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Before the

**Subcommittees on Biotechnology, Horticulture, and Research
and
Livestock and Foreign Agriculture
of the
House Committee on Agriculture**

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Chairmen Davis and Rouzer, Ranking Members DelBene and Costa, 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 threats to plant and animal health. I have with me today our Deputy Administrator for Plant Protection and Quarantine Mr. Osama El-Lissy and our Acting Deputy Administrator for Veterinary Services Dr. Jack Shere.

As you well know, safeguarding against significant plant and animal pests and diseases—ranging from the European grapevine moth to foot and mouth disease—is vital to protecting industry, producers, 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.

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. The Mediterranean fruit fly—known as the most destructive agricultural pest in the world—infests more than 300 varieties of fruits, vegetables, and nuts, including apple, bell pepper, grape, lemon, orange, peach, tomato and walnut. The gross value of just those eight commodities in California alone is more than \$14 billion a year (USDA NASS, 2014).

Pests and diseases can limit our ability to produce healthy and abundant crops and can shut off foreign markets for U.S. producers. They also 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.

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 his or her homeland, a sick animal or pet being brought from overseas, or even nefarious attempts at agroterrorism. Regardless of the intent, APHIS’ focus is on putting in place preventive measures to keep pests and diseases out of the country, preparing for these threats, detecting them, and taking emergency action if necessary.

APHIS has a wide breadth of expertise and over 40 years of 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, stakeholder groups, and federal agencies including U.S. Customs and Border Protection (CBP).

To protect America’s agriculture and environment, 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 plant and animal pests and diseases from gaining a foothold in our country. Today, I will give you an overview of our efforts in each of these areas, as well as discuss some of our initiatives that further support these activities.

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. Our Plant Protection and Quarantine (PPQ), Veterinary Services (VS), and International Services (IS) programs work with foreign governments, agricultural producers, and shippers to produce healthier crops, 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 risk assessments should focus, 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 plant and animal health officials from other countries in developing effective systems to identify and control pests and diseases locally.

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 International Plant Protection Convention, the North American Plant Protection Organization, the World Animal Health Organization, the International Seed Testing Association, 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, 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. APHIS requires that certain approved plant products, such as bulbs from Holland, undergo and pass preclearance inspection in the country of origin before being shipped to the United States. USDA may also require that commodities undergo treatment—such as fumigation or 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 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 provides insect identification services to assist CBP officials in distinguishing common pests from pests of concern, and monitors the application of treatments that at-risk shipments must undergo at ports of entry before being allowed to enter American markets. We also station veterinarians at ports of entry to provide guidance on inspecting animal products to allow for safe entry.

Importations of nursery stock and other propagative plant materials can serve as significant pathways for invasive pests and diseases. To reduce the risks associated with such imports, APHIS requires that certain imported plant materials enter the United States through one of its plant inspection stations, which are located at ports-of-entry throughout the country at major international airports and seaports, and at major crossings along the U.S.-Mexican border.

APHIS specialists at these stations inspect shipments to ensure that imported plants and seeds do not contain pests and diseases of regulatory significance. In FY 2015, our inspectors cleared more than 19,000 imported shipments containing 1.5 billion plant units and over 700,000 kilograms of seeds. Through these inspections, they intercepted more than 800 reportable pests. In addition, the stations conducted more than 500 treatments remediating pests on more than 4.2 million plant units and more than 350,000 kilograms of seed.

On the animal side of things, APHIS 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 plant and animal 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 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 PPQ program, along with State cooperators, carries out plant pest surveys through the Cooperative Agricultural Pest Survey (CAPS) Program. CAPS targets high-risk hosts and commodities, gathers data about pests specific to a commodity, and provides accurate assessments of pest distribution, including pest-free areas for use in support of U.S. exports. In FY 2015, APHIS and cooperators conducted CAPS 259 surveys in 50 States and 3 territories. The program targeted 118 high-risk pests of national concern for survey in corn, small grains, soybean, nursery crops and other commodities, as well as exotic wood boring bark beetles and cyst nematodes, along with an additional 130 pests of State concern.

VS 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. 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.

Laboratory and diagnostic services are essential components of the U.S. plant and animal health surveillance infrastructure. On the plant side, APHIS relies on its Center for Plant Health Science and Technology (CPHST), which develops, validates, and conducts diagnostic testing for plant pathogens, develops digital pest identification tools, and supports our pest management and eradication efforts. 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 Plant Diagnostic Network (NPDN) of 55 labs and the National Animal Health Laboratory Network (NAHLN) of 62 laboratories.

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, 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 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.

In the event of an outbreak, the Secretary of Agriculture has emergency transfer authority under the Animal Health Protection Act and Plant Protection Act to obtain funding to combat a pest or disease, just as he did with the outbreak of HPAI last year. This can include funding for indemnity, to allow APHIS to compensate a producer if we must destroy his plants or animals as part of our response.

Responding to HPAI in 2015 put to test all of our emergency preparedness and response infrastructure and plans. While we were successful in eradicating the disease, we learned a lot and continue to reflect on the lessons learned and take steps to improve our response. Further, of the more than 1,000 foreign animal disease investigations that we participated in last year, the vast majority turned out to be minor illness. This shows the vigilance, both within APHIS and with our partners in the states and industry, to quickly respond when there may be a potential threat to U.S. livestock health.

2015 was a very challenging year on the plant health side as well. We found more exotic fruit flies than we have in the past 20 years, and we had 12 fruit fly outbreaks in California, Florida, Puerto Rico, and Texas, compared to 4 the year before. Thirteen other new significant pest and pathogen species were detected through our pest surveys or other reports, including Old world bollworm in Florida, which attacks crops valued annually in the United States at approximately \$78 billion (Kriticos, et al, 2015). Old world bollworm can affect 180 species of wild and cultivated hosts including rice, sugarcane, tomatoes, potatoes, cotton, and beans. Despite the challenges to our plant health safeguarding system in 2015, the good news is that we are demonstrating through our cooperative efforts that we can rapidly detect, contain, and eradicate these pests. For example, we have already eradicated 10 of the fruit fly outbreaks from 2015. We also anticipate being able to declare eradication of European grapevine moth in late 2016. Through the combined actions of APHIS' domestic fruit fly and pest surveillance and response programs, we are working to ensure that new and exotic plant pests do not establish in the United States, thereby protecting U.S. agriculture and the environment while keeping our export markets open.

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 that we and our partners in the federal, state, and local governments, industry, and stakeholders are fully committed to. I'd like to mention two other initiatives aimed at expanding our ability to be successful.

In the 2008 Farm Bill, and again in the 2014 Farm Bill, Congress recognized the great role that pests and diseases of plants play in the safety and security of our food supply, and in making our U.S. agricultural economy and local communities prosperous. This Committee, along with your counterpart in the Senate, created the Plant Pest and Disease Management and Disaster Prevention program, which has proven quite a success in extending our ability to protect, detect, and respond to plant pests and diseases. Through this program, APHIS has funded more than 2,600 projects in 50 States and 2 U.S. territories since 2009, allowing cooperators across the country to put innovative ideas into action with Farm Bill funds. Projects have included enhanced molecular diagnostics for pests such as fruit flies. We have been able to extend the reach of our traditional CAPS surveillance each year, with an additional 80 taxon and commodity surveys supported in FY 2015. The Farm Bill also funds New Pest Response Guidelines, which serve to jumpstart preparation of site- or situation-specific action plans for high consequence plant pests and diseases so we can be prepared should they invade the United States. Other projects target domestic inspection activities such as detector dogs that can identify pests in mail facilities, as well as mitigations to help eradicate or contain pests. This program has been a true success, helping APHIS, the states, and stakeholders further protect U.S. agriculture.

Second, I would like to mention our proposal in the FY 2017 President's budget request to bolster our animal health readiness capacity. 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 in that time. The need to rebuild our capacity is critical, and we have requested an additional \$30 million 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.

In conclusion, APHIS' core mission is to protect the health of U.S. agriculture and we have a myriad of other programs and initiatives, all aimed at this vital cause. While I haven't mentioned every one of them today, I hope I have provided a broad overview of our goals and efforts in this area. 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'd be happy to answer any questions.