

## COMMITTEE ON TRANSMISSIBLE DISEASES OF SWINE

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The Committee met on October 2nd, 2011 at the Adam's Mark Hotel in Buffalo, New York, from 1-6pm. There were 13 members and 36 guests present. Drs. Snelson and Becton brought the Committee to order and went over house-keeping items. There was a call for Resolutions in addition to those that were previously submitted.

### **Report of the Feral Swine Subcommittee on Brucellosis and Pseudorabies 2011**

#### **Dr. Carter Black, Georgia Department of Agriculture**

Dr. Black will be retiring at the end of October and this will be his last report for the Subcommittee. Reports were given on feral swine issues. A report on the strategic baiting of feral swine was given by Dr. Kurt VerCauteren outlining the threat feral swine pose to livestock. Due to this threat from feral swine, a method to potentially control feral swine was investigated. Targeted swine were GPS collared and then followed during the study. It was found that not all swine near the bait station used it but those that did use the bait station were impacted. However, bait stations are not found to be a substitute for other known control measures such as fencing during culling efforts.

Lindsey Holmstrom reported on identifying and optimizing prevention and control strategies against the spread of viral pathogens within the US feral swine populations. The end result will be a high-quality dataset that is extensively analyzed and available to the modeling and interactions of feral swine over various landscapes and eco-regions and identifying the epidemiologic and ecologic factors associated with disease spread. This will help other agencies to be better able to prepare and respond from the potential introduction of exotic transboundary diseases.

The last speaker, Dr. Joseph Corn, SCWDS, provided an update on the National Feral Swine Mapping System. Over 450 additional have been made to the distribution map through the NFSMS since January 2008. Currently, 37 states are reporting established feral swine populations. Information is available at <https://www.feralswinemap.org/>.

The Committee made a motion to approve the Sub-committee report, it was approved and seconded. It was approved by voice vote. The complete report can be found following the Report of the Committee on Brucellosis in these proceedings.

### **Teschens disease in Haiti**

#### **Dr. Keith Flanagan, Inter-American Institute for Cooperation on Agriculture**

Dr. Flanagan went over the activities that he has been actively participating in for Haiti. The investigation started when the ministry of agriculture was informed of increased death loss in swine populations in early 2009. Dr. Ming Ding, USDA APHIS and Dr. Dave Pyburn, USDA VS had also visited previously for disease review and investigation. A review of clinical signs and symptoms was given. Samples were submitted to Plum Island for diagnosis and confirmation which turned out to be Teschens serotype 1 (Picornaviridae). The origin of this virus in Haiti remains unknown. Was originally seen at St. Marks region then spread throughout the country. There is a suspicion that this virus may have originated from UN forces and via spread through contaminated meat products. There is a current concern of the

development of FMDV due to this additional risk. Dr. Flanagan had to report off of OIE's information that no vaccine was available for the control of this virus. The lack of vaccine for this disease has contributed to the erosion of trust and respect for veterinary community. Another contingent of veterinarians came to Haiti for support of the disease to include additional sampling to better understand what was occurring in the pig populations. Future plans include looking at Teschovirus vaccine (may be a company within the US) as well as looking at potential field trial of PCV-2 vaccines to compare effect of Teschovirus on vaccine vs. non-PCV vaccinated pigs. The Dominican Republic does vaccinate for PCV but not for Teschovirus. Dr. Flanagan then showed a video of pigs infected with Teschovirus. Getting morbidity and mortality data on the pig was hard because some pigs did not die but were butchered before they naturally died. They did not see a difference in effect of Teschovirus on pigs that were or were not vaccinated for CSF. The hope is that the virulence will subside over time as the overall population status becomes more exposed to the virus. With this exposure the need for vaccine may diminish as well.

### **Swine Health Programs Update**

#### **Dr. Troy Bigelow, USDA-APHIS-VS, National Center for Animal Health Programs**

Dr. Bigelow reported on activities and status of swine health programs. The focus of the talk is on what changes are coming down the pipeline for swine health programs. There is a movement away from disease centric programs to more commodity surveillance plans that are more flexible in disease surveillance and detection. CSF is an example of a commodity based program. PRV will be moving to a stream-based approach as a commodity program. With these changes in surveillance targeting will also be changes in the regulations that are getting dated. Changes are also occurring within sample and testing capabilities: i.e. oral fluids for PRV. High risk sample selection/risk based sampling will occur, and random surveillance of sow/boar and market will continue for PRV. NSU is engaged with VS on the risk based sampling strategy and if this is appropriate for current national status. Feral swine testing for PRV is not part of the surveillance system, but done instead with Wildlife Services for informational reasons. For FY'11 PRV infection still found in transitional herds and infected herds were targeted for depopulation. Texas received PRV free status as of May 2011, so now all states considered PRV free. Changes in the program for PRV will be within the regulatory chain. A new proposal in the Federal Register early 2012 and will allow for comment and feedback. The concept is to allow for a comprehensive risk based surveillance program. There will also be reporting changes and also see differences in options for managing infected herds. This will combine PRV and Brucellosis into one program and allows for additional flexibility for surveillance of diseases. The concept paper will further outline what the exact program will be. Comments are sought and encouraged when the paper is made available publically.

Dr. Bigelow reviewed activities for CSF surveillance. So far, all tests to date are negative for CSF in samples tested in 2010-2011 through June, 2011. Garbage feeders are targeted as high risk and subject to inspection for compliance with the Swine Health Protection Act.

Trichinae surveillance is currently being reviewed and over 41 farms currently participating in the program. Dr. Dave Pyburn is the primary contact for this program.

SIV activities and surveillance was reviewed. The objectives for surveillance were covered briefly and have not changed since 2010. Response to identification is a state directed response on a case by case basis. Most current data is available at the USDA SIV web page. For 2011, there have been nearly 1500 samples tested within the anonymous system. There are multiple strains being identified in addition to H1N1.

Will the change in PRV regulations within the US satisfy the EU regulations? The changes will meet the OIE definitions for PRV and should meet the needs for EU declaration of US as PRV free.

There is identification of high risk testing stream as a result of working with State Vets and to find the operations that are of issue. This is in conjunction with NSU and analysis of incoming data. Michigan is doing this as well as NC. NC is doing a cooperative plan on high risk counties and targeting areas that they can get reasonable samples. It is all written up in a local plan and focusing on those that are high risk and not getting tested through normal streams.

### **SIV surveillance update**

#### **Dr. Jennifer Koeman, National Pork Board**

Dr. Koeman provided a report on the animal health and public health partners in response to SIV issues. She thanked Dr. Pyburn for supporting information. This presentation highlights the collaborative

efforts between animal health, public health and industry in managing influenza in swine populations and out in human populations. The surveillance objectives were reviewed. The case stream for sampling and reporting was also reviewed. Data from sequenced isolates is available in GenBank. The surveillance producer brochure was reviewed. Can be viewed at [www.pork.org](http://www.pork.org). A history of swine-origin influenza virus infection in humans was reviewed from 2005-2007. Between 2005 – 2010, CDC reported 10 human cases of swine-origin influenza. The recent case of H3N2 infection in children in PA and IN was reviewed. (See the MMWW report from CDC in September, 2011). The formal response plans for both animal health and public health was reviewed. Animal health worked within the animal side for control. Public health focused on the human side and looked at working with folks that were ill. The two groups cooperated and collaborated well in their respective areas to deal with the infection. Other allied and industry groups worked together to manage this situation. This case example shows that the groups can work well together. Very importantly is the timely sequencing of isolates identified within the surveillance program in order for potential traceback and analysis of isolates found.

The National Pork Board also has taken additional actions for alert of the need for vaccination for producers to protect animal and human health as seen by the new release for vaccine. A surveillance group will be meeting this fall to discuss continued needs within the surveillance plans and future actions.

A question came up about what is considered a novel virus? Dr. Sue Trock with the CDC made the comment that there is current definition of novel that is something that is not found before.

Virus names arise from where the virus was identified. But there is also a 'naming' from the genetic origin.

### **PRRS Regional Elimination Update**

#### **Dr. Lisa Becton, National Pork Board**

Dr. Becton reviewed the activities of the National Pork Board for PRRS Regional Elimination efforts. The 2011 Pork Forum delegates made the advisement for the National Pork Board to continue to support the development tools and resources in support of regional elimination. One component of that support is the 2011 PRRS Economic Impact Study just complete. The total estimated cost to the industry for PRRS \$664 million with an additional \$477 million in costs associated to biosecurity, veterinary and outbreaks of PRRS. Other information related to the costs for PRRS elimination can be found in the industry summary at [www.pork.org](http://www.pork.org), research, PRRS, and project #10-158. Other tools in support of the RE projects include some of the research proposals that were funded for 2011. Some of the projects cover mapping of farms and prevalence identification, novel vaccine development, surveillance activities for validation of use of oral fluid samples in positive herds and a statistical sampling algorithm for determination of PRRS status.

Current PRRS RE projects are being funded and overseen by the USDA PRRS CAP coordinator, Dr. Bob Rowland (KSU) and Dr. Bob Morrison (UMN). There are currently funded projects in 7 different states. Each project has different end objectives. For specific details and locations of those projects, see [www.prrs.org](http://www.prrs.org). Other groups including Boehringer-Ingelheim are active in PRRS RE projects. However, public information is not always available. Other states that are involved in PRRS RE projects include Indiana, North Carolina and Wisconsin. Future funding will become an issue when PRRS CAP ends in 2012.

Support for PRRS research is ongoing and will be cooperatively addressed through the various organizations: National Pork Board, USDA PRRS CAP, American Association of Swine Veterinarians, Boehringer-Ingelheim and State Pork Associations. Newly announced research initiatives have been published by USDA AFRI and will be pursued for the animal health sections.

In summary PRRS RE is a major collaborative effort and will continue onward to benefit the industry.

### **2012 NAHMS Swine Study**

#### **Dr. Eric Bush, USDA, NSU**

Dr. Bush reviewed the timeline for the upcoming NAHMS Swine study for 2012. This is a national scope project with collaboration and cooperation with multiple organizations and producers. This will be the 5<sup>th</sup> swine study. The information collected by the NAHMS study will be covered under the necessary confidentiality provisions provided by the Farm Bill. Data will only be identifiable by region. The focus for the study will be management, health and productivity. Wen to finish will also be a newly added component of the study. Some examples of herd health studies and tracking were provided. Certain diseases like dysentery can be tracked throughout the different studies and changes over time can be identified. Herd and production management changes can also be identified and tracked over time.

Another objective of the study is to look at the prevalence of diseases and food-borne pathogens found in weaned market hogs. This can be accomplished through the collection of biological samples that can be matched with production data. However, all reported data is confidential and reported only on a regional basis. Another objective is to describe antibiotic usage patterns by product, reason for use, duration/dose, and by age of animal treated. The fifth objective is to review exposure to selected pathogens as seen in the collection of biological samples, via blood and feces. There are several requests for collaboration from multiple universities for potential samples to be collected for targeted issues.

The current study will reflect 90.8% of pigs and 88.9% of operations with 100+ total inventories. The intent is to go to the top 13 states for swine production. The overall target population is 61 million pigs and 20,000 producers. There will be two total visits for 2012: 1 by NASS and 1 by VMO. The visit by NASS may be accomplished via telephone interview. The farms with inventory of 1- 99 will be questioned through telephone interview and mail survey. The implementation of the survey will occur potentially in June of 2012. For more information, see the USDA NAHMS website. Dr. Bush reviewed the timeline for activities for the 2012 survey implementation, analysis and reporting. Please contact Dr. Bush for questions about the upcoming NAHMS study. The timeframe for sampling will be very similar to each other for the time of sampling – occur during June 1<sup>st</sup> and continue into the summer months.

### **Swine ID Program/Secure Pig program Dr. Patrick Webb, National Pork Board**

Dr. Patrick Webb, the Director of Swine Health Programs at the National Pork Board provided an industry update on the swine identification and secure pork supply plans. Dr. Webb provided an overview industry involvement in the development of the swine ID plan since 2002 to the present. He reiterated the US pork producer's commitment to the principle that premises identification, animal identification and recordkeeping are the cornerstone for animal health disease surveillance in rapid and accurate pre-harvest traceability for animal health purposes. Dr. Webb reviewed the membership and role of the swine ID task force whose primary goal is to direct implementation of the swine ID program standards. He discussed the goal the swine ID plan and identified key components of the program standards, outlined the successes so far with implementation the swine ID plan. Currently the pork industry has 101% of the estimated swine premises having registered for the standard seven character alphanumeric premises identification number (standard PIN). This percentage was derived from the most current USDA numbers of registered premises using the 2007 NASS agricultural statistics for estimated swine premises. Dr. Webb acknowledged that the NASS state is only an estimate and present a moving target as far as the denominator. Regardless Dr. Webb said that the cooperative effort between the pork industry, State and Federal animal health authorities has resulted in impressive progress in the registering of swine premises. Dr. Webb discussed the role of the standard PIN in the Site Assessment process for the industry's Pork Quality Assurance Plus program. Site assessments are required by all major pork packers. Pork producers must provide a valid standard premises identification number to the advisor doing the assessment so that the data entered into the databases can be linked to a premises. Dr. Webb overviewed the educational efforts being focused on adoption of the Official Premises ID Number Tag (PIN Tag) for cull sows and boars. He also discussed the industry's interest in working with key swine producing states on PIN Tag pilot project to help determine if the official tags can be used for more targeted Pseudorabies and swine brucellosis surveillance. Dr. Webb discussed USDA's posed rule for animal disease traceability and identified some concerns to the industry. He was concerned that the option for states to use different location identification numbers other than the standard seven character alphanumeric premises identification number can cause some problems if they no longer allowed producers to acquire standard PINs. He was also concerned if states were to remove swine premises information from the national repository then the industry could not validate PIN for the site assessment process. Dr. Webb briefly discussed the secure pork supply plan. USDA has funded Iowa State's Center for Food Security and Public Health to begin the process of developing a secure pig supply plan. The planning process will be similar to the other secure food supply plans that USDA has funded in the past. The Center has put together an advisory group and the first meeting will be October 11th and 12th in Des Moines Iowa. The advisory group will be responsible for shepherding the process to develop the draft plan which upon completion will be circulated to a broader audience for input.

### **Proposed National List of Reportable Animal Diseases**

### **Dr. Stan Bruntz, USDA, NSU**

Dr. Bruntz reviewed the NAHRS organizational structure and how each commodity group is represented. The different reasons for the need for the NLRAD include having a standardized reportable list, it provides guidance to state animal health officials and assists in meeting OIE needs for trade. It will also assist in reporting diseases in a standardized manner. One key point is the development of the reporting criteria for diseases and the development of case definitions. See the white paper for the actual language.

There was a 2010 USAHA resolution supporting the development and finalization of the NLRAD. This list is not intended to be in the CFR, but instead have the list as a part of guidance or policy statement that can be more flexible than a CFR can be. Dr. Bruntz reviewed the VS response to the 2010 resolution in support of the continued work on the NLRAD. Comments have been received and more are requested. The White paper will be distributed to the Committee for comments and comments should return to Stan by October 30<sup>th</sup>, 2011 for final assimilation into the final version that will ultimately go to USDA VS Management Team for final approval. For 2012, there will be case definition development in NAHRS for inclusion in the final version of the NLRAD. The goal is to have final approval by 2012.

What does the regulatory process of implementation entail? There will be a reference to a National List in the CFR but the list itself will not be included. The list will reside in a separate document for reference as a standard operating procedure. There will also need to be review on the notifiable diseases and response. Monitored diseases will need to have some response, but will be less stringent than notifiable diseases.

### **NAHLN Strategic Plan**

#### **Dr. Beth Lautner, USDA, APHIS**

Dr. Lautner provided hard copy materials for her presentation. She discussed the organizational structure and history of the NAHLN Core and other laboratories and the duties that each group carried and some of the disparities that exist. There was a coordinating council that helped to develop the six different operating scenarios. An additional group helped to refine those options. A survey was sent out to each state and other industry groups for what model would be best suited for the future of NAHLN. The support was for a few different models. That led to the development of a "Current Thinking" paper and to use this to get broad stakeholder input via the Federal Register. See page 2 for the language that a state has to meet a minimum of existing support in order for the Federal designation of a NAHLN lab. There will also be an annual review for those labs that have an enhanced role in the NAHLN system. There will be a minimal amount of BSL-3 spaces needed for the enhanced laboratories (similar to the old core lab). This is to accommodate the surge capacity for future needs for increased disease surveillance in a response/recovery mode. There could be some conditions where a private laboratory could be considered as a "specialty laboratory" but not be within the normal NAHLN system. The intent is to seek and receive comments on this new proposal. See the paper for the differences between Level 2 and 3 labs. Level 2 are AAVLD accredited labs while Level 3 are not, but could be assessed by USDA staff for eligibility.

Dr. Snelson discussed the joint special committee results and they did propose a budget plan for each level of laboratory participation. The support for the program would be ideally \$30 million dollars. However, there will be adjustments due to budget concerns. There will be an upcoming resolution that will better outline the budgeting requests.

This is a draft estimate ONLY for the different levels of the labs and funds available:

- Level 1 – 12 labs; \$500,000/lab
- Level 2 – 30 labs; \$350,000/lab
- Level 3 – 10 labs; \$150,000/lab

### **Committee Business**

Dr. Snelson reviewed the 2010 resolutions and the outcomes for those resolutions.

The first resolution was on CISS. Please see the 2010 resolution for the actual response (page 32).

The Committee made a motion to change the 2010 to reflect the 2011 resolution to continue to remind NSU to continue to update and make progress for the Committee. The motion was seconded. The motion passed by voice vote.

A 2010 joint resolution from the NLRAD was presented and reviewed. See the 2010 for the USDA VS response. A new resolution for 2011 was presented for consideration (See the 2011 resolution language). The Committee made a motion to approve and was seconded. The motion passed by voice vote.

The third 2010 resolution for review was for the NAHMS survey. See the 2010 resolution for the formal response from USDA NSU.

A new resolution to come before the Committee involves the NAHLN funding. The resolution is the latest version to be considered. (See the resolution for language)

The Committee made a motion to move this NAHLN funding resolution forward. A second was made. The motion passed by voice vote.

There was no other Committee business. A motion was made to adjourn, it was seconded and the meeting was adjourned.