

**FARM TO FORK: PARTNERSHIPS TO PROTECT  
THE FOOD YOU EAT**

---

**FIELD HEARING**

BEFORE THE

SUBCOMMITTEE ON MANAGEMENT,  
INVESTIGATIONS, AND OVERSIGHT

OF THE

COMMITTEE ON HOMELAND SECURITY  
HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

JULY 9, 2007

**Serial No. 110-55**

Printed for the use of the Committee on Homeland Security



Available via the World Wide Web: <http://www.gpoaccess.gov/congress/index.html>

U.S. GOVERNMENT PRINTING OFFICE

48-929 PDF

WASHINGTON : 2009

---

For sale by the Superintendent of Documents, U.S. Government Printing Office  
Internet: [bookstore.gpo.gov](http://bookstore.gpo.gov) Phone: toll free (866) 512-1800; DC area (202) 512-1800  
Fax: (202) 512-2104 Mail: Stop IDCC, Washington, DC 20402-0001

COMMITTEE ON HOMELAND SECURITY

BENNIE G. THOMPSON, Mississippi, *Chairman*

LORETTA SANCHEZ, California,	PETER T. KING, New York
EDWARD J. MARKEY, Massachusetts	LAMAR SMITH, Texas
NORMAN D. DICKS, Washington	CHRISTOPHER SHAYS, Connecticut
JANE HARMAN, California	MARK E. SOUDER, Indiana
PETER A. DeFAZIO, Oregon	TOM DAVIS, Virginia
NITA M. LOWEY, New York	DANIEL E. LUNGREN, California
ELEANOR HOLMES NORTON, District of Columbia	MIKE ROGERS, Alabama
ZOE LOFGREN, California	BOBBY JINDAL, Louisiana
SHEILA JACKSON LEE, Texas	DAVID G. REICHERT, Washington
DONNA M. CHRISTENSEN, U.S. Virgin Islands	MICHAEL T. McCAUL, Texas
BOB ETHERIDGE, North Carolina	CHARLES W. DENT, Pennsylvania
JAMES R. LANGEVIN, Rhode Island	GINNY BROWN-WAITE, Florida
HENRY CUELLAR, Texas	MARSHA BLACKBURN, Tennessee
CHRISTOPHER P. CARNEY, Pennsylvania	GUS M. BILIRAKIS, Florida
YVETTE D. CLARKE, New York	DAVID DAVIS, Tennessee
AL GREEN, Texas	
ED PERLMUTTER, Colorado	

JESSICA HERRA-FLANIGAN, *Staff Director & General Counsel*

ROSALINE COHEN, *Chief Counsel*

MICHAEL TWINCHEK, *Chief Clerk*

ROBERT O'CONNOR, *Minority Staff Director*

---

SUBCOMMITTEE ON MANAGEMENT, INVESTIGATIONS, AND OVERSIGHT

CHRISTOPHER P. CARNEY, Pennsylvania, *Chairman*

PETER A. DeFAZIO, Oregon	MIKE ROGERS, Alabama
YVETTE D. CLARKE, New York	TOM DAVIS, Virginia
ED PERLMUTTER, Colorado	MICHAEL T. McCAUL, Texas
BENNIE G. THOMPSON, Mississippi ( <i>Ex Officio</i> )	PETER T. KING, New York ( <i>Ex Officio</i> )

JEFF GREENE, *Director & Counsel*

BRIAN TURBYFILL, *Clerk*

MICHAEL RUSSELL, *Senior Counsel*

(II)

# CONTENTS

	Page
STATEMENTS	
The Honorable Christopher P. Carney, a Representative in Congress From the State of Pennsylvania, and Chairman, Subcommittee on Management, Investigations, and Oversight .....	1
The Honorable Mike Rogers, a Representative in Congress From the State of Alabama, and Ranking Member, Subcommittee on Management, Investigations, and Oversight .....	2
WITNESSES	
Mr. T. David Filson, Coordinator, Emergency Preparedness and Response, Partnership Expansion Leader, Penn State Cooperative Extension:	
Oral Statement .....	4
Prepared Statement .....	8
Dr. Frederic J. Hoerr, Professor, College of Veterinary Medicine, Auburn University:	
Oral Statement .....	13
Prepared Statement .....	17
Dr. Thomas McGinn, Director, Veterinary and Agriculture Security, Office of Health Affairs, U.S. Department of Homeland Security:	
Oral Statement .....	20
Prepared Statement .....	22



# FARM TO FORK: PARTNERSHIPS TO PROTECT THE FOOD YOU EAT

MONDAY, JULY 9, 2007

U.S. HOUSE OF REPRESENTATIVES,  
COMMITTEE ON HOMELAND SECURITY,  
SUBCOMMITTEE ON MANAGEMENT, INVESTIGATION,  
AND OVERSIGHT,  
*Washington, DC.*

The Subcommittee met, pursuant to call, at 1:30 p.m., in Room 1 of the Wyoming County Courthouse, Tunkhannock, Pennsylvania, Hon. Christopher P. Carney [Chairman of the Subcommittee] presiding.

Members present: Representatives Carney and Rogers.

Mr. CARNEY. The Subcommittee will come to order. The Subcommittee is meeting today to receive testimony on Farm to Fork: Partnerships to Protect the Food You Eat. First, I would like to thank everybody for joining us here today in our neck of the woods. It is not every day that Tunkhannock, let alone Northeast Pennsylvania, gets to host a Congressional Hearing.

I would like to recognize a few people in the audience. Stark Bartron, County Commissioner, Mayor Norm Ball, Tony Litwin, County Commissioner, friends and neighbors from the area. I appreciate you showing up today, it is very nice to see you. Thanks also goes to the Subcommittee's ranking member, Mr. Mike Rogers, for taking a couple of days out of his busy 4th of July schedule to travel all the way up here from Alabama. Hopefully, the weather is very reminiscent of his home back in Alabama. And finally I would like to thank our friends at Cargill at Taylor Packing for allowing us to come up this morning for a visit. We had a very enlightening trip, tour of the plant.

And we are here today to examine how the Department of Homeland Security will work with its partners at all levels of government, as well as with the private sector in the event of a large-scale food contamination or agro-terror event. Agriculture is one of Pennsylvania's leading industries. According to the most recent data compiled by the State Department of Agriculture, 59,000 farm families farm over 7.7 million acres in this state alone. And it is not just farms that contribute to our agriculture industry, there are over 2,000 food producers, producing businesses, scattered across the state that create goods for market or prepare food stuffs for the next steps toward a finished product. And Pennsylvania is not alone, as we understand. Many states rely upon agriculture as a major piece of their economy. Most consumers take for granted what it takes to keep bringing food to their tables. Aside from just

planting, farming and harvesting, the industry produces, packs and ships to market. Not to mention safety, which is an integral part of every step of the process. They do all these things. While domestic sources account for the vast majority of what appears on our plates at every meal, America imports roughly 15 percent of what we eat. Food and agriculture safety are paramount to not only our health but to our economy as well. We have already seen relatively small scale food scares be it dirty scallions, tainted spinach or E. Coli outbreaks, etcetera. But if we are facing a truly wide-spread event, let alone an international one, this nation would be crippled.

In Pennsylvania alone, production, agriculture and related agribusiness contributes over \$40 billion to our economy annually. Putting aside the economic damages, responding to potential health issues would also be very daunting. In the event of a large-scale food safety event, we cannot have mass confusion. Clear leadership is a must. It is up to the Department of Homeland Security to coordinate any crisis response should our Nation's agriculture industry come under attack while respecting the expertise of other federal agencies and state and local government as well.

As we have seen in other scenarios, some agencies that should have been listening to DHS, treat it more like the new kid on the block, which hindered its ability to operate effectively. DHS has responsibility of coordinating response, disseminating information and allocating needed resources. It only makes sense that if there were an agro-terror or food contamination event, DHS would coordinate, not only with state and local governments, but with the US Department of Agriculture, the US Department of Health and Human Services and the Food and Drug Administration as well for more focused expertise.

Homeland Security has also established partnerships with industry as well as we saw with Taylor Packing this morning or Cargill this morning. The federal government is great at large-scale planning and response but private industry is much better suited to police itself for food contamination and from agro-terror.

Long before DHS stood up today, Taylor Packing, which, of course, is now Cargill that we toured, established an uphill standard for excellence in food handling. It is vital that our farmers and small businesses continue to do everything they can to ensure the safety and quality of our food. Ensuring that robust security and food handling procedures are in place and in practice at every agrobusiness is essential to preventing an economically devastating agro event.

The Department of Homeland Security, the state and local governments have done a good job in preventing a food catastrophe thus far and I am looking forward to hearing from Mr. Filson and Dr. Hoerr to hear their thoughts on how we can better prepare to prevent any agro-terror event.

The Chair now recognizes the ranking member from the Subcommittee, the gentleman from Alabama, Mr. Rogers, for an opening statement.

Mr. ROGERS. I want to thank you, Chairman Carney. It is good to be here with you in Wyoming County, Pennsylvania and have a chance to find out how we can better help protect our food supply. I want to thank the witnesses for being with us and particu-

larly Dr. Hoerr from Auburn coming up. He is from the School of Veterinary Medicine at Auburn University and is a leader, a world leader, in avian flu. I want to thank him.

East Alabama is similar to northern Pennsylvania in its support for agriculture. Here, dairy farming is prevalent and in my home area, poultry farming is prevalent. The annual receipts for farm and poultry products in Alabama are about \$5 billion. Of this total, approximately 47 percent is in the production of broiler chickens, which is Alabama's number one agricultural commodity. In fact, Alabama rates number three in the country for poultry production marketing over one billion chickens annually. An outbreak of highly contagious avian flu could be devastating to the economy of my home state, as well as our nation.

And if such an outbreak among poultry and wild birds is not properly contained and controlled, we could increase the risk that this disease will find its way into the human population. An outbreak of this type is one reason why my constituents in Alabama, like the folks here in northern Pennsylvania, want to know what is being done in this area.

Today we will hear from the chief veterinarian from the Department of Homeland Security. Of special interest is how DHS coordinates with the USDA and state agencies to protect our food supply. We also look forward to hearing from our witnesses about what steps are being taken and what additional steps should be taken to help prevent an act of agro-terrorism and the spread of foreign animal diseases.

I am sure the information we learn today will be helpful in our work on the Homeland Security Committee, as well as the House Agriculture Committee on which I am also a member.

And I want to thank Chairman Carney again for inviting me up here.

Mr. CARNEY. I want to thank Mr. Rogers for taking the time. It really is nice to have a good bipartisan committee. Mr. Rogers and I were very close together in a number of issues and this is something we are both very concerned with.

I want to welcome the witnesses today. Our first witness is Dr. Tom McGinn. Dr. McGinn has had a background in dairy and beef farming before going to veterinary college, graduating from North Carolina State University in 1987. As an assistant state veterinarian to North Carolina, in 1993, he pioneered the use of geographic information systems for animal and human health management. He is currently the director of veterinary and agricultural security for the office of the chief medical officer of the Department of Homeland Security. Our second witness is Mr. David Filson. Mr. Filson is the emergency preparedness and response coordinator for the Penn State Cooperative Extension and is responsible for ensuring that it is prepared to play a key role in the event of an agricultural emergency. He also serves as the partnership leader and is a liaison to state and federal agencies and other organizations. In that capacity, he is responsible for building, maintaining and enhancing professional connections and funding partnerships with a variety of agencies and organizations. He is a Penn State alumnus, having received his MS and BS from the College of Agricultural Sciences. Welcome.

Our final witness is Dr. Frederic Hoerr. Dr. Hoerr is a professor at Auburn University, College of Veterinary Medicine. He also serves as director of the Alabama Diagnostic Laboratories. The TBS State Diagnostic Laboratory is a member of the National Animal Health Laboratory Network and conducts surveillance on foreign animal diseases, including avian influenza and Exotic Newcastle Disease. I am not sure what that is, please enlighten us. Dr. Hoerr supervises eight veterinarians who provide diagnostic services for livestock, poultry, wildlife and companion animals. Dr. Hoerr received his DVM and his MS and a Ph.D. from Purdue University and has veterinary specialty certifications from the American College of Poultry Veterinarians and the American College of Veterinary Pathologists.

Without objections, the witnesses' full statements will be inserted into the record. Also, asking the audience's consent that we have the report, who is in charge, Dr. Filson, entered into the record. Without objection, so ordered.

I now ask each witness to summarize their statement for five or so minutes, whatever it takes, beginning with Dr. McGinn. Thank you.

**STATEMENT OF DR. THOMAS MCGINN, DIRECTOR,  
VETERINARY AND AGRICULTURE SECURITY, OFFICE OF  
HEALTH AFFAIRS, DEPARTMENT OF HOMELAND SECURITY**

Dr. MCGINN. I appreciate the opportunity, Mr. Chairman, to be with you this afternoon and Congressman Rogers as well. Thank you for the opportunity to be here in Wyoming County. Wyoming means extensive meadows and Tunkhannock means small streams, so we must be in the area of great agricultural capabilities.

You have asked me to report to you today on the progress being made to prepare for, to prevent and to respond and recover to acts of bioterrorism, agroterrorism, outbreaks of contagious diseases and natural disasters that would affect our food system.

A little bit of my background is 25 years as a dairyman, as a cattleman and as a veterinarian. I have worked extensively with contagious infectious diseases and what I found is that turning to the industries, like you mentioned earlier in Taylor Packing earlier this morning, gives us the ability to understand how they actually resolve problems and actually have the ability to contribute. So this is really a public/private partnership that we are invested in in terms of being able to protect the food supply in our country.

I have also been a deputy commander for one of the VMAT teams, veterinary medical assistance teams, and the founder of the State Animal Response Teams, SART, in North Carolina and I will come back to that as it relates to Pennsylvania in just a moment. And had the opportunity to work in many disasters in those capacities, as well as you mentioned now with Homeland Security.

My history with Pennsylvania, I have a great love for Pennsylvania. I came here about five years ago, was invited by the state veterinarian to talk about how to prepare for and respond to disasters in Pennsylvania. And at that point in time, presented on what North Carolina was doing because I was there in North Carolina and then also encouraged Pennsylvania to develop a State Animal Response Team as well.

Part of what I understood when I was in North Carolina was that emergency management and the capability to respond to an agricultural disaster begins at the county level and then at the state level. It begins with the private industry in concert with the local folks and the state folks having the ability to respond for two reasons. One, the response could be in multiple counties and multiple states at the same time particularly if it is of an agricultural nature of a Homeland Security impact. And so the ability of counties and states to work with their industry to respond quickly and effectively is the kind of needs that we have just out of the gate to be able to respond to a disaster.

We also have to develop the ability to have seamless response, seamless diagnostics and seamless recovery capabilities as it relates to any sort of emergency.

I am proud to be here to renew my commitments to the State of Pennsylvania from within the Department of Homeland Security because what we realize is the ability for Pennsylvania to have secure agricultural capability is the same ability that we have throughout our entire country.

I am very proud to point to the \$40-plus billion that Pennsylvania contributes to the food and ag vitality of this state and thereby to that of the nation.

Pennsylvania also has the third largest port in the nation as it relates to agriculture and the first largest port as it relates to fruits in the entire nation. So you can see you have a very important critical component of the infrastructure that needs to be protected.

You have 58,000 farmers and you contribute \$14.5 billion through your restaurant industries as listed in 2005. You have an excellent tripartite relationship within the diagnostic laboratory system between your Department of Agriculture, Penn State and the University of Pennsylvania.

You have a very successful food program that is emulated throughout the entire country in the way that you—your labeling of your food, Manufacturers Registry Programs.

You have 60 of your 67 counties with county animal response capability. That is a model for the rest of the country. It is a great testimony and a great example of how other states can build their capability to be able to respond. Again, we have to have that response capability for one county to be able to help another county and for states to be able to help states in order for our Nation's food to be secure.

You have also been successful in Pennsylvania to obtain the Homeland Security dollars, a little over a million dollars per year to be invested into this vital component of your economy. So being able to demonstrate the value of getting those Homeland Security dollars to protect your food and agriculture is a very important process and it is also a great example to the other states of ways in which they can then emulate what Pennsylvania is doing as well.

The mission of the Department of Homeland Security, and I have brought and I will leave these with everyone as well, are basically five goals within Homeland Security. We are to protect the nation against dangerous people, against dangerous goods, protect the

critical infrastructure, have a nimble and effective emergency response system and a culture of preparedness and strengthen and unify the operations in management within DHS. And we have discussed how important management is to this Subcommittee.

The goals within the Office of Health Affairs is to serve as a principle medical and veterinary authority to the Department of Homeland Security. We actually run the biodefense and agrodefense activities within the Department of Homeland Security. We do the internal and external coordination of the programs and we also provide the point of contact for state, federal and local capabilities, as well as the private sector on veterinary and public health issues.

The first person that the chief medical officer within the Office of Health Affairs hired was a veterinarian. This is the emphasis that our office has placed on animal health as a component of human health and the one medicine approach that we see as it relates to health that is vital to health of the communities and of the states. We now hired three veterinarians into the Office of Health Affairs and so we are very thankful to be able to start building this capability within animal health in the Department of Homeland Security.

The goals for this office, the Office of Food, Animal and Veterinary Medicine, are as follows. To stand up this office, to build this capability. To build a strategic plan for food, agriculture and veterinary medicine. We currently have not yet developed this sort of strategic planning and this is one of the first goals that I have as the director of this office. We also need to be able to give the accountability for our directives within HSPD-9 and to be able to answer the questions that are related to the GAO and the IG reports and then we got to be able to work with the different—coordinating with the different agencies right down to the private sector in our abilities to execute what is necessary for the protection of our food supply.

The secretary has also given our office the lead on food, agriculture and veterinary issues, as well as Homeland Security Presidential Directive 9.

Within Homeland Security Presidential Directive 9 there are 17 tasks. Seventeen of these DHS has responsibilities for. Five of those 17 are in a supportive role, for example, to the national veterinary stockpile. Five we co-lead and those are vulnerability assessments, border protection, specialized training, counter measures developments and secure biolabs. We also have seven that we are responsible for in a leadership capacity. They are in the area of intelligence, biothreat assessment, adequate local response capabilities and adequate planning, coordinated planning. In the area of information sharing, particularly with the private sector, and then the Centers of Excellence, of which there are two. One is centered around the University of Minnesota and that is in post-harvest and the other one is centered around the University of Texas, A & M in pre-harvest. It is these coordinated plans and this ability to rapidly respond in an inner-agency, integrated manner is the kind of capability that you are looking for from the Department of Homeland Security.

We also have over 30 programs with responsibilities in food and agriculture and veterinary medicine. Thirty programs. These are divided into basically five directives, science and technology, FEMA, customs and border, our Office of Health Affairs and intelligence and analysis. Within science and technology, let me highlight just a couple of programs which are important to you. One is in the building of additional counter-measures, such as the latest vaccines and diagnostic capabilities. Another in the management of the Plum Island Diagnostic Facility, which we coordinate with USDA. There are roughly 500 routine shipments to Plum each year of potential foreign animal diseases and is important to facilities like the one we visited this morning, Taylor Packing. Those are diagnosed in a very rapid and accurate manner to maintain their ability to provide the food that we all enjoy.

The biothreat assessment capabilities and then we mentioned the Center of Excellences. They have tremendous relationships, these Centers of Excellence, with the private sector and they are vital to our ability to protect the homeland since over 70 percent of the critical infrastructure in food and agriculture are owned by the private sector. Another area, FEMA's grant systems. I mentioned that you have been able to in this facility to—I mean, within Pennsylvania you have been able to obtain a million dollars in the grant programs into the food and ag sector. It is a great, great testimony to the work here.

One of the challenges that we have is making sure that we analyze these grants that are being given to all states, being able to determine which programs are being effective in putting resources into the food and ag area and then showing those effective states to other states so that we can be able to demonstrate best practices and ways to obtain further grants in that competitive process within the state, so that then we can further protect the food and agricultural commodities and sectors within that state.

I mentioned the intelligence community. DHS has a vital role in collecting, analyzing, fusing data within our National Biosurveillance Integration System. It is not just agricultural data that we are bringing in those programs, we are also bringing in data from hospitals, from other medical networks from around the world and from the environmental capabilities.

These sorts of biosurveillance efforts actually result in the ability of building an effective tool to combat the war on terrorism in a similar way that sonar and radar have been used in previous wars.

Customs and borders. This will be my last example. Customs and borders. We have seen a tremendous working relationship being established between the USDA and the Department of Homeland Security in customs and borders. Both secretaries have recently signed a letter supporting customs and border ag specialists to remain within the Department of Homeland Security. They are developing excellent working relationships. The number of inspectors has increased 30 percent. The number of dog teams have gone up significantly as well. And there is these pest risk committees, risk pest committees, at each port. The Port of Philadelphia has an excellent example of one of these committees. It has three states, university personnel, private sector, state governmental folks were working together with these pest risk committees to be able to

make sure that the ports are secure and the stakeholders' needs are being met.

I want to thank you for the opportunity to appear before you today and I want to thank you for the leadership of this committee to actually improve and give guidance to the protection of our food supply for our children and our children's children's future. Thank you.

[Statement of Dr. McGinn follows:]

PREPARED STATEMENT OF DR. TOM MCGINN

### 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 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 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 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 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 coordination of medical and veterinary preparedness activities;
- Serve as primary DHS point of contact for governments and the private sector on medical and veterinary and public health issues; and
- Discharge DHS responsibilities under Project

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 designated 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 \$51.1 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, 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 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 and diagnostics to combat a wide variety of these livestock bioterrorism threats.

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

In recent testimony, Secretary 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 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 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 both the health establishment 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 proc-

essors, retail operations, warehouses and 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 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 (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 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 (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 as an IRS approved 501 (c) (3) non-profit organization;
- Receipt of 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.

Mr. CARNEY. Thank you, Dr. McGinn. Before we go to Mr. Filson, I would like to do something I do not get to do in Washington chairing the committee. A tan Camry, license plate number ESH-6926 is blocking the driveway. Anybody who wants to—

Mr. FILSON. Welcome to rural Pennsylvania.

Mr. CARNEY. I will now recognize Mr. Filson for five minutes or so.

#### **STATEMENT OF DAVID FILSON, COORDINATOR, EMERGENCY PREPAREDNESS AND RESPONSE**

Mr. FILSON. Welcome to rural Pennsylvania. Chairman Carney, Congressman Rogers, Congressional support staff and invited guests, thank you for inviting me to share with you at this Committee Hearing, Farm to Fork: Partnerships to Protect the Food You Eat.

I am Dave Filson, an emergency preparedness and emergency response coordinator for Penn State Extension. I am also the chair elect for the National Extension Disaster Education Network or EDEN and I have been with Penn State Extension for 22 years.

In my current role, I have a professional working perspective and involvement in interagency collaboration or partnerships at the federal, state and local level between and among stakeholders across the entire continuum from Farm to Fork. I have co-authored a series of three OG&T reviewed and approved courses on agricultural emergencies and disasters and have collaborated with other universities, APHIS and various agencies and organizations on training material specific to emergency management for agricultural disasters and emergency preparedness.

I will focus my comments around these areas. The importance of agriculture, the cost of a major agricultural disaster, the partnerships in the food and agricultural system, documenting the need and, finally, a few recommendations.

Less than three percent of our population is directly involved in production agriculture and yet that group of committed farmers and ranchers generate cash receipts in excess of \$900 billion or about 10 percent of the US Gross Domestic Product. Include the allied and support industries and we have about a \$50 billion annual contribution to the national trade balance.

US citizens spend less than 11 percent of their disposable income to feed their families with the most nutritious, most diverse and safest food supply in the world. Around the world, other nations must spend two to three times or up to 30 percent of their disposable income on food. Food and agriculture is not only big business, it is vital to our very existence.

The Food and Mouth Disease outbreak in Great Britain several years ago cost that country \$32 billion. If a similar scale outbreak occurred in the United States, the estimates on the financial loss to the economy range as high as \$140 billion. Additional losses would come from the loss of domestic and export markets and a loss of confidence in the food system and the agencies who are charged with protecting our food system.

No less than five federal agencies have some responsibility to ensure the safety of our food system. USDA and FDA have the most visible roles but Homeland Security has overall responsibility. EPA and Health and Human Services have responsibilities at certain points. To complicate the issue further, lead roles in food safety change from agency to agency depending of whether the role is during prevention and preparation or during response and recovery. At the state level, similar diverse and varied responsibilities are held by state level agencies that sometimes are similar to federal agency responsibilities.

The State Department of Agriculture is lead partner with the responsibilities for animals, plants and some food products. Other state level agencies have various responsibilities for food and agriculture safety. At the local level, the diversity of responsibility, and I might add the diversity of the level of preparedness, is even greater. Many counties do not have a comprehensive emergency management plan that addresses food and agriculture issues.

The system is truly complex. HSPD-9 in part says, "the United States agriculture and food systems are vulnerable to disease, pests or poisonous agents that occur naturally or unintentionally introduced or are intentionally delivered by acts of terrorism. America's agriculture and food system is an extensive open interconnected,

diverse and complex structure providing potential targets for terrorist attacks. We should provide the best protection possible against such successful attacks on the United States agriculture and food system, which could have catastrophic health and economic effects.”

One could argue that the system in place to protect our food and agriculture system, with multiple agencies at federal, state and local level, is also an extensive, open, interconnected, diverse and complex structure. Our system of food and agriculture safety is very complex but it works. Could it be improved? Yes. Can we ensure zero risk? Absolutely not. Partnerships exist and they function but sometimes the effectiveness of the partnership is limited intentionally or unintentionally by silo or stovepipe philosophy.

Communication up and down within an agency, both at the federal and state level, occurs freely. That same degree of collaboration and communication across or between agencies is not nearly as open and free. The partnership is utilized when it becomes imperative to bring others into the conversation.

Communication and collaboration issues have been identified in nearly every exercise and nearly every report on agency response capabilities. A March 20, 2007 GAO report entitled “Critical Infrastructure Challenges Remain in Protecting Key Sectors”, agriculture and food is one of our key infrastructures and a key sector. The barriers to success as identified in the report are difficulties in developing partnerships, concerns about sharing information and lack of long-standing working relationships.

Significant resources have been channeled from various sources, Homeland Security, HHS, USDA, FDA and others to build a better food and agriculture safety system. When we consider the entire continuum from Farm to Fork, how much have we invested to ensure food and agriculture safety on the farm? Agencies are better staffed, better equipped, better trained, better exercised, more knowledgeable, but what about the poultry producer on the Eastern Shore, the Northeastern dairy producers, the Mid-west corn and soybean growers, the Western cattle feeders, swine producers in North Carolina and Washington State apple growers? What investments from agencies have been dedicated to the safety and security of our food and agriculture system for the producer at the farm or ranch?

A national survey of agriculture producers by the Extension Disaster Education Network asked producers a series of questions. When asked, how likely do you think it is that agroterrorism could happen somewhere in the United States, the majority or 77 percent indicated that an agroterrorism event would likely occur. Most thought it would not happen to them individually but that it would occur. When asked, do you believe you are properly prepared for agroterrorism or some other biosecurity threat on your operation, only 14 percent said yes. This should be a concern to all of us. I am not aware of any funds from any federal agency allocated to improve our agricultural producers’ level of preparedness for food and agriculture safety and security issues. No producer continuity of operations, no agriculture producer contingency plans, no producer disaster and terrorism plans. We have a \$900 billion industry that could receive some support for disasters including terrorism.

HSPD-9 says we should provide the best possible protection. Should not that protection also include the producer?

Numerous GAO reports indicate the critical nature of surveillance and detection. Where better to enhance surveillance and detection than at the production level and by the individuals whose very livelihood depends on the continuous market of safe and nutritious agricultural commodities. Multi-agency response and recovery enhancement is important but resources at the front end, at the producer level, including surveillance and detection and individual disaster and terrorist plans for agriculture producers may, in fact will likely, result in a fewer potential incidents escalating to disaster status when response and recovery are required.

In that same EDEN survey I mentioned earlier, producers were asked, if you discovered a crop disease outbreak on your farm that you didn't recognize, to whom would you turn for advise? 80 percent of the producers across the nation indicated that they would turn to Cooperative Extension. Same group, different question. Who would they turn to if they discovered an animal disease outbreak? The highest response was their local veterinarian, which is logical. Following closely was the Cooperative Extension System and no response to the producers on whom they would contact did they indicate Homeland Security, FEMA, APHIS or FDA.

There are a number of recommendations that I could bring to your attention and they are fully listed in the narrative that I have shared with you. Let me highlight several. Use real world incidents such as spinach, peanut butter, wheat gluten, Foot and Mouth Disease, Anthrax, soy bean rust, Exotic Newcastle Disease, Plum Pox Virus and other real life food safety incidents as valuable learning experiences. Find out what went wrong and then try to fix it and then share reports and findings across all agencies. Support and enhance existing resources and networks such as the Cooperative Extension System, the Extension Disaster Education Network and other established resources. Re-focus efforts toward food and agriculture safety and security at the producer level. Ensure that states and local municipalities have comprehensive emergency management plans that have resources, tasks and protocols or standard operating procedures developed to accurately represent the local food and agriculture community for all disasters, including food and agriculture issues. Support educational programs to increase awareness of the complexity of the agriculture production system to agency staff and first responders and educational programs to increase the awareness of food and agriculture safety system, including NIMS and the national response plan for the agricultural industry. CSREES and the Cooperative Extension System have established credibility and science to meet those needs. Evaluate the work. What has been the effectiveness of resource allocation at all levels to improve the safety and security of our food and agriculture system? Is the system any more safe or more prepared for disaster than before investment and to what degree and at what levels? Support research and public outreach programs that address current emerging issues on food and agriculture safety and security. Again, the Cooperative Extension System has science-based research in the National Land-Grant System and reach ca-

pability into every county and parish in the United States to address that need.

As we focus on the partnerships that protect the food you eat, please consider the importance of the food production industry. Consider how we collectively, with financial support and with existing resources and networks, can place more emphasis on preparedness and preparation, surveillance and detection, response and recovery with possibly the most important partner in this partnership, the American farmer and rancher.

Thank you for the opportunity to provide my professional perspective on the partnerships in the Farm to Fork Food System.

[Statement of Mr. Filson follows:]

PREPARED STATEMENT OF T. DAVID FILSON

Chairman Carney, Committee members, congressional support staff, and invited guests, thank you for inviting me to share with you at this committee hearing "Farm to Fork: Partnerships to Protect the Food You Eat".

My name is Dave Filson, I am the Emergency Preparedness and Emergency Response Coordinator, and Partnership Expansion Leader for Penn State Cooperative Extension. I am also the chair-elect for the National Extension Disaster Education Network (EDEN). I have been with Penn State Extension for 22 years.

In my current role, I have a professional working perspective and involvement in interagency collaboration, or partnerships, at the federal, state, and local level between and among stakeholders across the entire continuum from "Farm to Fork". I have co-authored a series of three OG&T reviewed and approved courses on Agricultural Emergences and Disasters, and have collaborated with other universities, APHIS, and various agencies and organizations on training material specific to emergency management for agriculture disasters and emergency preparedness.

I will focus my comments around these areas:

- The Importance of Agriculture,
- The Cost of a Major Agriculture Disaster,
- The Partnerships in the Food and Agriculture System,
- Documenting the Need, and finally,
- Recommendations.

***The Importance of Agriculture***

Less than 3 % of our population is directly involved in production agriculture, and yet that group of committed farmers and ranchers generate cash receipts in excess of \$900 billion dollars or about 10 % of U.S. Gross Domestic Product. Include the allied and support industries and we have about 50 billion annually contributing to the national trade balance. U.S. agricultural exports are more than twice the exports sold by other U.S. industries. The U.S. food system employees an additional 15 % of the U.S. workforce across the diverse network from "Farm to Fork". U.S. citizens spend less than 11 % of their disposable income to feed their families with the most nutritious, most diverse, and safest food supply in the world. Around the world, other nations must spend two to three times, or up to 30 % of their disposable income on food. Food and agriculture is not only big business, it is vital for our very existence.

***The Cost of a Major Agriculture Disaster***

The Foot and Mouth outbreak in Great Britain cost that county \$32 billion dollars. If a similar scale outbreak occurred in the United States, the estimates on the financial loss to the economy range as high as \$140 billion dollars. Additional loss would come from loss of domestic and export markets and a loss of confidence in the food system and agencies who are charged with protecting our food system.

***The Partnerships in the Food and Agriculture System***

When we use the term "partnership" in the context of protecting the food we eat, the number of agencies with responsibility in these partnerships is so diverse that it is difficult, if not impossible, to describe how we as a nation ensure the safety of our food and agriculture system. No less than five federal agencies have some responsibility to ensure the safety of the food system. USDA and FDA have the most visible roles, but Homeland Security has overall responsibility. EPA and Health and Human Services have responsibilities at some point. To complicate the issue further, lead roles in food safety change from agency to agency depending on whether the role is during Prevention and Preparation, or during Response and Re-

covery. At the state level, similar diverse and varied responsibilities are held by state level agencies that sometimes are similar to federal agency responsibilities. The state Department of Agriculture is lead partner with the responsibilities for animals, plants, and some food products. Other state level agencies have various responsibilities for food and agriculture safety. At the local level, the diversity of responsibility, and I might add level of preparedness, is even more diverse. Many counties do not have a comprehensive Emergency Management Plan that addresses Food and Agriculture issues. Some counties have a plan that was developed from a generic template that was borrowed, and there are some counties that have a legitimate working document in which the stakeholders and local agency partners are identified and a protocol or standard operating procedure is identified for Food and Agricultural incidents.

The system truly is complex. HSPD 9 in part says: “The United States agriculture and food systems are vulnerable to disease, pest, or poisonous agents that occur naturally, are unintentionally introduced, or are intentionally delivered by acts of terrorism. America’s agriculture and food system is an extensive, open, interconnected, diverse, and complex structure providing potential targets for terrorist attacks. We should provide the best protection possible against a successful attack on the United States agriculture and food system, which could have catastrophic health and economic effects.”

One could argue that the system in place to protect our food and agriculture system with multiple agencies at federal, state, and local level is also . . . an extensive, open, interconnected, diverse, and complex structure. A flow chart that tracks a commodity from “Farm to Fork” and identifies the various agencies that may have oversight responsibility across that continuum is mind boggling!

My comments are not intended to be overly critical. Our system of food and agriculture safety is very complex, *but it works!* Could it be improved? *Yes.* Can we ensure zero risk? *Absolutely not.* Partnerships exist and they function, but sometimes the effectiveness of the partnership is limited intentionally, or unintentionally, by silo or stovepipe philosophy.

Within agencies, information and collaboration is more functional. Communication up and down within an agency, both at the federal and state level, occurs freely. That same degree of collaboration and communication across or between agencies is not nearly as open and free. Sometimes important information on an incident is held within an agency until a critical point is reached. Then, information may be shared across agencies. The partnership is utilized when it becomes imperative to bring others into the conversation. Precious time can be lost until all agencies are fully functional and engaged in the incident.

Communication and collaboration issues have been identified in nearly every exercise, and nearly every report on agency response capabilities. A March 20, 2007 GAO report, “Critical Infrastructure Challenges Remain in Protecting Key Sectors,” Agriculture and Food is one of the critical infrastructures and key sectors. The barriers to success as identified in the report are:

1. Difficulties in developing partnerships with DHS.
2. Concerns about sharing information.
3. Lack of long standing working relationships.

As our society and our culture are changed by the events of the world, our way of doing business needs to change as well. Change is difficult for everyone. We are doing business differently, which is necessary. Some who are directly affected by changes in agency roles and accountability are challenged to perform in a new work environment. Time will help, but we must all be accountable for our individual and collective role and responsibility to ensure a safe and secure food and agriculture system. You, as House Homeland Security Committee members are included in that charge.

#### ***Documenting the Need***

Significant resources have been channeled from various sources—Homeland Security, HHS, USDA, FDA, and others—to build a better food and agriculture safety system. That has been a wise investment. But allow me to ask, when we consider the entire continuum from “Farm to Fork”, how much have we invested to ensure food and agriculture safety on the farm? The very hub of the system has been largely ignored. Agencies are better staffed, better equipped, better trained, better exercised, more knowledgeable, but what about the poultry producers on the Eastern Shore, the Northeastern dairy producers, the Mid-west corn and soybean growers, the Western cattle feeders, swine producers in North Carolina, and Washington State apple growers? What Homeland Security or other agency resources have been dedicated to the safety and security of our food and agriculture system for the producer at the farm or ranch?

A national survey of agriculture producers (n,337 from 34 states) by the Extension Disaster Education Network (EDEN), asked producers a series of questions. When asked, *How likely do you think it is that agroterrorism could happen somewhere in the U.S.?*, the majority, 77 %, indicated that an agroterrorism event was likely to happen. Most thought it would not happen to them individually, but that it would occur. When asked, *Do you believe you are properly prepared for agroterrorism or some other biosecurity threat on your operation?*, only 14 % said yes. Ladies and Gentlemen this should be a concern to all of us. What resources have we invested to improve this situation? I'm not aware of any funds, from any federal funding agency, allocated to improve our agricultural producers' level of preparedness for food and agriculture safety and security issues. No producer continuity of operation plans, no agriculture producer contingency plans, no producer disaster and terrorism plans. . . . We have a 900 billion dollar industry that has not received support to prepare for disasters including terrorism. HSPD 9 says we should provide the best protection possible. Shouldn't that protection also include the producer?

Numerous GAO reports indicate the critical nature of surveillance and detection. Where better to enhance surveillance and detection than at the production level and by the individuals whose livelihood depends on a continuous market of safe and nutritious agricultural commodities?

Multi-agency response and recovery enhancement is important, but resources on the front end, at the producer level, including surveillance and detection, and individual disaster and terrorist plans for agriculture producers may, in fact, will likely, result in fewer potential incidents escalating to disaster status when response and recovery are required.

In the same EDEN Survey I mentioned earlier, producers were asked, *If you discovered a crop disease outbreak on your farm that you didn't recognize, to whom would you turn for advice?* 80% of the producers across the nation indicated that they would turn to the Cooperative Extension Service. The other two groups with highest number of responses were the State Department of Agriculture, or another farmer or rancher. Same group different question, *Who would they turn to if they discovered an animal disease outbreak?* The highest response was their local veterinarian, which is logical. Following closely was the Cooperative Extension System. In no response on whom to contact did they indicate Homeland Security, FEMA, APHIS, FDA.

**Recommendations:**

- Accept the fact that we will never have zero risk.
- Increase and improve communication at all levels with all agencies and with all partners
- Include representation and consider the input of the working farmer or rancher, and the agriculture industry on committees at all levels.
- Ask agriculture producers what should be done to improve food and agriculture safety and security.
- Use real world incidents such as spinach, peanut butter, wheat gluten, Foot and Mouth Disease, Anthrax, soybean rust, Exotic New Castle Disease, Plum Pox Virus, and other real-life food safety incidents as valuable learning experiences. Find out what went wrong and then try to fix it. Share reports and findings across all agencies.
- Support and enhance existing resources and networks such as the Cooperative Extension System, the Extension Disaster Education Network, and other established resources. Re-focus efforts towards Food and Agriculture Safety and Security at the producer level.
- Ensure that states and local municipalities have Comprehensive Emergency Management Plans that have resources, tasks, and protocols or standard operating procedures developed to accurately represent the local food and agriculture community for all disasters including food and agriculture disasters.
- Practice / test plans at *all* levels with *all* stakeholders including agriculture producers, who would be involved in a response effort for a food or agriculture disaster or terrorism incident.
- Support increased emphasis on surveillance and detection by education of First Detectors, including producers, adequately trained technicians, and adequately equipped laboratories for the National Plant Diagnostic Network and the National Animal Health Laboratory Network.
- Support educational programs to increase awareness of the complexity of the agriculture production system to agency staff and First Responders, and educational programs to increase the awareness of the food and agriculture safety system including NIMS and NRP for the agriculture industry. CSREES and the

Cooperative Extension system have established credibility and science to meet these needs.

- Evaluate the work—What has been the effectiveness of resource allocation at all levels to improve the safety and security of our food and agriculture system? Is the system anymore safe or prepared for disaster than before investments? To what degree? At what levels?
- Provide training in crisis communication for all agencies who have food and agriculture safety and security responsibility, and who interact with the public.
- Encourage better coordination and collaboration between federal and state agencies, academia, local responders, and the private sector, including the agriculture industry.
- Support the development of an improved media campaign to educate the public before, during, and after a disastrous event including terrorism that will reduce fear and panic.
- Support research and public outreach programs that addresses current emerging issues on food and agriculture safety and security. Again, the Cooperative Extension system has science-based research in the national Land-Grant system and reach capability into every county and parish in the United States to address that need.

As we focus on the “the Partnerships that Protect the Food You Eat”, please consider the importance of the food production industry. Consider how we, collectively, with financial support, and with existing resources and networks can place more emphasis on preparedness and preparation, surveillance and detection, response and recovery with possibly the most important partner in this partnership, *the American Farmer and Rancher!*

Thank you for opportunity to provide my professional perspective on the partnerships in the “Farm to Fork” food system.

Mr. CARNEY. Thank you, Mr. Filson. I now recognize Dr. Hoerr to summarize his testimony for five minutes or so.

**STATEMENT OF DR. FREDERIC J. HOERR, PROFESSOR,  
COLLEGE OF VETERINARY MEDICINE, AUBURN UNIVERSITY**

Dr. **Hoerr**. Chairman Carney, Mr. Rogers, thank you for the invitation to present this testimony.

My name is Fred Hoerr. I am a veterinarian who serves as director of the Alabama State Diagnostic Laboratories. I am also a professor at the Auburn University College of Veterinarian Medicine.

Today I am presenting information about Auburn University’s research technologies and programs that respond to food safety and agroterrorism concerns for the State of Alabama and for the nation.

Auburn University is a top 50 public university with notable programs in training of dogs in the detection of explosives and drugs and in advanced conflict and tactical simulation software for first responder training.

In many ways, Alabama is a microcosm of other agricultural states. We are an exporter of chicken and beef but an importer of dairy products. An agroterrorism event can threaten the economy of Alabama by directly affecting production, blocking exports, limiting imports of dairy products and influencing livestock and poultry markets. For this reason, research at Auburn University is focused on the detection of agents that threaten food safety and the public health and well-being.

The Auburn University Detection and Food Safety Center was developed with faculty from across the university. The goal is to foster research synergism to develop new technologies that will detect food-borne pathogens from the farm to the dinner table and to facilitate the transfer of this technology to society. The center has made advances in the prevention of BSE or Mad Cow Disease by developing a new procedure for detecting ruminant byproduct in

animal feeds. Other research focuses on the detection of agents of agro or bioterrorism such as, research to understand the cellular basis for the very sensitive smell possessed by animals, to develop new technologies to detect pathogens at extremely low levels. Also, newly developed biosensors for Anthrax and salmonella are more robust than those currently available. Also involving detection is our new State Diagnostic Laboratory on the Auburn Campus, which continues a 60-year partnership with Auburn University and the Alabama Department of Ag and Industries, the Honorable Ron Sparks, Commissioner. This biosafety level two and three laboratory is a member of the National Animal Health Laboratory Network. It conducts surveillance for foreign animal diseases and would be the first responder laboratory for an agroterrorism event in Alabama.

In the area of response, Auburn is the lead site for development of advanced conflict and tactical simulation. This is software first developed by the military but undergoing modification for domestic application. ACATS can model terrorism or agroterrorism events for almost any variable that could be encountered. For national implementation of ACATS, Auburn works with 10 regional collaborators with the goal of putting this training capability in every state and down to the county and local city government. Also in the area of response is a new avian influenza vaccine that enables rapid production of a vaccine specific to an emerging strain with high-volume production and mass application to millions of chickens if necessary.

Auburn faculty are active in agroterrorism awareness and training at the regional and national levels including Internet New Digest, with the latest information on agroterrorism awareness and on avian influenza. As mentioned by Mr. Filson, the Extension Disaster Awareness Education Network, or EDEN, Auburn veterinarians work with southern regional states and the goal of this program is to provide farmers information about farm security and disaster planning. And our veterinarians at the College of Veterinarian Medicine have recently published articles on veterinarian responsibilities in agroterrorism and natural disasters.

Auburn University veterinarians are instructors in the Department of Homeland Security, Center for Domestic Preparedness in Anniston, Alabama. Each year, the Agricultural Emergency Response Training course—in this course more than 400 first responders from across the nation receive training specific to agricultural events. It is the only program of this type with hands-on animal training scenarios which are conducted at the College of Veterinary Medicine at Auburn University.

For the future, Auburn University offers accountability in developing technologies that are applicable to Alabama and to the nation. We are fostering collaborative research lead by innovative faculty, while we strive to provide quality research facilities for those faculty members. Through our new research, our Auburn Research Park, we will transfer new technology to the marketplace by building partnerships with business and industry.

Thank you again for the invitation and this concludes my formal presentation.

[Statement of Dr. Hoerr follows:]

## PREPARED STATEMENT OF FREDERIC J. HOERR, DVM, PHD

Mr. Chairman, Ranking Member, and Members of the Committee. Thank you for the invitation to present this testimony on the activities of Auburn University relative to food protection, particularly those aspects related to agroterrorism. My name is Frederic Hoerr. As a veterinarian with specialties in pathology and in poultry medicine, I have worked with the poultry industry in Alabama since 1980. For the past 20 years, I have served as the director of the state diagnostic laboratories for Alabama, a program of the Alabama Department of Agriculture and Industries, The Honorable Ron Sparks, Commissioner. I hold a joint appointment in the Auburn University College of Veterinary Medicine at the faculty rank of Professor

Auburn University is a top-50 ranked public university that has provided instruction, research and outreach to benefit Alabama and the nation for more than 150 years. Auburn contributes to our nation's homeland security through a number of innovative programs, including AU's unique ability in canine explosives and drug detection training and AU's robust first responder training activities that utilize the highly flexible Advanced Conflict and Tactical Simulation (ACATS) exercise software

In many ways, Alabama is a microcosm of the interstate and international scope of agriculture today. States with intensive agriculture must rehearse for rapid and effective response to an agroterrorism event, develop rapid detection capabilities for agents of agroterrorism, create a awareness of the issues among the agricultural producers, and train agricultural first responders. Auburn University is addressing these key components not only for the state of Alabama, but with technological developments and programs that can benefit the nation as a whole.

Alabama ranks third nationally in broiler chicken production and 9th in beef cow production. These rankings translate to a substantial economic presence in the state with nearly 4000 poultry farms producing 20 million chickens each week. The 2002 USDA Agricultural Census maps show many counties clustered in north and south Alabama having 75% or more of their total economy based on poultry production. Alabama chickens are a healthy and wholesome food shipped to consumers throughout the country and exported throughout the world. Many poultry farms are also ideally suited for the production of beef cattle, especially beef cows producing calves that are shipped to feedlots in western states. The poultry-beef farming connection is exemplified by Cullman County, which ranks first in the state in poultry and cattle production, and second in dairy production. Dairy production in Alabama now occurs on fewer than 90 farms, with much of the state's milk supply imported from Texas and New Mexico.

From these basic farm facts emerge several agroterrorism concerns. The density of production farms in poultry-rearing areas creates a major challenge to prevent the rapid spread of a highly contagious disease, whether it is introduced naturally or maliciously. Centers of poultry production in Alabama extend across the state lines into Georgia, Florida, Mississippi and Tennessee. Ten to 20 percent of poultry products are exported and therefore vulnerable to rapid closure of export markets in the event of a disease emergency. Calves produced in Alabama are shipped out of state to realize their economic potential and require health certificates to travel interstate. During an animal disease emergency, farm quarantines for either a poultry or cattle disease could severely impact all of the poultry, beef, and dairy production within a quarantine zone involving one or more counties. This could result in not only the direct loss of animals on the farm, but also economic losses from an inability to process rapidly growing poultry at the market weight, the closing of interstate shipments of cattle and poultry products, and the overnight loss of export markets. Those who work in diagnostic and regulatory testing of livestock and poultry are reminded are ever mindful of this potential reality. The line between an agroterrorism event and a threat to a major segment of the food supply is only a matter of the severity of given situation, and the effectiveness of the response to it.

Auburn University's mission is defined by its Land-grant traditions of service and access. Several significant advances relative to acts of agroterrorism and safety of the food supply are highlighted in the following.

*Detection.* The Auburn University Detection and Food Safety Center (AUDFS) links and coordinates researchers from five Auburn University colleges: Agriculture, Engineering, Human Sciences, Sciences and Mathematics, and Veterinary Medicine. Core faculty work together to address the need for next-generation sensors and information systems for the detection of food contamination, and rapid inventory and traceability of food products. The results of this research will benefit national and international efforts to detect threats to the food supply system. AUDFS seeks to combine advances in the identification of foodborne illnesses and contaminants with

the latest in biosensor technology. The goal is to have a system that monitors food products from production to consumption, thereby eliminating or reducing significantly the threat of foodborne bacteria, pathogens and toxins reaching our dinner tables and restaurants. AUDFS fosters multidisciplinary programs leading to synergistic collaborations between university researchers and the detection industry. It facilitates technology transfer from the university to product development, and encourages joint industry-university research collaborations. Potential applications include technology to instantaneously evaluate food safety at port-of-entry inspection stations; ascertain the presence of ruminant meat-and-bone-meal (MBM) in agricultural feed, thereby preventing bovine spongiform encephalopathy (BSE) from infiltrating the food-supply chain; and identifying, warning and tracing problems in food processing lines.

Two core faculty members of AUDFS, who are located at the College of Veterinary Medicine, focus on improved detection technologies. Dr. Vitaly Vodyanoy studies sensory physiology and the biophysics of odor detection using the canine nose and its highly sensitive sense of smell (olfactory system). The aims are to determine the initial chemoreceptive events in the animal olfactory system and to find out how the odor-related information translates into electrical events in the cellular level. The potential application of this research is to produce new or improved artificial systems responsive to very small concentrations of odorant. The objective is to develop an electrochemical sensor that shares basic molecular mechanisms associated with the sense of smell. Dr. Valery Petrenko studies small viruses (phage) that infect bacteria. He discovered that specific proteins on the outer surface of the phage can be employed as sensitive and specific detectors of *Bacillus anthracis* (anthrax) spores as well as Salmonella. He is developing additional applications for other pathogenic viruses, bacteria, and toxins.

The cooperative relationship between Auburn University and the state diagnostic laboratory now extends to 60 years. The state laboratory emerged from the post-war veterinary school in 1947, progressing to the new Thompson Bishop Sparks State Diagnostic Laboratory, a program of the Alabama Department of Agriculture and Industries, in 2006. This Biosafety Level 2 and 3 facility is the central animal disease diagnostic laboratory in a four-laboratory system. Diagnostic and regulatory testing is provided for livestock, poultry, wildlife, and companion animals. The Auburn laboratory, a member of the National Animal Health Laboratory Network, provides full service diagnostic testing to determine the cause animal mortality, as well as regulatory testing for interstate and international movement of animals. The state laboratories will conduct 900,000 diagnostic tests in 2007, including surveillance for avian influenza in poultry, waterfowl, and wild birds. The state laboratories are linked to the National Veterinary Services Laboratory for confirmatory testing for emerging and foreign animal diseases. This laboratory is the most likely first-site of laboratory assessment and preliminary determination of an agroterrorism event involving animal health in Alabama. Because of the size of poultry production in the southeastern U.S. and the potentially rapid spread of an infectious disease, this detection capability has major regional impact.

The diagnostic laboratory is both a consumer and developer of new detection procedures and technologies. As the point of first detection of emerging diseases in Alabama, numerous research projects at Auburn University have been initiated through the years by diagnostic laboratory findings of infectious diseases of poultry and livestock.

*Response.* Auburn University is the pilot site for deployment and training of a conflict response modeling program, Advanced Conflict and Tactical Simulation (ACATS). This U.S. military-developed program is being refined and tested as an emergency response and homeland security preparedness trainer for local, state and regional public service agencies. ACATS provides realistic and real-time computer simulation to improve domestic response preparedness rehearsal activities. The computer simulation program integrates terrain and structures, vehicles and equipment, line of site responder views, sensor data, weather, casualty modeling, human fatigue factors, and chemical dispersion models for real-time modeling. ACATS has potential application to agro/food supply terrorism with appropriate refinements, especially large venue events, which could rapidly occur in the poultry or cattle producing regions of Alabama and throughout the nation. ACATS testing is in the early stages with lead agencies in eight national regions, and will eventually link deployment sites in every state across the nation.

The first egg-injected vaccine to protect chickens against avian influenza (AI), a virus threatening human health and global poultry populations, has been developed by Dr. Haroldo Toro, at the College of Veterinary Medicine in collaboration with researchers at Vaxin Inc. of Birmingham, AL. This vaccine has the potential to dimin-

ish the spread of highly pathogenic avian influenza in large commercial poultry production facilities located throughout the world.

The vaccine can provide a high degree of protection once an outbreak's strain is determined. The researchers inserted a gene from a low pathogenic avian flu virus strain (H5N9) into a non-replicating human virus (a Vaxin proprietary technology), which was then injected into developing chicken embryos still in the egg. In trials with the vaccine against two highly pathogenic avian flu viruses, a Vietnam H5N1 strain and a Mexican H5N2 strain, the results showed acceptable to excellent protection. Current AI vaccines have inherent constraints against large volume production and must be administered to individual birds by hand application. This vaccine can be produced in high volume and robotically administered into the incubating egg several days before the chick hatches, both major advantages.

U.S. poultry producers, with a few specific exceptions, do not vaccinate for AI and their flocks have no protection to the disease should exposure occur, such as during a bioterrorism event. Dr. Toro's work is a significant advancement because of the millions of chickens that may need to be rapidly vaccinated in the face of an outbreak. This vaccine technology provides for rapid production of a strain-specific vaccine that can be applied to large populations of chickens, protecting the viability of the poultry industry, as well as the poultry meat protein in the food supply. It could also significantly reduce the public health threat that could develop with certain AI strains amplifying in commercial poultry flocks.

*Awareness.* Dr. Robert Norton, of the College of Agriculture, publishes a daily news digest of agroterrorism-related news as well as a similar list devoted to avian influenza, with linkages to the unclassified avian influenza mapping system (AIMS) (nortora@ag-security.com). The subscribers to this list number in the thousands, representing most states and several countries. Faculty members in the College of Agriculture consult with Federal agencies about protecting agriculture and food production. The close working relationship between Auburn faculty and poultry and livestock producers in Alabama enhances the value of this information transfer.

Extension specialists in the Alabama Cooperative Extension System are working with specialists from the southeastern U.S. to develop the Extension Disaster Education Network (EDEN), which includes agroterrorism awareness information. EDEN is a working partnership of extension specialists, livestock and poultry producers, and emergency responders to help protect the food supply system.

Agricultural and veterinary faculty members participate in the Annual Agroterrorism Conference sponsored by the South Central Center for Public Health Preparedness at University of Alabama at Birmingham, and the Alabama Department of Agriculture and Industries. Two recent publications by Auburn veterinarians in the *Journal of American Veterinary Medical Association* delineate role of veterinarians, including small animal veterinarians, in biological and agricultural terrorism (*JAVMA* (2007) 230:494–500; 1476–80).

*Training.* Auburn University has significant collaboration with the Department of Homeland Security at the Center for Domestic Preparedness in Anniston, Alabama. Four faculty members from the College of Veterinary Medicine provide instruction in the Agricultural Emergency Response Training program (AgERT). Thirteen training sessions with 32 students each are held annually, training a total 416 first responders from across the nation each year. The trainees include fire fighters, HAZMAT specialists, veterinarians and veterinary technicians, and agricultural first responders. The Auburn instructors present instruction on epidemiology, foreign animal disease recognition, animal restraint and euthanasia, and methods of mass carcass disposal. This course is the only training of this type that includes hands-on experience with post mortem examination of animals under adverse field conditions, presented as a scenario at the College of Veterinary Medicine.

*The future.* Auburn University is a prime force that supports the state of Alabama's efforts to move to a knowledge-based economy, taking its place as one of the nation's preeminent comprehensive land-grant universities in the 21st century. In this spirit, Auburn continues to focus strategically its agriculture and food safety programs; yielding results that are broadly benefit the national effort to protect the food supply. The AU Detection and Food Safety Center is yielding technologies available for transfer to the market place and implementation. The development of the avian influenza vaccine reflects the partnership of the private and public university research sectors.

This synergism should expand with the Auburn Research Park, scheduled to open in 2008. The research park will help create new academic, research, and entrepreneurial opportunities for Auburn faculty and students, and help build stronger partnerships with business and industry. Agriculture and food safety can become chief beneficiaries of this effort. The ACATS program is a technological development that can bring Auburn University into partnership with small municipalities and county

governments state-of-the-art modeling and rehearsal scenarios. The state diagnostic laboratory, with linkages to Auburn University, the Alabama Department of Public Health, the USDA, as the Alabama Department of Agriculture, and the NAHLN is positioned for modeling exercises. With five veterinarians trained in Foreign Animal Disease diagnosis at the Plum Island, the laboratory is developing closer relationships to hands-on training of veterinary students from Auburn University and nearby Tuskegee University in pathology skills needed recognized and respond to an agroterrorism event.

The future success of Auburn University requires that it be accountable to the citizens of Alabama and the nation. This is essential to maintaining a strong innovative faculty and the facilities to support expanding research programs of an increasingly complex nature.

Mr. CARNEY. I would like to thank all the witnesses for their testimony. Mr. Rogers and I will now ask the panel some questions. It will go about five minutes each. We will probably have two or three rounds anyway. I will recognize myself for the first five minutes. This is to all the witnesses, starting with Dr. McGinn.

Under the national response plan, DHS is to be a coordinated agency during a terrorist act, a major disaster or other emergency involving the Nation's agricultural or food systems. Could you please give us some detail how you have seen the department fulfilling its role?

Dr. MCGINN. In an agroterror event? Obviously, if it is agroterror, then what is probably going to happen to begin with is it is going to show up as a large-scale event, multiple states probably. At the same time, we will start diagnosing and will very quickly recognize a trigger that says we are no longer dealing with a small-scale incident, we are dealing with a massive intentional, sort of event. In that situation, DHS is in a position where quite a number of federal agencies will be involved in that kind of response. Lots of states will be asking the President to declare an incident of national significance and so we would be in a coordinating role. And that coordinating role, to bring together all the assets at the federal level but also at the state level and down to the local one and private sector level as well. We would not be doing that in a way that takes away any of the other agencies' legal responsibilities. They would actually be in—USDA, for instance, would be working with the state level to be able to manage the agricultural and animal concerns within such an incident. It is that coordination that is actually what gives you the ability to get ahead of a biological event, which is quickly spreading of an intentional nature.

Mr. CARNEY. Let me ask you this. Has DHS reached out to state and local governments across the country beforehand? We do not want to see a kind of a Katrina thing happen where we respond after the fact. Has this outreach been done? Are you in the process of doing it? Where are we there?

Dr. MCGINN. At this point in time I am an office of one and we are in the process of expanding that office to six FDs, bio, eight. One of my first responsibilities is to work on this national planning-type of responsibility that DHS does have. A national plan has to have all the different seams between the state and the local work in such a way that they work together. We have had several incidences and as Mr. Filson was saying, use the incidences that have occurred in the past to help you see the kinds of things you need to do. We have had incidences recently that demonstrate the

need for us to work in a much more coordinated interagency sort of way than we have been able to accomplish yet and we are trying to learn from those instances to actually build that capability.

One of the key ways that we have done what you are asking about is providing training resources into the states to be able to do training and exercises. Planning, equipping, training and exercising are the key ways that when we build this capability at the state and local level that we need to be able to have within DHS to be able to respond to a disaster. Some \$160 million—a portion of \$160 million of the dollars that go to the states have been used—DHS dollars that go to states have been used in the whole area of building plans and building exercises. We got a ways to go in being able to respond to an intentional outbreak as effectively as we want to but we have made significant advancements through those resources being put into the states.

One of my challenges is to increase that capability so that we got a much more coordinator approach. Thanks.

Mr. CARNEY. Mr. Filson?

Mr. FILSON. Dr. McGinn I think made some very valid points and I think if we assume that there has already been some sort of an incident, then we are already fast-forwarding to a response and recovery mode and we are not talking about planning, preparation or mitigation. So with that assumption, Homeland Security's role would be one of fostering resources, I think at all levels. Not just at the federal level but helping to foster resources at the state level and fostering the communication collaboration of those agencies who have direct responsibility for this kind of an incident. I think the over-arching objective would be to make sure that everybody who has responsibility, and that might include CDC, could include FDA, USDA, EPA, FEMA, FBI depending on who all may be involved and what kind of food product it would be, would be to make sure—Homeland Security's job—make sure that all those agencies understand what their role is in that particular incident and coordinate resources. That may mean moving resources from one area of the country or one agency to help stop, gap and provide the required kind of support that may be necessary depending on the particular incident. They are the go-to people when there is a problem in making sure that a particular agency that needs resources gets their resources.

I do not look to Homeland Security as those that have the answers. We have a number of federal and state agencies who their role is to answer the questions and respond down from the state to the local level. I look at Homeland Security as the agency that fosters the collaboration between those agencies at all levels.

Mr. CARNEY. Have you had a relationship with Homeland Security before now? Can you describe the nature of that relationship?

Dr. MCGINN. Nature of the relationship would be conversations in developing exercises, being part of exercises at the state level, to identify areas in food and agricultural disasters where there may be some room for improvement. It would be at the state level working with Pennsylvania Office of Homeland Security and FEMA to identify vulnerability issues and the Pennsylvania's Food System, likewise, developing exercises to test the agencies at the state level. No interaction with Homeland Security at the local level.

Mr. CARNEY. My time is up in this round. I now recognize Mr. Rogers for five minutes.

Mr. ROGERS. Thank you, Mr. Chairman. I want to follow up on that. My impression from the Chairman's initial question to Dr. McGinn was, in the event of what we suspect is an agro-terror attack, who is in charge? I am open to an answer. Is it going to be DHS? Is it going to be your state agency? Who is going to be in charge in the event that it becomes obvious we have had an agro-terror attack?

Dr. MCGINN. Homeland Security will be in that position of being in charge. We will be building those relationships, fostering that the resource that he is referring to both now in the planning side and also in the response side.

Mr. ROGERS. Do you have the authority to direct actions by anybody outside your agency?

Dr. MCGINN. In an incident of national significance, which I think you are describing would occur, then we are in the position where we actually do that coordination, yes.

Mr. ROGERS. Okay. I want to ask, last month GAO issued a report on the USDA. I am talking about an Avian Flu Pandemic. And the GAO found that USDA's plan would actually bypass DHS in the event of an outbreak, and we believe DHS would be charged with the lead. Because DHS and USDA coordination is absent from USDA planning, how do you think that is going to work itself out? If USDA is saying they do not have to listen to you, not even plan to interact with you in the event of an outbreak, how do you resolve that failure in planning?

Dr. MCGINN. It was my understanding, because I worked through that report, my understanding was that USDA put together a plan for what they considered to be high path AI type scenarios that they would be facing. And they put together one that looked at markets, commercial birds and wildlife, for example. What did not occur in that planning process was one that would be an incident that actually expanded to an incident of national significance or at least an incident where the number of sick people would be involved, an exotic disease for example. In situations where there would be, for instance, H5N1 that we currently have with the potential for a number of human illnesses, you have a zoonotic component there that gets human health involved, as well and this whole interagency coordination becomes even more essential. So what my understanding was in the GAO report was is they wanted to see where scenarios where DHS was needed to assume this role of interagency coordination. Particularly if an incident of national significance was to occur, they want to be able to see that we put together the kinds of planning that would accomplish that. GAO directed us to develop con-ops with USDA and we are very glad to be able to work on that and issue.

Mr. ROGERS. Well, that is what I—as you know, I am a member of the House Agriculture Committee as well and I want to make sure that we, on the policy side, have put in place the appropriate authorization to make sure that there is some sequence of organization in the decision-making process in the event of an attack. And I am concerned, we are talking about this coordination, we are talking about voluntary coordination and when it comes down to an

emergency, nobody is going to be in charge. Mr. Filson, let me ask you. Do you agree with Dr. McGinn's assessment that in the event of what appears to be an agroterrorism attack, and to make it clear, that it is just not appearing, that the President comes out and acknowledges that we have been attacked by whatever group, that there is some al-Qa'ida or some other group goes up on the web and acknowledges that they are responsible for whatever outbreak, do you agree with Dr. McGinn that DHS would be in charge of directing actions at the state and local level as well?

Mr. FILSON. On an overall level, I agree with Dr. McGinn that Homeland Security would be in charge. I think the variances that within that responsibility, specific agencies may have lead agency roles over which Homeland Security would oversee their activities.

Mr. ROGERS. But do you believe that they would voluntarily subordinate their activities to DHS in that event?

Mr. FILSON. I think that remains to be seen. One of the GAO reports indicated that this new arrangement for levels of responsibility and reporting was an area that created some challenges and will have to be tested.

Mr. ROGERS. Do you believe that Congress needs to put in place some legislation that would mandate what that structure should be?

Mr. FILSON. For all of our sakes, I would hope that personalities would not get in the way and we could do this voluntarily for the good of all of us so it would not have to be legislated by law. One of the recommendations that I made in an AAAS-sponsored briefing to Congress a week or so ago, identified the need to talk about building a matrix. That when an incident occurred, there would be an automatic level. When it reaches a certain level, all the agencies would become involved and be aware of it so that it did not wait until some person within an agency decided by human decision, it is time to share information across agency lines.

Mr. ROGERS. I just want you to understand. By nature and philosophy, I am a small government kind of guy. I think the federal government should not be involved in anything it does not have to be involved in. But Katrina taught us a real lesson in preparedness and I am hopeful that we do not drop the ball as far as Congress is concerned in making sure that we are comfortable, that we are going to have cooperation, if not voluntary then otherwise. But my time is up. I will get you in the next round. Thank you, Mr. Chairman.

Mr. CARNEY. Thank you, Mr. Rogers. Let us just kind of continue down this path a bit. Do you think the government has defined clearly enough the roles of the governmental agencies to handle these things, potential terrorist attacks?

Mr. FILSON. I believe on paper it is very well-defined. I think in practice it may yet to be decided how that may play out.

Mr. CARNEY. Has this been exercised yet?

Mr. FILSON. May I respond?

Mr. CARNEY. Yes.

Mr. FILSON. I think the exercises have been played out, testing particularly agency response plans. I think the shortcoming in most exercises is that they are limited to within agencies or within several agencies and then have not brought all the stakeholders to-

gether who would be affected in the event of a disaster. So if you would test any particular agency for their response plan or their role in an agricultural disaster, they have a response plan and they have exercised it within their agency. My concern is that in a real incident, it is not going to be just one agency. It is going to be multiple agencies working at the same time, some simultaneous, in the same geography, on the same incident. Those kinds of exercises I am not sure have been fully practiced as they should.

Mr. CARNEY. Do you know, Dr. McGinn, have they been?

Dr. MCGINN. There has been quite a lot of exercises being done and they are continuing to be done like, for instance, on pandemic flu types of exercises. One of the things that I have followed on would say this whole aspect of a con-ops that the GAO asked for then instructs you on a day-by-day basis what sorts of critical things have to be done and what agency is going to do them. That is when you are really getting down to the place where you are actually scoping out what the responsibilities are and who is going to get them done, day one, day two, day three.

Mr. CARNEY. Okay. Following on that train of thought, who has responsibility, who is going to fulfill them? Do you believe your department, your area, needs additional authority to fulfill its responsibility?

Dr. MCGINN. Well, we have the responsibility in task number 15 within HSPD-9 to actually do this coordinated planning. We also had the responsibility to—

Mr. CARNEY. But that is not what I asked. That is not what I asked. Do you think you need additional? Do you have what you need as far as authority goes?

Dr. MCGINN. Additional authority, we currently do not have the resources to actually do the planning that is necessary. That is part of why this Office of Health Affairs is being developed, to actually do this sort of planning capability.

Mr. CARNEY. Okay.

Dr. MCGINN. Clarifying of roles. I think, part of the best way to clarify roles is to define what are the actual tasks that need to be done on a daily basis and who is going to do those tasks. Is it going to be the industry, is it going to be the state or is it going to be a federal agency?

Mr. CARNEY. Under your—do you have enough staff? What other resources do you need? Do you need more staff? Is your staff at the right levels now? What do you think?

Dr. MCGINN. Well, our office was stood up January 18, 2007, by Secretary Chertoff. Our plans are to have six persons working in this area by the end of 2008 with the possibility of additional five detailees. The kind of work that you are describing to coordinate these different components, programs within DHS, is a large task and we are going to take it a day at a time as we can get the job done.

Mr. CARNEY. Well, certainly Secretary Chertoff has put a great deal of responsibility on your shoulders. I guess I am not saying yeah, we have enough resources to do the job. You have not said that yet.

Dr. MCGINN. We have begun the process. We are identifying these sorts of gaps. National planning, building capability down to

the local level are some challenges we yet have in front of us and having the staff to do that is part of what we are building to in 2008 and 2009 and going forward.

Mr. CARNEY. Dr. Hoerr, do you care to comment on this conversation?

Dr. HOERR. The original question had to do with what was the process. The process from my end of the business in a State Diagnostic Laboratory director is that the initial detection most likely is going to be made out of a State Diagnostic Laboratory. Exactly when the USDA comes into a state is really a decision of the state agricultural commissioner or the state veterinarian would issue an invitation or a call for help from the USDA. That said, my colleagues in the USDA, who we work very closely with in partnership, I think have a really commendable record on disease control. The H5N1 influenza scenario though is something that I do not think we have dealt with. We have dealt with highly pathogenic avian influenza but not one that offers a threat to the public health. And so I am concerned that should that become a major outbreak, that there would be a vast marshalling of courses needed across the country and exactly who does that now is above my pay rate, sir. But I think there is a need for somebody to take the big coordinating role, Department of Justice, Transportation, bringing in national guards. I mean, it could be big.

Mr. CARNEY. Dr. McGinn?

Dr. MCGINN. To add to this and answer your question, do we have enough resources? One of the challenges that we see is that the resources that are necessary at the local and state level need to be plussed up. My challenge within Homeland Security is to identify how to get that job done so that those who are going to be responding very quickly to a biological or chemical event can move at the state and local level with efficiency to maintain our confidence in our food supply. So resources definitely are needed at lots of levels and particularly at the local and state level to build both preparedness capability and response capability. We got to build a resilient system. If we are attacked, if we are insulted, intentionally or accidentally, our ability to get back to normalcy is a challenge.

Mr. CARNEY. Thank you. My time is up in this round. Mr. Rogers.

Mr. ROGERS. Thank you, Mr. Chairman. We will remind you, the primary purpose for us having this hearing is to draw on your expertise as to what we do and do not need with the Congressional record. And I want to pick back up where I left off a little while ago on who is in charge. When you talked about the need for these exercises, it opened the door for something I was going to talk about anyway which is ACATS. Dr. Hoerr mentioned it a little while ago. It is Advanced Contact and Tactical Simulation Programming. It is a software program. And I would ask Dr. Hoerr, could you tell us a little bit more about how this would be used in an agroterrorism event?

Dr. HOERR. Right. At this time, ACATS is a potential for agroterrorism. But ACATS is a program that can take into account a large number of variables. Terrain vehicles, hospital beds, just almost any of these commonly-encountered roadblocks to success in

a disaster type situation and can put together a challenging modeling simulation program for people to rehearse to check out their systems.

Mr. ROGERS. And my understanding—I am sorry to interrupt you but I want to make sure that the record understands and the people in the audience do that the people who would be involved in making decisions and responding in a terrorist attack, in this case agroterrorism attack, would be brought together with this computer simulation and they would have real-time incidents they have to react to and it would give them a chance to exercise who makes what decisions and how they make it and go back afterwards and see how they did. Is that pretty much it?

Dr. HOERR. That is exactly correct. It allows the people on the very front line to practice their decision-making activity and then to sit back and evaluate those decisions and see if they were the best decisions under the circumstances.

Mr. ROGERS. Um-hum. Now, I have seen this program modeled for other folks of terrorist attacks. I have not seen it for agro. Have you seen any of these programs prepared already or is this—

Dr. HOERR. I have not seen it prepared for agroterrorism. My contacts at the university assure me that it could be modified for agroterrorism.

Mr. ROGERS. Okay. I want to go back to what I was talking about a few minutes ago with who is in charge. You made reference to the fact that you thought USDA would be very responsive in the event the commissioner of agriculture or your office called on them. Do you believe that the commissioner of agriculture in Alabama or your office at the diagnostic lab would subordinate their responsibilities to DHS in the event of a terrorist attack, when it comes to directing actions?

Dr. HOERR. I don't think subordinating to DHS would be an issue if that was the federal plan.

Mr. ROGERS. But somebody is going to have to direct actions. Who is going to do what? And I am still trying to get in mind's eye clear whether it is going to be USDA, DHS or who, FDA?

Dr. HOERR. Yes, sir. My understanding of how that process would work is if we had an incident in our state, our state people would be the first responders, the USDA would be called in for containment of that agricultural event and after that, certainly the commissioner of agriculture could call who he thought was appropriate for assistance. And we also, of course, have a large task force within the state. It has been working with the group out of UAB to plan for such events. I am sure they spill over into the public health area and beyond.

Mr. ROGERS. I do want to talk with you in our next series of questions about Avian Flu but I want to stay on this for just a few minutes, this organizational stuff. Dr. McGinn, you mentioned that you currently were an office of one but I thought you said earlier in your prepared statement that you had three veterinarians hired since you came on board.

Dr. MCGINN. Three veterinarians within the Office of Health Affairs. We have one veterinarian within the National Biosurveillance Integration System and then about a month ago, we hired another veterinarian to run our Weapons of Mass Destruction and

Biodefense area. But within the area of veterinary and agriculture security, I am an office of one.

Mr. ROGERS. Okay. Describe this organizational structure.

Dr. MCGINN. Gladly. Within the Office of Health Affairs, we have an acting assistant secretary who directly reports up to the secretary. That is Dr. Jeff Rundy, who is also our chief medical officer. We have three sections. The section that deals with Weapons of Mass Destruction and Biodefense, of which I am in that office is where the director of veterinarian and security. We also have a medical readiness section, which does the planning and the preparedness work and then we have what we call a section for component services. And that is a section that takes care of the health care needs of the Department of Homeland Security employees.

Mr. ROGERS. In looking at this Subcommittee, given our role in supervising management and oversight in particular, what would you recommend that we focus our energy on when it comes to drafting legislation, going forward, that would help you in the subject matter we are talking about here today? What is the one thing that you would ask us to focus our energies on and our attention?

Dr. MCGINN. Well, the secretary's goal, the last goal, was strengthening and unifying DHS' operations and management. That is one of the five—

Mr. ROGERS. How can we strengthen it? That is what I am asking.

Dr. MCGINN. Our office is about coordinating the 30 different programs in the veterinary, food and agriculture areas. So what we are doing is managing to a better economy of resources within DHS. There are a small amount of resources devoted to veterinary, food and agriculture and we got to actually have the ability to manage those resources in a way that we get the best synergy and we get the best coordination from the different components within DHS. And in a like fashion, to work with the states and the other federal agencies and the private sector to do the same. So it is a management issue but it is also a motivational issue.

Mr. ROGERS. Okay, thank you.

Mr. CARNEY. Thank you, Mr. Rogers. Dr. Hoerr, in your testimony, you describe how the density of farms and the interstate transport of livestock creates major challenges preventing the rapid spread of highly contagious disease. Could you elaborate on this please?

Dr. HOERR. Yes, sir. For example, in the State of Alabama, we have very nearly 4,000 poultry farms which would have anywhere from 30,000 to a quarter million birds per farm. Those poultry farms actually extend to our state borders and intermingle to some extent with poultry farms in Georgia, Tennessee, Mississippi and the Florida panhandle. So just the farm to farm contact can spill outside of the state. The density of those farms is also very high. When you get into Coleman County, Alabama, as our leading poultry state, it is a very high density of farms. Just practically every rural household has a couple of broiler houses. Significantly, Coleman County is also the state's highest cattle producing state. So cattle production and poultry production coexist very well together in Alabama. Which brings about another issue which is, what is a problem for the poultry industry also becomes a problem for the

cattle industry. And so you can very quickly see that agriculture can be all in this together. It is not just a cattle problem, it is not just a poultry problem. Dairies, you can add that in also.

Mr. CARNEY. How long would it take for a disease to spread from coast to coast do you think?

Dr. HOERR. I think the best example that would have is West Nile Virus. It started out on the East coast and I think within three years, three, four years maximum, it reached the West coast and there were cases that actually leap-frogged over the mountains because they rode there in a vehicle.

Mr. CARNEY. Mr. Filson?

Mr. FILSON. I am privy to a study that was done here in Pennsylvania that looked at the Lancaster Livestock Market as a hub for introduction of a contagious disease. And if that were the case, if a disease were introduced at that center, the potential exists that there would be 17 states exposed in the first day and the entire nation within five days.

Mr. CARNEY. Entire nation in five days?

Mr. FILSON. Yes, sir. Continental United States.

Mr. ROGERS. That would be what kind of contamination, I am sorry?

Mr. FILSON. An animal disease, a highly contagious animal disease using the Lancaster area as the hub for distribution. It is a significant market exchange.

Mr. CARNEY. What were the factors involved in that spread?

Mr. FILSON. A significant number of interstate transport both bringing in and receiving and taking back. So we have animals coming in and going back. It is not a terminal market. Animals are exchanged and that creates a very high risk.

Mr. CARNEY. Mr. McGinn? Dr. McGinn, you have your work cut out for you it sounds like. Would you be able to respond in five days?

Dr. MCGINN. For this type of scenario and other scenarios that we have worked on and discussed earlier, rapidly expanding into lots of states in a very short period in time. We are talking about having software that teaches people how to make decisions quicker. We don't have to have people that can make decisions quicker in one of these rapidly expanding biological or chemical incidences but we have also got to have policies that allow those decisions to be made. Whether we are talking about a surge in the ability to do diagnostics at different levels throughout the country, the ability to use vaccination, the ability to do tracing of infected animals or contaminated animals or infected product and contaminated product. All these sorts of policy issues and decisions have to be addressed before we get in an incident like this, it moves in just a few days to a few weeks across the country.

Mr. CARNEY. No, I agree but we do not get to pick where those incidents occur.

Dr. MCGINN. Right.

Mr. CARNEY. Doctor, yet, I hate to pick on you but you have some interesting answers here. What does HSPD-9 mean to the state and local governments?

Dr. MCGINN. It is a number of the different—there is about 18 or 19 tasks, depending on how you count them, with an HSPD-9.

If you go through that and you can see there is certain ones that are very important directly to the states and local governments and others that are important indirectly. Two of them that really—or several of them that really just jump out at me that are very important to the state. One is this whole thing about coordinated planning. That is task number 15. Very important to actually have the kind of coordinated planning that you are referring to that we actually can move through one of these events very quickly. Number two.

Mr. CARNEY. Why is that not task number one?

Dr. MCGINN. It is just the way it is written. In the document, it is not 15 in terms of priority. It is just in the way the tasks—

Mr. CARNEY. 15 things to do?

Dr. MCGINN. Yeah. They are just listed through and they are arranged in five different pillars so it is not meant in a priority. It is just the line within the document that has that particular task.

Mr. CARNEY. I think I would kind of put it as a priority myself.

Dr. MCGINN. Right. They all are of equal high priority. It is just task number 15 within the list.

Mr. CARNEY. Okay.

Dr. MCGINN. And then the line above there—maybe if I use the word line—line 14, which is above it talks about having response capability down to the local level to be able to respond to acts of terrorism and naturally-occurring disasters as well, such as floods. These are the kinds of things that from a state and local perspective would be very important. I will give you two more. One is vulnerability assessments. Being able to do these assessments down at the state and local level within the production units and the processing units. That is one of the key things that they say within HSPD-9, do vulnerability assessments. Come up with mitigating strategies is another one that is very important, to be actually able to mitigate a situation. Another one is information sharing with the private sector. The private sector wants to know, not only who is in charge but who to contact. That is part of why I put together this contact sheet of who in the Department of Homeland Security is actually there to contact. One of the chief complaints or challenges I have is people say, we do not know what DHS does, we do not know who to contact. And so, obviously, one of my first challenges has been to put together what we do and then actually to put together who to contact. So those are maybe about four or five good examples of priorities that the state and local would be looking to within Homeland Security.

Others that are somewhat related is research, education. We have heard a lot about the value of the Extension Service and the education university system within the educational systems and developing the kinds of training courses as we go forward.

We got to have coordinated curriculums within Homeland Security-type training courses, whether we are talking food or animal and that is a challenge as we proliferate all these different training capabilities and we have a proliferation of research being able to get that in a much more coordinated managed fashion as we go forward.

Mr. CARNEY. Mr. Filson, do you care to comment?

Mr. FILSON. I agree. I think the focus needs to be across agencies rather than within agencies. I think the effort Homeland Security is doing is significant, however there is still certain challenges that need to be addressed. Communication, the sharing of vital information and maybe even some information that may not be considered vital to keep all the players informed equally as they possibly prepare to respond. I think the effort, to drive it more local, either at the state or at the county or at the industry or at the producer level, is admirable and very much one of the needed area that needs to focus. I think there is some possibilities that Homeland Security could look at existing networks and existing resources and encourage or support what already exists to extend some of the responsibilities of Homeland Security or delegate that to other agencies. As long as the work gets done, does it really matter who takes credit that it is done. So rather than recreate new ways of doing something that is already being done, let us look at the resources that may already be present and possibly add additional support there.

Mr. CARNEY. At the risk of being naive here, is that being done?

Mr. FILSON. I think to a certain degree it is but I think it could be enhanced.

Mr. CARNEY. Good. My time is up. Mr. Rogers.

Mr. ROGERS. Mr. Filson, in your view, how capable are local health systems in Pennsylvania, including emergency rooms, clinics and medical professionals of responding to a pandemic outbreak of Avian Flu?

Mr. FILSON. By pandemic I am assuming that you are talking that Avian Flu would be a human disease?

Mr. ROGERS. Yes, sir.

Mr. FILSON. I think almost all the healthcare agencies are at almost their full capacity and a pandemic would very rapidly call them beyond their capability of responding. There are mutual aide agreements within the healthcare industry but if you look at the capability of each individual healthcare facility, when we talk about the potential for a pandemic, they all very rapidly would exceed their capability of being able to respond at the current facility. Many of those healthcare facilities are looking at alternative sites for care, tertiary care kinds of capability off site from the facility or delegating a particular wing of the unit for a particular kind of treatment. Those kinds of decisions, I think, are in line with making sure that they can respond as well as they can. I think all are very much in agreement that if a pandemic would strike, their capability would soon be surpassed.

Mr. ROGERS. Dr. Hoerr, you are recognized as one of the world's leading experts on this. What do you think about the vulnerability of our nation on this subject, again please?

Dr. HOERR. Well, I think that we have made giant progress in our detection and surveillance capability. The National Animal Health Laboratory Network has been a good program. Our laboratory is active in that. We are testing water fowl, commercial poultry. We are testing backyard poultry and the net is cast wide and this includes active surveillance, going out to places where backyard poultry are on the weekends and swap meets and so forth. I think the Public Health Group is very much aware of this concern

and has done some good exercising in this regard. My concern, and this comes up in the GAO report that has been referenced several times today, is are we going to have adequate protection for the agricultural first responders who are going to have to be the people that deal with an AI outbreak within hours, minutes preferably. This includes people in diagnostic labs, people that need to be onto the farms to do the sampling.

Mr. ROGERS. What is the answer to that question?

Dr. HOERR. The answer is when we try to resolve this in Alabama and try and find out where is the antiviral medication and how quickly could we have it, the answer was very slow in coming. We didn't have the answer to that and we tried to work with our public health people and you quickly get mired down in pharmacy regulations and types of things like that. But that has to be worked out and ready to go in an instant. Should be——

Mr. ROGERS. And how would you recommend that we do that?

Dr. HOERR. I think we need centers of these drugs available in every state that has significant poultry, that there be people authorized to dispense these compounds to first responders when they go on the farm and that cannot wait. That has to be already out there ahead of time. And there seems to be a question about who can authorize that and how much can they get to the situation in a hurry. Because it is not just an agricultural event. It is a public health event and it can begin with the first responders.

Mr. ROGERS. My recollection is that a couple of years ago the President put a large sum of money aside for the vaccines to be distributed. To your knowledge, that has not happened? I know a lot of that money was utilized for Katrina and for the war. But has there been any stockpiling of this vaccine that you are aware of?

Dr. HOERR. I cannot comment on stockpiling of vaccines. My concern is about antiviral drugs, medications that would protect a person getting exposed to the virus in a chicken house.

Mr. ROGERS. I see. Tell me, I read in your prepared testimony—I know you just summarized it but you talked about the capability of us treating eggs before the poultry is hatched——

Dr. HOERR. Yes, sir.

Mr. ROGERS. —and doing that mechanically. Could you tell us what that is, what kind of vaccine?

Dr. HOERR. The current Avian Influenza vaccines are what is called an inactivated product. It is a virus grown in actually an embryonated chicken egg and then the virus is inactivated and it has to be injected by hand into each chicken egg. In Alabama, we produce 20 million chickens a week. Next door in Georgia, 25 million a week. You cannot inject that many chickens by hand and protect an industry. A new vaccine has been developed by Dr. Torro [phonetic] at Auburn University in collaboration with the USDA scientists that allows us to tailor-make a vaccine very quickly by taking a gene from an emerging influenza virus, splicing it into a virus that has no effect on the chickens and no effect on humans, so the influenza virus is not multiplying but it vaccinates or immunizing the chickens to influenza. This can be applied robotically to the chicken eggs at 18 days of incubation and then the baby chick hatches at 21 days of incubation and it is has already started its immunity response to influenza. It is a significant breakthrough.

Mr. ROGERS. Okay, thank you. I see my time is up.

Mr. CARNEY. Thank you, Mr. Rogers. Dr. Hoerr, I kind of want to go back to the other sobering comment that Mr. Filson made. How long would it take to stop, to contain an outbreak, of something to the nature that Mr. Filson described? Do you have an idea on that?

Dr. HOERR. Of a single point introduction?

Mr. CARNEY. Yeah.

Dr. HOERR. What was the scenario?

Mr. FILSON. Foot and Mouth Disease.

Dr. HOERR. Foot and mouth disease? Foot and Mouth Disease is a special concern. For example, all of the calves that are produced in Alabama, virtually all of these are trucked to feed lots in the western states. So they all leave on a truck and some of them come back into Alabama on a truck. So overnight, those diseases of cattle can go half way across the country in an 18-wheeler and I think that is the concern. Cattle that are congregated at auctions, are incubating a disease and it get expressed somewhere else and they contaminated the interstate highway system all along the way. So the response is going to have to be very quick and very focused and the traceability of those cattle is going to be key.

Mr. CARNEY. Dr. McGinn, is there a plan with the Department of Transportation to track such things?

Dr. MCGINN. The issue that you are bringing up about transportation is very important because so far in this hearing today we have talked about the effects on agriculture. But the interdependency of the 14 different critical infrastructures is critical to be able to describe what is going to happen to transportation and describe what is going to happen to tourism, to health and on down the road in terms of critical infrastructure, the banking for instance. And the issue with transportation is one of the things that needs to be addressed in terms of a national plan. Currently USDA has a plan for which they would respond to animal disease such as described within this country, Foot and Mouth Disease outbreak. But a national plan that actually puts together all the different agencies in a coordinated fashion is one of the things that yet needs to be worked on.

Mr. CARNEY. I have no further questions. Mr. Rogers?

Mr. ROGERS. This would be it for me. I just want to come back around on what we talked about earlier. Dr. Hoerr's reference to the ACATS program in his written testimony and what it could do. Listening to Mr. Filson talk about the need for us to push down into the local and state level this coordination activity, I would like to ask you Dr. McGinn, do you believe that a software program like ACATS, some version of it, would be something that you would like to see as a part of your planning, which I understand is the primary role that you have right now, planning and preparation, to better coordinate between the state and local and federal agencies and practice this decision-making? You talked about the vulnerability assessments, mitigating strategy and information sharing. It seems to me the only way you are ever going to get those objectives is to go through some sort of simulation.

Dr. MCGINN. Right.

Mr. ROGERS. Do you believe that is worth pursuing as far as policy?

Dr. MCGINN. We have just recently, in May of this year, released our National Infrastructure Protection Plan. That plan is actually a way which the industries, the governments, get together in a method to protect this critical infrastructure. We have a GCC, Government Coordinating Council, and a Sector Coordinating Council. In this way the governments are supposed to be able to—the Government Coordinating Council work together, as well as the different aspects of the sectors including transportation would work together.

Mr. ROGERS. Do you all have exercises that you go through with people to—

Dr. MCGINN. Well, we do. We are exercising that sort of arrangement every year and then that information is disseminated throughout the states. This issue that he raised about being able to make decisions quick, in a more timely manner and in a more accurate manner, is a critical component of a biological incident, particularly of highly contagious diseases we are describing. So the ability to make those sorts of decisions rapidly and accurately will be very helpful in the process of getting us better prepared. And again, it comes back to this whole issue of being able to mitigate a response. You asked how long it takes. The number of scenarios that we dealt with showed these sorts of intentional introductions could last 180 days, 300 days and even long. So the challenge you have by utilizing this sort of attack technologies is how to make decisions sooner and reduce the length of the incident and also the pain and suffering, loss of confidence in the government and things like that occur as an incident continues on.

Mr. ROGERS. Well, this technology is available and it is very sophisticated. You can take a town like this and literally see it on the computer, drive down the streets and see the exact buildings that you would see if you drove down those streets. I would like to see your office try to take it and apply it to agroterrorism-type circumstance and see us—try to integrate these local officials with the state and federal folks so that we can do the vulnerability assessments that we need and be able to talk intelligently about it. So I hope that will be one of the goals that you will pursue. And that is all the questions I got. Thank you all for your testimony.

Dr. MCGINN. We have a responsibility to actually do a Foot and Mouth exercising capability within our Office of Health Affairs. So this would be an excellent tool for us to look at as well.

Mr. ROGERS. Thank you, great.

Mr. CARNEY. Well, Dr. McGinn, a couple of requests. One, if you could please provide an org chart of your particular agency, your particular organization, and who is in the particular slots and those that are unfilled, you know, just say unfilled.

Dr. MCGINN. Gladly and I will get that to you today.

Mr. CARNEY. All right. That would be great. I appreciate that. And I wanted to thank you all for coming over today, coming to Tunkhannock in Northeast Pennsylvania to see a beautiful part of the country certainly. I want to thank the audience for showing up and listening to this. I think that we have all seen that we are kind of in a place now where we are still—we will be in a reactive mode

in case a bioterror or agroterror event occurs. It is my job, it is Mr. Rogers' job and our Committee's job, the Subcommittee's job, to make sure that we get to a place where we are proactive and not reactive to such things. So that is my charge to all of you and hearing no further business, the Committee stands adjourned.

[Whereupon, at 3:05 p.m., the Subcommittee was adjourned.]

