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Chairman Johnson, Ranking Member Carper, and Members of the Committee, thank you for the opportunity to testify today on behalf of the U.S. Department of Agriculture (USDA). I serve as the Deputy Administrator for USDA's Animal and Plant Health Inspection Service (APHIS). In this capacity, I am the Chief Veterinary Officer of the United States.

Today, we are facing the largest animal health emergency in this country's history. We are dealing with an unprecedented outbreak of highly pathogenic avian influenza (HPAI) that is taking a heavy toll on the poultry industry. People have lost their jobs and have seen their livelihoods put in grave danger by this outbreak, and our hearts go out to them. I can assure you, however, that this disease has USDA's fullest attention, and we are committed to standing with our producers and industry to get them – and the communities they live in and support – back on their feet.

USDA has been and will be there every step of the way with producers, industry, and our state partners. We've worked closely with them to respond quickly and decisively to this outbreak. More than 400 USDA staff and nearly 3,000 USDA-contracted personnel have been working around the clock in every affected state on the response. We've delivered over \$190 million in indemnification payments to producers to control the spread of disease, and to help them recover from it. Should the need arise, we have the authority to request even further funding. All told, USDA has committed over \$500 million – an amount more than half of APHIS' yearly discretionary budget – in addressing this outbreak. We've seen trade cut off by trading partners concerned about the devastating effects of this disease, causing \$1 over billion in poultry products to be directed to other markets at a cost to producers. We understand the devastating impact this outbreak has had upon all, and we are committed to helping those affected. And we will help protect those producers who have not yet been – and we certainly hope, will not be – impacted by this disease.

The Outbreak

The outbreak started in December 2014. Western Hemisphere migratory birds commingled with Asian birds in the northwestern part of the continent. These birds acquired a variant of HPAI that is currently widespread in Asia. Wild ducks and geese (which have lower mortality for this variant) brought the disease first to the Pacific flyway, and later to the Central and Mississippi

flyways. Initial detections in the United States were in wild birds and backyard flocks, and may have resulted from direct contact with sick migratory birds. As the virus spread through the Midwest, it came into contact with some of the largest segments of the poultry industry; it took an especially heavy toll on turkeys and egg-laying chickens, primarily in Minnesota and Iowa.

APHIS scientists have been conducting an epidemiological investigation into the origins of the disease. Based upon the results of the preliminary investigation the Agency released in June, we believe wild birds were responsible for introducing HPAI into the environment, and from there it was spread into commercial poultry houses. However, given the number and proximity of farms affected by HPAI, it appears the virus is spreading in other ways as well. For instance, one analysis provides evidence that a certain cluster of farms was affected by identical viruses, pointing to possible transmission among those farms. In addition, genetic analyses of the HPAI viruses suggest that independent introductions as well as transmission between farms are occurring in several States concurrently.

Our investigation shows that the virus has been introduced into commercial poultry facilities from the environment (i.e., water, soil, animal feces, air) or from farm-to-farm transmission on human sources such as boots or equipment. After conducting an analysis of over 80 commercial poultry farms, APHIS cannot associate transmission of the disease with any single one of those factors, but it seems clear that lateral spread occurred when biosecurity measures that are sufficient in ordinary times were not sufficient in the face of such a large amount of virus in the environment.

USDA – through the APHIS National Veterinary Services Laboratories – has confirmed HPAI in 21 states, which includes nine states where we identified it in commercial poultry. We have confirmed the disease in 232 total poultry premises, with 211 of those being commercial facilities. As part of our disease control strategy, we've depopulated 7.5 million turkeys and 42 million chickens and pullets. This is approximately 3% of the U.S. annual turkey production, and approximately 10% of the egg-laying chicken population.

USDA's Response to HPAI

USDA has extensive experience in responding to animal disease outbreaks, especially in poultry. In 2003 and 2004, we successfully fought off an outbreak of Exotic Newcastle Disease in the southwestern United States and low pathogenic avian influenza, which spread through the Shenandoah Valley in Virginia. The bulk of our response to the current outbreak has been based upon the existing USDA avian influenza response plans we've developed and refined over the years. These existing plans have allowed USDA and its state partners to respond quickly and decisively to address this outbreak using the authorities given to us under the Animal Health Protection Act and state laws and regulations.

The goals of USDA's HPAI response plans are to (1) detect, control, and contain HPAI in poultry as quickly as possible; (2) eradicate HPAI using strategies that seek to protect public health and stabilize animal agriculture, the food supply, and the economy; and (3) provide science- and risk-based approaches and systems to facilitate continuity of business for non-infected animals and non-contaminated animal products. In addition we want to ensure that the

Federal government, producers, States and local governments are well-positioned to effectively respond to future outbreaks. Achieving these goals will allow individual poultry facilities, States, Tribes, regions, and industries to resume normal production as rapidly as possible and minimize losses from future outbreaks. They will also allow the United States to regain disease-free recognition from our trading partners without the response effort causing more disruption and damage than the disease outbreak itself would be were it left unchecked.

The plan has five basic steps when the disease is detected: quarantine, eradicate, monitor, disinfect, and test.

- Quarantining allows us to restrict the movement of poultry and poultry-moving equipment into and out of the control area. Simply, we must stop the spread and transfer of the disease as much as we can.
- Eradication is part of our “stamping-out” approach to HPAI, which requires the depopulation of clinically affected and in-contact susceptible poultry to eliminate the disease where it exists and to further reduce the risk of spread. USDA has provided indemnification payments to producers for those birds that must be depopulated, which helps serve as an incentive for them to report potential infections quickly, which can further reduce the potential for virus spread.
- USDA monitors the region to better understand the viral spread. We monitor birds in a broad area around the quarantine area to see if there are other incidents to which we must respond.
- Cleaning and Disinfection of the premises where affected flocks are located is a key piece toward eradication. We must know that facilities are clean and disease-free before we can allow them back into production.
- Testing is the last step. After the disinfection is complete and before we can release the quarantine, we test the premises and environment to ensure that it is disease-free, so that operations may safely resume.

USDA has the best avian influenza surveillance system in the world. Our program exceeds international standards and allows us to identify the disease, and upon detection, to ramp up our emergency response activities. Our strong surveillance system assures our trading partners that we take disease eradication and control seriously and will be of great benefit to us as we try to resume trade with the foreign trading partners who have cut off access to U.S. poultry and poultry products.

How This Works for Producers

USDA wants impacted producers to get back into business as quickly as possible, and APHIS and its state partners work very closely with those affected.

Following confirmation of HPAI in their operation, a producer will need to develop a flock plan for all premises with confirmed infections or exposure. The flock plan sets out the steps to eradicate the virus and prevent its spread to other flocks. It also specifies the procedures required to get the facility back into production, including requirements for quarantine release. The flock plan will include cleaning and disinfection requirements. The flock plan must be signed by the owners, a State animal health official, and an APHIS official before an indemnification payment can be processed. An APHIS case manager will work with the producers to walk them through the process and the information required to complete all steps.

APHIS will then prepare an appraisal document for indemnification and present it to the producer as quickly as possible. Affected producers need to sign the appraisal document before depopulation can occur. The Animal Health Protection Act limits indemnity to the fair market value of the animal being depopulated; it is not intended to make the producer whole, such as by covering production losses during the time a barn is down for the disease response activities. APHIS economists developed a series of species-specific appraisal calculators that use publicly available prices, costs, and productivity data to develop a value per animal that varies by the age of the animal. The calculators are updated monthly to account for changing feed costs, values, and assumptions.

The value per animal type multiplied by the number of each animal type is used to calculate total indemnity. For HPAI, APHIS provides 100 percent of that indemnity amount. One important distinction: the Animal Health Protection Act limits indemnity to the fair market value of the animal being depopulated.

A compliance agreement must be developed if depopulation, disposal, or cleaning and disinfection will be performed by personnel other than Federal or State officials, and if the producers will request indemnity for those activities. A compliance agreement is separate from the flock plan. The flock plan specifies the necessary procedures for the premises to resume normal production; a compliance agreement indicates what tasks will be completed, who will be responsible for each task, and how much the work is expected to cost. A compliance agreement is comparable to a statement of work -- a plan that lays out the activities to be done and the expected costs to accomplish those activities.

Provided the terms of the compliance agreement are met, USDA will provide funding for those cleaning and disinfection activities, and compensation or indemnification for any items or equipment that are destroyed or damaged as a result of the cleaning and disinfection process.

The Importance of Biosecurity

One of the lessons we've learned is that we all need to be vigilant about maintaining stringent biosecurity measures, especially in the face of a disease outbreak. In June, APHIS released a partial epidemiology report on the Agency's findings about the origins and spread of the virus. While the results of our preliminary epidemiological investigation didn't show a single source of transmission, it did emphasize the importance and need for improved biosecurity. The strength of

our biosecurity efforts depends entirely on all of us – producers, their employees, USDA, and our contractors who are responding to this outbreak.

Part of this involves more outreach to producers. We've made more information about basic biosecurity practices available on our website, and we've shared materials such as a checklist of best practices and information sheets with industry groups for distribution to their members. These recommendations include items such as allowing only essential personnel access to poultry premises and thoroughly disinfecting boots, equipment, and vehicles that enter and exit those locations.

We're also meeting directly with State Veterinarians and industry to discuss the need for more biosecurity. On July 28 and 29, 2015, we'll be holding a stakeholder meeting with those groups to discuss those issues to ensure that our collective biosecurity is more stringent and that we are prepared for any future outbreaks.

We know that proper biosecurity begins at the farm's edge. What this outbreak has taught us is that the biosecurity measures that extend on the farm into each individual barn or facility are equally or, at times, more important than the farm's edge approach. Based on the belief that "an ounce of prevention is worth a pound of cure," we plan to work with our producer and State and local partners to strengthen biosecurity measures. This may require changes to current practices or assumptions, and USDA is engaging our partners in these critical issues.

APHIS appreciates the cooperation of poultry producers in providing the information needed for these epidemiology investigations. APHIS values its partnership with industry and believes that with their continued support and assistance, the agency will be well positioned to learn all it can about this virus. We all have a role in – and a responsibility for – our Nation's agricultural health, and we will work together to ensure that we are in the best position possible to address this disease.

Preparedness for the Fall

USDA is treating the potential threat of more infections in the fall with the utmost seriousness. Although we hope that we will not have additional or more wide-spread outbreaks, it's very likely that wild birds will carry the virus with them when they begin migrating south in the fall. Although states in the Atlantic flyway have not been affected by this HPAI outbreak, it's important that our state and industry partners begin preparations should the disease occur there.

I can assure you that this need for preparedness has the attention of all of USDA. The Secretary is leading these efforts, and has directed USDA to do everything it can to respond to this virus, assist producers, and maintain trade markets. As we look to the fall, we plan to be ready for the challenge.

To that end, we recently concluded a planning workshop with our partners focusing on the worst-case scenarios and the responses needed. We're identifying the resources we would need under various scenarios and how we can better partner with States and industry to manage this disease.

We've encouraged our partners to review the existing avian influenza response plans so they understand what we will expect and what actions we will need them to take should the disease strike. Along those lines, we've urged states and industry to develop site- and county-level specific depopulation plans for landfilling or composting birds. Our experience in the Midwest showed that the biggest roadblock to efficient depopulation (which is key to reducing the spread of the virus) is the lack of ready sites to receive and process dead birds.

Should the disease strike in the fall, USDA and its partners will be ready to tackle it head-on.

Vaccination and Trade Issues

As part of USDA's ongoing response, the Department evaluated the efficacy of current vaccine options for HPAI in addition to the economic impacts of vaccination. Some in the poultry industry asked if USDA would consider allowing the emergency use of vaccines to halt the spread of the disease. In June, after conducting that evaluation, USDA determined that we would not, at this time, allow for the use of vaccines to assist in the eradication of HPAI.

Right now, we do not have a closely matched vaccine to the outbreak H5N8 or H5N2 HPAI viruses. USDA's Agricultural Research Service (ARS) is evaluating a current vaccine in chicken and turkey protection studies against our specific outbreak viruses. In addition, ARS has developed a reverse genetic H5 vaccine seed strain that antigenically matches the field virus and it is undergoing the same protection studies. Only the most efficacious vaccines should be considered for field use as any infection in the vaccinated population would still require the entire barn to be depopulated.

Aside from questions about its effectiveness, USDA believes that if a vaccine were used, some additional trading partners would ban all U.S. exports of poultry and eggs and not necessarily just those from the states currently affected by HPAI until they could complete a full risk assessment. The loss of these markets could cost U.S. producers at least \$3 billion in trade revenue with uncertain reductions to the mortality rate of birds from this disease.

In the weeks and months ahead, we will continue to support efforts to develop more effective vaccines. ARS scientists are working diligently on a better vaccine based on the specific genetics of this strain of the virus. We have said that we may reevaluate our vaccination decision as more effective vaccines are developed and ready for use, carefully considering both the efficacy of the vaccine and the potential trade impacts. If used, vaccines will serve as an additional tool in our eradication efforts and will be targeted in the states and poultry sectors where they can be most effective.

USDA has been working very closely with our trading partners to minimize the effects of this outbreak on producers. The World Organization for Animal Health (OIE) guidelines encourage a regionalized approach to animal diseases, and we have urged our trading partners to adopt that approach, just as we would with them should they be struck by an animal disease. Despite the OIE guidelines, 18 trading partners have suspended imports of all U.S.-origin poultry and poultry products. However, 38 trading partners have adopted a regionalization approach, limiting

imports of poultry and poultry products only from those states or counties affected. We speak with our partners regularly, and are already working with them to restore market access from the areas where the outbreak was limited and has been controlled. We'll continue to work with them to restore full market access as quickly as possible as the overall outbreak subsides.

Conclusion

There are a few key points I want to leave you with. There have been no human infections from these viruses and the risk to the general public is low. It's also important to understand that our food supply is safe. Properly prepared and cooked poultry and eggs are safe to eat.

I think despite the difficulties we've faced, we've had some good news. In recent weeks the number of new detections has slowed to a trickle, and more and more farms have begun to repopulate with new poultry. The restocking guidelines we and our state partners have put in place give us the assurance that the premises and the local environment are free from the disease, and that we have enhanced biosecurity measures in place to reduce the threat of re-contamination. Most importantly, successful restocking is a sign that our techniques and approaches in confronting this disease can and do work. That might not seem like much consolation for the producers who've lost so much, but it should provide reassurances to those nervous about the potential approach of the disease through wild waterfowl come fall.

I really want our producers to understand that they have USDA's support. Our experience in quickly and successfully responding to previous animal disease outbreaks and the lessons we've learned from the Spring on this outbreak will inform our response and allow us to minimize the effects of this disease going forward. Every day, we are further refining our prevention, detection, and response based on the latest science and the lessons from this outbreak. We will continue sharing what we learn with our state and industry partners through regular conversations and meetings. We will also continue to work with Congress to ensure that we have the necessary tools and resources to fight this disease. Together, we will meet this challenge and protect the health of the Nation's poultry.