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Chairman Johnson, Ranking Member Carper, and Members of the Committee, I appreciate the opportunity to appear before you today to discuss the importance of ensuring that the United States is prepared to prevent, detect, and respond to both natural and intentional biological threats.

Safeguarding against significant plant and animal pests and diseases—ranging from avian influenza to the European grapevine moth—is vital to protecting industry, producers, export markets, and consumers, and ensuring that we have a safe and secure food supply. It remains a top priority for the U.S. Department of Agriculture (USDA), and is something we at the Animal and Plant Health Inspection Service (APHIS) are committed to every day.

Pests and diseases highlight the importance of our “One Health” approach to coordinating efforts across the government to protect human and animal health. According to the Centers for Disease Control and Prevention (CDC), about 75 percent of recently emerging infectious diseases affecting humans originate in animals. And approximately 60 percent of all human pathogens are zoonotic. The work that APHIS and its partners undertake to protect U.S. agricultural health provides benefits far beyond the fields and farms.

The impact of pests and diseases on the U.S. economy can be staggering. The outbreak of highly pathogenic avian influenza (HPAI) last year—which was the largest animal disease outbreak in U.S. history—cost U.S. taxpayers nearly \$1 billion just in response, clean up, and indemnity costs. That didn’t include lost export markets, temporary shortages, or price increases for certain poultry and their products.

Threats to U.S. agricultural health can come from a number of places—hitchhiking pests imported on cargo or ships, a traveler bringing food from overseas, a sick animal or pet being brought from overseas, or even nefarious attempts at agro terrorism. In addition, pests and diseases that enter the country can spread either by people, on commodities and other products, or on modes of transportation, such as automobiles or campers. Regardless of the intent or mode of entry, APHIS’ focus is on putting in place preventive measures to keep pests and diseases out of the country, finding them if they do enter, as well as preparing for these threats, detecting them, and taking emergency action if necessary.

APHIS has a wide breadth of expertise and experience in protecting U.S. agriculture from plant and animal pests and diseases. From our cadre of veterinarians to our plant pathologists, wildlife biologists, entomologists, epidemiologists, and microbiologists, we have a strong scientific infrastructure that informs our decision making and actions. The relationships we have built

with our partners in this effort also serve to strengthen our protections against pests and diseases. We work closely with state departments of agriculture and natural resources, local governments, tribal partners, stakeholder groups, and federal agencies including the Centers for Disease Control and Prevention, Food and Drug Administration, and Department of Homeland Security.

To protect America's agriculture, environment, and food security, APHIS and its partners maintain a comprehensive system of overlapping safeguards that operate overseas, at U.S. ports of entry, and within the United States to prevent foreign pests and diseases from gaining a foothold in our country. While this system supports efforts to protect against both plant and animal pests and diseases, today, I will focus on our animal health protection efforts in each of these areas.

Overseas and Risk Mitigation Activities

APHIS' work to safeguard the health and value of American agriculture begins by preventing harmful pests and diseases from entering the United States. This work starts overseas, in some cases in the field or on the farm. APHIS works with foreign governments, agricultural producers, and shippers to exclude pests at their origin and treat at-risk commodities in the country of origin or on the high seas before shipments get near our shores.

APHIS, with employees stationed in more than 30 countries, collects and analyzes data on foreign pests and diseases from around the world to detect potential trade pathways for accidentally transporting foreign invasive pests. This information helps us make better policy decisions, such as where to focus risk assessments, when to modify port-of-entry inspections, and what pests we should be surveying for at home.

Our work to help our foreign counterparts build their own infrastructures and capacity to respond to emerging pest and disease conditions is another essential component of our safeguarding activities. Through our capacity building programs, we train animal health officials from other countries in developing effective systems to identify and control pests and diseases locally. This serves as an additional safeguard against the transport of pests and diseases.

We also work closely with multilateral organizations throughout the world to promote effective disease surveillance overseas and gain access to information on agriculture health issues worldwide. These include international and regional groups such as the World Organization for Animal Health and the Codex Alimentarius Commission.

Combined with our overseas efforts, APHIS' import regulations work to mitigate the risk posed by agricultural products long before they reach U.S. ports of entry. Before we will allow imports of a specific product from a specific region of the world, our scientists conduct a risk assessment that enables us to make informed decisions about the potential pest or disease risks associated with that specific commodity. Based on these assessments, and based upon public input and additional scientific perspectives we receive through the rulemaking process, APHIS will only allow imports if they can occur in a safe manner.

APHIS also maintains strict, science-based import regulations for foreign agricultural products. We require import permits for a variety of imported agricultural commodities. As appropriate based on pest and/or disease risk, we also require imports to be accompanied by official sanitary or phytosanitary certification indicating that any associated risk has been sufficiently mitigated. USDA may also require that commodities undergo treatment—such as dipping for cattle fever ticks—and/or mandatory quarantine prior to being allowed entry into the United States. As you can see, USDA’s overseas and risk reduction activities play a critical role in helping to mitigate foreign pest and disease risks in the country of origin rather than in the United States.

At Ports of Entry

Through its Agricultural Quarantine Inspection (AQI) program, APHIS works in tandem with U.S. Customs and Border Protection (CBP) to address the risk of foreign pests and diseases entering the country at ports of entry, either through the movement of people or commodities. Under the Homeland Security Act of 2002, USDA maintained responsibility for establishing the regulations, policies, and procedures that govern the import of agricultural products, and CBP became responsible for conducting the actual inspections at ports. APHIS directs CBP on what pests and diseases to look for and which pathways pose the highest risk, shares information on new and emerging pests and diseases, and trains CBP agricultural specialists in how to enforce our agricultural import regulations. CBP inspections target the highest-risk cargo, as well as travelers most likely to be carrying agricultural products. APHIS also stations veterinarians at ports of entry to provide guidance on inspecting animal products to allow for safe entry.

APHIS also operates Animal Import Centers for importations of animals and animal-derived materials to ensure that exotic animal diseases are not introduced into the United States. Animals that are susceptible to or are capable of carrying diseases or pests that could seriously endanger U.S. domestic livestock or poultry must be imported through a U.S. animal import center and are inspected, tested, and quarantined depending on the species and origin. APHIS also has border inspection facilities along the southern and northern U.S. borders for inspecting cattle and other livestock transiting from Mexico and Canada.

Inside the United States

Expanding international trade is good for our farmers, our consumers, our economy, and the world. However, the increasing movement of people and goods means that foreign pest and disease introductions are a very real threat. Outbreaks can halt the movement of agricultural products, having serious economic impacts on farmers, growers, and exporters, and in the case of zoonotic disease, may affect humans.

To counter this threat, APHIS’ efforts to safeguard America’s agriculture and environment continue inside the United States, so that we can quickly detect any foreign pests and diseases that may have evaded our other safeguarding measures. Critical to this effort is the surveillance we and our state partners conduct throughout the country. Early pest and disease detection is important to avert economic and environmental damage; once a pest or disease becomes

established or spreads significantly, the mitigation costs can reach millions of dollars. This is in addition to lost farm revenues, damage to ecosystems, and loss of foreign markets.

Our Veterinary Services (VS) program conducts routine surveillance for foreign, emerging, and endemic animal diseases, including bovine tuberculosis, foot and mouth disease, avian influenza, and scrapie, as well as for disease vectors such as the cattle fever tick. This surveillance is done through a number of surveillance streams, including testing at slaughter facilities, livestock markets, shows, sales, buying stations, on-farm, and at rendering facilities. As an example, in FY 2015, VS tested over 2 million cattle for brucellosis, over 40,000 sheep and goats for scrapie, and over 190,000 swine for pseudorabies.

Consistent with our One Health approach to animal diseases, our Wildlife Services (WS) program also monitors wildlife for diseases that could potentially spread to livestock or impact humans. Their longstanding efforts monitoring for highly pathogenic avian influenza (HPAI) in wild birds were highlighted during the disease outbreak in poultry farms last year. Since last July, they have sampled over 43,000 wild birds in an enhanced surveillance effort, which can serve as an early warning system for HPAI in commercial poultry. This effort was coordinated with the U.S. Geological Survey, U.S. Fish and Wildlife Service and National Flyway Council. Another important effort they undertake is disease testing of feral swine that they remove through the National Feral Swine Damage Management Program. In FY 2015, WS tested over 2,800 feral swine samples for five diseases of national concern, finding, for example, that 18% were positive for pseudorabies, a disease that APHIS and U.S. industry eradicated from the domestic swine population in 2004.

Additionally, although systems of zoonotic and infectious disease surveillance in humans traditionally operate separately from those for animals, we routinely share data during ongoing cluster or outbreak investigations and on an ad hoc basis as the need is identified. For example, CDC and USDA collaborate directly on a number of well-established zoonotic disease surveillance programs including rabies, bovine spongiform encephalopathy, Trichinellosis, swine and avian influenzas, and foodborne diseases.

Laboratory and diagnostic services are another essential components of the U.S. animal health surveillance infrastructure. Our National Veterinary Services Laboratories (NVSL) serves as the only national reference and confirmatory laboratory for APHIS animal health programs, and participated in over 1,000 foreign animal disease investigations last year. To expand our capacity to detect and diagnose pests and diseases and ramp up during emergency situations, we also support the National Animal Health Laboratory Network (NAHLN) of 62 laboratories. The NAHLN is a national network of laboratories managed by State governments and universities, and is a cooperative effort between two USDA agencies—APHIS and the National Institute of Food and Agriculture (NIFA)—and the American Association of Veterinary Laboratory Diagnosticians. It provides animal disease surveillance and testing services, both daily and in the event of a large-scale animal disease outbreak. In FY 2015, NAHLN laboratories performed over 500,000 diagnostic tests in support of APHIS routine surveillance and outbreak testing needs.

We also recognize the risk posed by smuggled or improperly imported agricultural products and address this vulnerability through our smuggling interdiction and trade compliance (SITC) program. Our SITC program is responsible for intelligence gathering and other anti-smuggling activities, such as secondary market and warehouse inspections, that help prevent animal and plant pests and diseases from entering the United States. When SITC personnel identify smuggled product, they not only remove it from the market but also conduct a full investigation to identify and eliminate any illegal pathways. SITC also conducts market surveys and trend analysis and uses various intelligence tools and data systems to track products that have entered through our borders. In FY 2015, APHIS seized over 230,000 pounds of prohibited and/or restricted plants and plant products and meat and meat products and an additional 65,000 pounds of recalled product.

Emergency Response

In conjunction with our prevention and surveillance efforts, we acknowledge the absolute necessity of being able to respond swiftly and in a coordinated manner should a serious pest or disease be detected. APHIS has the authority and the ability to respond quickly and effectively to the identification of new pests and diseases. In addition, APHIS has specific emergency response guidelines for many of the pests and diseases that pose a significant threat to the United States. We've developed these response plans in conjunction with our Federal, State, tribal, and local partners, with whom we conduct exercises to test our preparedness. To ensure maximum speed and effectiveness, we have rapid response teams stationed around the country ready to travel to detection sites to coordinate Federal containment and eradication efforts. In such situations, our goal is to minimize impacts to U.S. producers and disruptions to trade.

We have in place an incident command approach to emergency response. Incident command places teams of emergency personnel and managers directly in the field to coordinate response efforts. By virtue of their placement and size, the teams and their commanders have a high level of autonomy, are able to respond quickly to new or evolving situations, and can provide extremely timely information to decision makers. In addition, teams from various local, State, and Federal agencies all speak the same language -- using standard terminology for positions and having common structures -- when working an emergency and can tap into a wider network of resources. We saw this in January, when APHIS was able to quickly deploy an incident management team to Indiana at the first sign of disease, enabling the Agency and the State to swiftly eradicate an outbreak of HPAI.

Responding to HPAI in 2015 put to test all of our emergency preparedness and response infrastructure and plans. Through our successful efforts in eradicating the disease in 2015, we learned a lot about our disease response plans that will help us be even more successful in the future. Chief among those is the need for rapid depopulation of affected animals so as to reduce the spread of the virus, and the need for all of us to improve our levels of biosecurity.

However, our HPAI response was just a piece of what we do. Of the more than 1,000 foreign animal disease investigations in which we participated last year, the vast majority turned out to be minor illnesses. This shows the vigilance of APHIS and our partners in the states and industry, to quickly respond when there may be a potential threat to U.S. livestock health.

Expanding our Ability to Protect the United States

Safeguarding U.S. agriculture and ensuring that we are prepared for any sanitary or phytosanitary threats against it is a huge undertaking, but it is one to which APHIS and our partners in the federal, state, and local governments, industry, and stakeholders are fully committed. I would like to mention two other initiatives aimed at expanding our ability to be successful.

One of the biggest lessons we learned in responding to last year's HPAI outbreak was that we could build on the Agency's existing capacity to effectively address large animal health events. Unfortunately, our current funding level for animal health activities is below levels that were available to us 10 years ago, and APHIS has seen a reduction of more than 200 animal health professionals since then. The need to rebuild our capacity is critical, and we have requested an additional \$30 million in the FY 2017 President's budget request to address this need. If provided by Congress, we will use most of the funds to hire veterinarians and animal health technicians to rebuild our field force and strengthen our ability to respond to animal health emergencies. To paraphrase a proverb, this request illustrates that an ounce of prevention may well be worth a pound of cure.

Second, to further enhance our ability to respond to emerging disease threats, our Veterinary Services program published a *Veterinary Services Proposed Framework for Response to Emerging Animal Diseases in the United States* in July 2014. The final Framework, which we are working to complete later this year, will describe the activities to be undertaken under the framework, and will outline roles and responsibilities, possible triggers for action, and potential responses to emerging animal diseases, as well as public outreach. Due to the novelty of emerging diseases – either within a geographic area or species – detection and response will depend on close cooperation with producers. For this reason, flexibility is essential, and the framework implementation plan will outline the processes APHIS will use to develop science- and risk-based approaches and systems to respond to emerging animal diseases.

A National Blueprint for Biodefense

We appreciate the effort undertaken by the Blue Ribbon Panel on Biodefense to make recommendations to strengthen the United States' biodefense, and the recognition of the role animal health plays in this effort. I am pleased to say that APHIS is already taking a number of actions related to recommendations made in the Panel's report. I will mention several of them today.

Our Veterinary Services program has a One Health Coordination Center (OHCC) that facilitates the integration of One Health approaches throughout our animal health programs. It is our standard practice to approach our work from a One Health state of mind, and OHCC works to inform and educate USDA employees about this need. OHCC staff also leverage their knowledge and relationships to build better alliances, coordinate between government and industry partners, and network to ensure that animal agriculture is considered when One Health

issues are being addressed. OHCC also identifies unmet needs and opportunities to promote the potential contributions that APHIS can make to One Health activities.

APHIS has also undertaken several efforts around animal health data collection and sharing to help improve collaboration and coordination. We have a data management roadmap initiative to identify strengths and gaps in current data management systems for our animal health surveillance data, with the end goal of finding ways to link the systems to each other and to provide a framework for data sharing between government agencies, universities, and private organizations while maintaining appropriate security of confidential data. We also have tools such as interactive dashboards that allow self-exploration of surveillance information by our federal, state, and industry partners.

In addition, we have a comprehensive and integrated animal disease surveillance approach that includes a variety of surveillance sources of information including wildlife and other vectors. Interagency collaborations are part of this approach, which is particularly important as we address diseases of economic and public health concern. For example, we have a cooperative initiative for Influenza A virus in swine (IAV-S) with the swine industry and NAHLN laboratories to identify unique strains of IAV-S that may be of significance to animal or public health. The CDC is regularly updated on IAV-S surveillance in the U.S. and works closely with APHIS to stay apprised of current influenza issues from a veterinary perspective, linking the human and animal health perspectives into a One Health approach.

APHIS is also developing a U.S. National List of Reportable Animal Diseases (NLRAD) to complement State reportable disease lists. The NLRAD will be a single uniform, science- and policy-based, nationally supported standardized list of animal diseases/agents. The NLRAD will focus on livestock, poultry and aquaculture species. In July 2014, APHIS published the *Proposal for a U.S. National List of Reportable Animal Diseases (NLRAD) Concept Paper*. The NLRAD list was developed in direct collaboration with numerous stakeholders including the United States Animal Health Association (USAHA), American Association of Veterinary Laboratory Diagnosticians and National Assembly of State Animal Health Officials. We are currently looking at issues around laboratory implementation, data management, and confidentiality, as we work towards releasing a draft guidance document this fall. The NLRAD will be implemented through Federal-State cooperation, and will contribute to the assessment and reporting of the listed zoonotic and endemic animal diseases and facilitate response to an emerging disease or issue in the United States, as well as support trade.

In conclusion, APHIS' core mission is to protect the health of U.S. agriculture, which in turn supports public health and food security in the United States. I assure you that my Agency, and USDA, are committed to doing all we can to protect U.S. plant, animal, and human health from the threats posed by pests and diseases. I would be happy to answer any questions.