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Hearing on the 2009-H1N1 Influenza
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Mr. Chairman and distinguished Members of this Committee, I appreciate the opportunity to testify before you today on the 2009-H1N1 influenza. I have with me today Dr. John Clifford, Chief Veterinarian for the Department of Agriculture (USDA), Jim Miller, Under Secretary for Farm and Foreign Agricultural Services, and Dr. Kenneth Petersen, Assistant Administrator for the Food Safety and Inspection Service.

Before I begin, I would like to express my sympathy and concern for those who have lost loved ones to the 2009-H1N1 flu, as well as to those who have been sickened by the virus. I recognize that many Americans are worried about this virus, and want to assure you that Federal, state, and local governments are working closely together to respond to the emergence of this virus.

The appearance of the 2009-H1N1 flu virus in humans and the associated concerns for animal health underscore the interdependent nature of human and animal health and the need for a "one medicine" approach to animal health surveillance. This emphasizes how we at USDA view our role in animal health safeguarding — a role in which we are concerned not only with animal health, but with the optimal health of people, animals, and our environment.

Today I would like to emphasize several points related to the 2009-H1N1 flu outbreak. One—let me be absolutely clear: it is safe to consume pork products. Two—USDA is involved in surveillance and vaccine development for swine. Three—USDA is well prepared should we detect the 2009-H1N1 flu virus in U.S. swine. And finally—USDA is working to keep markets open for pork products.

Before I discuss these points, I would like to note that when I reference "2009-H1N1 flu," I am referring to the novel flu virus currently causing human illness, not flu viruses typically found in swine. There has been some confusion about why this virus is different from flu viruses we have seen before, so I'd like to provide a brief explanation.

Ecology of Influenza A Viruses

Influenza type A viruses are widely distributed in birds and mammals including humans. These viruses are sub-typed by surface proteins referred to as H and N. The primary types seen in humans are H1, H2 and H3, and in swine they are H1 and H3. The current virus of concern is an H1N1 subtype.

The genetic codes inside the virus further distinguish the subtypes. If viruses from 2 or 3 different species (for example bird, swine and human) infect the same person or animal, they can mix and create a new influenza A virus. Several of the gene segments in this 2009-H1N1 flu virus have previously been identified in swine influenza viruses, so it was initially called a swine influenza virus. However, this virus is different from other type A influenzas because of its unique combination of genes.

It is also important to understand that when genes are re-combined, as has happened with this 2009-H1N1 flu virus, the behavior of the virus changes. It may lose potential to infect or cause disease in its original host (in this case, swine) or it may become more transmissible to another host. This 2009-H1N1 flu virus has become fairly efficient in transmission among humans, as the spread of cases in this current outbreak has demonstrated. Now that we've discussed the science behind this virus, I'd like to talk about our approach to this situation.

U.S. Pork is Safe.

I have been saying this since day one and will continue to reiterate that pork and pork products are safe - the American food supply is safe. Experts at USDA and the Centers for Disease Control and Prevention (CDC) have carefully examined this issue and found no evidence that this 2009-H1N1 flu virus can be transmitted by food. It is important that consumers understand that there is no evidence that you can contract this flu from eating pork and pork products. We are reiterating this message not only to the general public and industry, but to trading partners and organizations such as the U.S. Commodity Futures Trading Commission and the Chicago Mercantile Exchange, in order to assure markets that U.S. pork is safe and to protect producers' livelihoods.

Another point I want to reiterate is that there is no evidence of the 2009-H1N1 virus in U.S. swine. We continue to take steps to verify that there are no signs of this virus in our swine herd, including working with state animal health officials, private practitioners, and our own federal

veterinarians in the field. However, it's important to note that because of the inherent qualities of influenza, there could be transmission from humans to swine.

In fact, Canadian Food Inspection Agency (CFIA) officials have confirmed that swine from a herd in Alberta, Canada, tested positive for the 2009-H1N1 strain currently causing illness in humans. A Canadian carpenter who had been in Mexico, upon return, was exhibiting flu-like symptoms, did work on this Alberta farm, and subsequently swine on the farm became ill. Consequently, as a precaution, people with flu-like symptoms should not interact with swine, and swine showing influenza symptoms should be kept away from the public and brought to the attention of state animal health authorities or USDA. Canada has handled this situation appropriately and taken the necessary steps and precautions. No sick swine have left the farm, and the animals and premises have been quarantined. We are working closely with our CFIA counterparts to be kept abreast of the situation. This emphasizes the critical importance that pork producers be vigilant and understand and practice accepted biosecurity measures.

Vigilance is something we are used to at USDA, and we have an effective safeguarding system in place that utilizes surveillance, testing, and monitoring to ensure diseases are kept out of the livestock industry. What people outside of the livestock industry may not realize is that swine influenza, though not the 2009-H1N1 strain, is actually endemic in the United States, and that USDA, as well as the swine industry, have a long history of successfully dealing with this virus. And just as our safeguarding system has proven successful in the past, we are confident that our efforts, combined with those of our industry partners, will alert us to any possible disease in U.S. swine.

USDA is Prepared.

So, while USDA's routine safeguarding efforts for animal disease are ongoing, we do recognize the need to be responsive to the heightened concern surrounding the 2009-H1N1 flu virus, and are undertaking additional measures around surveillance and research to reassure consumers, producers and the public.

To ensure early detection should the 2009-H1N1 flu be introduced into the U.S. swine population, and because this particular strain has human health implications, we have accelerated implementation of a swine influenza virus surveillance program, which we began developing in July 2008 in cooperation with CDC and other stakeholders. We have asked laboratories to send any swine influenza virus isolates that are difficult to subtype with current reagents or known to be associated with human illness to our National Veterinary Services Laboratories (NVSL). To provide additional capacity to further characterize these submissions, we will be working with National Animal Health Laboratory Network (NAHLN) laboratories to provide additional diagnostic assistance.

USDA's laboratories are ready, and are prepared to address potential findings of 2009-H1N1 flu in swine. We are growing virus to meet potential future diagnostic needs and determining if USDA can detect this strain with the screening test we currently use to detect avian influenza. NAHLN laboratories already use and are familiar with the avian influenza test and have been trained and proficiency tested, so they are prepared to use this test to screen for swine flu once this determination has been made.

To test swine for the virus, you need to swab their nasal passages when they are sick and shedding the virus. If the animals are not showing signs of sickness, the likelihood of detecting the virus is low. If the screening test shows that the animal does have a type A influenza virus, further tests, known as genetic sequencing, must be done to distinguish one influenza virus type and subtype from another. This genetic sequencing, which looks at the DNA-makeup of the virus, is conducted by NVSL in Ames, Iowa, as well as selected laboratories with this capability.

Laboratories with this sequencing capability conduct genetic sequencing on more than 500 swine influenza virus samples each year. USDA has contacted these laboratories and asked them to review their databases for their current and past sequencing analyses. The results of these reviews, including the most recent swine influenza season, revealed no detections of the 2009-H1N1 strain currently causing illness in humans.

If we were to detect an unusual case of swine influenza, USDA would take a series of swift and appropriate actions to contain the virus and protect animal and human health while the virus was being identified. First, USDA and its State and industry partners would identify any infected or exposed animals and quarantine those animals. Second, USDA would take blood and tissue samples and would determine the virus type (i.e., H1N1) at a State diagnostic laboratory or the National Veterinary Services Laboratories in Ames, Iowa. Third, if we confirm that a sample is indeed positive for the 2009-H1N1 influenza, APHIS and State animal health officials will immediately begin an epidemiological investigation to determine any other herds that may have been exposed to the affected animals. This highlights the need to have significant producer

participation in the National Animal Identification System (NAIS), which would make traceability much more effective if we do need to engage in a traceback effort related to this disease.

Enhancing our Understanding of the Virus and Increasing our Capabilities

To better understand and prepare to respond to a disease such as the 2009-H1N1 flu virus, it is important to understand its epidemiology. To that end, USDA has agreed, at the request of the United Nations Food and Agriculture Organization (FAO), to send a laboratory diagnostic expert to Mexico as part of an international team studying the epidemiology of the 2009-H1N1 flu outbreak. It is our hope that with a better understanding of the disease's incidence and distribution, we can tailor our preparations more appropriately to the specific virus.

Additionally, our National Animal Disease Center (NADC), which has conducted research on swine influenza since 1978, is studying the 2009-H1N1 flu virus with the end goal of developing a rapid and specific diagnostic test to target the unique genes in the 2009-H1N1 flu virus. This new test would be applied to samples that screen positive for any swine influenza virus. Even before the 2009-H1N1 case in swine was announced, scientists at NADC planned to inoculate pigs with the new virus to determine if it causes disease in pigs and how easily it is transmitted from pig to pig. We still plan to follow this course of action. The information obtained in these studies will be crucial for the U.S. swine industry to prepare for infection of swine herds with the new virus and their potential consequences, including spread of the virus to swine workers and others exposed to infected swine.

NADC scientists are also initiating critical new research to determine if current vaccines or previous exposure to current strains of swine influenza virus will provide protection against the 2009-H1N1 influenza virus. The results of these studies will provide important information on how vulnerable the U.S. swine population is to the new virus. We will also work with the swine industry to generate and produce new efficacious vaccines to provide protection to pigs against the disease. An outbreak of this virus in the U.S. swine production system could further exacerbate the potential for viral spread and replication in the human population, in addition to costing the swine industry millions of dollars. All research will be conducted using appropriate biosecurity protocols.

Speaking of biosecurity, it is imperative that we take steps to prepare and protect U.S. swine from a potential 2009-H1N1 flu outbreak. We are reaching out to industry and encouraging them to intensify existing biosecurity practices. This includes not loaning/borrowing equipment or vehicles to/from other farms; permitting only essential workers and vehicles to enter the farm; disinfecting shoes, clothes, and hands of swine workers; thoroughly cleaning and disinfecting equipment and vehicles; and avoiding visiting other farms without proper cleaning and disinfection. In addition, we are working closely with our state and industry partners to ensure that officials take appropriate steps to protect themselves should they need to investigate suspect animals.

Impacts on the U.S. Swine Industry

Following the escalating media attention regarding the 2009-H1N1 influenza over the weekend of April 25-26, the pork industry has encountered a 16.5 percent decline in the average cash base

price for hogs. Prior to that weekend, USDA reported a weighted average base price of $61.03 per hundredweight paid for barrows and gilts on a carcass basis. As of May 5, that price decreased to $50.95 per hundredweight, a decline of over $20 per head for pork producers. By comparison, the average base price was $75.07 a year ago, or 47.3 percent higher than the current price.

Although the decline in pork prices has not been as large, the wholesale pork carcass cutout value decreased by 5.5 percent from April 24 to May 5. While the USDA estimated pork carcass cutout stood at $59.28 per hundredweight prior to that weekend news cycle, the value declined to $56.01 by May 5. In comparison, the cutout was $76.63 a year ago, or 36.8 percent higher than now.

Softening demand and declining pork prices have resulted in reduced slaughter rates. Estimated hog slaughter for the week ending May 2, 2009, was 2,018,000 head, a drop of 4.2 percent from the previous week and 2.3 percent from the same period a year ago.

Reassuring Trading Partners

Now let me turn to the situation in regard to the international market for U.S. pork and other meat and poultry products. As you know, exports are vital to the success of U.S meat and poultry. For example, in 2008, total U.S. pork exports were approximately $4.7 billion.

When I first became aware of the 2009-H1N1 flu situation, one of the first steps I took was to instruct the Foreign Agricultural Service (FAS) to reach out to all of our major trading partners

to keep their markets open. Through its network of overseas posts, FAS worked quickly to remind the appropriate foreign ministries and key foreign officials that the discovery of this virus in humans is not a basis for restricting imports of commercially produced U.S. meat and pork products. We wanted to make sure our trading partners knew that this is not a food safety issue and that we expect them to make any decisions regarding the importation of U.S. pork based on sound science and internationally accepted rules. Because of our swift action, we have been able to significantly mitigate the impact on our international markets.

To reinforce our commitment, Ambassador Kirk and I put out a joint statement again urging our trading partners make decisions based on scientific evidence and in accordance with their international obligations. USDA will continue to work with the U.S. Trade Representative's office to send a very strong and unified message.

One of the key markets we immediately contacted was Japan. Japan is the number one export market for U.S. pork, with trade worth well over one billion dollars a year. We were particularly pleased with the Japanese response, which was a very strong and unequivocal confirmation that U.S. pork products are safe and there is no reason to restrict imports into their country.

Official and unofficial bans were quickly lifted in numerous countries, due largely to USDA outreach efforts. For example, all Central American markets that initially closed are reported to have reopened to U.S. pork exports.

FAS works closely with the international organizations, FAO, World Animal Health Association (OIE), and the CODEX to ensure that all countries have a strong set of science-based guidelines for use in these types of situations.

Conclusion

In closing, I want to emphasize that USDA will continue to work with other government agencies, industry, and our counterparts around the world to monitor the situation and assure the public and our trading partners that U.S. pork is safe. I must reiterate that U.S. pork and pork products are safe. We are moving swiftly to make sure that we understand the science behind this virus, have the tools in place to detect and identify it, and respond appropriately if needed. You also have my assurance that USDA will continue to press our trading partners to remove restrictions on U.S. products and that restoring the international market for U.S. meat and poultry is a top priority.

That concludes my statement. I look forward to working with Members and staff of the Committee and we will be glad to answer questions you may have.