

**Statement for the Record**



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**before the**

**U.S. House of Representatives**  
**Committee on Homeland Security**  
**Subcommittee on Management, Investigations, and**  
**Oversight**

**“Farm to Fork:**  
**Partnerships to Protect the Food You Eat”**

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## INTRODUCTION

Mr. Chairman and members of the Subcommittee, I am pleased to appear before you today to discuss the progress we are making at the Department of Homeland Security (DHS) to prevent, respond to, and recover from acts of agroterrorism, major disease outbreaks or natural disasters affecting the Nation's livestock, crops and food supply. I will also address concerns regarding our national food supply chain and highlight a specific application to the food and agricultural industry in Pennsylvania.

Congress has held hearings on agroterrorism and enacted laws and appropriations with various agroterrorism-related provisions. The executive branch has responded by implementing the new laws, and creating liaison and coordination offices. The Government Accountability Office has studied several issues related to agroterrorism and made very useful recommendations. Various Homeland Security Presidential Directives were issued to direct the development of national efforts to combat natural and intentional threats against critical infrastructures, including agriculture.

The Public Health Security and Bioterrorism Preparedness and Response Act was enacted in 2002 to address agroterrorism preparedness and response vulnerabilities identified following September 11, 2001. Agriculture-specific provisions included expanding the Food and Drug Administration's (FDA) authority over food manufacturing and imports, tightened control of biological agents and toxins under rules by the Animal and Plant Health Inspection Service and Centers for Disease Control and Prevention (CDC), expanded agricultural security activities and security upgrades at USDA facilities, and increased criminal penalties for terrorism against animal enterprises and violation of the select agent rules. Concurrently, DHS became responsible for coordinating the overall national efforts to enhance the protection of the critical infrastructure and key resources of the U.S.

Among the Homeland Security Presidential Directives, HSPD-9, *Defense of United States Agriculture and Food*, was issued to establish a national policy to defend the Nation's agriculture and food systems against terrorist attacks, major disasters, and other emergencies. The directive recognizes DHS's role as "responsible for coordinating the overall national effort to enhance the protection of the critical infrastructure and key resources of the United States" and acknowledges the DHS Secretary as "the principal federal official to lead, integrate and coordinate implementation of efforts" to protect critical infrastructure as outlined in HSPD-7. These efforts include mitigation of vulnerabilities in food, agriculture and water systems, as well as developing a robust biological threat awareness capacity. Of the 21 tasks for which DHS is designated as having significant responsibility, DHS has the lead for 12, in which the Office of Health Affairs (OHA) is responsible, in either a lead or support role, for coordination. The 12 activities fall under 5 "pillars." Those pillars are:

- 1) Awareness and Warning: under which fall intelligence operations and analysis of biological threat assessments;

- 2) Vulnerability Assessments: under which DHS is to assess our national vulnerability to a broad spectrum of threats;
- 3) Mitigation Strategies: under which DHS will develop and implement response strategies, as well as screen our national borders;
- 4) Response Planning & Recovery: includes activities involving local response capabilities and coordinating them with overall response planning; and
- 5) Outreach and Development: which involves information sharing and analysis mechanisms, specialized training in agriculture and food protection, continued research and development of countermeasures against animal/plant diseases, plans to provide biocontainment labs for research capabilities and the establishment of university-based Centers of Excellence.

## **DHS OFFICE OF HEALTH AFFAIRS (OHA)**

Secretary Chertoff created the Office of Health Affairs as part of the Departmental reorganization on January 18, 2007. OHA was created to protect the health and security of the American people in full coordination and collaboration with other DHS components, Federal partners, and the private sector. Responsibilities and activities within the OHA do not duplicate or supplant activities currently being provided by other components or programs within DHS or among the departments and agencies of the Executive Branch. The OHA Assistant Secretary and Chief Medical Officer (CMO) has the specific responsibility to coordinate Federal activities to protect human health, livestock, crops, and the food supply. OHA's goals are as follows:

- Serve as Secretary's principal medical and veterinary authority for DHS;
- Coordinate DHS biodefense (including agrodefense) activities, to include policy, planning, strategy, requirements, operational programs and metrics;
- Ensure internal/external coordination of DHS' medical and veterinary preparedness activities;
- Serve as primary DHS point of contact for Federal/state/local/tribal governments and the private sector on medical and veterinary and public health issues; and
- Discharge DHS responsibilities under Project BioShield.

The Department serves as the integrator of Federal, state and local resources that are dedicated to preserving the security of the Nation. With specific reference to agroterrorism preparedness, in a memo dated March 28, 2007, Secretary Chertoff designated OHA's Assistant Secretary and Chief Medical Officer as the DHS official accountable for the implementation of the Department's responsibilities for veterinary, food and agriculture security...[who] will also coordinate the Department's responsibilities for implementation of Homeland Security Presidential Directive 9, Defense of the United States Agriculture and Food."

Within OHA, I serve as the Director of Food, Agriculture and Veterinary (FAV) Defense. FAV defense goals are to ensure food and agriculture are actualized as Critical Infrastructure, understand and strengthen public confidence in food protection through assessment and advancement, ensure critical stakeholders are functionally aligned, and

assist all DHS Food, Ag and Veterinary programs in attaining operational capability. OHA FAV Defense activities are fostering efficiency and effectiveness across 30 programs within DHS regarding food and agricultural and veterinary defense.

## **THE FOOD SECTOR**

The post-harvest food industry accounts for 12 percent of the Nation's economic activity and employs more than 10 percent of the American workforce. It consists of enormous subsectors, including business lines addressing processing, storage, transportation, retail, and food service. Statistics on just two of these subsectors serve to illustrate the magnitude of the sector. The National Restaurant Association projects that the industry's 925,000 domestic locations will reach \$511 billion in sales for 2006, serving over 70 billion "meal and snack occasions" for the year. Meanwhile, the Nation's \$460 billion food retail business consists of more than 34,000 supermarkets, 13,000 smaller food markets, 1,000 wholesale club stores, 13,000 convenience stores, and 28,000 gas station food outlets. Like the other components of the food industry, these subsector business units have a broad geographic distribution and are present in all regions of the country.

Private sector entities are the predominant owners and operators of the food sector. Federal, state, and local governments have noteworthy food production, distribution, retail, and service operations, but these are small when compared to private sector operations. Regulation of the food industry is divided between Federal, state, and local agencies. State, territorial, and local governments conduct oversight of food retail and food service establishments within their jurisdictions. These levels of government oversee restaurants, institutional food service establishments, and hundreds of thousands of food retailers.

The food sector experiences several types of significant adverse events. Among these, intentional food contamination is of great concern and preventing such events has grown in importance since the attacks of September 11, 2001. Food products may be deliberately contaminated with a wide variety of chemical, biological, or radiological agents. Despite that range of possible contaminating agents and the open vulnerability of many links in the food supply chain, there have been few recorded cases of deliberate food contamination in the United States. However, we would be grossly remiss if we began to rely upon that historical safety and assume it will continue into the future.

Food safety practitioners also devote considerable attention and resources to hazards associated with *unintentional* food contamination. In the past, this type of food contamination has led to many major outbreaks, which have occurred with much more frequency and on a considerably larger scale than recognized deliberate acts. In 1985, for example, the unintentional contamination of milk with *Salmonella typhimurium* caused illness in 170,000 individuals in the United States. A decade later, an estimated 224,000 people in 41 states became ill after consuming ice cream with *Salmonella enteritidis*.

The food sector could also suffer adversely from attacks or natural events affecting other sectors. Because food is often consumed some distance from its point of

production, significant transportation disruptions have the potential to spawn food shortages. The availability of food products is also dependent on the continuing efforts of the food sector workforce. Conditions that undermine the willingness of food industry workers to go to their worksites or to otherwise perform their jobs could also contribute to food shortages. Major U.S. cities typically have access to about one week's supply of food. Therefore, moderately sustained transportation or labor disruptions would critically undercut the availability of food. Such a disruption could occur, for example, during a widespread communicable disease outbreak that kept food sector workers from their jobs. Additionally, electricity disruptions seriously reduce the availability and shelf-life of perishable foodstuffs.

## **THE AGRICULTURAL SECTOR**

The potential for terrorist attacks against agricultural targets, termed agroterrorism, is increasingly recognized as a national security threat, especially following the events during and after September 11, 2001. Agroterrorism is a subset of bioterrorism, and is defined as the deliberate introduction of an animal or plant disease with the goal of generating fear, causing economic losses, and/or undermining social stability. The goal of agroterrorism is not to kill cows or plants. These are the means to the end of causing economic damage, social unrest, and loss of confidence in government. Human health could be at risk if contaminated food reaches the table or if an animal pathogen is transmissible to humans.

The agricultural sector has several characteristics that inherently present unique vulnerabilities. Farms are geographically dispersed in typically remote environments. Livestock are frequently concentrated in confined locations, and transported or commingled with other herds. Many agricultural disease agents can be easily obtained, handled, and distributed as they may be readily found in many areas outside the United States and do not pose a safety risk to the aspiring agroterrorist. Because of the relative success of our domestic agricultural disease prevention activities, our herds are free from more than 40 internationally significant diseases such as foot and mouth disease (FMD), classical swine fever (formerly known as hog cholera), and African swine fever. This success leads to great vulnerability, however, as international trade in food products often is tied to disease-free status, which could be jeopardized by an attack. Because our herds have been free of these diseases for generations and vaccines do not yet exist for many of them, our animals are highly susceptible to natural or intentional introduction. Moreover, most U.S. veterinarians lack experience with foreign animal diseases that have been eradicated domestically but remain endemic in foreign countries. In the past five years, agriculture and food production have received a certain degree of increased attention from the counterterrorism community and response capacities have been significantly upgraded. However, as I stated previously, much work remains before we can consider ourselves reasonably protected. Specifically considering FMD, the disease can be spread rapidly by aerosol and cause symptoms in cattle, swine, sheep, goats, deer, and other ruminant species. The virus is incredibly transmissible and be carried long distances by the natural environmental flow of air between farms. Should this disease become

established in susceptible U.S. wild animal populations, eliminating it would prove problematic.

The risk of an attack on the Nation's livestock is defined by the likelihood of a terrorist attempting to use a biologic agent to infect livestock populations, the vulnerability of those livestock populations to infection with the agent utilized, and the economic or other consequence from the attack. The overall economic impact of a natural or intentional reintroduction of FMD would include the direct supply shortages to livestock-dependent industries such as the meat and milk industries. The feed industry would have an instant overabundance of feedstuffs previously consumed by production animals that could not be sold and employees of these industries would be adversely impacted. Additionally, and perhaps most significantly, major trade issues would result as many other nations would likely ban the import of all U.S. livestock products such as meat, milk, leather products, and feed. These direct effects on the National economy and potential impacts from quarantines and third and fourth order effects will reach into the transportation, tourism and defense sectors of our economy as has been seen in recent outbreaks such as occurred in the United Kingdom in 2001.

Computerized risk assessment scenarios conducted by DHS reveal that a single point introduction of FMD could spread very rapidly and affect millions of animals and cause billions of dollars in economic damage. These risk assessment and impact analysis of an attack with this biologic agent identify the vulnerability of our livestock populations and the potentially devastating consequences of only one livestock disease. DHS brings a great sense of urgency to develop countermeasures and diagnostics to combat a wide variety of these livestock bioterrorism threats.

## **WHAT'S BEING DONE BY DHS**

In recent testimony, Secretary Chertoff pointed out the \$1.3 trillion of this economy that's focused in agriculture. He asked the question, how do we protect this system without damaging the prosperity and the techniques that actually make it a vibrant part of the economy? His answer was that anything DHS does has to be done in partnership with farmers, producers and cooperatives to analyze and understand the risks, and then work on a protection plan that ensures commerce is preserved rather than impeded. On May 21, 2007, the sector-specific plan for agriculture and food was released; giving an overarching planning framework for a cooperative effort between Federal, state, local and tribal governments and the private industry to protect agricultural and food systems. Likely next steps are to understand what reduces those vulnerabilities and foster those activities in a strategic fashion.

DHS is working with USDA and FDA to conduct comprehensive risk assessments for agricultural and food commodities, which can then be used to identify protective measures and research and development gaps. Additionally, we are working with those agencies and sector partners to exercise communications, response and recovery efforts. A major threat in the food and agriculture sectors is a crisis of confidence, where a poorly prevented or recognized event causes people to question the

safety of food regionally or nationally. Therefore, a swift confidence-building response is a critical objective of our planning and exercising efforts. Another critical element is to continue to provide online training tools for regulators, inspectors, farmers, food producers and food cooperatives.

DHS is also advancing scientific research and analysis through several national facilities. The Plum Island Animal Disease Center (PIADC) is one such facility that provides diagnostic, research, and teaching services to prevent the introduction and spread of foreign animal diseases. As PIADC is aging and becoming increasingly costly to operate, DHS is working with USDA to build the next-generation laboratory that will allow advanced research to understand and develop better preventions against the threats to humans, crops, and animals. DHS sponsors two university Centers of Excellence to study emerging issues related to food and agro defense—one at the University of Minnesota, which conducts research on food defense and actually has a tool that allows quick analysis and the other is a Center of Excellence at Texas A&M University that researches potential threats to animal agriculture.

Probably one of the most important activities DHS is undertaking with regard to protecting the food and agricultural sectors concerns intelligence collection, analysis, and application. DHS is fusing, under the leadership of the Assistant Secretary for Health Affairs and Chief Medical Officer, not only the typical kinds of information received through the agricultural network about potential problems with respect to food or animals, but adding information sources from both the health establishment (e.g., hospitals and the medical network that CDC relies upon) and the more traditional intelligence community information. We need to know, for example, when and where there are highly pathogenic avian influenza outbreaks so that appropriate import restrictions can be immediately put in place to mitigate the threat to our domestic poultry flocks. Once we get a better operating picture, DHS can put measures in place at the borders to protect domestic animals and crops from outside pests and microbes.

DHS also wants to integrate the various border defenses and enhance them with human and technological capabilities to defend this country against the deliberate or accidental introduction of foreign pathogens or pests that could affect the viability of our crops and animals. One key part of our border defense is the agricultural specialists within DHS' Customs and Border Protection (CBP). These inspectors are specifically trained and capable of focusing on reducing the risk from imported foods, plants, or animals. Agricultural inspectors intercept more than 4,000 prohibited meat, plant, and animal products every day at US ports of entry. DHS recently formed a task force with the USDA to address the concerns of agricultural stakeholders and to identify and close gaps in the inspection process.

In March 2004, USDA, FDA and DHS invited the private sector to join in the creation of two bodies, one for government officials and one for private industry, to work together on security initiatives. The industry sector coordinating council (SCC) is comprised of private companies and associations representing key components of the food system. The SCC has seven sub-councils spanning the farm-to-table continuum –

agricultural input, animal producers, plant or crop producers, food processors, retail operations, warehouses and import/export establishments. The government coordinating council (GCC) is comprised of Federal, state, tribal and local governmental agencies responsible for a variety of activities including agricultural, food, veterinary, public health, laboratory, and law enforcement programs. In simple terms, the SCC and GCC are the liaison bodies that will plan, coordinate, and implement homeland security policies and programs for the food and agriculture sector.

There must be a continued effort to identify ways to motivate public and private sectors to harden infrastructures and build a more resilient U.S. economy through enhanced response capabilities. Such resilience would facilitate the quicker reopening of a favorite restaurant following a small scale natural disaster and an economy that fuels recovery on a larger scale.

## **PENNSYLVANIA**

The safety and security concerns of our food systems are shared by consumers and government officials alike. Pennsylvania alone has nearly 12.5 million citizens, 58,000 farms, more than 3,200 food processors, 2,000 plus food warehouses, three large ports and a \$14.5 billion restaurant industry. In 2005, Pennsylvania saw agricultural cash receipts of \$4.8 billion and ranked in the top 10 of all states in 11 production categories. In the same year, Pennsylvania exported \$1.1 billion worth of agricultural products to other countries. In terms of the impact agriculture has on Pennsylvania's economy, the dairy industry alone represents 1.4 percent of the Commonwealth's gross domestic product. Agriculture in Pennsylvania must be recognized as an extremely diverse industry with unique security needs. The day-to-day production of the food supply is what most of us think of first when we envision the entire agriculture sector. But agriculture also contributes significantly to less obvious health and welfare areas such as the development of vaccines and pharmaceutical research, the inspection of restaurants and food processors, the prevention and containment of unintentional outbreaks of food-borne illnesses, and the monitoring and management of animal and plant diseases and pests.

The various segments of the food and agriculture sectors each have their own current protocols and management practices to ensure safety and security. However, it is essential that the Pennsylvania Departments of Agriculture and Homeland Security work closely to create a comprehensive, statewide strategy that protects consumers and the Commonwealth's economic interest throughout all stages of the farm-to-fork continuum. Agroterrorism, and even unintentional acts that impact the Commonwealth's food supply and its security, has economic ramifications, through the loss of products, markets and jobs, as well as emotional ramifications of diminished consumer confidence in agricultural products and, perhaps most importantly, a lower quality of life.

Focusing on the animal agriculture industry, the Pennsylvania Animal Diagnostic Laboratory System (PADLS) was created in 1991 and is a tripartite system joining the Pennsylvania Department of Agriculture, Pennsylvania State University, and the University of Pennsylvania together for the mission of improving the health, safety and



welfare of families in Pennsylvania. Specifically, PADLS exists for the purpose of protecting animals and humans from health threats by providing accurate diagnoses to assist Pennsylvania's agricultural community in controlling diseases to minimize economic loss. Also associated with PADLS is a field investigation team of veterinary diagnosticians with bases of operation at PADLS-Penn State and PADLS-New Bolton (University of Pennsylvania's large animal facility). This team works with veterinary practitioners who need support on difficult problems in the field and are activated when there is a suspicion of any outbreak of disease that may threaten Pennsylvania agriculture. Pennsylvania is also home to a Biosafety Level 3 laboratory that can handle/accept/analyze some of the most dangerous animal diseases in the world.

In terms of response and recovery, the Pennsylvania State Animal Response Team (PA SART) was formed in 2004 as a coordinated effort between several governmental, corporate, and private entities dedicated to preparation, planning, response, and recovery operations regarding animal emergencies in Pennsylvania. The mission of PA SART is to develop and implement procedures and train participants to facilitate a safe, environmentally sound and efficient response to animal emergencies at the local, county, state and Federal levels. Local teams, called CARTs (County Animal Response Teams), have been initiated in 60 of 67 counties as of June, 2007. Funding for the PA SART and local CART teams is currently limited to Federal dollars. Progress includes the following highlights:

- Receipt of over \$148,000 for purchase of equipment from State Health Department;
- Creation of on-line registration capability for volunteers;
- Establishment of PASART as an IRS approved 501 (c) (3) non-profit organization;
- Receipt of \$200,00 from Office of Defense Preparedness for calendar year 2006;
- Receipt of \$380,000 from DHS Office of Grants and Training for 18 months effective January 1, 2007;
- Receipt of \$50,000 from State Health Department for training for calendar 2006; and
- Sponsorship of a truckload of donated supplies sent to a Hurricane Katrina ravaged area.

At the farm level, premises identification creates a unique numeric identifier for livestock operations, which provides traceability back through the food chain. The USDA also actively participates with the Pennsylvania Emergency Management Agency, the Commonwealth's Regional Counter-Terrorism Task Forces, and the Strategic Partnership Program Agroterrorism Initiative.

The food distribution system would benefit from the expansion of food safety and security protocols. There is no requirement for trailers, railcars, or crate sealing for security and traceability as these transports move through commerce. Ports represent serious challenges as far as safety and security are concerned. Pennsylvania is home to three ports, including the Port of Philadelphia, which is the fourth largest port in the U.S.

and the second largest port on the east coast. The ports in Erie and Pittsburgh must also be addressed, but the sheer volume of activity done in Philadelphia's port is staggering – over 3,000 ships enter the port each year.

## **CONCLUSION**

Agrosecurity, food safety and food defense are issues that will only increase in importance as the food industry and regulatory agencies continue to move forward in creating policies and procedures to protect human and economic interests. This is a combined challenge for all involved, from using similar taxonomy to devising common reporting and response protocols during emergencies. Going forward, DHS, FDA and USDA must continue to work together to create and train on table top exercises, increase the familiarity of key players in the three agencies, and communicate each agency's standard operating procedures for different emergencies. Cross-agency efforts and funding should be used to inform the public and even other governmental organizations and leaders of the need for a strong relationship between these agencies to keep the food supply safe, abundant and affordable.

Today, a single hamburger can have more than 80 ingredients, each of which may originate in a separate country. The coordination of states and local governments as central partners between the private sector and the Federal government will create a model vision to be emulated by other states. Mr. Chairman, the leadership you foster, within the Federal government and within Pennsylvania, will provide for that 'farm to fork' safety that Americans have come to expect. Thank you for the opportunity to speak to the Subcommittee on the state of food protection and security. This Subcommittee plays an important role in helping all of us continue to improve upon the methods and coordination necessary to detect and diminish threats to the Nation's Agricultural and Food sectors. I look forward to continuing my working relationship with you and the members of this Subcommittee and am happy to address any questions you may have.