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Hearing on the National Animal Identification System
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Chairman Scott, Chairwoman Clarke, Ranking Members Neugebauer and Lungren, and Members of the Subcommittees, thank you for holding this hearing today. I am Dr. John Clifford, Deputy Administrator for Veterinary Services with the Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS). In this position, I also serve as USDA's Chief Veterinary Officer for animal health.

I appreciate the opportunity to testify before you regarding USDA's National Animal Identification System (NAIS) and our extensive efforts to protect U.S. agriculture from foreign animal disease threats such as foot-and-mouth disease (FMD). We have a comprehensive and effective safeguarding system that is designed to keep diseases like FMD out of our country, look carefully for any signs of the disease in our Nation's herd, and, should we diagnose it here, respond quickly to minimize spread and economic impacts.

The backbone of any effective emergency response is the ability to quickly and reliably ascertain what animals are carriers of disease, what animals are at risk, and what animals are unaffected.

With this information, we can make decisions in real time regarding the boundaries of the quarantines that we should put in place, what movement of animals and products can be supported from a risk standpoint, when it is needed to use vaccine, and which animals must be depopulated to curb and eventually end the spread of the disease.

These are difficult decisions to make, especially in the midst of an emergency situation. The most important thing needed to make these decisions and protect our Nation's producers, communities, and economy from a major disease event like FMD is timely, current information that tells me which animals have been infected or exposed.

Today, because the livestock industries are so integrated and animals move regularly from location to location for feeding, sale, breeding, and the like, it is absolutely essential, in the event of a contagious disease like FMD, to have this sort of usable information at a moment's notice. The most important tool at our disposal in this regard is the National Animal Identification System (NAIS).

USDA, States, and industry have been working cooperatively to develop a unified NAIS for several years. This work assumed greater urgency when we witnessed the heavy losses associated with the FMD outbreak in the United Kingdom in 2001. In 2003, a group of approximately 100 industry and government representatives - the National Identification Development Team - drafted the U.S. Animal Identification Plan. The detection of a case of bovine spongiform encephalopathy (BSE) in the United States on December 23, 2003 accelerated our implementation of NAIS.

We have expended significant effort and resources on NAIS and today have a strong infrastructure in place, consisting of premises registration, animal identification, and animal tracing. Premises registration - the foundation of NAIS - establishes a contact list for all locations in the United States that manage or hold livestock or poultry. A registered premises provides a key link for a disease investigation - allowing for a targeted response. Animal identification provides producers with a uniform numbering system for their animals, and links livestock and poultry to their premises of origin. Animal tracing, the final component of NAIS, allows producers to choose a private or State animal tracking database and report animal movements that may pose a significant risk of disease transmission. USDA maintains only the premises registration information needed to enable effective traceback or notification in animal disease situations, as well as distribution/ termination records of official identification devices, and will not have direct access to the private and State animal tracking databases which contain animal movement records.

Unfortunately, we have faced many challenges as we have worked to develop a robust NAIS. Most producers, industry groups, and State officials see NAIS' value, but the debate continues over how to implement it. This has led to a disappointing participation rate of about 35 percent of the estimated number of our Nation's livestock and poultry premises. Some State legislators have sought to restrict participation in the program. Further, we at USDA have made adjustments in the direction of NAIS, resulting in some confusion regarding producer participation. In May 2005, USDA announced a Draft Strategic Plan that included timelines for a mandatory program by January 2009. The April 2006 Implementation Plan stated that the

program was voluntary with a contingency that USDA would consider regulations that would require participation if voluntary participation levels were not adequate to have an effective program. Although our NAIS implementation strategies have always been based upon continuous producer and stakeholder assessment and input into workable solutions, this strategy shift, combined with producer concerns, appears to have reduced producer focus on the importance of animal disease traceability and preparedness.

Despite these challenges, I believe we have turned an important corner in the development of NAIS. All components of the system have been developed, integrated, tested, and made operational. Secretary Vilsack has signaled his clear support for developing a system that will work efficiently and effectively, and that accommodates the unique needs and perspectives of the diverse array of stakeholders involved. Implementation of an effective NAIS is my top priority. There is no question that an effective animal identification system is essential to our work to successfully protect U.S. animal health.

With that, let me turn to examining the risks we face today, our approach to preparedness and response, and how NAIS effectively complements these critical efforts.

The Risks Posed by Foreign Animal Diseases

As you well know, foreign animal disease incursions, as well as other animal health emergencies, can have a major impact on the Nation's agricultural infrastructure, animal and public health, food security, economy, and export markets. For example, there are many animals susceptible to FMD in the United States, including over 94 million cattle, 67 million swine, and

almost 9 million sheep and goats. A recent study conducted by USDA's Economic Research Service simulated a FMD outbreak in small hog operations in the Midwest, estimating losses between $2.8 and $4.1 billion.[1] Another study, based on a hypothetical FMD outbreak in California, projected a cost of between $8 and $14 billion.[2]

USDA has numerous safeguards in place to prevent the introduction of FMD, and has successfully kept the disease out of the United States since the last outbreak in 1929. However, we also recognize that no system is 100 percent foolproof. That said, should we be faced with a significant animal disease event in the United States, the key to reducing its impact is our ability to swiftly contain and eradicate it. The way we can achieve this is by having an effective system in place that allows animal health officials to quickly identify all potentially affected animals and stop them from further spreading the disease. Again, this is exactly what we are trying to achieve with NAIS. NAIS can have significant, positive effects on our ability to limit the number of animal owners impacted by an outbreak, reduce the economic strain on owners and affected communities, demonstrate that certain areas of the United States are free of disease, limit export market closures, and preserve the marketability of animals for domestic markets.

The U.S. Animal Health Safeguarding System

USDA safeguards the Nation's animals and animal products by preventing, controlling, and/or eliminating animal diseases, and monitoring and promoting animal health and productivity. We have made significant investments - totaling more than $405 million of annual appropriated

[1] Paarlberg, Lee, and Seitzinger. (2008). *Economic Impacts of Foreign Animal Disease*. Washington, DC: USDA ERS.
[2] Ekboir, Javier. (1999). *The Potential Impact of Foot and Mouth Disease in California: The Role and Contribution of Animal Health Surveillance and Monitoring Services.* Davis, Calif.: Agricultural Issues Center.

funding in FY 2008 - towards preventing, controlling, and eradicating animal diseases. USDA's animal health safeguarding systems have largely stayed ahead of evolving risks and have been highly effective in preventing the introduction of serious animal diseases such as FMD into the United States.

Prevention Measures

Our agricultural safeguarding system in the United States consists of a comprehensive, interlocking set of programs that work together to protect U.S. livestock from foreign pest and disease risks. USDA does not allow animals or animal products to be exported to the United States from an area of the world where FMD is known to exist or where a determination of disease status cannot be made. Our import regulations are science-based and are designed to keep susceptible animals and their products out of the United States. To ensure that these regulations are followed, USDA works in tandem with the Department of Homeland Security (DHS) to address the risk of foreign pests and diseases entering the country at ports of entry, either through the movement of people or commodities. APHIS also operates animal import centers with veterinary personnel who screen imported live animals.

Recognizing that every single import cannot be inspected, APHIS provides an additional layer of protection from foreign threats through our Smuggling, Interdiction, and Trade Compliance (SITC) program. SITC teams, in cooperation with DHS' Customs and Border Protection, the USDA Food Safety and Inspection Service, and other federal partners, vigilantly seek out any animals or animal products that might be smuggled into the United States from another country.

SITC teams also conduct secondary market and warehouse inspections and conduct a full investigation on smuggled goods to identify and eliminate illegal pathways.

Surveillance and Detection

The components of our safeguarding system are designed to protect against damaging and potentially costly introductions. But we know we must have a strong domestic surveillance infrastructure in place to detect any animal diseases that could slip past our prevention measures. Early detection is essential to preventing disease establishment in the United States and can help reduce the cost to industry of lost product and lost markets. To that end, APHIS conducts a number of surveillance activities so that we can detect an intrusion as early as possible.

APHIS scientists perform diagnostic testing of samples collected from U.S. livestock that are showing clinical signs consistent with an exotic disease, as well as test animal products and live animals being imported into the United States to ensure that unwanted diseases are not accidentally introduced through importation. APHIS scientists have the capability to diagnose more than 30 exotic animal diseases and perform thousands of diagnostic tests each year. They also prepare diagnostic reagents, distribute them to laboratories throughout the world, and work to improve techniques for the diagnosis or control of foreign animal diseases.

The National Animal Health Laboratory Network supports USDA's animal health testing efforts, enabling rapid, accurate detection and reporting of possible occurrences of significant animal disease. The Network includes 38 laboratories which are approved for testing diagnostic

samples for FMD, providing for early detection and the surge capability needed in the case of an outbreak.

In addition, APHIS trains veterinarians, scientists, professors, and veterinary students on the recognition of clinical signs and pathological changes caused by foreign animal diseases. This training provides the backbone of APHIS' animal disease surveillance and safeguarding programs. These foreign animal disease diagnosticians are located throughout the country, and we estimate that they can be on-site to conduct an investigation and collect samples within 4 hours of receiving a report of a suspected foreign animal disease. About 500 active State and Federal animal health officials have received this training and are ready to respond to suspicious animal disease cases. Based on their assessment of the situation and prioritization of the threat, APHIS can then take appropriate steps to protect the U.S. livestock industry. All of these surveillance efforts are a crucial part of USDA's overall agricultural safeguarding system.

Emergency Preparedness and Response

Although our preventative measures have successfully protected the United States from FMD and other animal diseases, it is only prudent to assume that, even with the best safeguards available, a serious disease event will still occur. Accordingly, now more than ever, preparedness is critical and response plans need to be in place ahead of time, rather than waiting for a disease outbreak to occur.

USDA has specific emergency response guidelines for FMD and many other foreign animal diseases that pose a significant threat to the United States, as well as guidance for state and local

responders. They include detailed checklists and standard operating procedures that cover such topics as disease etiology and ecology, surveillance objectives, diagnostic sample testing, quarantine and movement control, vaccination, and continuity of business planning. We have developed these response plans in conjunction with our Federal, State, and local partners, with whom we conduct exercises to test our preparedness.

Another essential part of planning includes identifying those Departments and Agencies that will support and partner with USDA in responding to emergencies and how roles and responsibilities will be divided or shared. A primary partner for APHIS is the Department of Homeland Security (DHS). In working with DHS during animal health emergencies, APHIS leads the animal disease incident response, coordinates incident management teams, manages public relations, and takes measures to control and eradicate the disease for the Agriculture and Food Sector. DHS, on the other hand, coordinates Federal-to-Federal support as outlined in the National Response Framework, mobilizing resources through DHS components (e.g., Federal Emergency Management Agency, Customs and Border Patrol) to mitigate impacts of incidents.

To ensure maximum speed and effectiveness, APHIS has rapid response teams stationed around the country ready to travel to detection sites to coordinate Federal containment and eradication efforts. These teams use an incident command approach to emergency response, enabling members from local, State, and Federal agencies to communicate with each other clearly and effectively when working an emergency and to tap into a wider network of resources. APHIS also manages the National Animal Health Emergency Response Corps (NAHERC) of over 720 veterinarians and animal health technicians who can be federalized and deployed as needed.

APHIS also has access to personnel through the International Animal Health Emergency Response Corps, comprised of veterinarians and technicians from Australia, New Zealand, Canada, the United Kingdom, and Ireland.

Additionally, APHIS continues to enhance the Nation's repository of critical veterinary products, known as the National Veterinary Stockpile (NVS), to ensure that we can deliver vaccines and other critical veterinary supplies to the site of a dangerous animal disease outbreak within 24 hours. To accomplish this critical mandate, the NVS has defined the agents of greatest interest to animal health and has prioritized its resources accordingly. This disease list, led by FMD and highly pathogenic avian influenza (HPAI), is one of the key influencers of our emergency management priorities. The NVS currently holds or has systems in place to provide:

- Personal protective equipment (PPE) for 310 responders for 10 days in a high-risk environment;
- Further PPE to protect 3,000 responders for 40 days;
- Anti-viral medications for 3,000 responders for 6 weeks; and
- Satellite data and voice equipment that is portable and capable of establishing temporary command posts.

Vaccines are another potentially critical tool in our emergency response arsenal. APHIS is the custodian of the North American FMD Vaccine Bank (owned by Canada, Mexico and the United States), which stores concentrated FMD antigen that can be formulated into a vaccine if a FMD introduction occurs. We have developed guidelines regarding the use of FMD vaccine, including distribution if the vaccine were limited or if time constraints prevented establishment of a current

livestock population estimate, and have a rating system in place to prioritize vaccine delivery within the vaccination zone. To strengthen our response capabilities, USDA and DHS are also working on the development, testing, and licensing of FMD vaccines that can be safely manufactured on the U.S. mainland.

While we have made great strides in preparing for a FMD or other foreign animal disease outbreak, there is always more we can do to strengthen our capabilities. For example, USDA is currently working on a model to better estimate how many personnel would be needed to manage a large scale FMD outbreak, and expect to complete it in 2010. On the diagnostic side, APHIS and USDA's Agricultural Research Service continue to try to improve our capabilities, and are currently working on rapid diagnostics that can be used pen-side. We also regularly test our emergency response capabilities through simulation exercises with local, state, federal, and international partners, so that we can identify needed improvements and ensure that all participants understand their roles. For example, we conducted NVS deployment exercises with four separate states during the past year, and plan to conduct a FMD exercise with 13 states and Canada this summer.

The Need for an Effective National Animal Identification System

With all that we have done to prepare for a FMD or other significant disease incursion, we cannot afford to be complacent; we must always be doing more and improving our capabilities and preparedness to respond. And, again, we can only respond effectively if we know what animals are affected, where they are located, and if they have had contact with other animals to spread the disease. Based on the worst case scenario—FMD—we have found that being able to

trace back from infected animals within 48 hours is vital to quickly containing and eliminating an incipient disease outbreak.

In fact, a number of studies have looked at this issue, and found that a quicker response equates to a significant decrease in negative effects from an outbreak. For example, in a study that examined the impacts of a simulated FMD outbreak in California, researchers found that a shorter traceback time is key to reducing the scope of a disease, as indicated by the study's finding that in its simulation, "a one-week delay in starting depopulation could increase the proportion of infected premises from 18% to more than 90%."[3] A more recent study that examined the value of traceability in a simulated FMD outbreak in Kansas found that "as the level of surveillance and ability to trace cattle increases, the number of animals that have to be destroyed and related costs decrease."[4] Clearly, there are benefits to be had from enhancing our traceback capabilities.

USDA has long recognized the benefits of animal identification and for much of the second half of the 20th century used this tool in long term eradication programs for diseases like brucellosis and tuberculosis. While certainly not the modern, standardized system we envision with NAIS, those systems did provide us with a solid base for traceback. However, the success of those programs led to a dramatic decline in the number of premises and animals registered in any identification program. This, coupled with the incompatibility of the different federal and state

[3] Ekboir, J.M., L.S. Jarvis and J.E. Bervejillo. 2003. Potential Impact of FMD Outbreak in California, in Sumner, D. (ed.), Exotic Pests and Diseases: Economics, Science and Policy, Iowa State University Press.
[4] Pendell, D.L. and Schroeder, T.C. (2007). *Value of Animal Traceability Systems in Managing a Foot-And-Mouth Disease Outbreak in Southwest Kansas*. Kansas State University Agricultural Experiment Station and Cooperative Extension Service.

systems, leaves us today without sufficient traceability in the U.S. livestock sector in the event of an animal health emergency.

To achieve a level of animal traceability in the United States that meets the needs of our producers, USDA in 2003 began planning for a National Animal Identification System that would provide rapid animal tracking for prompt and effective disease containment. The efforts of the last 5 years have enabled us to build and link all the IT components of the system, standardize numbering systems so that we and our State partners have common frames of reference, and test and deploy strategies for increasing traceability in key sectors of the livestock industries. To date, USDA has obligated approximately $120 million for NAIS. However, while we have a strong infrastructure in place, participation in NAIS has been disappointing. Currently, just over 510,000 premises are registered, which, as we mentioned before, equates to approximately 35 percent of the estimated number of our Nation's livestock and poultry premises.

While we have very high levels of traceability in the swine, poultry, and sheep sectors, we have much work to do in terms of traceability for cattle. In order for NAIS to be successful, we need a minimum critical mass of producers on board, which we estimate would be 70 percent of the animals in a specific species/sector that could be identified and traceable to their premises of origin. While 70 percent would provide some measure of traceability, I must emphasize that we really need to achieve higher participation rates, perhaps as high as 90 percent, to ensure the benefits of the system.

Various groups within the beef cattle industry have voiced a number of concerns with NAIS that we believe contribute to the industry's low participation rate, currently estimated at 25 percent. One of the greatest concerns we have heard is with the costs associated with a mandatory NAIS, particularly for small producers. Data from a benefit-cost analysis conducted by Kansas State University show that annual estimated costs for implementing NAIS today throughout the livestock (food animal) industries could range from roughly $143 million for a bookend approach (the point of origin and last premises of livestock) with 90 percent participation, to $228 million for full pre-harvest traceability with 100 percent participation, with other options falling in between. Over 90 percent of the industry costs for such a system would be associated with the cattle sector, and equates to approximately $5.97 per animal. This is largely due to the individual animal identification required, whereas swine, sheep, goats, and poultry can often be sufficiently traced using premises and group lot identification.

Concerns have also been raised by industry about whether producer information will be released and used against them, such as for food safety liability purposes. I want to emphasize that we take producer confidentiality very seriously. When developing NAIS, USDA intentionally limited the type and quantity of information collected and maintained by the Federal Government. We generally treat producer information as confidential, applying Freedom of Information Act exemptions as appropriate to protect personal information and confidential business information provided by NAIS participants. Furthermore, I would like to emphasize that we have not designed NAIS to be used for liability purposes, nor do we believe that it would be appropriate to use it in this manner. Should Congress determine that we need additional statutory assurances of confidentiality, we would be happy to work with you.

Secretary Vilsack and I believe strongly that we must work collaboratively with industry to address their concerns and move forward with an effective NAIS—whether it be a mandatory system, or a system based on voluntary participation. In fact, on April 15, 2009, the Secretary held a roundtable with stakeholders representing the full spectrum of views on NAIS. This meeting kicked off a larger listening tour to gather feedback on concerns and, more important, to identify potential solutions to help USDA and the U.S. livestock sector move forward with the program. The Secretary's listening initiative will include substantial opportunities for stakeholders to share their thoughts on NAIS in person and in writing. Our goal is to work collaboratively to resolve their concerns and achieve the overall goal of enhanced animal traceability.

Conclusion

As I stated at a hearing before the Subcommittee on Livestock, Dairy and Poultry in March, it took an average of 199 days to complete 27 recent bovine tuberculosis investigations. Can we really afford to spend 199 days tracing back animals if we have a FMD outbreak? I absolutely do not think we can, which is why I strongly believe that we need an effective national animal identification system in the United States.

NAIS is a long-term investment in emergency preparedness and response, in the success of our ongoing disease control and eradication programs, in enhancing the competitiveness of our livestock sector in international markets, and in advancing consumer confidence in our food

supply. An effective NAIS will not only prepare us to respond to an outbreak of FMD, but also other foreign animal disease incursions, natural disasters, and agroterrorism. We understand that NAIS implementation is not cheap. But when we compare this with the estimated billions of dollars in losses we would suffer from a FMD outbreak, the case, to me, for a robust NAIS is compelling. We must not be complacent because we have not had a FMD outbreak in recent times.

Thank you very much for the opportunity to testify before you. I am happy to answer your questions.