REPORT OF THE USAHA COMMITTEE ON TRANSMISSIBLE DISEASES OF SWINE

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The Committee met on Monday, October 17, 2016 at the Sheraton Greensboro Hotel in Greensboro, North Carolina from 1:00 to 8:10 p.m. There were 26 members and 38 guests present. Lisa Becton covered introductions and housekeeping items. There were no 2015 resolutions to review.

Presentations and Reports

Feral Swine Issues Update

Dale Nolte, USDA-APHIS-WS

This is intended to be a cooperative program to implement natural solutions in conjunction with state and local partners. Feral swine damages are thought to exceed 2.5 billion dollars annually. Field ops, designated zone (DZ) and pop monitoring, research, communication, and outreach, planning and evaluation, and regulatory action are the focus areas. This program is currently active in 41 states emphasizing the use of helicopter teams, documentation of damage and mitigation, and area eradication programs.

Six states have moved to detection status. In 2016, New York, Maryland, Idaho, and Washington and in 2017, New Jersey and Wisconsin.

Future areas of focus include:

1. Research: toxicant; economic analysis; genetic tracking and detection
2. Outreach: through Tuskegee and national outreach campaign
3. Disease monitoring: results of serology: Classical Swine Fever (CSF) 0; brucellosis 5.4%; pseudorabies virus (PRV) 19%
4. Food Safety and Inspection Service (FSIS)- risk of disease transmission at slaughter
    a. 13% culture positive for Brucella from tissues
    b. Serology: leptospirosis prevalent, trichina and toxoplasmosis present as well as flu and Brucella
    -Brucella culture 2x positive vs serology
    -Potentially due to B. abortus as the antigen for the serologic testing

Question about feral swine slaughter and serving product at upscale restaurants- with the human health risks profiled here- how do we mitigate this risk? Raw feral swine sourced meat may also be in dog food.

Looking for ways to do outreach with this message

Modeling the Transboundary Survival of Foreign Animal Disease Pathogens Via Contaminated Feed Ingredients

Scott Dee, Pipestone Veterinary Services

Dr. Dee presented a summary of his research in the area of modeling the transboundary survival of foreign animal disease pathogens via contaminated feed ingredients.
porcine epidemic diarrhea virus (PEDV) projects:

2014: PEDV can be transmitted via bioassay with contaminated feeds

2015: PEDV survival in different feed ingredients

2016: Transboundary project - PEDV survived in a subset of feed ingredients during a simulated shipment from China to the U.S. (published)

(Sal CURB® (KEMIN) or medium chain fatty acids (MCFA) (KSU) blend were equally effective mitigants).

Utilized an environmental simulator set to real world weather data and shipping timeframes. There were five ingredients where viable PEDV was recovered (virus isolation (VI) or bioassay).

Foreign Animal Disease (FAD) surrogate project:

The purpose was to evaluate virus survival in feed ingredients under conditions simulating importation from China to the U.S. as in the transboundary PEDV project. Ten proposed FAD agents and their surrogates will eventually be tested. The first three which have been completed include strongly stained vessels (SVV) for foot-and-mouth disease (FMD), bovine viral diarrhea (BVD) for classical swine fever (CSF), and bovine herpes virus 1 for pseudorabies virus (PRV). The proposed surrogate pairs were chosen based on structural similarity of viruses with validated tests.

Results showed 10 of 14 feed ingredients positive for FMD (SVV) after the 37-day simulated journey; 0/14 positive for CSF (BVD), and 2/14 PRV(BHV1) positive primarily in soy products.

Discussion:

This is a proof of concept that feed ingredients could serve as vehicles for FAD entry; further work includes determining high risk combinations of virus and feed ingredient and potential mitigation strategies. The results seem to indicate that soy products appear supportive for virus survival. Also, all three stock virus controls were negative - is a protective feed matrix required for virus survival?

USDA VS Swine Health Program Update

John Korslund, USDA-APHIS-VS

Dr. Korslund presented an update on USDA Swine Health Programs and issues surrounding transitional swine. Additional work remains to be done in this area and more conversations with stakeholders and other state partners will be held.

USDA Influenza Surveillance Program Update

Ellen Kasari, USDA-APHIS-VS

Dr. Kasari presented an update on the USDA Influenza Surveillance Program. The presentation provided current information on data from the swine influenza virus (SIV) plan and also highlighted some potential changes to show up in the future due to the change in algorithm for testing. See presentation for surveillance details, available on the Committee page at usaha.org.

USDA NLRAD and Emerging Disease Plan

Dana Cole, USDA-APHIS-VS

Dr. Cole presented an update on the USDA National List of Reportable Animal Diseases (NLRAD) and Emerging Disease Plan. She outlined the steps that have been taken to develop the Emerging Disease plan and then provided a glimpse into how the program would work. The NLRAD will fit in with the Emerging Disease plan as it is the reporting arm of the plan. See presentation for details on each program area available on the Committee page at usaha.org.

Swine Health Information Center Update

Paul Sundberg, Swine Health Information Center

Dr. Sundberg presented a summary of activities and gave an update on the Swine Health Information Center. Activities include the formation of a Monitoring and Surveillance working group and a Response working group to look at research, communication, and response functions. We will need to work closely with USDA on the Emerging Disease plan as it moves forward. Other items include the Swine Disease Matrix, Seneca A virus research and a Rapid Response team development and deployment team. All information can be viewed at www.swinehealth.org.

Industry Emerging Disease Preparedness Update
Patrick Webb, National Pork Board

In 1998, USDA published a final report of the Swine Futures Project which "represented a unique partnership between industry and government to develop a shared vision of future industry service needs and how to best address those needs collaboratively". The final report included recommendations to establish a system for the rapid detection of emerging animal issues, which encompasses emerging diseases, and the development of a collaborative process to identify and respond to issues of concern. Based on these recommendations the industry has been working collaboratively to develop an industry state and federal cooperative structure to identify and address Emerging Swine Production Diseases (ESPD).

A standardized process that coordinates industry, state, and federal cooperative efforts to identify, characterize, prioritize and respond to ESPD's of concern to the U.S. Pork Industry will provide numerous benefits. Identification, characterization, and prioritization of ESPD's can currently be accomplished though collaboration between the Swine Health Information Center and USDA's Risk Assessment Unit (RIU) within the Center for Epidemiology and Animal Health. According to the plan, once a disease of concern is identified the development of response recommendations will be done collaboratively by a Swine Disease Response Council. The recommendations will not carry regulatory authority, but will have been developed with input from regulators familiar with the industry.

The National Pork Board, the American Association of Swine Veterinarians and National Pork Producers Council are in the process of nominating and approving representation from each organization. The National Assembly of State Animal Health Officials (NASAHO) has nominated Dr. Bret Marsh and Dr. Dave Schmitt as their representatives. Industry will also be working with USDA to identify two representatives to serve as advisors to the Council.

Once nominations are complete the Council will be convened to start the team building process which will include an in-depth review and discussion of the ESPD plan, mock scenarios designed to exercise the plan and the development of a communication strategy to keep the Council engaged and at the ready. In the event that a disease of concern is identified the Council would provide a core function of developing response recommendations and identify the responsible party for implementation. This process would also include representation (state vet, state pork association) from the affected State and subject matter experts as needed. The recommendations would be provided to stakeholders for consideration and if accepted implemented by the responsible party.

Discussion:

What are the barriers and potential solutions for communication and sharing of data and information between state, federal and industry partners for disease incidents?

The discussion centered around the identification of barriers and potential solutions to be able to identify key data in the event of an animal health challenge. Many different thoughts were shared about what issues exist with current data sharing and transfer.

Committee Business:

No old business was brought forward.

New Business:

The Transmissible Diseases of Swine Committee will incorporate the Feral Swine subcommittee into the full Committee. Agenda items will reflect the needs for update of feral swine activities as well as other pertinent swine health issues.

Influenza A Virus in Swine (IAV-S) Surveillance Resolution:

Snelson moved to approve the resolution listed above. It was properly seconded by Sundberg. Discussion followed and it was moved by Kovich to amend the resolution by inserting the word "new" prior to mandatory. The motion to amend was seconded by Ptaschinski and voted on. Motion to amend passed. The amended motion was then voted on and passed unanimously.

Kovich moved to recommend the following. Hines seconded. The motion was voted on and was passed unanimously.

Recommendation:
SOURCE: COMMITTEE ON TRANSMISSIBLE DISEASES OF SWINE
SUBJECT MATTER: DATA SHARING

Developing the capabilities to rapidly detect, respond to and mitigate a foreign animal disease that disrupts trade and commerce while ensuring business continuity is an urgent priority for U.S. Pork Producers. The following barriers must be addressed to achieve meaningful disease response and business continuity capabilities that will drive sustainable production in the U.S. pork industry in the event foreign animal disease threatens to disrupt trade and commerce.

- The need for a nationally-coordinated bio-surveillance system that rapidly delivers real-time data for analysis to improve foreign animal disease detection.
- The need for the industry to rapidly and securely share premises, production, movement and diagnostic data with state and federal animal health authorities to facilitate the management of disease control areas resulting from regulatory actions designed to control a foreign animal disease.
- The need for the industry to securely gather, standardize, house and share data and information required by the Secure Pork Supply Plan to aid state animal health authorities in facilitating business continuity for non-infected pork premises.

Data that is needed to achieve these capabilities is located in disparate federal, state and private databases. The ability to rapidly and securely share this disparate data in real time must be improved to achieve a meaningful disease response and business continuity for pork producers in the event of an FAD in the U.S. swine herd.

Recommendation:

The United States Animal Health Association encourages USDA-APHIS-VS to work with the pork industry and state animal health officials (SAHOs) on developing a data sharing policy that will allow for the secure and real time sharing of data needed to detect, respond and support business continuity in the event of a foreign animal disease outbreak that affects swine.

Resolution:

State Veterinary Diagnostic Laboratory (VDL) Data Sharing

Becton moved to approve the resolution from American Association of Veterinary Laboratory Diagnosticians (AAVLD). Hines seconded. The motion was discussed, voted on and passed unanimously.