Testimony of

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before the

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I would like to thank Chairman Rob Simmons, Ranking Member Zoe Lofgren, and Distinguished Members of the Subcommittee for the opportunity to offer this testimony. You are faced with a most challenging task of anticipating plans of terrorists and deciding between competing priorities to keep this nation safe and secure. My direct involvement with food safety at various levels for more than 24 years will hopefully provide the Subcommittee with a perspective from the grassroots level.

Today I have the privilege and honor to convey to the Subcommittee the significance of North Carolina’s agriculture, both economically and in terms of food production. My testimony will address the threat of agroterrorism and describe the potential impact of such an attack. I will conclude by delineating preparedness and mitigation activities that the State of North Carolina is currently engaged in, and respectfully submit to the committee several proposals for hardening one of our greatest assets and most critical infrastructures; the food supply from farm-to-fork.

North Carolina is one of a handful of states that produces the majority of America’s food supply. Our swine and turkey industries rank 2nd and poultry industry ranks 3rd highest in the United States1. We supply enough pork to feed 1 out of every 4 families in America and supply 1 in 7 turkeys at Thanksgiving. These industries, along with crops and associated agribusinesses, contribute $59 billion annually to the State's economy, account for 21.5 percent of the State's income, and employ over 18 percent of the work force2. Thus, North Carolina’s economic stability depends on its agribusiness and, in turn, the nation depends on North Carolina’s food and agriculture.

THREAT TO AGRICULTURE AND POTENTIAL IMPACT

An attack on this nation’s agriculture system is likely to have an immediate, substantial, and permanent effect on our production capability and export opportunities according to the Congressional Research Service report titled, Agroterrorism: Threats and Preparedness released February 4, 20053.

The foot and mouth disease (FMD) virus, for example, persists on clothing and in animal tissue. Little skill or training is required for nefarious individuals to smuggle infected items or meat to the United States and expose susceptible animals, be they cattle or hogs. When we add to this equation over 20,000 hogs that leave NC every day and the likelihood that terrorists would infect several states simultaneously, we are certain to have a nationwide outbreak before we first detect the disease. These conclusions are consistent with the data garnered from the “Crimson Sky” FMD exercise series conducted by the National Defense University with our Department providing technical expertise. Findings of the disease modeling from this exercise indicated that if 2 farms were infected, FMD would spread to 12 states within 10 days4. If 5 farms are initially infected, then the disease could reach 35 states within the same period of 10 days. A GAO report released in 2002 estimated that eradication may cost up to $24 billion5. Taiwan learned first hand the economic impact of foot and mouth disease. In 2002, the first year that Taiwan pork was cleared for export following the 1997 outbreak, pork exports were just over half of one percent of pre-outbreak levels6.

A significant challenge facing agriculture is that we do not have a full understanding of our food and agriculture vulnerabilities. Aside from awareness of several worst-case scenarios, we have only rudimentary vulnerability data. One recent initiative to collect detailed vulnerability information was made as part of the Exotic Newcastle Disease (END) project conducted by the Department following an outbreak of the disease in California poultry. One of the most striking findings from this risk assessment is the unchecked mass movement of poultry, game birds, and other species such as turkeys through our United States Postal Service. Our assessment revealed that North Carolina receives as many as 1,275 birds a day from across the United States and over 70 percent of these birds gain entry without any formal disease testing7,8. These birds are
commingled in the postal offices without proper biosecurity precautions and may be further transported to other states posing a national risk. In light of the persistent Avian Influenza outbreak in Asia, this situation is the potential agricultural equivalent of the “biological agent release at a football stadium” with a certain nationwide dispersion of sick animals.

Animal production facilities are at risk, but so is produce and other crops; and not just from exotic terrorists’ agents. The North Carolina Department of Agriculture & Consumer Services (NCDA&CS), in the first week of May 2005, received a call from a local retail grocery chain describing a customer complaint where a child bit into a strawberry with a sewing needle embedded in the product. Follow-up investigation suggested this to be an isolated incident, but in the case of a broader scale adulteration or a serious injury, the impact would be felt statewide. As this is the peak of strawberry season for North Carolina, over $15 million is at risk.

The threat of agroterrorism can be just as potent a weapon as the actual act. One documented case occurred in 1989 when a terrorist group phoned the US Embassy in Chile claiming to have contaminated grapes destined for the US with cyanide. Exhaustive surveillance efforts by the Food and Drug Administration revealed only three suspicious grapes on a dock in Philadelphia, PA. However, American supermarkets pulled all Chilean fruit including peaches, blueberries, blackberries, melons, green apples, pears, and plums off shelves throughout the US resulting in the loss of an entire season’s fruit sales from Chile at a cost of $200 million in lost revenue.

The former Secretary of Health and Human Services Tommy Thompson said, “For the life of me, I cannot understand why the terrorists have not attacked our food supply because it is so easy to do.” Unfortunately, this is a true statement. The NCDA&CS respectfully submit to you that we are not prepared for this threat. Homeland security funding has hardened critical infrastructures in America’s population centers and this is consistent with the affinity of Al-Qaeda for high profile targets. However, as we harden highly visible, metropolitan infrastructures, greater pressures are placed on agriculture as a ripe target for an asymmetrical attack with high visibility and an economically potent impact.

**NORTH CAROLINA PREPAREDNESS AND MITIGATION ACTIVITIES**

North Carolina has a long history of disaster preparedness efforts fine-tuned by repeated hurricanes. The State is proactive in identifying and mitigating new threats within the constraints of limited state budgets.

- North Carolina formed a food safety and defense task force in November 2001 in an effort to establish a unified and coordinated approach to identify the vulnerabilities and safeguard the food supply. The task force is co-chaired by representatives from the North Carolina Department of Health and Human Services and the North Carolina Department of Agriculture and Consumer Services with membership from other key state agencies, industry, and academia.

- The Department provided the technical expertise to conduct the Crimson Sky Exercise Series I alluded to previously in addition to the follow-up exercises Crimson Winter and Crimson Guard.

- We have invested heavily in a Geospatial/Geographical Information Systems (GIS) that not only serves Departmental needs but reaches out to other vital agency partners in the State including the State Bureau of Investigation, Division of Emergency Management, Department of Health and Human Services, Department of Environment and Natural Resources as well as industry to provide a common operational picture for the State.

- Under the Disaster Mitigation Act of 2000 that directed states to develop a State Hazard Mitigation Plan, North Carolina is the only state in the nation to include infectious
disease in the list of known and mitigatable hazards such as floods, hurricanes, and earthquakes. The plan was written and submitted in full partnership with the Department of Health and Human Services and categorizes diseases by route of transmission. This makes North Carolina eligible to receive funding to mitigate a future infectious disease to prevent a large-scale, economically costly outbreak.

- We have hosted and participated in national level symposiums to discuss environmentally, socially, and industry acceptable methodologies of mass euthanasia and carcass disposal that could be utilized in a large-scale livestock disease eradication program. Concurrently, we are working on alternative disease control strategies to eliminate the need for such drastic methods of disease control.

**ACTION NEEDED**

Securing agriculture presents unique challenges. I respectfully submit to you the following recommendations which augment those made in the testimony of Mr. David Miller before the Subcommittee on Emergency Preparedness, Science and Technology on April 12, 2005 and Dr. Thomas McGinn’s testimony before the Senate Governmental Affairs Committee in November 2003. I would like to preface my remarks by saying that unique conditions exist in each state that provide an opportunity for development of innovative preparedness, mitigation, and response initiatives. Success will depend on identifying and enhancing these programs at the state level through federal funding.

- NCDA&CS recommends a review of current funding allocation that is based primarily on population in favor of formulas that more accurately reflect agricultural risk. As high agricultural density areas are inversely proportional to human population centers, agriculture tends to receive inadequate preparedness support. For example, North Carolina’s Sampson County has only 1/12th the population of Mecklenburg County, but generates nearly 5 times the farming cash receipts\(^\text{12,13}\). Sampson County receives little homeland security funding, and yet is one of the most agriculturally productive regions in the world.

- In the same way that the Centers for Disease Control and Prevention (CDC) has funneled bioterrorism funding for state departments of health and human services, funding for state departments of agriculture also needs to have a dedicated funding stream with a mandate of preparedness. According to the Association of Food and Drug Officials (AFDO), more than 80 percent of the food safety and security activities including inspections, investigation of foodborne illnesses and consumer complaints, enforcement actions, and response to emergencies involving food products are performed at the state or local levels in the US\(^\text{14}\). State personnel, therefore, are in the ideal position to provide the food producing sector with outreach information, food defense strategies, and serve as the key link between the food production system and law enforcement. Unfortunately, out of $960 million federal counterterrorism funding given to states in 2003, 4.5 percent went to plant and animal disease initiatives while a mere 0.4 percent was devoted to protecting all other elements of the food supply\(^\text{15}\). Federal funding must reflect additional demands for food defense.

- We support the creation of a national consumer complaint system to facilitate information sharing and coordination among state and local agencies involved in food safety and defense. This would enable timely, sector-specific, yet nationwide notification of food producers, processors, and inspectors of attacks on the food supply to facilitate intervention and expanded surveillance actions.
• We need to take one of the most severe agroterrorism diseases off the table by reducing the consequences of an FMD epidemic. The only thing more daunting than FMD itself is our nation’s planned response to an outbreak which includes euthanizing millions of animals based on the UK experience of 2001. Current disease control policy provides little incentive for farmers to proactively remain disease free. A producer whose animals are infected with FMD receives reimbursement by the federal government for the loss of his stock. However, a farmer with healthy animals receives no compensation, yet he faces a likely state-wide quarantine that prevents him from marketing his meat or milk product while still incurring the expense of feeding and caring for his livestock. Therefore, farmers that maintain disease free animals may encounter an economic situation more dire than those with infected livestock.

We request the creation of a multi-agency taskforce with decision authority to embrace modern technology for diagnosis, surveillance, and vaccination as well as address policy issues that prevent the implementation of a modern disease control program. These issues, including the need for “cow-side” testing were highlighted in the recent GAO report on protecting agriculture\textsuperscript{16}.

• Disease simulations, as well as national and international disease outbreaks, have shown that laboratory capacity can be a limiting factor in disease control. While we fully support strengthening the national laboratory system through initiatives such as the National Animal Health Laboratory Network (NAHLN), Laboratory Response Network (LRN), and upgrades to the National Veterinary Services Laboratory in Ames, Iowa, equal considerations should also be given to state agriculture laboratory facilities which routinely service their crop, food, and livestock industries. State laboratories will be the first line of defense and must provide needed surge capacity should an outbreak occur.

• We strongly urge the continued support of state based Geographic Information Systems (GIS) initiatives. GIS allows the mapping of production facilities, production plants, and retail establishments to quickly assess the scale of the incident, determine populations at risk, and appropriate the required resources during an incident response. State GIS allows us to leverage our close relationships with stakeholders in agriculture production, processing, transport, and retail to obtain validated data which is available for federal response needs.

• We request a formal review of procedures and protocols for movement of animals through United States Postal Service facilities taking into consideration the findings of the END project and the implications of unregulated shipments on public health and the spread of agricultural diseases.

• Lastly, we request support for the North Carolina Food and Agriculture Defense Project which strives to develop, in partnership with sector specific industries, detailed mitigation, response, and recovery plans and incorporate new technologies designed to reduce the overall effects and impact from any terrorist act targeting the State’s food supply. We need a state program, supported by a national policy environment, to assess the vulnerabilities of the food chain using a nationally recognized model. Information gathered from these assessments will be appropriately shared with USDA or FDA to be used in the refinement of templates for state specific plans.
SUMMARY

Through my testimony today, I hope to have effectively described North Carolina’s progressive stance in addressing agroterrorist threats. North Carolina understands emergency response issues, but we are anxious at how much remains to be done in our State and the rest of the nation. States have the relationships and share the geographical space necessary to develop the required programs to safeguard our food industries. We have developed a culture of food safety since 1906 with the enactment of the Federal Food, Drug, and Cosmetic Act. We have yet to develop a food defense culture.

We appreciate the opportunity to address the challenges ahead. I look forward to answering any questions you may have regarding my testimony.
LIST OF REFERENCES


15. Association of Food and Drug Officials [AFDO]. “AFDO Position on Protecting the Food and Agriculture Infrastructure. Appendix A.

APPENDIX A

North Carolina Exotic Newcastle Disease Project

Investigation of Bird Container Movement
2003
• Photo shows the handling of live birds on the same table as express mail in close proximity to express mail bags
• No bio-security practices used
• Commingling of birds with health documentation and those without
• Fans blowing across birds to workers and express mail resulting in potential contamination of workers
• USPS Inspectors banned NCDA&CS from enforcing NC import laws
Map shows movement of bird containers into NC by zip code of shipper

- **Red**: without health documentation
- **Green**: with health documentation
- **Black**: unknown health documentation
- **Blue**: with health papers
Map shows destination of birds shipped through US Postal Service facilities in Charlotte, Durham, and Greensboro, NC

- **Red**: without health documentation
- **Green**: with health documentation
- **Black**: unknown health documentation
- Histogram illustrates types of birds imported from other states to NC through the US Postal Service facilities
- Wild turkeys, which are illegal to import into North Carolina, make up 8% of all bird shipments
- Pie Chart shows 72% of birds imported from other states do not have health papers
APPENDIX B

Association of Food and Drug Officials [AFDO] Position on Protecting the Food and Agriculture Infrastructure
May 18, 2005

AFDO Position on Protecting the Food and Agriculture Infrastructure

The Association of Food and Drug Officials (AFDO) successfully fosters uniformity in the adoption and enforcement of science-based food, drug, medical devices, cosmetics and product safety laws, rules, and regulations. For over 100 years, AFDO has served as a major voice for food and drug officials in the United States and Canada.

In 2002, AFDO conducted a survey of state activities showed that, during 2001, state programs performed:

- More than 2.5 million inspections of food establishments
- More than 3,000 food borne illness investigations
- Investigation of over 46,000 consumer complaints
- Response to over 2,800 emergencies or disasters involving food products
- More than 128,000 emergencies or disasters involving food products embargos, seizures and stop sales; injunctions; criminal prosecutions; warning letters; informal hearings; and food recalls; and collection and analyses of over 328,000 food samples, including more than 252,000 microbiological samples.

Based on these figures, more than 80% of the food safety and security activities in the United States are performed at the state or local levels. Consequently, it is clear that state and local food safety programs provide the major portion of the shields that must be in place to deter any sort of terrorist act. With the increasing threat of terrorist activities against our food supply, it is paramount that this cooperative and highly integrated federal, state and local food safety and security system be maintained and strengthened for the deterrence, prevention and detection of terrorist activities.

Single incidents of food borne contamination can have devastating public health and economic consequences – with notable examples of incidents that sickened hundreds of thousands and costing billions in lost trade and consumer confidence. Yet only a small trickle of federal homeland security funding is reaching these front line protectors of the food supply. Data collected by AFDO in 2003 indicated that of $960,000,000 federal counterterrorism funding given to States; approximately $43,000,000 (4.5%) went to Plant & Animal Disease Response, Surveillance and
Testing, and $3,600,000 (0.4%) was devoted to protecting all other elements of the food supply.

In 2004, AFDO conducted a Baseline Survey of State Food Program Officials on State Food Security Initiatives. All fifty states responded to this baseline survey. Below are some of the highlights of the survey results:

- Only 52% of respondents indicated that their food program had received funding for food security initiatives.
- Currently, there are only 33 full-time public food defense professionals working for State Health or Agriculture Departments
- Only 4.9 million dollars from the CDC cooperative agreements went directly to food and agriculture protection efforts in the U.S. in 2004
- Only 56% or 28 states have developed a written food emergency response plan
- Only 44% or 22 states have conducted some type of food and agriculture vulnerability assessment
- Only 18% or 9 states have developed some type of vulnerability reduction plan to address food and agriculture vulnerabilities

The survey results have made us aware of the clear need to establish a national strategy for protecting food and agriculture in the United States. This should include a strategy for the states to help both the Government Coordinating Council and the Food and Agriculture Coordinating Council with their goals and objectives in meeting HSPD-9.

Even though some progress has been made in the different areas of food defense, many states have taken different approaches to protecting food and agriculture from intentional contamination. This has created a situation where many efforts are being duplicated and the information stove-piped from state to state.

AFDO has established a Food Security Committee to address these issues. The committee is working on standardizing food and agriculture protection efforts as well as providing a forum for discussion on these issues. The committee has developed a grant proposal to partner with the Department of Homeland Security National Center for Food Protection and Defense at the University of Minnesota to create a secure website to, act as a national clearinghouse for food security information; connect the stakeholders in food and agriculture protection, and provide web-based training.

In order for the states to continue to make progress in food defense preparedness and response efforts, a consistent source of federal funding...
must be established. This funding would provide the following benefit to protecting the nation’s Food and Agriculture Infrastructure:

- Organize and facilitate a 50-state meeting to leverage our resources and identify subject matter experts for developing a blueprint for the future of food and agricultural protection
- Provide training and certification food defense professionals
- Continue to assess vulnerabilities in the farm-to-fork food continuum in each state
- Develop vulnerability reduction plans
- Develop food emergency response plans for food and agriculture in each state
- Develop exercises to test preparedness and response efforts
- Work with industry to develop public/private partnerships
- Continue to recommend implementation of food security preventive measures as outlined in the FDA and USDA guidance
- Work with the insurance industries to create return-on-investments for implementing these measures
- Work with industry to develop business recovery plans that may be utilized in a post-incident environment

If a consistent source of funding is secured to work on implementing these food protection measures it will allow all the stakeholders in food and agriculture to unify and move forward together with a sense of urgency to defend this critical infrastructure from the risk of both intentional or unintentional contamination.