

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

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The Committee met on Monday October 22, 2012 at the Greensboro Sheraton Hotel, Greensboro, North Carolina, from 1:00 to 6 p.m. There were 23 members and 40 guests present.

Dr. Snelson opened the meeting with housekeeping items and reviewed the mission statement of the Committee. He asked for resolutions to be presented if there are any. Other Committee rules were covered prior to the meeting proceeding.

### **Presentations and Reports**

#### **Subcommittee on Feral Swine Brucellosis and Pseudorabies**

Joe Corn

University of Georgia, College of Veterinary Medicine

Dr. Corn provided an update of what is going on with feral swine. Discussed the feral swine mapping system and how data is gathered to populate that map. Information is available on the National Feral Swine (NFS) mapping webpage. It is updated on a monthly basis. Now there are 36 states reporting feral swine as Nebraska has eliminated their feral swine population so have been removed from the list. The draft concept paper on pseudorabies virus (PRV) and swine brucellosis (SB) is underway. Dr. Ray presented on feral swine control issues in North Carolina (NC). The State was funded to study the impact of importation of feral swine into NC and what the end outcome is for the state. The economic impact of this importation and also the potential for an introduction of an FAD were included in the study and provided in detail. Early results are available but not yet published. A presentation of monitoring of feral swine diseases was also given. This covered additional diseases like classical swine fever (CSF) and swine influenza virus (SIV).

#### **Swine Health Programs Update**

Troy Bigelow

USDA-APHIS-VS

Dr. Bigelow provided a review of Swine Health programs activities throughout the past year. This will cover many diseases both regulatory and non-regulatory. There are some changes occurring in the industry and with swine health programs and those will be presented later in the year. Surveillance is moving from disease-centric to commodity-based. The goal is to increase flexibility and move towards more of a risk-based approach vs. just random sampling.

PRV will be targeted surveillance to high risk premises. Will utilize NAHLN labs and use convenience serology that is already submitted to the NAHLN labs. Validation of antibody testing for oral fluid diagnostic testing will also become a priority to match industry needs. High risk sites are still going to be targeted for the focus for PRV. Random surveillance will continue to focus on sow/boars. To date, there have been about 521,000 samples collected so far to equate to about 5% sampling level. This does exceed the PIE "Previously Free" status requirements. PRV NAHLN lab sample collection numbers were presented for year to date. NAHLN stream was implemented in FY20120 with 15 labs. There are plans to expand for SB surveillance. Testing for feral swine testing is not currently part of the surveillance plan. Testing of feral swine is done in collaboration/cooperation with USDA Wildlife Services. All states remain free of PRV. Three herds were identified in 2011 and were transitional herds and indemnified when diagnosed. SB update is provided and will utilize many of the same sample streams as PRV. Look to see the implementation of the update of the plan in FY2013. The focus to increase surveillance is because of the increased risk of feral swine to commercial populations. There is a concept paper describing what is to come for the changes in the surveillance plan. The draft paper is in the review

process. Will be coming out in the Federal Register and will explain where the program will go and the reasoning behind those changes. The updated plan will combine PRV and SB programs into one and it will hope to be in the FR by FY2013.

CSF surveillance is underway with the same sampling that is used for PRV and SB. Look at high risk (waste-feeders) and feral swine sampling. All samples have been negative for CSF to date. Will also be streamlining the Swine Health Protection Act; did over 36,000 feeders and found 125 non-licensed feeders. The information provided here can be found at the USDA website.

Trichinae program is also ongoing. The program guidelines are in the CFR and can be found at the website.

Focus for USDA is cost-effective measures, utilizing different sampling streams and to update surveillance activities.

### **Seneca Valley Virus Update**

David Marshall

North Carolina State Veterinarian

Dr. Marshall gave a presentation on three vesicular disease incidents in commercial swine. They received a call from a swine practitioner about vesicular lesions on the snouts of sows. There were no lesions on the new gilts. The case was treated as an FAD. There was no fever or inappetence of affected sows. They saw signs as the introduction of new gilts. There was not oral or foot lesions no fever. No lesions were ever seen in progeny of the affected sows. Second case showed both sows and gilts affected with some off feed but no feet or oral lesions. Some weaned pigs were sent to Iowa from one of the affected farms. No further problems developed in Iowa or on the sow herd. The third case occurred in the finisher farm. There were 25% in the barn affected. There was no movement on or off the farm that might cause the infection (within the last 90 days). Primary lesions were vesicular lesions on the snouts. A wide variety of samples were taken and submitted to NAHLN lab in Raleigh. FMD samples were initially tested at Raleigh and were negative. Samples were all negative for FAD by a FAD Panel at FADDL. All three cases were positive and detected by different tests for Seneca Valley Virus via PCR and VI. Timely reporting from FADDL is critical but for response, do not over-react. The affected company did run a trial of their emergency response plan at the same time and there was no impact on the producer for the quarantine. The quarantine was stopped within 36-48 hours.

There is concern about the need for new research for SVV and the idiopathic vesicular disease complex (IVD) in swine. There are issues associated with this disease and complex and could significantly disrupt operations and packing for swine. So outreach and education is needed to look at this disease and how it is moving within the system.

NVSL has been seeing some of these viruses since 1988 but periodically. It will be interesting to look further into the epidemiology of the isolates and see what changes if any are occurring. In had seen a case of a febrile pig at the Indiana State Fair and was also diagnosed with SVV.

### **Secure Pork Supply Update**

Jim Roth

Director of the Center for Food Security and Public Health, College of Veterinary Medicine, Iowa State University

Dr. Roth gave a presentation updating about activities for Secure Pork Supply (SPS). He reviewed the potential impact in the event of an FAD outbreak. The true effect will be hard to predict as no country with similar industry structure has been affected. See the FADPrep document for what USDA response will be. Part of those USDA activities includes a continuity of business plans. There is a Secure Egg Supply plan and it is instituted. There is also a Secure Turkey Supply and also a Secure Milk Supply plan is underway. Secure Pork will cover foot and mouth disease (FMD), African swine fever (ASF), CSF and swine vesicular diseases. The diseases are not zoonotic and spread primarily through direct contact and oral exposure. Pigs are relatively resistant to aerosol exposures but not immune. We will need to work with other affected species (cattle) to make sure to address the ancillary effects of swine infection.

The SPS is a voluntary program pre-break. The plan focuses heavily on biosecurity and surveillance. The plans must be based on current capabilities and with science as it evolves. Final decisions will be made by responsible officials during an outbreak. There is a need for outreach and training prior to an outbreak as well as after an outbreak.

For biosecurity, there are two levels: 1 and 2. There are also other very active working groups to include surveillance, compartmentalization, data collection/management/sharing, risk assessments, communications and a plan for FAD response if it occurs tomorrow (before all these things are in place). Compartmentalization is a complex issue and the hope is to be able to address the needs to be approved for this and to implement that in production.

Initial steps include the development of a planning committee comprised of key stakeholders from all phases of the industry and academia.

Vaccine plays a role in some of the diseases of focus but amounts may not be helpful in the event of a large outbreak. FMD is in limited supply; CSF is not in the US so availability is limited. There are no vaccines for ASF or vesicular diseases. Therefore, dependence upon vaccines should be limited until supplied can be guaranteed.

FMD is present world-wide. Only 66 of the 178 OIE members are free of FMD. Dr. Roth presented differences in the response to FMD outbreak in UK and Uruguay. Both countries are considered free and Uruguay sustained a lot less cost to industry than UK. US scenario would fall somewhere in between the two countries, so their response must be relevant to the state of the industry. Challenges include the mobility of animals and products and herd size is significant. Therefore, the strategy for response has to change with the magnitude and scope of the initial outbreak.

There is a categorization of the phases and types of FMD response. This is a draft that can be commented on by mid-January, 2013. It can be found at the CFSPH website [www.cfsph.iastate.edu](http://www.cfsph.iastate.edu). See the document for the description of the different phases of response. There are six types of outbreaks and those definitions of types can be found within the draft document. Also included in the document is the availability and proposed use of vaccines for each scenario. Dr. Roth provided an example of an FAD in Iowa (courtesy of John Zack).

So how do we handle movements of animals during an initial outbreak? Swine movements play a critical role in the management and response. Have to be able to stop and start movement in a timely manner that can control disease and also not cause welfare issues on-farm. It is very hard to determine that an animal is free of FMD but can establish that there is a lack of infection. This disease is not a zoonotic disease and does not affect humans at all and it is not a food safety issue. However, meat scraps fed back to pigs ARE infective. Potential exists to keep plants open to continue processing of animals in transit and during an outbreak. Processing presents a mechanism that can preserve protein for consumption and also effectively remove infected animals from the system. Biosecurity protocols play a huge role in the plant and in services provided by plants (transportation of live animals).

Issues to address: Will consumers accept the products? Will packers continue to process animals? Will cold storage be able to hold product in an outbreak?

## **CSF Surveillance in Puerto Rico**

Fred Soltero

Area Veterinarian in Charge, APHIS-Veterinary Services (VS), Puerto Rico and U.S. Virgin Islands

Dr. Soltero gave a presentation on the CSF surveillance in Puerto Rico. He provided a background of CSF within the United States and surrounding neighboring countries. As CSF is in many countries around the US, this is why USDA has a stepped-up surveillance strategy in PR. USDA is the sole participant in the surveillance plan. There are five areas of the surveillance program. Garbage feeder premises have a higher level of surveillance due to higher risk of disease. Five samples per premises are needed to determine if CSF is present. There were 219 premises targeted for 2011. There is also an "illegal boat landing program" that targets these boats and aims to prevent exposure to swine near ports of entry. Dogs and other vectors can carry products away before detection and sampling. Additional and increased sampling occurs after the boats have landed and sites identified (see every seven and 28 days). It is a very effective program and an effective one. Other surveillance sampling streams include feral swine on Mona Island to look for FAD's. This island is first potential place for introduction of diseases since it is halfway between PR and DR. There is also cooperative work with NC Veterinary Diagnostic Laboratory to work on samples and have access to swine practitioners along with sample testing. First cases of PRRS, Trichinella, Techenvirus, Circovirus were found through this program. Many commercial endemic diseases have been confirmed in PR swine. VS are involved in school lunch garbage feeding auctions. This helps to monitor garbage disposal and also helps to reduce the load on landfills. USDA provides list of licensed garbage feeders that are eligible to feed garbage. This mechanism is the only way that USDA can let unlicensed feeders know that they cannot buy at the auction. Any other authority is through the local States. CSF surveillance still needs to be assigned to the program in the Caribbean so it can respond in case an introduction occurs.

## **ASF in Russia, Local Insight**

Kazimierz Tarasiuk

PIC Central Europe and Russia

Dr. Tarasiuk gave a presentation on the status of African swine fever (ASF) in Russia. ASF is a devastating disease and re-emerging disease. The clinical signs vary in severity by strain. There is no vaccine for ASF currently so control of the disease is a huge challenge. He presented information on historical spread of the virus into Ukraine has been identified. Garbage has been highly implicated in the spread of the virus into wild and domestic pig populations. There are sporadic outbreaks in the north near Finland and around Moscow. The virus has a wide distribution across the country of Russia. The Krasnodar region is under quarantine due to such high circulation of the virus in domestic and feral swine. Certain areas the virus circulates continuously. A significant threat exists for spread into Europe. All European countries have a contingency plan in place for increased surveillance and monitoring. Major source of the virus is garbage (55%) of the pigs affected, but there are also 28% of outbreaks that the source is unknown. Wild boars are only about 6% of the source of outbreaks and direct contact with other pigs is about 2% of the source. Mortality is about 90-100% and pigs have high fevers and cyanosis of ears and hemorrhages in skin. Biosecurity is lax on many sites, especially transportation, and is leading to continued breaks in many different areas even on more commercially structured farms. Other clinical signs during an acute outbreak include bloody diarrhea. Other observations can include petechial hemorrhages in organ surfaces and mucosal layers. Acute form of the disease showed a lot less or smaller hemorrhages vs. chronic disease. Lymph nodes are significantly affected: enlarged, hemorrhagic and have a marbled appearance.

The economic impact has been significant. There have been over 30 outbreaks and >600k pigs have been destroyed. Total lost to the industry is estimated to be at \$1 billion dollars US (\$30 billion rubles).

Diagnosis occurs in two central labs in Pokrov and Vladimir and additional testing at Interprovincial Regional Labs. Major testing is PCR and ELISA (indirect). There are educational materials for all holdings and pig farms to make them aware of what is going on and course of the disease and the transmission.

What is the response by the government? Quarantine is implemented. The vet authority carries out a census of pigs in the area and then posts veterinary police on the edge of the districts and closes minor roads. Stamping out is the main means of control currently. Quarantine can be lifted 6 months after the last case of animal death but pig breeding in the area is not allowed earlier than 1 year after the quarantine is lifted. After stamping out, then burn carcasses with flammable materials. Ashes mixed with lime for final burial. The Site should be disinfected with 3% NaOH and 2% formaldehyde.

Challenging factors for ASF control is that the pigs have a high viremia that lasts a long time (if the pigs survive) upwards of 70 days. There can be carrier animals and no regular surveillance of disease. The compensation for pigs is limited and there is an uncontrolled distribution of pork products. Producers have the potential to make up to \$100 profit per pig so if compensation is not guaranteed, then producers may not be as willing to cooperate in control efforts. Products themselves can remain infective for 3-6 months uncooked pork products (chilled meat 15 weeks; 3-6 months in hams and sausages). Poorly coordinated veterinary services presents a challenge for control of ASF.

In order to have better control of ASF there needs to be close coordination with the leading veterinary authority as well as with local veterinarians. There needs to be a clear chain of command to implement control practices.

## **USDA ASF Response Plan**

John Zack

USDA-APHIS-VS

Dr. Zack gave a presentation on African swine fever (ASF) and started with an overview of ASF and what groups it affects. ASF is a very persistent environmental pathogen and remain infective. There was a review of clinical signs and symptoms. A big concern is that this disease can look like other diseases that are routinely seen in pork production.

From a reporting and diagnosis standpoint, cases are confirmed at FADDL. Case definitions have been updated for ASF. ASF is a notifiable and reportable disease. A positive case has had virus isolated and also been positive through initial screening by PCR and ELISA. Currently have a passive surveillance but need to look at a more active surveillance plan. There is also no current vaccine available for ASF and potential for development is underway but a long-term effort. Recent discussion with NVSL and program staff, current diagnostic tests can tell you if it is ASF or not. The ASF real-time PCR has been reviewed and the group proposed that it be used in the NAHLN labs for early detection of ASF. Plans are underway to do training on this PCR for NAHLN labs to start to do this test.

The goal of response is to detect and detain quickly. There needs to be a stoppage of the production, transmission and spread of the virus once identified. The primary control method would still be stamping out. The disease response strategy is at <https://fadprep.lmi.org>. The international guidelines to show proof of freedom from ASF are significant and not easy to attain.

## **Latest ASF Research**

Luis Rodriguez

USDA ARS

Dr. Rodriguez gave a presentation updating activities ongoing at Plum Island for ASF. Other experts include Manuel Borca and Jonathon Arzt. He provided a quick overview of the virus and disease it can cause.

In previous ARS focus, many different accomplishments were made for ASF including techniques for genetically engineering virulent ASF isolates; genetically engineering live-attenuated ASF viruses which protect swine from ASF; development of an rt-PCR for ASF. Characterization of the virus-host relationship in the pig was a major focus of previous ARS research. With the re-emergence of ASF as a major disease, ARS stated to re-focus on research for this disease. The research program is titled as the countermeasures to control FAD's: CSF and ASF. There was a gap analysis and found many different gaps in knowledge: pathogenesis; virus ecology; epidemiology; and immunology. The goal of the research is to develop intervention by identifying virus-host determinants of virulence and transmission and by developing technologies to enable the development of ASF vaccines that are efficacious against the most prevalent ASF strains. Research needs include a consistent challenge model, comparative studies of early pathogenesis, identification of the immune mechanisms mediating protection and development of ASF experimental vaccine through functional genomics. A challenge model was developed through the oronasal inoculation. Immunohistochemistry shows extensive cellular infection after inoculation on the palatine tonsil. The epithelial cells are NOT infected in ASF as compared with FMDv. Infection seems to begin in macrophage origin cells.

Functional genomics is another area of focus in order to help develop potential vaccines. Different genes are associated with different functions. Genes have been identified that affect host virulence. Genetic manipulation of the virus (remove the genes for virulence) can provide mutants that might be eligible as a suitable vaccine candidate. There are ways to induce protection for ASF but still limited use and in initial evaluation. There is work with the Georgia strain of ASF to look at for potential vaccine candidates.

What is next? There is still a body of research that needs to be done in order to understand early pathogenesis events using a natural route of infection. Need to determine protection induced by experimental live attenuated vaccine and what is the mechanism of that protection; Identify the immune mechanisms mediating protection induced by experimental live attenuated vaccine strains; assess immune response and protection from ASF challenge.

## **PIN Tag Pilot Project**

Ellen Kasari

USDA APHIS, National Surveillance Unit (NSU)

Dr. Kasari gave a presentation on updating what is going on for the PIN tag project. The project started in May of 2012 and goes through October 18, 2012. The purpose was to see if there is a cost effective mechanism by targeting surveillance and still get the same information for surveillance and see if we could utilize the premise identification to track animals through the various slaughter chains. There were 6 states in the initial pilot and those states represented in the pilot accounted for 59% of the breeding population.

The goal of the project was to test the components of a risk-based surveillance program using Premises identification (PIN) tags. Tags were only traced and no back-tags were tracked during the course of the pilot study. The risk evaluated was the risk of exposure to feral swine. Information from the tags needed to be readily accessible for county and zip code. There were five main objectives that included the validation of existing premises and to make sure that information from animals was collected and could be traced back to a specific county. Having the updated feral swine information helps in the assessment of risk to commercial swine, so having an updated database of information is crucial. Communications of set-up and ongoing process was held. There was monthly reporting to the participating states to let them know what was occurring in their respective states for sow slaughter. Both the USDA Traceability database was utilized as well as individual State information in order to get the end zip code and county information. The focus of sample collection was geared towards those counties who had more feral swine.

Outcomes: For the barcode tags, there was a 95% accuracy in scanning the tags. For the tags with state ID, those tags needed to have hand entry to identify information. N-PIN tags were easily to retrieve information, state tags were a bit harder to access information needed (45.5% of tags could be readily assigned a location). The sampling could target locations where breeding swine and feral swine were located but still did not get a large sampling of sites. Charts were presented for the outcome of the trial. The trial did help to ferret out changes needed in slaughter collection and laboratory processes. The pilot did show value in potentially being able to update breeding herds by providing who was sampled each month and state information could then be updated. Still need readily accessible information; need a critical mass of samples from PIN tagged sows in risk counties; there is a lack of standardization of PIN tags for automated reading; IT solutions are needed for lab decisions and then lab resources are needed due to higher volume of samples coming in. There are issues, but they can be worked out with cooperation and collaboration between states and industry.

## **PIN Tag- Industry Update**

Patrick Webb

NPB Director of Swine Health Programs

Dr. Webb provided a similar presentation that was given in the CAHSIS meeting. He covered the industry perspective on the pilot PIN tag project why it is a high priority for pork producers. The industry supports the use of premise identification for program disease and FAD surveillance and response. A review of the sow PIN tag was given. So far, there is >1.7 million tags that the industry has purchased. Challenges to the industry: the program is voluntary; the tag is an added cost for producers; the color has recently been expanded to include those other than pink (white, orange, yellow - available in Nov 2012). There are resolutions from both NPPC and NPB Boards in support of the use of the PIN tags. Two sow packers will also be requiring the tags by 2014 (Johnsonville) and 2015 (Sarah Lee). Producers are trying to offset cost of the tag by using them originally as a gilt identifier instead of adding one more tag later in life. For premise identification, 104% of USDA estimated swine premises have a nationally standardized PIN (70,218 premises registered). PIN's are required for PQA site assessments and majority of market hog packers require site assessments in order to market pigs for slaughter. Push is now to utilize the PIN for other production and diagnostic purposes. Next steps can be to look at a pilot for market hog surveillance. Ultimately, the targeted surveillance can help the industry in the event of an FAD and potentially get production back to normal as quick as possible after an outbreak. We need to build the capacity now vs. during the middle of a outbreak.

## **Variant H3N2 Influenza Outbreak in the US, 2012**

Sue Trock

Influenza Division, National Center for Immunization and Respiratory Diseases (NCIRD), Centers for Disease Control and Prevention

Dr. Trock gave a presentation of influenza activities that have occurred earlier in the year (2012). A brief history of influenza infection in people related to swine was reviewed. For 2005 - 2011, 35 index cases identified for variant influenzas. There were 12 human cases in Aug-Dec, 2011 with the H3N2v. For 2012, there is a lot of activity for H3N2v. Three-hundred and six cases from July – October, 2012. Multiple states were involved with the majority of cases in Indiana. The last case was in September of 2012. Looking at human antibodies, children < 10 years old have little immunity. Exposures 98% had direct contact at the fairs with the pigs or attended a fair with many exhibiting swine. Exposure was 2-7 days prior to onset of clinical symptoms. Data is presented in a recent MMWR article.

Recommendations for fairs can be found online at the CDC website and include minimize eating/drinking at barns, hand washing stations, supervise small children, wash hands and close when you get home, not bring stroller to barns. CDC made the recommendation that folks that are high risk groups should not attend the fairs. Many visitors going to the fair could have some exposure, but very limited for those with casual exposure in the barns, really needed to have close or intimate and long-term contact with swine in the barns. There was limited human to human transmission and limited community transmission. Managing influenza was a collaborative efforts between many organizations.

## **Influenza Outbreak at the Indiana State Fair**

Bret Marsh

Indiana State Veterinarian, Indiana Board of Animal Health (BOAH)

Dr. Marsh reviewed the events leading up to and including the Indiana State Fair. LaPorte County was the first county that called BOAH in July about a pig that might be too hot to go to slaughter (may be condemned at slaughter for an elevated body temperature). There were 15% of pigs with temps over 105 degrees F. Then a call came in from a reporter about children being sick (July 13, 2012). The only clinical symptoms of the pigs was that they were fevered and off feed. An initial screen was taken from 12 pigs at random and they were all positive for influenza. Many different alerts were sent out to folks with upcoming fairs to help with the management of influenza. Calls were also held with the Swine Health Advisory Committee to see if anything was going on for commercial operations. Many additional counties had both swine and exhibitors getting ill. The next big concern is the 4-H show at the beginning of the State Fair. Check-in starts on July 31, 2012. Multiple meetings were held with collaborating and cooperating organizations to help manage this outbreak. For the Indiana State Fair, the decision was made to temp pigs prior to entry to the fair. This went out in an email prior to folks coming to the fair so they knew ahead of time. Protocols were in place prior to unloading time. Fair exhibitors temp'd their own pigs in order to manage biosecurity issues. They utilized digital thermometers for screening and went back to verify with a glass thermometer if a pig had a temp. The goal was to be reasonable in screening animals coming in. From an animal welfare standpoint, the pigs were all in very good condition since folks were alerted ahead of time for what was going to happen. Once in the barn, the veterinary staff monitored pigs daily and any pigs with ILI were sent home. Most common clinical sign was off feed, no coughing or sneezing. Signage was placed for biosecurity and hand washing stations were available. They encouraged exhibitors to depart after the show was over and not eating in the barns. Indiana did try to use the Influenza A test kits from Pfizer, but found out that it was not necessarily effective for individual pigs, more based for herd level testing. BOAH did also send companion samples to Purdue NAHLN lab for concurrent testing. On day seven, BOAH sent home six pigs for fever. Then the barrow show was cancelled the next day. The building was cleaned and disinfected and then held the open show later. Indiana ended up with 138 total cases from this summer. There were two cases from 2011, so the virus was present in the state. There were 721 farms of origin from 72 counties that were at the State Fair. As a result of the experience, there will be the establishment of a Show Pig Advisory Committee. There were recommendations that were made with BOAH and to help manage shows and still keep these events healthy for pigs and people. Four main recommendations include: vaccination of swine prior to exhibitions; RFID prior to placement; temperature < 105 degrees F; 72-hour rule on swine shows.

## **SIV Surveillance Update**

Troy Bigelow

USDA-APHIS-VS

Dr. Bigelow gave a presentation on the updates on the ongoing swine influenza surveillance plan. He covered the objectives of the influenza plan which can be found on the USDA-APHIS-VS website for influenza. Swine influenza is not considered a regulatory disease and response is from the State veterinarian level. The surveillance is a voluntary and anonymous but is not able to give prevalence of disease but only on what is going on with samples that are submitted. The data presented is helping to generate questions regarding influenza patterns of activity. The information does show what type of isolates are circulating in the industry and information can be shared with stakeholders and other related organizations.

## **Committee Business:**

Dr. Snelson reviewed the National List of Reportable Animal Diseases (NLRAD) finalization resolution. Dr. Becton confirmed that the plan for the NLRAD is ongoing as planned. He also reviewed the NAHLN Funding resolution as this was for infrastructure for NAHLN operations. Lastly, he reviewed the Comprehensive and Integrated Swine Surveillance (CISS) resolution. Change the resolution to request an annual progress report instead of having a date included. Mark Engle requested to accept this motion, Jim Niewold seconded. Motion passed by a voice vote.

A new resolution was presented by Dr. Marshall on increased focus on the Seneca Valley virus (SVV) and idiopathic vesicular disease complex (IVD) in swine. The Committee discussed the language of the resolution and Dr. Snelson will include the resolution in the notes. Jim McKean made a motion to accept and Gene Nemecek seconded. Motion passed by a voice vote. Mark Engle made a motion to adjourn and the meeting was adjourned.