

## **REPORT OF THE COMMITTEE ON TRANSMISSIBLE DISEASES OF SWINE**

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The Committee met on November 16th, 2010 at the Minneapolis Hilton Hotel in Minneapolis, Minn., from 12:30 to 5:30. There were 18 members and 38 guests present. Dr. Harry Snelson welcomed the group and reviewed USDA responses to the 2009 USAHA resolutions pertinent to the committee.

### **USAHA Feral Swine Subcommittee Report**

Dr. Carter Black, Georgia State Veterinarian presented the highlights of the subcommittee which are available in the Report of the Subcommittee, found after the Report of the Committee on Brucellosis in these proceedings.

### **2012 NAHMS Swine Study**

Dr. David Dargatz, National Animal Health Monitoring System, USDA-APHIS-VS

Dr. Dargatz provided an overview of the National Animal Health Monitoring System (NAHMS) program discussing the scope, participation, validity, collaboration and confidentiality of the program. He reviewed demographics of the past swine studies done in 1990, 1995, 2000 and 2006 and then discussed the swine study process focusing on needs assessment, design, implementation, analysis and dissemination of information. Currently they are disseminating the 2006 information and they are doing the needs assessment for 2012. Information from NAHMS studies is used by researchers to address various swine health and production issues. Data is also used for educational purposes and to support trade by providing prevalence data for diseases of interest and policy issues. A timeline for the 2012 study was provided. NAHMS staff are currently in the needs assessment phase and they are looking for industry input and implementation will occur in the summer of 2012.

### **CSF Update: the Dominican Republic, Haiti and Cuba**

Dr. John Shaw, Senior APHIS International Services Attaché, The Caribbean and Central America

Dr. Shaw provided an overview of the overall IS mission. He provided a brief history of early activities for ASF and CSF in Cuba, Dominican Republic and Haiti. Currently Cuba has an outbreak of CSF almost every other day. The disease is widely distributed and Cuba is trying to control the disease with vaccination. Haiti has approximately 150,000 backyard premises with an average of 5 head per site. Funding for CSF program has been provided by USDA IS at approximately 50% of costs more funding is needed to carry out a more successful mission. Efforts by USDA IS has resulted in better reporting and veterinary training to mitigate CSF. In the Dominican Republic USDA IS provides 10% funding for CSF programs. Producers have more modern production practices than Haiti and are interested and have explored development of a Checkoff for CSF eradication. Program dollars have been used to improve lab capacity, develop private public partnerships, and to train veterinarians to conduct better epidemiological investigations.

### **Teschens Disease: Situation in Haiti**

Dr. Rodney Simon, Veterinary Services Haiti

Dr. Simon provided an overview of Teschens diseases, including etiology, clinical signs and transmission. He provided the timeline regarding the discovery of the disease in Haiti in early 2009, area spread and the actions taken to respond to the disease once it was diagnosed at USDA FADDL. Serological profiling done as a result of finding Teschens in Haiti also identified antibodies to PCV, enterovirus, PCV2, PRRS and CSF. Other response activities include ongoing education and veterinary training to improve field investigations.

### **USDA Program Diseases**

Troy Bigelow, USDA-APHIS-VS

Dr. Bigelow thanked various stakeholders that cooperated in program activities. He emphasized USDA 2015 vision for surveillance and comprehensive and integrated swine disease surveillance. USDA is moving towards stream based surveillance for multiple diseases as opposed to by disease program area. All 50 states are free for PRV in the commercial herd. Feral swine are still a risk to the commercial compartment for transmission of PRV and swine brucellosis. In 2010 1 transitional herd was found to have PRV and swine brucellosis which was depopulated and the owner indemnified. Targeted surveillance for PRV is being implemented including high risk streams, routine serology and testing of sick pigs in NAHLN laboratories. 277,972 samples were taken for Sow / boar surveillance which is at the 5% level outlined in the PRV plan. In FY 2010 PRV testing occurred in 11 NAHLN labs and will be expanded to 15 in in 2011. Other samples collected include: 18 from sick swine, 58 from epidemiological investigations, 378 from high risk premises, 8 from known feral swine contacts, 12,267 from routine herd profiling and 12,729 total NAHLN lab tests. Feral swine are being monitored for PRV but sampling may be cut back. Regulatory revisions for the PRV program has been a slow process but proposed rule on the indemnity section may be published in 2011. For swine brucellosis USDA regional labs in KS and KY are running the diagnostic tests and in 2010 277,811 samples were tested. Two transitional herds in TX and one in FL were depopulated and indemnity provided to the owners. Texas is applying for brucellosis free status in the commercial herd. Samples for CSF surveillance were collected from swine highly suspicious for CSF, sick pigs submitted to VDL's (3,936), swine condemned by FSIS at slaughter (3,214), feral swine (2395), waste feeding operations in high risk states (2,834). Under the Swine Health Protection Act there are 1,405 licensed premises. In 2010 there were 7,462 inspections of license premise and a total of 142 non-licensed feeders were discovered. The regulations for the voluntary U.S. Trichina program voluntary have been published in 2008 and 42 farms currently participating. Dr. Bigelow provided a brief overview of the new SIV surveillance program outlining objectives, sampling streams, response and discussed the anonymous and traceable aspects of the plan.

### **National Veterinary Stockpile**

Dr. Lee Myers, USDA APHIS VS NVS

Dr. Lee Myers, State Federal Liaison for the National Veterinary Stockpile, briefed the Committee on Transmissible Diseases of Swine about the National Veterinary Stockpile (NVS) program within the U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services. Dr. Myers described the NVS program and its available countermeasures, reported on NVS exercises, and described available NVS preparedness planning tools.

Established by Homeland Security Presidential Directive 9, the NVS program is the national repository of critical veterinary supplies, equipment, vaccines, and services and has two primary goals: (1) to deploy countermeasures against the 17 most damaging animal disease threats within 24 hours, and (2) help states/tribes/territories plan, train, and exercise the receipt, processing, and distribution of NVS countermeasures during a disaster.

Dr. Myers reported that new countermeasures the NVS program acquired during fiscal year 2010 include self-refilling syringes and other ancillary vaccination supplies, animal handling equipment, and vaccines for classical swine fever. Plans are in place to acquire additional vaccines for many of the remaining damaging animal disease threats, and subject matter experts are discussing the feasibility of portable electrocution units and portable pneumatic captive bolt guns for depopulation.

The NVS program has sponsored and managed a robust exercise program since 2006, incorporating a variety of discussion based and operations based exercises recognized by the Homeland Security Exercise and Evaluation Program. The Southern Agriculture and Animal Disaster Response Alliance (SAADRA) and the NVS program sponsored a logistics functional exercise in April 2010 to exercise

sections of the Alabama, Louisiana, and Mississippi State NVS plans. The SAADRA organization includes members from Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Texas. A total of 169 participants from the NVS program, APHIS VS Eastern and Western Regions, and all ten SAADRA member States participated in operations-based exercises conducted in the States of Alabama, Louisiana, and Mississippi concurrently.

Dr. Myers encouraged State, Tribe, and U.S. Territory officials to take advantage of the NVS planning tools posted on their website <http://nvs.aphis.usda.gov>. Using the NVS Template for State Plan simplifies the planning process by "filling in the blanks" and customizing the plan for jurisdictional circumstances, and enhances regional preparedness by having consistent approaches across multiple States. Examples of State NVS plans are posted on the password protected portion of the site and NVS planners are encouraged to contact Dr. Myers at [lee.m.myers@aphis.usda.gov](mailto:lee.m.myers@aphis.usda.gov) for more information.

The NVS outreach program actively engages State and Tribe officials in NVS preparedness efforts. The Southern Agriculture and Animal Disaster Response Alliance member States will develop NVS plans in FY 2010, and operations-based logistics exercises are planned for the States of Alabama, Louisiana, and Mississippi in April 2010. Looking ahead for FY 2011, the NVS program is soliciting approximately three contiguous States or Tribes as partners who will commit to NVS preparedness, develop written NVS plans, exercise the plan, post the plan on the NVS website for planners, and help advise other States.

### **FMD Vaccination Lessons in South America**

Dr. Gay Miller, University of Illinois and University of Minnesota

Dr. Gay Y. Miller, Professor and Division Chair of Epidemiology and Preventive Medicine, College of Veterinary Medicine, University of Illinois, briefed the Committee on Transmissible Diseases of Swine about a collaborative project on mass FMD vaccination.

Dr. Miller described the lessons learned from a study trip to Uruguay and Argentina to gather information about the experiences in those countries with FMD and FMD vaccination. She included details about the potential economic impact from an FMD outbreak in the United States, rules and guidance from OIE on FMD vaccination and management of FMD outbreaks, and summaries of information gathered from the study trip.

The study tour was conducted March 21-March 27, 2010, and was supported in part by cooperative agreements between the National Center for Animal Health Emergency Management, and the Universities of Illinois and Minnesota. In organizing this trip, a team of 12 people from the United States, including representatives from the US pork, dairy and beef industries, worked with the ministries closest to USDA in Argentina (SENASA) and Uruguay (MGAP).

Dr. Miller provided some contrasts noticed from studying the two countries. For instance, she outlined the differences in how the routine vaccination campaigns are implemented and managed. Some specific differences included who administers the vaccines, the time spent in the vaccination campaigns, and how the programs are funded.

Dr. Miller made some essential basic points. The most important one perhaps is that regardless of the decision to vaccinate, it is likely that it would take years to reestablish export trade markets following an outbreak of any size in the United States. Thus, the decision to vaccinate will not be made easily. Elements that will help form effective and efficient vaccination programs, should they be implemented, include following the **WAR** approach: **W**ork during peace time (prior to an FMD outbreak) to improve FMD preparedness and response; **A**rea control - speed (of decisions and actions will) stops spread; and **R**eliance (built by communication and trust) among the various parties involved in fighting an FMD outbreak.

### **NIFA/AFRI Research Update**

Dr. Peter Johnson, USDA-National Institute for Food and Agriculture

Dr. Johnson highlighted the changes in structure and programs for CREES transition to National Institute for Food and Agriculture (NIFA) as directed in the 2008 Farm Bill. NIFA has a politically appointed director. Two thirds of funding revolve around 5 challenge areas that include: climate change, sustainable bio energy, childhood obesity prevention, food safety, global food security. NIFA now has the capability to forward fund projects similar NIH. One third of funding goes to foundational research which included the traditional animal health, production and animal products. There is 5 million dollars available in 2010 for animal health versus 9 million in 2009. Key areas of research include PRRS and

### **African Swine Fever (ASF) Status and Research Update**

Dr. Luis Rodriguez

Dr. Rodriguez provided an overview of ASF, including virulence characteristics, life cycle, morbidity and mortality, clinical signs and past and present geographic distribution. Most recent spread is thought to be from garbage feeding of swine. USDA ARS was active in ASF research up to 2004 at which time the programs was discontinued to fund DHS. Research included looking at protective immune responses, functional genomics, host virulence factors. The program is being revived as a result of the emergence of ASF into the Caucasus regions and work is being undertaken at Plum Island to look at genetic engineering of ASF and virulence factor which will aid in vaccine development. Current research gaps include pathogenesis, ecology, immunology, and epidemiology.

### **Swine Influenza Virus (SIV) Surveillance Program – Public Health Perspective**

Dr. Susan Trock, Centers for Disease Control

Dr Trock provided an overview of the timeline for the novel H1N1 pandemic in humans. CDC was concerned with gaps in surveillance when it was discovered that the closest lineage to the nH1N1 was an isolate identified over 10 years ago. In the case of nH1N1 primers and probes had to be developed along with test kits in the first 2 weeks of the outbreak to respond. CDC's primary concern with swine origin influenza is human to human transmission. Having an SIV surveillance program will allow CDC to increase pandemic preparedness and will result in benefits in vaccine development and consumer confidence

### **SIV Surveillance Program – Industry Perspective**

Dr. Lisa Becton, National Pork Board

Dr. Becton described producer support for a robust influenza surveillance program emphasizing the need for anonymity. Pork producers consider SIV surveillance an important component of a comprehensive and integrated swine disease surveillance system.

### **SIV Surveillance Program – NVSL Perspective**

Dr. Beverly Schmitt, National Veterinary Services Laboratory, USDA-APHIS-VS

Dr. Schmitt described National Veterinary Services Laboratory's (NVSL) role in past efforts for SIV surveillance in swine. She outlined a need for more current reagents in order to rapidly diagnose and detect emerging SIV strains in swine. She also outlined challenges to implementing a nationally coordinated SIV plan and emphasized that NVSL was ready and capable to carry out their mission.

### **Committee Business**

The Committee considered three resolutions, which were sent to the Committee on Nominations and Resolutions for review.

Resolution entitled U.S. National List of Reportable Diseases was moved and seconded, and passed unanimously.

Resolution entitled NAHMS 2012 was moved and seconded, and passed unanimously.

Resolution entitled CISS Implementation was moved and seconded, and passed unanimously.

It is the request of the committee chair that the board consider moving the Committee to Monday afternoon rather than Tuesday. We often have issues that overlap with the Committee on Foreign and Emerging Diseases and many of our members would like to participate in the afternoon session of that committee.