

Meeting Minutes: Quarterly Board Meeting

Date: 09/15/2021

Location: Sleepy Eye Event Center (110 12th Ave NE, Sleepy Eye, MN 56085) and
Teleconference via Microsoft Teams

Attendance

Board Members

- Dean Compart, President
- Erica Sawatzke
- Jim Vagts
- Peggy Anne Hawkins
- Jessica Koppien-Fox

Consultants to the Board

- Michelle Carstensen, Minnesota Department of Natural Resources
- Mary Donahue, USDA-APHIS, Veterinary Services
- Peder Kjeseth, Minnesota Department of Agriculture
- Laura Molgaard, University of Minnesota College of Veterinary Medicine
- Stephan Schaefbauer, USDA Animal and Plant Health Inspection Service (USDA-APHIS), Veterinary Services
- Joni Scheftel, Minnesota Department of Health
- Jerry Torrison, University of Minnesota Veterinary Diagnostic Laboratory

Guests

- Sarah Anderson, Minnesota Turkey Growers Association
- Robyn Corcoran, USDA-APHIS, Veterinary Services
- Pam Debele, Minnesota Turkey Growers Association
- Scott Dee, Pipestone Applied Research
- Jeff Erickson, Michael Foods
- Jenna Fier, USDA-APHIS, Veterinary Services
- Saad Gharaibeh, University of Minnesota College of Veterinary Medicine
- Brenda Hartkopf, Elk Producer
- Lucia Hunt, Minnesota Department of Agriculture
- John King, Minnesota Department of Agriculture
- Michelle Kromm, Jennie-O Turkey Store
- Tony Kwilas, Lobbyist, Minnesota Elk Breeders Association/Minnesota Pork Producers Association
- Josie Lonetti, Minnesota Farm Bureau
- Michelle Medina, Minnesota Farmers Union
- Tamara Nelsen, Minnesota AgriGrowth Council
- Gary Olson, Deer Producer
- Mackenzie Reberg, USDA-APHIS, Veterinary Services
- Katie Schlist, Forsman Farms
- Marc Schwabenlander, Minnesota Center for Prion Research and Outreach
- Lucas Sjostrom, Minnesota Milk Producers Association
- Marissa Studniski, Select Genetics

- Katie Stumvoll, Jennie-O Turkey Store
- Pedro Urriola, University of Minnesota College of Food, Agricultural and Natural Resource Science
- Allison VanDerWal, Minnesota State Cattlemen's Association
- Scott Wells, University of Minnesota College of Veterinary Medicine
- John Zannmiller, Bluffland Whittails Association

Staff

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|-------------------------|------------------|-------------------------|
| • Beth Thompson | • Kara Schmidt | • Addie Evans |
| • Linda Glaser | • Michael Crusan | • Michael Herrmann |
| • Dale Lauer | • Annie Balghiti | • Susan Chapman |
| • Shauna Voss | • Erin Crider | • Samantha Kappel |
| • Courtney Wheeler | • Jason Cater | • Terry Sistad |
| • Stacey Schwabenlander | • Heather Damico | • Krista Lautenschlager |
| • Brian Hoefs | • Lisa Ehlen | |
| • Greg Suskovic | • Kayla Pierson | |

Call to Order/Approval of Agenda and April 21, 2021 Minutes

Dean Compart called the meeting to order and announced that Board members Erica Sawatzke and Jessica Fox were participating in the meeting remotely. Peggy Anne Hawkins, Jim Vagts and Mr. Compart were present in person.

Mr. Compart asked for any changes or corrections to the agenda. Hearing none, he asked for a motion to approve the agenda. Jim Vagts made the motion, and Dr. Hawkins seconded it. A vote was taken by roll call, with all voting aye.

Mr. Compart asked for any corrections to the draft minutes from the April 21, 2021, Board meeting. Hearing none, he asked for a motion to approve the minutes. Dr. Hawkins made the motion, and Mr. Vagts seconded it. A roll call vote was taken, with all voting aye.

PRRS Virus Study

Dr. Scott Dee from Pipestone Research outlined their study on Porcine reproductive and respiratory syndrome virus (PRRSV) strain 144 and their preliminary findings. The industry expressed grave concern when this strain began appearing in swine. Concerns included that 144 is the most infectious PRRSV strain, and vaccines and biosecurity protocols are ineffective against it. Dr. Dee said the study's goal was to test these observations and compare the results against PRRSV strain 177, which is known to be the most virulent strain.

The study had three parts: A pathogenicity study, in which they started PRRSV 144 and 174 infections in their BSL-2 laboratory; a vaccine challenge study, in which some pigs were given two well-known vaccines, while others were non-vaccinated and then all were exposed to PRRSV 144 and 174; and pilot studies to look at routes of transmission and the effectiveness of prevention measures.

The pathogenicity study measured the viral load in vaccinated and non-vaccinated pigs 35 days post exposure to either 144 or 174. The study showed the viral load in non-vaccinated pigs was higher than in the vaccinated groups, and there was much higher mortality in the non-vaccinated group exposed to strain 174 than in the other groups. Dr. Dee also noted both 174 and 144 caused significant internal damage to animals, though damage from strain 144 did not appear to be more serious than from strain 174.

Dr. Dee presented a number of findings from their studies in biosecurity. Disinfectants were effective in neutralizing the virus when left to work for 60 minutes; PRRSV 144 was transmitted through feed, though feed mitigants prevented infection; PRRSV 144 survived in the study's feed transport model and in infected pigs; and 144 survived in slurry for 14 days, but not 21 days. Contaminated clothing and equipment transferred virus to contact controls, but individuals who followed shower in/shower out protocols and changed clothes and footwear did not transmit the

virus. In examining air filtration, PRRSV RNA was detected in 28 to 43 percent of interior air samples after post-challenge. There was no virus detected in exterior air samples.

Dr. Dee stated that the study had a small sample size and a short duration, under the conditions of this study, PRRSV 174 was more pathogenic than PRRS 144, MLV vaccines were effective against PRRSV 144, and aerosols and feed are risk factors for PRRSV 144 that can be reduced through filtration and feed mitigation.

Jessica Fox asked what time of year/temperature this study was done. Dr. Dee said it was done in August.

Mr. Compart said, in his experience with nursery and finishing, they have used some common drugs, and it seems to make them sicker. He asked Dr. Dee if this made sense. Dr. Dee said you can use an effective antibiotic, but viruses can be transferred by using the same needle on multiple animals, making some animals sick and others sicker. This is very typical situation for PRRSV spread.

David Preisler asked if Dr. Dee had any recommendations for producers going into the manure application season. Dr. Dee stated there is a real risk for PRRSV transmission in the right conditions. At Pipestone, they no longer open the pit covers; they agitate the contents throughout the year and remove slurry without lifting the lid to reduce the potential of trucks passing on the virus. Mr. Preisler asked about this situation for a finisher. Dr. Dee admitted that this is a very challenging situation for finishers.

Mr. Compart asked Dr. Torrison if, with the quantitative work that has been done on studying PRRSV 144, has he seen any differences. Dr. Torrison said they have seen worse lesions with 144 in the lungs and other tissues. The study Dr. Dee presented is small but is beginning to show some real data. However, PRRSV is a challenge to study because it does not always behave the same way.

Beth Thompson asked about the geographic spread of the virus. Dr. Dee said Dr. Karyn Havas did a study of Pipestone farms, and 10 of 70 sow farms were infected. A few were PRRSV 144, and most were 174. Those farms that used filtration and feed mitigants lowered their PRRSV risk by 95 percent. Dr. Torrison said 144 has primarily been focused in Minnesota and Northern Iowa starting last fall and into the spring. Dr. Dee mentioned several farms in western South Dakota had filtration systems and still got PRRSV.

University of Minnesota College of Veterinary Medicine Update

Dr. Laura Molgaard stated the College of Veterinary Medicine (CVM) welcomed the new class to campus with orientation and team building activities. The CVM is continuing the hybrid curriculum they adopted last year due to the pandemic. Students and faculty like the increased flexibility of having smaller in-person lab groups and virtual lectures.

Dean Molgaard noted the CVM froze tuition for the second year in a row. The CVM has had a comparatively high tuition rate, and that has had an impact on enrollment.

South Dakota State University welcomed nearly 20 students as the first class in the “Two-Plus-Two” Program, in which students with an interest in food animal care will spend their first two years at SDSU and then move to the CVM to complete the program. The goal of the program is to increase the number of large animal veterinarians in Minnesota.

The biofilm drinker swab testing for avian influenza at the Veterinary Research Laboratory at the University of Minnesota Mid-Central Research and Outreach Center (MCROC) in Willmar, MN was suspended on September 15, 2021 due to issues identified during a University of Minnesota audit. Testing was suspended after 28 months of attempting to address the University auditor’s findings. The University’s audit team noted an increase in the number of tests run at the MCROC laboratory and set certain conditions to reinstate testing. They cited lack of a data management system as one of the reasons for the suspended testing. The University applies a higher standard of “checks and balances” to fee-for-service activities. Unfortunately, it was a successful testing program that grew

beyond its origins as a research project. The CVM had a call with poultry industry representatives last week and are working to find an alternative testing process. There is no timeline for a return to testing at MCROC.

Several members of the poultry industry expressed concern over the lack of warning they received about the suspension of the biofilm drinker swab sample testing at MCROC that is funded by the turkey industry and the audit team's lack of understanding of how this suspension could increase the disease risk to the Minnesota poultry industry by removing an influenza detection surveillance test. They also stressed the urgency of discussions on either reinstating testing at MCROC or finding an alternative solution. Dean Molgaard apologized for the lack of transparency and unfortunate timing of the communication on the suspension of testing. She agreed that there need to be discussions with all the right people in the room to find understanding and an appropriate solution.

Ms. Sawatzke asked when Board staff made the industry and Board members aware of Board reporting changes. Dr. Thompson said the biofilm drinker swab samples tested at the MCROC research laboratory are considered unofficial samples. Dr. Torrison is good about sending results for reportable diseases from the VDL to the Board; however, she agreed that communication of testing at MCROC needs improvement. She asked that, as the University makes changes to this testing process, they provide updates to the Board, and the Board will distribute that information to Board members and the industry.

Dr. Lauer said early disease detection is important, and the biofilm drinker swab sampling is a vital early surveillance tool. The State statutes and Board rules on notification of reportable diseases have not changed. The Board wants to make sure there is an official diagnosis and an official flock status so the poultry industry can be alerted when there is a reportable disease in a Minnesota flock. There should be a reliable method of reporting the biofilm drinker swab sampling and testing information, and the benefits of testing far outweigh the cost of a disease outbreak. He agreed it is imperative to have the right people involved in discussions to find a solution.

Mr. Compart asked if the VDL or MPTL could run this test. Dr. Torrison said the test could be run at either laboratory. Dr. Lauer added the challenge of running the tests at the MPTL is the timing, as the lab is not regularly staffed evenings and weekends. It is the industry's expectation that a laboratory conducting this test must be able to respond and report test results in a timely manner. Mr. Compart asked how much each test costs and how many they could run in a day. Dr. Torrison said he was unsure of the cost and testing capacity but estimated the cost as \$31.50 per test with a capacity of 300 in a day. Dr. Lauer noted samples come in from around the state, many arriving at the MPTL late in the afternoon, with the expectation that they will have results by 8:00 p.m. This after-hours testing gives the industry time to adjust bird movement schedules to mitigate disease spread, however that is not possible with current staffing at MPTL.

Dr. Thompson asked that Dr. Lauer investigate restarting the courier service between the MPTL and the VDL. She also suggested Dean Molgaard and CVM researchers, like Dr. Peter Larsen, discuss a process for research testing and service so they are prepared with a plan before similar issues with testing arise. Dean Molgaard said those conversations have already begun.

Dr. Kromm said that each test costs \$52.00 at MPTL; MCROC cost was \$33.56. She then asked, once a diagnosis is made, what is the regulatory purpose for ongoing reporting of non-H5/H7 influenza? Dr. Lauer said the ongoing testing was used to work with the industry to practice with the Board's interactive mapping tool. However, questions arose on which test result was the flock considered positive – drinker swab, PCR, or serology? He expressed the need for discussions on this and setting a testing protocol for non-H5/H7 flocks.

USDA Update

Dr. Stephan Schaeferbauer said African Swine Fever (ASF) was detected in eight samples from the Dominican Republic (DR) on July 28. Since then, 13 provinces have been confirmed to have ASF cases. APHIS is actively working with Dominican officials on the ASF response, including offering technical advice and assistance on surveillance, quarantine, depopulation and disposal methods, providing continued testing support and additional personal protective

equipment (PPE). Dr. Schaeftbauer mentioned that Classical Swine Fever (CSF) has been in the DR for a long time, but comprehensive import restrictions and safeguards have kept CSF from spreading to the U.S.

Many cases of ASF have been found along the DR/Haitian border. Though Haiti has no confirmed ASF cases, APHIS is offering Haiti similar support. APHIS has samples from Haiti ready to test.

APHIS has increased ASF mitigation and prevention efforts in Puerto Rico, including increased feral swine sampling, testing for ASF, enhanced outreach and communication, and working with Puerto Rico's Secretary of Agriculture to prohibit the exportation of pork and pork products from the commonwealth.

Dr. Schaeftbauer discussed the USDA's efforts to establish an OIE (World Organisation for Animal Health) Foreign Animal Disease Protection Zone in Puerto Rico and the U.S. Virgin Islands if one of those territories has an ASF detection. This is a new, proactive approach to preserving animal health in disease-free countries involving suspending shipments of live swine and swine products from the protection zone to the U.S. mainland and conducting surveillance within the protection zone. The USDA is pursuing the federal order required to submit their protection zone request to the OIE.

Dr. Thompson asked if the samples from Haiti came from near the border with the DR or elsewhere. Dr. Schaeftbauer said she did not know but would find out.

Mr. Compart said he had heard the ASF-positive DR samples had been held for a time until the USDA had additional samples to test. If that is true, what was the reasoning? Dr. Schaeftbauer said that was her understanding; it was part of their surveillance program at the time. Dr. Torrison added the USDA offered this program to many Caribbean countries, and the DR was the only one that signed up for it. The samples were collected for three months and shipped for quarterly testing at the National Veterinary Services Laboratory in Plum Island, New York. The process worked, but it does not look like the best plan in hindsight.

What we have learned about CWD Transmission Risks of Farmed Cervids in Minnesota and Wisconsin

Dr. Scott Wells began by showing the current United States Geological Survey (USGS) map of CWD cases in the U.S. by County. He said CWD is spreading across the country, and there continue to be challenges to detecting the disease, including the lack of a live animal test. There are known high-risk transmission pathways, and infections continue.

Dr. Wells and his team recently released a paper on their study, ["CWD Transmission Risk Assessment for Farmed Cervids in Minnesota and Wisconsin."](#) Their goal was to gain a better understanding of transmission pathways to help prevent infection by studying CWD-positive farms in Minnesota and Wisconsin. Dr. Wells' team began by looking at these farms and identifying potential CWD transmission pathways through direct contact (infected wild or farmed cervids) and indirect contact (with infected cervid parts, equipment, clothing, feed, etc.). Then they created a framework to rank these transmission pathways as either high or low risk. After this, they also identified moderate or uncertain risk pathways.

Using case files from the Minnesota Board of Animal Health and the Wisconsin Department of Agriculture, Trade and Consumer Protection, the team identified potential CWD transmission exposures on confirmed CWD-positive farms. While determining any pathway as the exact source of infection was impossible, they could describe farm exposures by the likelihood of potential CWD transmission. Fifty-six percent of the positive farms had known high-risk exposures. However, 64 percent of the positive cases since 2015 did not have any known high-risk exposures. Eighty percent of the farms with no known high-risk exposure added cervids from farms that had no CWD positives in the last five years, and 73 percent were located within 50 miles of a CWD-infected wild deer. Of these herds, 73 percent had single fences, and 27 percent were double fenced.

Dr. Wells' team also assessed the CWD biosecurity on Minnesota cervid farms by surveying all Minnesota cervid producers on the risk factors present on their farms. They mailed surveys in January and February 2019 and received a 40 percent response rate. Responses indicated mostly moderate/uncertain risk factors (39 percent of farms introduced cervids from other farms in the previous three years; 23 percent reported potential fence line exposure to white-tailed deer in an endemic area; there were several different reported indirect contact exposures). There was no clear indication of the most important transmission pathways, making more research necessary to prioritize potential farm exposures.

Their current case-control study aims to identify key farm environmental risk factors associated with CWD-positive herds. They collected data from CWD positive farms in Minnesota, Pennsylvania and Wisconsin along with a control herd in each state that has no CWD, as well as from additional farms volunteering to share data. They hope to provide the industry, federal and state animal health agencies with results that will help improve on-farm biosecurity practices and CWD preventive policy. Dr. Wells will provide study results at a future Board meeting.

Dr. Hawkins stated she appreciated the information, but she still does not understand where CWD is coming from. Dr. Wells agreed the exact sources of CWD exposure are still unknown, which is why their case-control study is important, as it compares CWD-positive and negative cervid farms to determine where the risks are coming from. Dr. Hawkins asked if he had a prioritized list of risk factors. Dr. Wells said a prioritized list of the main ways farms are getting infected is still needed. She asked if feed and semen would be part of the study. Dr. Wells said several environmental factors, such as semen, feed and GIS mapping data, would be a part of the study. Dr. Hawkins stated all the research studies depend on animals getting infected with CWD. She feels people need to understand that while we work to learn more about the disease, that is what is going to happen.

Dr. Thompson said there need to be more studies like these done on wild cervids to have a complete picture to start developing a solution. Dr. Fox agreed, saying we need to understand the movement of CWD in both wild and farmed cervids to make the best decisions for disease management on both sides of the fence.

Mr. Compart asked if deer hunters need to be concerned about biosecurity practices like animal movement, clothing, truck washing, especially if hunting in an endemic area? Dr. Wells affirmed that any cervid producers who are deer hunters should be aware of and using such biosecurity measures to prevent disease spread.

Farmed Cervid Rule Making Update

Dr. Linda Glaser said the scheduled July 28 Special Board Meeting to discuss and approve the rules draft had been cancelled. As of July 1, the legislature granted the Department of Natural Resources (DNR) concurrent authority over farmed white-tailed deer herds, and that includes rule making. The DNR requested time to review the rules and has made comments on them. The Board has met twice with the Governor's office and the DNR regarding the rule making schedule and has requested staff resources from the DNR to assist with drafting the rules and developing the Statement of Need and Reasonableness (SONAR).

Annie Balghiti stated that once the rule making process resumes, the Board will follow the same rules process under the Administrative Procedure Act. Mr. Compart asked if the Board will be starting over from the beginning or if the process will pick up where it left off. Ms. Balghiti said the Board would not be starting over, but depending on how the rulemaking moves forward, the Board may publish a new request for public comment and/or an updated rules draft before proceeding to asking the board members for approval to publish a rules draft and Notice of Intent.

Mr. Compart asked for an estimated timeframe for this process. Ms. Balghiti said the Board and the DNR are working on this and will share a timeframe once one is established.

Brenda Hartkopf asked if the DNR is only changing rules pertaining to white-tailed deer regulations. Dr. Glaser stated the new legislation gives the DNR has concurrent authority over all aspects of the Farmed Cervid Program related to white-tailed deer; not just those concerning regulatory authority. Mrs. Hartkopf countered that the new legislation

refers to specific sections of farmed cervid laws and suggested there may be some disagreement on the interpretation of the new statutory language. She asked for a legal interpretation of the statute. Dr. Thompson said the statewide rule making group had said they believe concurrent authority gives the DNR rule making authority. However, she told Mrs. Hartkopf she could write a letter to the Board stating her request for an interpretation of the statute so the Board could pass it through the appropriate channels. Mrs. Hartkopf agreed to do so.

Mrs. Hartkopf then asked about the future involvement of the Farmed Cervid Advisory Committee in the rule making process. Ms. Balghiti said their role and involvement going forward is yet to be determined, but the committee will receive any new draft of the rules for them to provide comments. Mrs. Hartkopf asked who would approve the rules draft. Ms. Balghiti stated that because the Board's rulemaking would still follow the Administrative Procedure Act, any approval would still go through the Board members and now, with the new legislation, the commissioner of the DNR as the rules are related to white-tailed deer. The board members would have sole approval over all other farmed cervid rules.

Update on CWD Investigation

Dr. Glaser said 10 of 11 CWD-exposed animals at the infected Beltrami County farm were sampled in March 2021 and tested for CWD (one animal had died previously and was too deteriorated to sample). One of the 10 animals was CWD positive. The doe was born in 2018 in the Winona County herd and had moved to Beltrami County in September 2019.

The Beltrami County herd owner received federal indemnity, and the herd was depopulated on May 11. Twelve of the 54 animals were CWD positive, including nine fawns born in the herd in 2020. Three CWD-positive adult does had been purchased from three different Minnesota herds in Hennepin, Dakota and Kanabec Counties, which were quarantined.

The Board traced the movement into and out of these herds for the previous 5 years. Dr. Glaser noted the Beltrami County herd owner was still building his herd, so he had not moved any animals to other farms. She then displayed a chart of the current CWD investigation, which showed all the Minnesota herds with CWD-positive and CWD-exposed animals. Dr. Glaser said the Board also traced animals to eight states, and they informed the state animal health officials in those states for follow-up.

The USDA appraised and approved indemnity for most of the CWD-exposed herds and herds with CWD-exposed animals. They did not approve indemnity for the Kanabec County herd because the number of animals exceeded the indemnity funding. The six herds with exposed animals (in Morrison (2 herds), Mower, Mille Lacs, Stearns and Crow Wing Counties) received indemnity for their exposed animals and had them depopulated and tested. All results were CWD not-detected, and the Board released their quarantines.

Dr. Glaser briefly discussed the status of the remaining quarantined herds. These herds continue to submit samples for testing

- Winona County: Quarantined since October 2020. They recently requested USDA appraisal, so that will be scheduled soon.
- Kanabec County: The Board received confirmation yesterday that the USDA will award the Board federal funding through a cooperative agreement to provide indemnity for this herd. This extends the timeframe the USDA had for providing funds for depopulation of this herd.
- Hennepin County: Intends to stay quarantined for the required five years from the time of last exposure.
- Dakota County: Has not accepted indemnity, so the herd must remain quarantined for five years from the time of exposure.

Mr. Compart asked if the Dakota County farm will have the same quarantine timeframe as the Hennepin County farm. Dr. Glaser said the Hennepin County herd's exposed animal left the herd in October 2017, so their five-years ends in

October 2022. The Dakota County herd is also on a five-year timeline, but the exposed animals left at a different time, so the end date will be different.

Gary Olson asked if the Beltrami County herd owner was compliant with testing standards. Dr. Glaser said the Board struggled with him on compliance. He did not take the authorized sample collector training, and he had poor-quality samples starting in Fall 2020. He also had increased mortality during Winter 2020-2021, including several adults and fawns, without reporting the deaths to the Board.

Board of Animal Health Update

Dr. Thompson said Mark Goodrich, deputy general manager overseeing livestock and competitions at the Minnesota State Fair, retired this spring. Mr. Goodrich held this position for over a decade. The Board permits the State Fair, and Mr. Goodrich was a pleasure to work with. She suggested the Board invite him to share about his experience and what goes on behind the scenes at the fair.

Dr. Thompson then introduced the two newest Board members. She has known Dr. Peggy Anne Hawkins for 15 years. Dr. Hawkins is a swine veterinarian with Veterinary Provisions in Northfield. Dr. Jessica Fox, the newest Board member, is from Marshall and is one of the few Minnesota veterinarians with a background in aquaculture. Dr. Thompson suggested future Board meetings in both locations with possible facility tours.

She briefly discussed the changes made to the Farmed Cervidae statutes (Section 35.155) during the last legislative session. She noted Subdivision. 5, which states the Board can allow animal movement out of a CWD endemic area with negative results from a live animal test validated by the USDA. The Board and DNR are working to determine if concurrent authority applies to testing. Subdivision 11 changed the timeframe for depopulation of a CWD positive herd from completion of the appraisal process to completion of the indemnification process. The new Subdivision 14 includes the language regarding the Board's and the DNR's concurrent authority over farmed white-tailed deer regulation.

Due to the actions of the CWD-positive Beltrami County herd owner, the Board has issued a remedial action order against the herd owner to hold him responsible for the costs associated with fencing the county land where carcasses were dumped. He is entitled to a contested case hearing, and he has requested one. The Board is working closely with the attorney general's office on this process.

Mr. Olson asked how involved the Board was with planning and building the fence on Beltrami County land. Dr. Thompson said the DNR has the building experts and has contacts for the Requests for Proposal (RFPs). Mr. Olson noted fence construction cost was \$194,000 and asked why it was so expensive. Dr. Glaser said the total cost included both materials and labor. Mr. Olson asked if the Board had determined if only the herd owner had dumped deer on county land, or if wild deer had been dumped there as well. Dr. Thompson said the investigation is ongoing, so that will be determined.

Veterinary Diagnostic Laboratory (VDL) Update

Dr. Jerry Torrison said the VDL received state and federal grant funding for equipment to increase testing capacity. They purchased and installed a liquid handler to improve efficiency by automatically preparing samples for testing and reporting results. They also purchased a second liquid handler and PCR machine that can test more samples at one time. With pending installations, training and test validation, these should be fully functional by January 2022.

Mr. Compart asked how much the liquid handler cost. Dr. Torrison said the grant was \$675,000 to cover the machine, installation, training, and information technology.

Mr. Olson asked what the VDL can test for with this equipment. Dr. Torrison said they can run 80 different PCR tests, including avian influenza (AI), Porcine Reproductive Respiratory Syndrome (PRRS), Porcine Epidemic Diarrhea Virus (PEDv), Mycoplasma, and Bovine Viral Diarrhea (BVD).

The VDL has submitted several National Animal Health Laboratory Network (NAHLN) grant proposals. In addition, the Center for Animal Health and Food Safety requested NAHLN National Animal Disease Preparedness and Response Plan (NADPRP) funding for a joint field ASF project with Ohio State University, which would be performed overseas, possibly in the Dominican Republic. Dr. Thompson asked about the length of this project. Dr. Torrison said the project would run for five years. He said the VDL should get a response from NAHLN by the end of October, with funding coming in early 2022.

The VDL is one of 10 NAHLN labs doing active surveillance for both ASF and Classical Swine Fever (CSF), testing 20-50 samples per week. Dr. Torrison also mentioned the Swine Health Information Center was asked to lead an evaluation on “lessons learned” during the pandemic from a veterinary diagnostic lab perspective. They will be presenting their findings at the Lemman Conference and at the American Association of Veterinary Laboratory Diagnosticians (AAVLD) Annual Meeting.

Mr. Compart asked for an update on the VDL’s alkaline digester. Dr. Torrison explained that the alkaline digester is the equipment used to neutralize diseases in, and get rid of, carcasses. The current digester is beyond its life expectancy and the VDL continues to invest funds to repair it and keep it running. There is no definitive plan to fund a replacement. He suggested the University, the Board, and the DNR could all be involved in these discussions. Dr. Glaser asked if Dr. Torrison thought a replacement should be housed at the University or somewhere else. He replied that ideally, there could be two digesters, one at the University and one elsewhere in the state, as replacing the current digester would take time.

Jim Vagts referred back to the discussion on the Beltrami County land where CWD-positive carcasses were found and commended the DNR for constructing the fence so quickly.

Nitrogen Foam Delivery System Overview

Lucy Hunt, Minnesota Department of Agriculture, discussed a recent exercise to study the delivery and use of a nitrogen foam delivery system (NFDS), developed by Livetec Systems, for swine depopulation. She noted this is part of a two-year study, so she will present data from this exercise at an upcoming Board meeting.

Nitrogen is a widely accepted gas for depopulation, but it is technically challenging to use. Oxygen content needs to stay below two percent, and it is a buoyant gas that easily escapes. This exercise is studying the use of high expansion nitrogen foam (large bubbles), which would keep the gas in the pen. This method is similar to the AVMA-approved medium expansion foam used for poultry depopulation. She noted the water usage for high-expansion foam (25 gallons per 1,000 cubic feet) is significantly less than medium expansion foam (94 gallons per 1,000 cubic feet).

Ms. Hunt listed the elements of the Livetec Systems NFDS and showed a photo of the prototype, which was shipped in a 20-foot car from England to New Orleans and is currently mounted on a trailer pulled by a pickup truck. She then showed a video of the foamer filling a pen. They used the foamer to stack the bubbles in the pen to keep it constantly filled at three times the height of the animals.

Ms. Hunt stated the benefits of NFDS are that it is flexible and adaptable, there is limited equipment to purchase and maintain, minimal necessary personal protective equipment (PPE), minimal personnel needs, and it promotes emotional and psychological care for operators and handlers.

The continuing project objectives for 2021 to 2022 are to develop alternative depopulation techniques using the NFDS; validate the NFDS system for depopulating swine with nitrogen foam in a range of conditions and determine how using the NFDS informs their carcass disposal options.

Ms. Hunt discussed data collection in the project. Some pigs in the study were equipped ear tags with bio sensors, external “Fit Bit” devices strapped to their legs; and had implants to record vital signs and movement. They also had cameras set up to record animal movement and behaviors. Necropsies were performed to determine cause of death.

Preliminary findings show there was a 100 percent rate of death with minimal foam ingestion, and it took less than two minutes to fill the pen. The team will need to work on improving the directional control of the foam and will do further evaluation of the foam flow rate.

Dr. Glaser asked if pigs died from occlusion if they did not ingest much foam. Ms. Hunt stated the cause of death was difficult to determine because the temperature was over 100 degrees the day of the exercise, and many of the pigs were sick when they arrived. Dr. Torrison asked if they noted which animals were sick and which ones were well to compare how long death took for sick versus healthy animals. Ms. Hunt said Dr. Williams knows where all the animals came from and should have that information recorded.

A cold weather depopulation exercise with the NFDS is planned for January or February of 2022. Ms. Hunt also discussed their continued study into carcass disposal methods, including grinding and composting and above-ground burial. The latter method involves digging a shallow trench, adding a carbon base, placing carcasses, capping with excavated soil, and planting vegetative cover. They will test their theory that the carcasses will decompose over a year's time and then attempt to regrade the trenches for returning to normal land use.

Ms. Hunt stated they are continuing to examine the data from the summer nitrogen foam exercise. If continued study data shows this is a valid depopulation method, they will be taking it to the operational level to be ready to deploy it.

African Swine Fever Update

Dr. Brian Hoefs gave a brief history of African Swine Fever (ASF) and said that ASF is currently in Eastern Europe, Russia and Asia. Wild boars are prevalent in these countries, which contributes to ASF spread.

ASF was detected in the Dominican Republic in late July. Two index cases were found on opposite ends of the island, indicating a possible widespread infection. Currently, 22 of the 32 Dominican provinces have an ASF positive detection.

Dr. Hoefs noted Haiti, which shares the island of Hispaniola with the Dominican Republic, had pigs tagged within 20 kilometers of the Dominican border, which is part of the ASF-affected area, though there are no reports of positive cases as of this meeting. There are more samples from Haiti awaiting testing at the Foreign Animal Disease Diagnostic Laboratory (FADDL).

The U.S. is most concerned with ASF spread to Puerto Rico and the U.S. Virgin Islands, as some countries have indicated if ASF is detected in any U.S. territory, they will consider all of the U.S. ASF positive.

Threats of spreading ASF to the U.S. include feral swine and garbage feeding in Puerto Rico and the U.S. Virgin Islands. Other ASF risks include imported goods, such as feed components or souvenirs, people returning from ASF positive countries, and dogs imported from positive countries. Dr. Hoefs noted Minnesota has instituted a temporary ban on the importation of dogs from countries with ASF. He also said there is a risk of the ASF virus mutating with the development of vaccines. Mutations can be more infectious and make more pigs sick with symptoms not quickly recognized as ASF.

The U.S. is focusing ASF prevention efforts on biosecurity practices, restrictions on imported pork products, and increased state-assigned surveillance of high-risk market swine. They are also preparing response efforts in the event of an ASF detection in the U.S., including a 72-hour standstill and meeting with Mexico and Canada to discuss disease response if ASF were found in countries bordering the U.S. He also mentioned the Foreign Animal Disease Protection Zone, discussed during the USDA Update earlier in the meeting.

Minnesota is preparing for the possibility of ASF through its Emergency Disease Management Committee for Swine (EDMCS). This group has several subcommittees addressing different aspects of an ASF outbreak response. They are also working on an ASF response plan to define a process for determining ASF control areas and permitted movement. The Board is also working out cooperative agreements with the USDA on ASF and Classical Swine Fever (CSF)

surveillance. The Board is also working on a program for certifying swine sample collectors to be ready to assist with ASF surveillance during an outbreak.

Dr. Hoefs discussed ongoing ASF research, which includes various projects related to vaccines, mitigation measures, testing, and depopulation and disposal.

H6N1 LPAI Update

Dr. Dale Lauer began by reiterating that since this was not an H5 or H7 outbreak, the response was industry lead, with the Board in a support role. The 2020-21 H6N1 Low Pathogenic Avian Influenza (LPAI) outbreak involved 93 turkey flocks in 70 different premises in nine counties, including some repeat infections on the same premises.

All isolates were of North American wild bird origin. The National Veterinary Services Laboratory (NVSL) analyzed the virus and determined Minnesota likely had a total of three separate introductions: October 29, 2020, in Meeker County; December 10, 2020, in Meeker County; and April 23, 2021, in Otter Tail County (two premises). Dr. Lauer said this indicates there was substantial farm-to-farm spread during the outbreak. He also noted the virus may have become more efficient in adapting to turkeys as the outbreak went on.

The poultry industry was able to keep LPAI from being introduced into any commercial layer or broiler flocks in Minnesota; however, this outbreak showed that each positive flock diagnosis must be taken seriously to prevent disease spread. The epidemiologist hired to study the outbreak expressed concerns about the carcass disposal methods used, as rendering is popular for large toms but can be a risk factor for disease spread, especially in areas where poultry premises are close together. The importance of site-specific biosecurity is vitally important to preventing disease spread. While it is difficult to pinpoint an exact cause of infection, all workers need to review and follow all biosecurity processes at each site.

Dr. Lauer listed the Board's next steps for LPAI response planning, including finalizing a non H5/H7 LPAI Response Plan, developing a process for real-time updates for the interactive mapping program, examining alternative options for carcass disposal, starting a rendering working group to provide recommendations, working with a wildlife biologist on possible transmission routes, and continuing case manager training for field staff.

Mr. Compart asked if H6N1 commonly infects poultry flocks in the flyways. Dr. Lauer said he did not think so. Whenever there is an introduction of a swine influenza, whether or not it infects other flocks is unpredictable. Therefore, all virus introductions need to be taken seriously.

Dr. Thompson said there was not federal funding for wild bird surveillance in 2020, so information on the wild bird surveillance side is not readily available because the surveillance is not being done. Dr. Lauer agreed but also said sometimes the surveillance is only conducted on the East or West Coast instead of in the Midwest.

Minnesota Department of Health (MDH) Update

Joni Scheftel said there has been an outbreak of brucella melitensis due to Minnesotans bringing back homemade goat cheese from Mexico. As a result, 10 people contracted brucellosis. Samples can also cause exposures in laboratory staff, so staff who handled the samples are being monitored for signs of illness and treated with antibiotics as needed.

Dr. Scheftel said there has been a large surge of COVID-19 cases, with the number being 20 times higher than those seen in July 2021. Most cases are the Delta variant, and more people are hospitalized than were during the surge in the spring of 2021. She noted that people in every age group died from COVID this week.

MDH is working to determine how many COVID cases can be connected to the State Fair, but data collection is difficult because only about 25 percent of people agree to an interview with MDH. What they have found is that 153 cases where the most likely exposure was the State Fair, and four of these people were hospitalized. Almost all these cases are in unvaccinated people.

There are 50 schools with COVID outbreaks in Minnesota. Dr. Scheftel said some nurses have reported being told they will be fired if they report COVID cases to MDH, making disease control in schools difficult.

Dr. Scheftel showed the latest county case incidence map. She noted last month, Pennington County had an infection rate equal to two out of 100 people. Counties with the highest incidence rates continue to be in rural areas of the state.

Fifty-seven percent of Minnesotans are fully vaccinated, and 60.4% of people have had at least one dose. About 6.3 million doses have been given in Minnesota with no serious consequences. Dr. Scheftel encouraged everyone to get vaccinated even if they already had COVID. She shared information from studies that showed vaccination can help avoid subsequent COVID infections or shorten the time a person is contagious and avoid hospitalization if they contract COVID again.

Dr. Scheftel discussed the federal mandate for companies with more than 100 people to require vaccinations for all employees or submit to weekly testing. In Minnesota, businesses are responsible for arranging and paying for employee surveillance testing. There has been an uptick in requests for vaccination events, which are often paid for by the county if it is associated with a business.

Kayla Pierson asked for an update on approval of a vaccine for children under 12. Dr. Scheftel said a vaccine might be approved by the end of the year.

Dr. Thompson asked about the potential for COVID booster shots. Dr. Scheftel said this is a very political issue, so she is not sure what the decision will be on boosters.

Statement and Next Meeting and Adjourn

Dr. Hawkins read a personal statement expressing support for Chair Compart. She stated her disappointment in members of the state legislature in calling for his resignation from the Board earlier in 2021. She has spoken with her representative to share her perspective. She stated the legislature sets the rulemaking process; Board members cannot influence the rulemaking process, and their role in the process had not been reached. She reminded all that Board members are volunteers. She said she appreciated Mr. Compart's leadership and thanked him for his work.

The next meeting of the Minnesota Board of Animal Health will be Wednesday, December 8, starting at 9:30 a.m., location to be determined.

Mr. Compart asked for a motion to adjourn the meeting. Mr. Vagts made the motion, and Dr. Hawkins seconded it. A vote was taken by roll call, with all voting aye.

Respectfully submitted,

Beth S. Thompson
Executive Director
State Veterinarian