has been an important component of the soybean rust (SBR) coordinated framework that provides timely information about SBR, thereby saving soybean growers unnecessary fungicide applications.

USDA and HHS have developed an integrated laboratory network, the Food Emergency Response Network (FERN). FERN is a collaborative effort that includes Federal and State laboratories, coordinated jointly by FSIS and FDA to provide ongoing surveillance and monitoring, as well as a rapid and local response when necessary. Laboratories participating in FERN are responsible for detecting and identifying biological, chemical and radiological agents in food. To enhance surveillance capabilities, laboratory networks from a variety of Federal Departments have agreed to work cooperatively in an Integrated Consortium of Laboratory Networks. All have signed onto a Memorandum of Understanding to communicate and cooperate by sharing capabilities, policies, procedures and approaches for handling laboratory analysis for routine surveillance and surge capacity during national emergencies. The consortium also seeks to reduce redundancies among laboratories, identify holes in laboratory capabilities and to find solutions to managing these identified issues in the future. Together our

network of resources work to enhance detection of - and enables a rapid and sufficient response to - food, animal, plant and human health emergencies. Coordination with the Intelligence Community and Law Enforcement USDA is expanding its partnerships to include nontraditional partners such as intelligence community members and law enforcement agencies. One way to develop strong relationships is to work side-by-side with these entities. A senior intelligence advisor is assigned to USDA's Homeland Security Office and works primarily on information sharing between the intelligence community and USDA, bolstering that vital connection. In addition, FSIS has staff assigned to work closely with the National Counter-Terrorism Center, and APHIS and FSIS attend working level staff meetings of the interagency Ag-Intel Working Group to exchange information on potential threats to the sector.

Vulnerability Assessments

Vulnerability assessments play a key role in helping us to determine and implement the most effective countermeasures to prevent a terrorist attack on our sector. Interagency Site Assistance Visits USDA is partnering with the FBI, FDA, and DHS on the Strategic Partnership Program for Agroterrorism, a program to visit a variety of industries within the sector to validate previously conducted vulnerability assessments, initiate new assessments, and foster improved relations among industry, State agriculture and health officials, local law enforcement, FBI officials, and USDA and FDA field staff. Findings will also be used in considering mitigation strategies and to populate DHS databases. To ensure appropriate government and industry participation, the effort is synchronized via the Sector Coordinating Councils. As examples, USDA has partnered with the grain industry in Louisiana; will begin working with North Carolina to examine vulnerabilities in central kitchens preparing food for the National School Lunch Program; and, plans to work with the egg industry in Pennsylvania. USDA will coordinate with FDA to work with industries that are jointly regulated. FSIS has completed eight vulnerability assessments for selected domestic and imported food products. APHIS has completed four assessments for selected agricultural production industries. Both agencies have provided technical expertise concerning threat scenarios and the application of the CARVER + Shock assessment tool to industries conducting their own assessments. These assessments help industry learn more about their vulnerabilities and provided a forum to consider mitigation strategies. USDA agencies have worked with private sector entities including the National Pork Producers Board, the Texas Cattle Feeders Association, the American Meat Institute, National Turkey Federation, United Egg Association, and Kraft Foods. USDA plans to formalize its agencies' outreach and assistance via the Interagency Site Assistance Visits. CSREES is also working to further enhance food security assessments. It is funding multi-disciplinary research at Rutgers University to better understand public awareness, perceptions and reactions and to identify the key information needs in the event of a food security incident. The project includes research to facilitate rapid communications, investigations, trace back and containment. In addition, the project is providing fundamental training to several graduate students who are developing critical food bio-security research expertise. CSREES also supports a Multi-State Research Committee specifically to assess the potential impacts of bioterrorism on crop production and trade. As an illustration of the dual utility of this effort, one of the project members had analyzed the probable impacts of a hypothesized disruption of the grain handling capacity at the Port of New Orleans well before the devastation of Hurricane Katrina occurred. As a result, valuable information was available when this disaster occurred. Mitigation Strategies Early awareness enables a more effective

mitigation strategy. USDA has the goals of developing animal tracking systems and expanding screening and inspection procedures, so that we may quickly respond to an attack or naturally occurring incident.

National Animal Identification System

The implementation of a national animal identification and tracking system (NAIS) is a priority for USDA. NAIS will enhance the speed and efficiency of disease trace backs by standardizing animal movement recordkeeping and using newer technologies. Upon full NAIS implementation, our goal is to be able trace the movements of all exposed or infected animals entered in the NAIS within 48 hours of a disease diagnosis. USDA, State agencies, Tribal Nations, and agricultural stakeholders are making strides toward full NAIS implementation. Currently, all the States, 5 Tribes, and 2 U.S. Territories are capable of registering premises according to USDA standards, and more than 150,000 locations have received a nationally unique premises identification number. USDA is also preparing to begin allocating animal identification numbers in the near future. Stakeholder comments on the NAIS strategic plan and draft program standards indicate strong support for NAIS. While views among stakeholders vary, a majority of producers who commented on these documents favor a system that allows animal movement data to be privately held. On August 30, 2005, USDA announced the development of a public/private partnership that enables the private sector to maintain animal movement data as part of the NAIS. Efforts continue to register premises and establish a solid framework for construction of an effective NAIS in the years to come. Targeted Screening and Inspection of Imported Food FSIS ensures that meat, poultry and egg products imported into the United States are produced in a system that provides the same level of protection against food safety hazards as the domestic system. In addition, when each meat, poultry and egg product shipment enters the country under the authority of U.S. Customs and Border Protection, FSIS import inspectors verify that each lot is properly certified, examine each lot for general condition and labeling and conduct reinspection as appropriate. To aid in ensuring the importation of safe and wholesome foods, FSIS established Import Surveillance Liaison Officers (ISLOs), and assigned them to port cities on the perimeter of the United States. FSIS has 22 ISLOs who conduct a broad range of surveillance activities at seaport, land entry points along the Canadian and Mexican borders, and air terminals across the United States. Their focus is beyond the inspection areas where import inspectors work and includes docks, refrigeration and storage areas, and they coordinate with other agencies concerned with the safety and security of imported foods. Minimizing the Impact of Soybean Rust on the Agriculture Industry In November 2004, USDA published its Strategic Plan to Minimize the Impact of the Introduction and Establishment of Soybean Rust on Soybean Production in the United States, which involves a coordinated effort of Federal and State agencies, industry, growers and crop consultants to enable recovery from the introduction of SBR.

On March 15, 2005, the USDA SBR website was launched to provide a one-stop source for information, including an early warning system on detections and appropriate control recommendations. The ARS is conducting research to develop effective fungicide treatments to mitigate any outbreaks or prevent them from occurring. In addition, ARS scientists are actively involved in the identification and development of disease resistant germplasm.

Through a partnership agreement between CSREES, USDA's Risk Management Agency and North Carolina State University, additional crop-pest combinations, including some of concern in Pennsylvania, will be added to the program this year. This partnership will build on a CSREES National Research Initiative (NRI) research grant to Pennsylvania State University to develop a new Pest Information Platform for Extension and on the capabilities of Zedex, a private meteorological firm in Bellefonte, Pennsylvania. Preventing Animal and Plant Pests and Diseases from Entering the United States USDA remains committed to maintaining a strong relationship with DHS and working cooperatively to ensure the continued success of agricultural inspection operations at all U.S. ports of entry. For example, APHIS is working with DHS's Customs and Border Protection to establish a quality assurance program for agricultural inspections. This program will ensure the quality and thoroughness of inspections and further facilitate communications. USDA and DHS are also cooperating on new technologies to enhance border inspection efforts, including development of an automated inspection system to screen manifests electronically and target high-risk cargo; remote digital imaging to quickly identify pests on imported items; and, a nationwide database of regulation violators. Response Planning and Recovery In the event of an attack or unintentional contamination or outbreak, it is important that we all know our respective roles and responsibilities. The NRP, issued by DHS, is integral to ensuring coordinated incident responses.

National Response Plan Implementation

USDA is identifying and preparing revisions to existing regulations, policies and guidance to assure compliance with the NRP. USDA has developed and is delivering NRP training courses for USDA employees and stakeholders. Under a cooperative agreement, USDA, DHS, FDA and the National Association of State Departments of Agriculture formed a working group to develop the Food and Agriculture Annex to the NRP and the interagency Food and Agriculture Response Plan that will implement the annex. To date, the working group has submitted the Annex for interagency review; finalized the template for the Plan; and, is in the process of pilot testing the template.

USDA is also sharpening its readiness for the Incident Command System. This is a part of a command approach that gives Federal, State and local governments a unified strategy for working together to prepare for, respond to, and recover from domestic incidents. APHIS currently implements the Incident Command System when responding to animal and plant health incidents. In conjunction with our State colleagues, there are State-level emergency response teams on standby. These teams will typically be on site within 24 hours of the detection of a plant pest or animal disease. FSIS is also developing a series of exercises to take place across the country over the next three years to prepare to respond in the event of an incident involving the intentional contamination of the food supply. Stakeholders encouraged to participate in the exercises include Federal, State and regional food safety, public health, emergency management and law enforcement agencies and affected industries. One objective of the exercise is to test the ability of the agencies to respond within an incident command system. National Plant Disease Recovery System USDA is working with Federal agencies, State and local governments and the private sector to develop a system, the National Plant Disease

Recovery System (NPDRS), capable of responding to a high consequence plant disease. ARS has assumed leadership of this effort and initiated a roadmap for implementation. NPDRS will implement sufficient control measures and develop resistant seed varieties for economically important crops. Disposal and Decontamination USDA also recognizes the need to look beyond the initial response and be prepared to assist in the recovery of the industries that constitute our critical infrastructure. In the event of an intentional contamination of the food supply, there is the potential that large volumes of food products will need to be disposed of and food processing facilities will need to be decontaminated. FSIS has developed, in conjunction with FDA and the Environmental Protection Agency, a document that provides guidance as to the roles and responsibilities of various agencies in disposal and decontamination activities, options that would be available for disposal of contaminated food products and decontamination of facilities depending upon the type of agent used in the attack and a list of important contact numbers when dealing with disposal and decontamination issues.

FSIS is also working with and encouraging industry and States to start preparing and planning for the disposal of food, which might be classified as a hazardous waste, in advance of an event. National Veterinary Stockpile APHIS administers the National Veterinary Stockpile (NVS) for specific, high threat foreign animal diseases. It is capable of maintaining vaccines for use in the United States in the event of a significant foreign animal disease outbreak. APHIS will use the NVS to consider and obtain "ready-to-use" vaccine products. The goal is for NVS to become one component of an overall response planning and recovery effort to provide the best possible protection against an attack on our food and agriculture system. USDA is working with DHS, FDA, and the Environmental Protection Agency in ensuring that adequate supplies of animal vaccines, antivirals, and therapeutics have been stockpiled to appropriately respond to the most damaging animal diseases affecting human health and the economy. APHIS has awarded a five-year contract to Fort Dodge Animal Health to develop an AI vaccine antigen bank for poultry that will house enough frozen antigen to produce up to 10 million doses of vaccine for a variety of AI subtypes. In the event of a high pathogenicity AI outbreak, vaccination could be used to create barriers against further spread and assist with our overall control and eradication measures. Coordination with CDC USDA and CDC continue to coordinate interagency response efforts with respect to food safety and security, especially at the animal-human interface. Two permanent veterinary personnel staff from USDA have been posted to CDC. These liaison positions and established relationships have served the agencies well in times of crisis, most recently during the avian influenza outbreak in Southeast Asia. The agencies offered technical assistance to one another and shared information on the status of affected countries, import bans, and the prevention of occupational exposures. Outreach and Professional Development Outreach and professional development provide fundamental underpinnings for USDA bio-security preparedness by assuring that Federal personnel and their State, local and private sector cooperators possess the core knowledge and abilities that will be necessary. It is equally important to have outreach capacity to educate and inform the citizens directly affected by bio-security threats and incidents. CSREES provides the leadership and funding for the Extension Disaster Education Network (EDEN) which is a collaborative multi-State effort linking Extension specialists across the country. EDEN's mission is to share education resources to reduce the impact of natural and man-made disasters. This mission is carried out through interdisciplinary and multi-State research and education programs addressing disaster mitigation, preparation, response and recovery. EDEN works by linking

with Federal, State and local agencies and organizations in anticipation of future disaster education needs to prepare communications and deliver timely information that meets local needs. EDEN provides a national clearing house of pertinent information and a network of disaster recovery experts.

This network in turn provides information and expertise to the local Extension workers who have direct, preexisting relationships with local growers and regulatory officials. APHIS is educating producers and veterinarians on bio-security so that they can be prepared to identify clinical signs of infectious diseases. APHIS worked with DHS' Office for Domestic Preparedness to develop an Agriculture Emergency Response Training (AgERT) course in Anniston, Alabama. AgERT prepares APHIS employees to serve as emergency responders and provides traditional first responders with training for managing emergencies in agricultural settings. The course is targeted to responding to emergencies in an agricultural setting, but its instruction covers the use of personal protective equipment in all manner of emergencies, including chemical, radiological, and biological emergencies. Because individual training is not always possible, USDA also uses CD and web-based training. They are particularly effective mechanisms when the target audiences are widespread and in rural areas where traveling to a training site is difficult. FSIS is also working with industry organizations to actively seek out opportunities to encourage adoption of food defense activities, especially the use of vulnerability assessments and model food defense plans. To educate industry on actions they may take to increase security at their facility or within the system, and to continue to educate consumers on the importance of safe food handling practices that will help reduce the impact of intentionally contaminated foods, FSIS issued three sets of voluntary guidance documents:

? "Food Security Guidelines for Food Processors," which targets slaughter and processing plants. It helps establishments identify ways to strengthen their protection against intentional contamination.

? "Safety and Security Guidelines for the Transportation and Distribution of Meat, Poultry and Egg Products," which helps facilities and shippers that process or transport meat, poultry and egg products identify potential vulnerabilities in their own operations and address them.

? "Food Safety and Food Security: What Consumers Need to Know," which outlines practical information for consumers about safe food handling practices, foodborne illness, product recalls, keeping foods safe during an emergency and reporting suspected instances of food tampering.

Using the guidance materials, FSIS prepared a self-assessment checklist for industry to use to assess the security of their operations. In addition, to encourage this kind of voluntary action in protecting the food supply against all threats, FSIS has released four model food defense plans for egg processing facilities, meat and poultry processing facilities, slaughterhouses, and import facilities. These plans are based on vulnerability assessments and checklists and are geared to serve as models to assist industry in developing their own facility-specific food defense plans. To help industry adopt the plans, USDA is reaching out to all target establishments with a specific emphasis on smaller companies that might not have the resources to develop their own independent food defense plans. As part of its outreach program, FSIS is providing training tailored to small and very small plants to encourage industry to adopt food defense plans.

While these guidelines are voluntary, FSIS strongly urges all establishments operating under Federal and State inspection programs to incorporate these security procedures. Integral to the implementation of food defense plans by industry is the understanding of what are the "best practices" to securing a particular establishment. FSIS is interested in working with industry to identify these "best practices." Where there is a deficiency in available options, FSIS intends to encourage the development of new technologies to assist industry to better secure their plants.

Food Security Awareness Training To foster an awareness of the need to prevent and respond to food security threats with partners in food safety, FSIS conducted fourteen food security awareness sessions for food defense partners at locations throughout the United States. The sessions provided information about the CARVER + Shock method of conducting vulnerability assessments and general food security awareness topics. There were 1,040 participants in the sessions from a variety of Federal, State and local organizations, including FDA, State and county health departments, and School Lunch Program administrators.

Agriculture Transportation Security Guidance USDA and the American Trucking Association developed a voluntary security guidebook and risk assessment tool for use by truck company owners and drivers to enhance security from external threats, including terrorism, and to protect trucking facilities and vehicles.

Externships and Fellowships

The field of food and agriculture security is relatively new, and therefore, has few experts. Ensuring a competent and robust workforce of the future is important to the security of the sector in the long term. USDA has a number of initiatives to encourage study in this field. APHIS is collaborating with Veterinary Schools to establish externship programs between senior veterinary students and various units within the agency's Veterinary Services program. FSIS currently employs several post-graduate fellows who are engaged full-time in bioterrorism and vulnerability assessment activities. Research and Development Ultimately scientific research and development is the basis of our ability to prepare for, detect, respond to and recover from bio-security incidents.

Within USDA, multiple scientific disciplines including biological, physical, social, information technology and communications are contributing to our preparedness. The agencies of USDA's Research, Education and Economics mission area are all contributing to this effort in a coordinated and collaborative manner. ARS is USDA's intramural research arm. ARS conducts research to support the needs of the action agencies of the department and the Federal government. In addition, it conducts research in partnership with academia and industry, as well as other governmental agencies at the Federal and State levels to carry out its mission through a number of highly coordinated national programs. ARS research related to homeland security falls into three broad areas: 1) plant protection, 2) animal protection, and 3) food safety. Included in these activities are the development of new diagnostic and detection methods, preventative activities such as the development of new vaccines and risk reduction intervention strategies, and the mitigation of a variety of threats. ARS has built collaborations with States on a number of bio-security research issues. With supplemental appropriations received in 2002 to develop rapid tests for threat agents, ARS shared those funds with a number of universities to accomplish its goals. One particular example was the construction of a plant threat agent database at Pennsylvania State University.

By collaborating on research, ARS can share efforts in developing and disseminating bio-security technologies. All of the rapid tests that come from this research is being provided through APHIS and CSREES and directly to members of the Plant and Animal Health networks, which are State based laboratories. ARS and the land grant universities are the main contributors to the national germplasm system. That system will play a key role in the NPDRS. ARS is presently on the campuses of most land grant universities and cooperates with those schools to accomplish its research goals. This cooperative relationship assures that State universities are a continuing part of the initiatives of ARS research. One example relevant to Pennsylvania's agricultural industry is the AI research funded by the NRI. This NRI Coordinated Agricultural Project entitled "Prevention and Control of Avian Influenza in the United States" includes universities in seventeen States, including Pennsylvania State University and the University of Pennsylvania.

Working together in a coordinated manner they are developing diagnostic tests and vaccines as well as monitoring live bird markets and wild waterfowl flyways to enable early detection and rapid response. USDA is constructing a world-class animal disease bio-containment facility for research and diagnostics in Ames, Iowa that will house the Centers for Animal Health, which are the National Animal Disease Center, the NVS Laboratory and the Center for Veterinary Biologics. In this context, USDA is developing a comprehensive suite of rapid diagnostic tests to detect and identify pathogens within hours that pose the greatest threat to U.S. livestock. Regional Dairy Quality Management Alliance The ARS collaboration with the Regional Dairy Quality Management Alliance (RDQMA) program extends the concept of epidemiology to monitor pathogen presence and help dairy producers assure product safety. Microbial pathogens are a continuing concern in dairy production due to their potential impact on animal health, milk production and safety, and economics. ARS collaborates with scientists from three universities in quarterly farm visits assessing herd management practices and bio-security, and in sampling and laboratory evaluation of animal and food safety pathogens, including animal diseases such as Johne's Disease and food safety pathogens such as Salmonellosis. This ARS and university collaboration, including activities in Pennsylvania, will provide the data to validate and implement best management practices for commercial dairy cattle herds that are a valuable component of bio-security programs. RDQMA is building and maintaining a database of all the records from the annual and quarterly surveys, as well as individual cow information. This national database of well-characterized animals can be used for future research as well as a basis for comparison to evaluate and mitigate bio-security concerns. USDA Research on Crop Disease Detection and Food Defense ARS has worked closely with other USDA agencies and other Departments to address research and development needs resulting from vulnerability assessment findings. Methods were successfully developed to detect B. anthracis in milk on the farm, during transport/handling and at the processing plant to assure bio-security. ARS scientists working on crop diseases have developed rapid tests for plant threat agents. These highly sensitive and accurate tests provide diagnosticians with an accurate means to detect pathogens as part of a national surveillance system. The rapid test for SBR played an important role in the detection of SBR, in following its spread, and in the application of technology to reduce the impact of SBR. Future research will ensure that disease resistant varieties of plants and crops are continuously developed and made available to farmers and producers. ARS will develop real-time, field deployable surveillance and detection methodologies, coordinate the validation process, and

determine how the environment affects the establishment, spread and persistence of a threat in an agricultural context.

Modeling and Mapping Development

USDA's Economic Research Service (ERS) developed the Geo-Spatial Economic Analysis (GSEA) System to serve as a platform for collaborative analysis of the economic consequences of natural and man-made threats to the food and agricultural industries. The GSEA system can be used to examine the economic impact of events that disrupt the production, processing, distribution or consumption of food and agricultural products. The key to this system is the ability to leverage existing expertise and analytical capacity at ERS by identifying and filling data gaps, integrating the results of dissimilar economic analyses and developing interfaces with plant and animal epidemiology models. Coordinated Budget HSPD-9 directed a coordinated budget submission by USDA and HHS for food system defense to ensure collaboration during program and budget planning. USDA coordinated with HHS to submit the Food and Agriculture Defense Initiative for FYs 2005 and 2006. We continue to work together on the FY 2007 initiative. Conclusion I am sure we are united in the belief that bio-security for food and agriculture is a paramount issue that must be addressed with sound science and policy decisions. The Department looks forward to working with the Committee in continuing to develop programs and initiatives to help enhance the security of the nation's agriculture and food systems through collaborative efforts between Federal and State institutions. Mr. Chairman, that concludes my remarks. I would now be pleased to take any questions.