

Statement of
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Subcommittee on Oversight of Government Management, the Federal Workforce, and the
District of Columbia

“Agro-Defense: Responding to Threats against America’s Agriculture and Food System”

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Good afternoon Chairman Akaka, Ranking Member Johnson, and Members of the Subcommittee,

My name is Dr. Doug Meckes and I am the Branch Chief of the Food, Agriculture, and Veterinary Defense Branch of the Office of Health Affairs (OHA) at the Department of Homeland Security (DHS).

Thank you for the opportunity to speak to you regarding DHS’s efforts to defend our Nation’s agriculture, food, human and animal health.

DHS’s Role in Agro-Security and Food Safety

Homeland Security Presidential Directive 9: Defense of United States Agriculture and Food (HSPD-9), establishes national policy to defend the agriculture and food system against terrorist attacks, major disasters, and other emergencies. DHS is responsible for coordinating the overall national effort to protect the critical infrastructure and key resources of the United States. DHS works to complement the efforts of our partners, including other federal agencies that focus on food and agriculture safety, to protect agriculture and food systems which are critical to our public health and economic well-being. In addition, DHS works to mitigate the consequences associated with catastrophic incidents, and coordinates and integrates federal assets to prevent, protect against, prepare for, respond to, and recover from incidents.

OHA is specifically charged by the Secretary of DHS with providing oversight and management of DHS's implementation of HSPD-9 and coordinating those efforts with other federal departments and agencies, state, local, tribal, and territorial governments, and the private sector.

DHS's Lead HSPD-9 Responsibilities

With the release of HSPD-9 in February 2004, the Secretary of DHS was identified as the lead for five, and co-lead for eight, of the 19 specific tasks delineated in HSPD-9.

DHS leads HSPD-9 efforts to:

- Create a new biological threat awareness capacity to enhance detection and characterization of an attack;
- Ensure that the combined federal, state, and local response capabilities are adequate to respond quickly and effectively to a terrorist attack, major disease outbreak, or other disaster affecting the national agriculture or food infrastructure;
- Develop a coordinated agriculture and food-specific standardized response plan;
- Work with appropriate private sector entities to establish an effective information sharing and analysis mechanism for agriculture and food; and
- Establish university-based centers of excellence in agriculture and food security.

Today I would like to share with you the progress DHS has made in achieving the objectives of HSPD-9.

Biological Threat Awareness Capacity

One of OHA's primary responsibilities is to mitigate the consequences of biological incidents through early detection. Prompt identification of a biological incident has the potential to improve the delivery of medical countermeasures and save lives.

Within DHS, OHA operates, manages, and supports the Department's biological defense and surveillance programs. Two programs that provide biological threat awareness capacity are BioWatch and the National Biosurveillance Integration System (NBIS).

OHA's BioWatch program is the only federally-managed, locally-operated, nationwide environmental detection system designed to detect the intentional release of aerosolized biological agents. This program deploys collection devices and analytical capability in more than thirty high-risk metropolitan areas throughout the nation. BioWatch provides public health experts with a warning of the presence of a biological agent before exposed individuals develop symptoms of illness. This "detect-to-treat" approach provides public health officials with an

opportunity to respond to the release of a biological agent as quickly as possible and mitigate any potentially catastrophic impacts.

Current detection capabilities, termed BioWatch Generation 1 and 2 (Gen 1/2), consist of outdoor aerosol collectors, whose filters are manually retrieved for subsequent analysis in a Laboratory Response Network (LRN) facility. This system, while extremely beneficial, is labor intensive and results may not be available until 12-36 hours after the release of a biological agent has occurred. As a result, OHA is currently testing and evaluating the next generation of BioWatch, Generation 3 (Gen-3). The Gen-3 system will advance current detection technology by providing an automated detection capability that is expected to significantly reduce the time between a release of a biothreat agent and confirmation of that release by BioWatch technology.

In addition to providing critical early detection capabilities, the BioWatch program has increased collaboration between the federal government, state and local public health officials, and emergency management officials. This partnership is a model for future endeavors.

Another key element to an overarching biodefense framework is biosurveillance. OHA is focused on developing and maintaining an integrated, real-time surveillance picture.

To that end, OHA manages NBIS—a consortium of federal partners that was established to rapidly identify and monitor biological events of national concern. NBIS collaborates among federal and state partners to collect, analyze, characterize, and share human, animal, plant, food, and environmental biosurveillance information. The National Biosurveillance Integration Center (NBIC) integrates information from federal agencies and state, local, private sector, and international sources to provide early warnings of a possible biological attack or pandemic. NBIS can then identify important bio-events using the Biosurveillance Common Operating Picture (BCOP)—which is currently being piloted in four states. Through this process, the NBIC and NBIS enhance recognition of biological events, reduce response time, and promote effective response.

The May 2011 *E. coli* outbreak in Germany is a recent example of how NBIS can be used to enhance response to food and agricultural incidents. During this incident, NBIS made subject matter experts available to answer existing concerns about the potential origin and virulence of the associated *E. coli* strain, and facilitated communication between federal agencies. Sixty-one individuals representing 13 federal staffs, agencies, or departments participated in this process. As a result of this collaborative effort, American citizens at home and abroad were given up-to-date information about the outbreak and how to stay safe. Additionally, the U.S. Customs and Border Protection (CBP) was able to use this information to target imports that may have posed a risk to the United States.

In particular, the presence of a United States Department of Agriculture (USDA) liaison officer has strengthened the NBIC, improving coordination of USDA within the NBIS community and providing Food Safety Inspection Service (FSIS) with timely information. In addition, the quality of food defense and agriculture information shared with other agency partners has noticeably improved in both specificity and depth.

While the NBIC and NBIS have made significant steps toward achieving a robust national biosurveillance system, there is more work to be done. OHA is currently working with our partners and stakeholders to continue to enhance and improve the NBIC, in alignment with statutory requirements and Congressional intent. We will continue to work with our stakeholders to increase collaboration and data integration, improve analysis, and ensure high-quality and timely reporting.

Combined Federal, State, and Local Response Capabilities

Because all emergency response begins at the local level, ensuring adequate local response capabilities is vital to defending our Nation's food supply. DHS has worked to help states identify where they need to develop additional capabilities, and has provided information on grants, best practices, and training.

In order to develop response capabilities related to agriculture and food, state and local governments must integrate agriculture and food interests into their emergency management planning efforts. To facilitate this integration, OHA partnered with the National Center for Food Protection and Defense (NCFPD) to develop the Food Sector Food and Agriculture Readiness Measurement Toolkit (FARM Toolkit). In the early development of the Food Sector FARM Toolkit, OHA worked closely with other DHS components, interagency, non-governmental organizations, and with state and local officials to solicit input and ensure that the toolkit met state and local needs.

The FARM Toolkit allows the states to self-assess the strengths of their food emergency response plans and identify areas for potential improvement through a survey tool. The survey assesses the level of preparedness in the food-sector, level of integration of the food-sector into the emergency management community, current emergency management capabilities of the food-sector, and the emergency management needs of the food sector. Upon receiving the survey results, an integrated database returns relevant information on best practices, planning, training, and funding resources – all designed to help state and local communities improve their preparedness for adverse food incidents.

OHA and NCFPD are currently engaged in an outreach program with five states, and recently completed pilots in Minnesota and Washington to assist the states in using the FARM toolkit.

OHA met with stakeholders from across the Washington and Minnesota state governments in a day-long workshop to review the FARM Toolkit's questionnaire and discussed improvements that could be made to the questions. Later this month, OHA and NCFPD will meet with officials in Oklahoma to present the FARM Toolkit.

An additional benefit of the FARM Toolkit is the ability to identify national trends in preparedness. Summary data from all participants is compiled by NCFPD, without attribution to the submitter, to allow for an overarching view of trends in preparedness and identification of potential gaps.

OHA is also working to improve state and local governments' access to grants to improve preparedness. OHA developed a grants tutorial to assist state and local governments in finding grants to support the development of their response capabilities. The grant tutorial provides education on how to locate, evaluate, and apply for grants, as well as how to manage awards. The grants tutorial and FARM Toolkit are available online at www.FoodShield.org.

OHA also developed a partner page on the Lessons Learned Information Sharing (LLIS.gov) portal where emergency response providers and homeland security officials can access an online network of content related to lessons learned, best practices, and innovative ideas on food, agriculture, and veterinary defense. Best practices help states leverage lessons learned to improve their capabilities and planning.

Food and agriculture sector training and education is another way DHS is working to improve capabilities at the state and local level. The Federal Emergency Management Agency has partnered with colleges and universities to offer training for food and agriculture safety and security. Programs have been offered at the Center for Agriculture and Food Security and Preparedness (CAFSP) at the University of Tennessee, the National Center for Biomedical Research and Training (NCBRT) at Louisiana State University, the Agro-Terror Preparedness Center at Kirkwood Community College in Iowa, and the Western Institute for Food Safety and Security (WIFSS) at the University of California Davis.

Develop a Coordinated Agriculture and Food-Specific Standardized Response Plan

A standardized, unified response plan is imperative for effective incident management. The Food Emergency Response Plan (FERP) template assists states with the development of a food-related emergency response plan, which can be integrated into existing all-hazards emergency response planning. A food-related emergency involves the unintentional or deliberate contamination of food that may impact human health. A food emergency response plan does not apply to food incidents routinely handled by local or state health departments.

In 2006, DHS worked with the National Association of State Departments of Agriculture (NASDA), the USDA's FSIS, and the Food and Drug Administration (FDA) to develop the FERP template, which aligns with the National Response Plan. OHA and NASDA have just completed a revision and update of the FERP, which addresses changes made with the transition of the National Response Plan to the National Response Framework and adds additional potential food events. The FERP will be highlighted during NASDA's annual meeting, which will be held September 14-19, 2011 in Salt Lake City.

Work with the Private Sector to Establish an Information Sharing Mechanism

With 20% of the United States' gross national product coming from agriculture, the importance of the private sector in defending our food supply and keeping our economy strong is critical. DHS works closely with the private sector to share information regarding our food and agriculture system.

The National Infrastructure Protection Plan (NIPP) provides the unifying structure for a public-private partnership to enhance protection of the Nation's critical infrastructure. For the food and agriculture sector, DHS's National Protection and Programs Directorate's (NPPD) Office of Infrastructure Protection (IP) and the sector-specific lead agencies, USDA and FDA, co-chair the Government Coordinating Council (GCC), which develops sector-specific plans to advance security. The GCC acts as the counterpart and partner to the private industry-led Sector Coordinating Council (SCC) to plan, implement, and execute sufficient and necessary security programs for the Nation's food and agriculture sector's critical assets, systems, networks, and functions. In addition, IP conducts tabletop exercises and threat and intelligence briefings with food and agriculture stakeholders.

OHA has worked with DHS's Office of Intelligence and Analysis (I&A), and FEMA on the Health Security Intelligence Enterprise (HSIE), an initiative to integrate public health and healthcare community interests into homeland security information and intelligence exchanges. The initiative coordinates the efforts of the public health and the healthcare communities with the nationwide network of State and Major Urban Area Fusion Centers (fusion centers). OHA has worked to bring agriculture and public health officials into the fusion centers to improve preparedness and response capabilities.

Establish University-Based Centers of Excellence in Agriculture and Food Security

DHS's Science & Technology (S&T) Directorate Centers of Excellence (COE) network is a consortium of hundreds of universities generating ground-breaking ideas for new technologies and critical knowledge to serve the Department's missions. COEs with a food and agriculture focus include: NCFPD, the Center of Excellence for Emerging and Zoonotic Animal Diseases

(CEEZAD), and the National Center for Foreign Animal and Zoonotic Disease Defense (FAZD Center).

The COEs support HSPD-9 efforts through their projects and initiatives. For example, NCFPD and IP developed the Food and Agriculture Sector Criticality Assessment Tool (FAS-CAT) that enabled 30 states/regions to evaluate their most critical food and agriculture infrastructure. As a result, in 2010, the agriculture and food sector identified its first ever Level II critical infrastructure- 121 subsystems and components. Another COE, the FAZD Center at Texas A&M University, through their biological systems program, developed antiviral agents, detection/diagnostic tests, and other countermeasures to enhance detection, diagnosis, prevention and recovery. The Center's biological research focuses on three agents: Rift Valley fever, foot-and-mouth disease, and avian influenza.

Food and Agriculture Research

DHS continues to research plant and animal diseases and is working to develop countermeasures. S&T's Office of National Labs partners with USDA's Agricultural Research Service and the Animal and Plant Health Inspection Services National Veterinary Services Laboratory on the DHS Foreign Animal Disease Countermeasures Program. This program is part of a coordinated interagency strategy to protect U.S. agriculture from the threat posed by these diseases and is executed through the Plum Island Animal Disease Center (PIADC). Since 1954, PIADC has been protecting America's livestock from foreign animal diseases and is the only approved facility in the United States that can conduct R&D on high consequence foreign animal diseases of livestock, specifically foot-and-mouth disease (FMD).

PIADC has been leading the way to develop the first licensed FMD vaccine that can be manufactured in the United States. This vaccine (scheduled for completion based upon approval of the USDA APHIS regulatory process in 2012) will represent the first foreign animal disease countermeasure to emerge from the partnership between DHS-USDA at PIADC. It will be the first new vaccine developed for FMD in over 50 years and, most importantly, will represent the first FMD vaccine that does not require the use of live FMD virus for vaccine production. This will allow for vaccine manufacturing in the U.S., fulfilling USDA end-user need for a countermeasure capable of deployment within 24 hours of an outbreak. This is also the first FMD vaccine based on recombinant DNA technology that was specifically designed and developed to allow differentiation of infected from vaccinated animals, providing USDA with the option of utilizing a vaccinate-to-live outbreak control strategy. Several additional FMD vaccine candidates for other FMD serotypes have successfully completed vaccine efficacy trials at PIADC and are expected to enter the regulatory licensing development pathway in the near future through collaboration with veterinary vaccine manufacturers.

In addition, a molecular diagnostic test for FMD was developed by USDA ARS and APHIS at PIADC and is now operational in over 40 state veterinary diagnostic laboratories. The rapid test

will provide surge capacity in the event of a FMD outbreak in the U.S. An associated diagnostic test for the recombinant FMD vaccine was recently transitioned at PIADC from USDA ARS to APHIS and will be undergoing field validation testing.

Finally, S&T's Chemical/Biological Defense Division and Agriculture Defense Branch have been engaged in the development of new and next generation vaccines and biotherapeutics for high priority zoonotic and animal pathogens.

Other Areas of DHS Collaboration on Food and Agriculture Defense and Security

Outside of DHS's lead HSPD-9 responsibilities, the Department collaborates and supports other departments and agencies on additional tasks of HSPD-9 implementation.

CBP Agricultural Specialists use their experience in the natural and biological sciences, along with their regulatory expertise, to control agricultural imports and combat smuggling. The partnership between CBP and USDA-Animal and Plant Health Inspection Service (APHIS) has strengthened the safety of our Nation's agricultural and natural resources.

In addition, CBP's National Targeting Center (NTC) provides tactical targeting and analytical research in support of anti-terrorism efforts. The FDA's Prior Notice Center is co-located at the NTC and has more than 25 permanent and temporary duty staff working in coordination with CBP to implement the Public Health Security and Bioterrorism Preparedness and Response Act of 2002. The Act, in part, requires registration with FDA of all foreign food facilities that manufacture or process food for human or animal consumption in the United States. It also requires advance notice of any imported shipment of human or animal food.

Furthermore, the Commercial Targeting and Analysis Center (CTAC) in CBP serves as a multi-agency fusion center for targeting commercial shipments that may pose a threat to health and safety, including imported foods. CTAC partners include USDA's APHIS and FSIS along with FDA, the Consumer Product Safety Commission, and U.S. Immigration and Customs Enforcement Homeland Security Investigations. This collaboration is guided by the three core principles announced by President Obama's Food Safety Working Group in July 2009: prevention, surveillance and response.

DHS's Efforts to Support the Federal Veterinarian Workforce

Based upon the recommendations of Senators Akaka and Voinovich, the Office of Personnel Management (OPM) formed the Talent Management Advisory Council (TMAC), a veterinary community working group, to address critical Federal veterinary workforce shortages and develop a proactive, Government-wide approach to deal with these shortages. OHA serves as the lead for the TMAC's Emergency Planning Action Team (EPAT) that works to enhance

efforts to identify the veterinary workforce needed during catastrophic or emergency events. DHS continues to stay engaged in the efforts led by the Office of Personnel Management to support the federal veterinarian workforce.

Conclusion

Chairman Akaka, Ranking Member Johnson, and Members of the Subcommittee, thank you again for this opportunity to speak to you regarding DHS's efforts to defend our Nation's agriculture, food, human, and animal health. I look forward to your questions.