

Minutes of the Quarterly Meeting of the Board of Animal Health

Wednesday, December 7, 2016

A quarterly meeting of the Minnesota Board of Animal Health was held at 9:30 a.m. on Wednesday, December 7, 2016 at the Oliver Kelley Farm in Elk River. The following people were present:

Board Members

Dean Compart, Producer

Graham Brayshaw, Veterinarian

Paul Hanowski, Producer

Matt Anderson, Veterinarian

Peter Ripka, Producer

Consultants to the Board

Jerry Torrison, Director, University of Minnesota Veterinary Diagnostic Laboratory

Joni Scheffel, Minnesota Department of Health

Stacy Holzbauer, Minnesota Department of Health

Trevor Ames, Dean, University of Minnesota College of Veterinary Medicine

Guests

Emily Caldis, Student, University of Minnesota College of Veterinary Medicine

Michelle Carstensen, Minnesota Department of Natural Resources

Eir Garcia Silva, Minnesota Milk Association

Elaine Hanson, Minnesota Pet Breeders Association

Michelle Kromm, Jennie-O Turkey Store

Judy Lewman, Ovine Progressive Pneumonia Eradication Trial

Patrick Lunemann, Minnesota Milk Association

Holly Neaton, Veterinarian

Marc Pagnotta, Student, University of Minnesota College of Veterinary Medicine

Thom Peterson, Minnesota Farmers Union

David Priesler, Minnesota Pork Producers Association

Fabio Vannucci, University of Minnesota College of Veterinary Medicine

Staff Members

Beth Thompson, Executive Director

Paul Anderson, Assistant Director

Linda Glaser, Senior Veterinarian

Stacey Schwabenlander, Senior Veterinarian

Shauna Voss, Senior Veterinarian

Greg Suskovic, Senior Veterinarian

Michael Crusan, Communications Director

Erin Crider, Communications Specialist

Morgan Grelson, Business Manager

Terry Sistad, Agricultural Consultant

Approval of Minutes

A motion was made by Peter Ripka and seconded by Paul Hanowski, with all present voting aye, to approve the minutes for the Wednesday, September 7, 2016 meeting.

Board of Animal Health

Dr. Beth Thompson provided an update on the Minnesota Board of Animal Health (the Board). The next legislative session will begin on January 3, 2017 and the Board has no proposed legislation for this session. Staff will be available to testify if called upon by legislators.

The Board had \$1.8 million dollars of funds targeted for avian influenza emergency planning in 2015. The legislature broadened the use of those funds, which are now targeted for general emergency planning. There is nearly \$1 million remaining, and it is available until June 2019. The Board is open to ideas from the livestock groups and the agricultural community on how best to use the funds.

For some time, Wisconsin has requested a herd's PEDv statement on Certificate of Veterinary Inspections (CVI) for pigs moving into their state. Wisconsin is moving toward implementing this as a requirement starting in February 2017. Dr. Thompson spoke with Dr. McGraw, Wisconsin State Veterinarian, who said they would require a quarterly rope test on sow farms to detect what diseases might be present. If the herd status is negative, sows could move to Wisconsin on the CVI. If there is a positive herd status, the herd would need a permit, be quarantined, and would be required to have a herd plan. Wisconsin will have a template herd plan available to make the process easy on producers and veterinarians. They have not determined the process for vaccinated herds, though they are leaning toward considering them positive. Show producers would be required to conduct the rope test annually. If show pigs leave Wisconsin for another state and then return, the pigs would be considered positive and required to be quarantined and have a herd plan. The process for markets is also yet to be determined. The Board will keep working with Wisconsin to make sure rules are followed.

Dr. Thompson discussed the One Health Antibiotic Stewardship Collaborative, which partners the Board with the Pollution Control Agency and the Minnesota Departments of Agriculture, Health and Natural Resources. Dr. Amanda Beaudoin, a veterinarian, is the new Department of Health staff serving as director of the collaborative, which covers animal, human and environmental health. It also has an antibiotic footprint group who reviews antibiotic use across all three areas. The next meeting is Friday, December 9, and will discuss the Veterinary Feed Directive, the regulations for stewardship in health care, and antibiotics in Minnesota's rivers and lakes. Those involved are from both governmental and private industries, including BlueCross BlueShield of Minnesota, HealthEast, Allina, Mayo Clinic, Abbott Northwestern, Sanford Group, Merck, and several livestock groups.

Veterinary Diagnostic Laboratory

Dr. Jerry Torrison presented an update on the University of Minnesota Veterinary Diagnostic Laboratory (VDL). The VDL received state funding and made changes to its lab sections this year to make better use of space and improve convenience and interaction among lab staff. The Molecular Bacteriology, Molecular Virology and PCR sections are now combined into one section. Comparative Immunology and Endocrinology sections were dissolved, as those were services provided to individual researchers. Some of that space is now used by other research labs; some is being altered for a new Molecular Development section to give them a defined space. The VDL is also remodeling some space to give Molecular Development a dry lab for gene sequencing. The Electron Microscopy section is getting a new scope, and the VDL is retrofitting the space for the scope. It will be ready to use in the new space by January 1, 2017. The VDL also remodeled a couple of labs to make space for sample preparation within the Diagnostic Lab.

The VDL will be creating a new faculty position in pathogen discovery and surveillance, which is becoming a vital function of the lab. This position will work with many lab sections on what is happening with pathogens and characterizing existing pathogens. This will require working with the different resources in the college, at other universities, and across disciplines.

The VDL received funding for Laboratory Information Management System (LIMS) improvements. This year, the VDL is upgrading its client interface so LIMS can be accessed on mobile devices. It's reviewing RFPs for upgraded access and submission interfaces for mobile devices, as well as an online interface with the Board. The VDL is also gathering stakeholder input on data analytics and genome sequence analysis to streamline processes, as well as evaluating vendors for customer relationship management (CRM) software to improve communications with clients.

Next year, it will focus on improving lab efficiency and biosecurity by moving to a less paper-based system. It's also working with other university staff on data analytics to implement data visualization and access digital pathology viability.

The Minnesota Poultry Testing Laboratory (MPTL) has offered the Diagnostician position to a foreign candidate who is in the process of emigrating his family to the U.S.

University of Minnesota College of Veterinary Medicine

Dr. Trevor Ames delivered an update on the University of Minnesota College of Veterinary Medicine (CVM). During this year's CVM Research Days, the college recognized the Board as the Distinguished Research Partner of the Year. The award is in recognition of the significant financial support the Board has provided for testing and projects at the CVM over the years.

The CVM has a new strategic plan, which was developed over the last year with input from external stakeholders, students, faculty and staff. This plan will guide the CVM over the next five years. This includes placing more emphasis on diversity in order to reflect the change in the makeup of the communities veterinarians will serve in the future.

Dr. Ames also discussed the 2015 Legislative Session. The CVM received \$26.5 million in funding for two main Avian Influenza projects: The Minnesota Poultry Testing Laboratory (MPTL) and the Vet Isolation Lab on the St. Paul campus. The funding for these projects was mainly driven by High Path Avian Influenza (HPAI).

The Vet Isolation Lab will house Biosafety Level 2 (BSL-2) research animals of any size and BSL-3 animals up to 50 pounds. The facility will be capable of small ruminant, swine and poultry research, as well as housing rodents for basic animal research. Construction is underway, and the facility is on schedule to be completed by Fall 2017. The commissioning process for BSL-2 and BSL-3 certification will begin after completion. One of the old isolation buildings will remain open for continued research during construction. After the new facility is open, the old building will be demolished. All of the older buildings were built in 1958 and did not allow for any research on viruses like HPAI.

In the 2015 session, the state provided \$250,000 for the Large Animal Veterinarian Loan Forgiveness Program, which helps vets in rural, underserved areas in Minnesota. This was one-time funding, so the Minnesota Veterinary Medical Association (MVMA) will be leading an effort in the 2016 session to get this funding renewed. Three graduates received funding last year, and the CVM hopes to help more graduates with renewed program funding.

The Agriculture, Research, Education, Extension and Technology Transfer (AGREETT) program was also funded in 2015. This funding allowed for a number of new faculty and extension educator positions. The Rapid Agricultural Response Fund, which often funds responses to emerging diseases, also received an increase in funds. One million

dollars per year was allotted for HPAI research and response. All AGREETT funds are administered through the Minnesota Department of Agriculture (MDA) and granted to University of Minnesota under the oversight of the AGREETT Advisory Board.

Dr. Ames outlined the new research positions coming to the CVM as a result of the new University of Minnesota strategic plan funding and AGREETT funding. Six are faculty positions, and three are for graduate students. The strategic plan funding also includes an additional position for which the CVM and all the colleges can compete. All of the new positions are focused on different areas of food production, including pathogen surveillance and discovery, antimicrobial resistance, using pathogen genome data, vector-borne and zoonotic disease, antimicrobial resistance and proper drug use, and microbiomes and health.

Dr. Ames also made note of an article in the CVM biannual publication, *Profiles*, concerning student debt. The CVM has not received any increase in base funding from the state since 2005, and the budget was cut by 30 percent in 2008 and 2009. The loss of state funding is the greatest factor driving the increase in student debt within veterinary colleges. In-state tuition is about \$31,000; outstate tuition is \$54,000, and 50 to 60 percent of CVM students are in-state.

Chronic Wasting Disease Update

Michelle Carstensen from the Department of Natural Resources (DNR) gave an update on Chronic Wasting Disease (CWD) found in Minnesota. Dr. Carstensen reviewed the recent history of CWD in Minnesota and the disease response by the DNR. By Autumn 2016, CWD spread to half of Wisconsin's counties, and an Iowa captive herd near the Minnesota-Iowa border was also discovered with a very high prevalence of the disease. As a result, the DNR began extensive surveillance in southeastern counties of Minnesota. It aimed to collect 2,850 samples in the established Disease Prevention Areas (DPAs). As a result, the DNR found two cases of CWD near Lanesboro. The two deer were both males. The first was about 3.5 years old; the other was 1.5 to 2.5 years old, and neither were showing outward symptoms of CWD. The DNR collected a genetic sample from the first deer. The second deer was processed with others before a sample could be collected.

There is no good explanation as to why CWD was found in this location. The DNR has tested 646 deer within a 15-mile radius of the two positives, and no new cases have been found at this time.

Dr. Carstensen discussed the next steps in the CWD management process. The DNR is holding a public meeting in Preston on Thursday, December 15, and they expect a large attendance. Dr. Thompson and Dr. Anderson will be attending. The DNR established a new CWD Management Zone, called Deer Permit Area 603, and plan to institute a feeding ban in five counties (Mower, Fillmore, Winona, Olmsted, and Houston). Other plans include aerial surveillance, a special late season hunt, landowner shooting permits, and USDA sharpshooting, if needed. If any additional CWD cases are detected, the management zone boundaries may change.

Dr. Carstensen said it is important to explain to the public that reduction of the deer population is essential to control CWD. Studies in Wyoming show that once CWD impacts more than 40 percent of the population, the disease will start reducing herd numbers. Large adult bucks have a higher CWD prevalence, and are the primary target of reduction efforts. The special hunt requires testing of carcasses before they can be moved out of the CWD management zone. The DNR used this same procedure when CWD was found in Pine Island in 2010.

Dr. Anderson explained the procedures the Board is following to handle the deer and elk farms near where CWD was found. In cooperation with the DNR, the Board located all the farms within a 10-mile radius of where CWD was detected. There were four farms: two of which are about 9.5 miles north of the location, and two are south of Preston. The Board put a movement restriction on those farms immediately. Staff visited each farm to explain what was happening and why animals cannot move in or out of their farms until they have exclusionary (double) fencing. The

largest of these farms has been double fenced since 2013 in anticipation of a situation like this. Another of the farms has already finished a double fence, and the others have six months to complete their fencing. Once the fences are built and inspected, the Board will lift movement restrictions.

There are six additional deer and elk farms within a 15-mile radius of where CWD was found. The Board has talked with them about what is happening in the area but has not placed any restrictions on them. These farms have done CWD surveillance for 15 years, so the Board is fairly confident CWD is not there.

Dr. Carstensen also mentioned that Minnesota law has changed to state that whole deer carcasses from other states cannot enter Minnesota. This is to prevent bringing CWD from areas that may be unknown to be infected with CWD, as in the recent situation in Arkansas.

Request for Extension of Support for Ovine Progressive Pneumonia Eradication Trial

Dr. Holly Neaton led a discussion on extending support of the Ovine Progressive Pneumonia (OPP) Eradication Trial. Dr. Neaton requested that the Board extend support of the trial through next year. This will be the final year of the trial, which will be used to conclude findings. She said 46 percent of Minnesota and Wisconsin flocks are infected with OPP.

The trial started with nine flocks and is now down to four flocks, including the Goerger flock in the Pipestone sheep industry, where the majority of the state's sheep are located. Findings of the trial thus far include the possibility of a genetic component that would make sheep resistant to OPP; how to best use sensitive 'Elitest' enzyme-linked immunosorbent assay (ELISA) testing to accelerate eradication of OPP in flocks; and the challenge of false positives that result from using this highly sensitive test. Other challenges the trial identified include keeping show sheep OPP negative and eradicating OPP in large flocks with multiple lambing groups. Those involved in the trial also want to use the final year to develop a protocol for producers to follow in order to eradicate OPP from their flocks.

Minnesota Lamb and Wool Producers (MLWP) granted funds to the trial for one more year. They plan to use these funds to purchase clinical and non-clinical older sheep to hold a necropsy demonstration at the annual MLWP Spring Workshop. They want to illustrate the USDA researchers' findings that over 90 percent of animals with the infection have no obvious symptoms of OPP.

The trial is requesting continued support from the USDA and Board field veterinarians and technicians with bleeding sheep and verifying that all have been tested. Dr. Thompson noted feedback from the field staff involved in the trial has been very positive.

Dean Compart requested a motion be made for the Board to continue support for the OPP Eradication Trial. Graham Brayshaw made the motion, Peter Ripka seconded, all present voted aye, and the motion carried.

Senecavirus A Research Update

Dr. Fabio Vannucci, faculty at the University of Minnesota College of Veterinary Medicine, presented an update on current Senecavirus A (SVA) research. Dr. Vannucci explained a brief history of SVA, which was first isolated in 1988. In 2015 and 2016, Minnesota saw SVA-associated outbreaks of neonatal mortality and the vesicular idiopathic disease. The Veterinary Diagnostic Laboratory (VDL) extracted DNA and RNA and did whole sequencing of the clinical samples. The virus was found in just about every body system of piglets and in pigs with the vesicular disease, but in different concentrations. Then they located the virus within individual lesions, which was the SVA virus strain not seen since 1988. The VDL is almost certain the virus evolved within the pathogenesis of the disease.

In 2016, the VDL and South Dakota State University worked cooperatively on reproducing the SVA infection and reproduction of the vesicular disease. They studied the progression of the virus each day, and lesions became visible as early as 48 hours after infection, typically peaked around Day 5, and resolved around Day 10. The virus was very infectious and could infect as much as 70 to 80 percent of a herd. This is important knowledge, as it is great education for vet students or young vets who have not had experience with vesicular diseases to watch for mild vesicles that otherwise could be missed. This research also found that the SVA virus was still replicating in the tonsils at 38 days post-infection, a concern for the swine industry.

In cooperation with the Swine Health Monitoring Program and the Iowa and South Dakota VDLs, The University of Minnesota VDL began monitoring for SVA in 2015. This has shown that SVA is more prevalent in late summer and early fall. In Minnesota, Mower County has the most cases of SVA, probably as a result of their packing plant industry.

They also did seroprevalence surveillance in commercial sow herds and feral swine herds before slaughter. This research showed a low seroprevalence of SVA on sow farms, which indicates that the source of the disease is probably on the finishing side of production. In November, the VDL conducted a small pilot investigation to test for the presence of SVA in a packing plant. They collected oral fluids and samples from pen railings and loading docks, and found high amount of positive tests, including one sample with the live virus. As a result, they have submitted a proposal to the Minnesota Pork Board to continue evaluating oral fluids and environmental samples for SVA in finishing pigs, transport vehicles and packing plants.

David Priesler noted that the Minnesota Pork Producers Association investigated 62 cases of SVA since October 1, 2016. Investigations at packing plants and markets are completed the same day. Producers appreciate how fast the investigations are completed.

Minnesota Poultry Testing Laboratory (MPTL) Update

Dr. Shauna Voss updated the Board on the Minnesota Poultry Testing Laboratory (MPTL). The MPTL had a large expansion in 2016. It handles about 300,000 tests annually, which is expected to grow with the increased testing capacity. The MPTL held a Grand Opening on September 22. About 300-400 people came through the facility that day. They had good support from the industry, the University of Minnesota, the legislature, and the community.

The MPTL began PCR testing for Newcastle Disease, Avian Influenza and Avian Metapneumovirus on September 26. They are still working on getting certain types of testing equipment operational. One piece is a Sensitire® machine, which tests for antibiotic sensitivity. Technicians trained MPTL staff on the machine and met with industry veterinarians to make them aware of it. There is still more work to do to make sure the testing, equipment, and communication systems are working correctly before accepting any samples. They aim to have the machine operational in January. Another new piece of equipment is the Luminex xMAP® Salmonella Serotyping Assay, which provides a molecular assay with results identical to traditional serotyping, the ability to serotype problematic isolates, and will allow for a faster turnaround time in days, instead of two to three weeks with traditional serotyping. Training is scheduled for January 2017.

The MPTL is provisionally approved to become a National Animal Health Laboratory Network (NAHLN)-certified branch laboratory of the VDL. Dr. Voss expects to be certified soon. The MPTL will be the second NAHLN-certified lab in Minnesota and will offer Avian Influenza testing.

Carcass Disposal Proposal

Dr. Michelle Kromm from Jennie-O Turkey Store presented a proposal to change the wording of the Board Rule concerning carcass disposal. The Rules currently state that carcasses must be disposed of within 72 hours unless

other arrangements for disposal have been approved by the Board. Large producers, like Jennie-O Turkey Store, use rendering for carcass disposal. Any flocks beyond 14 weeks of age are being sampled weekly using water testing. In order to minimize the risk of disease spread, Jennie-O Turkey Store has instituted a policy that rendering trucks cannot pick up carcasses from a facility until they have a negative water sample.

However, Jennie-O Turkey Store is also concerned with what diseases a rendering truck might bring onto a farm. They require rendering trucks only go to one farm, then return to the rendering facility, deliver the carcasses, and be cleaned and disinfected before traveling to another farm. They are also controlling the truck routes in order to trace truck movements in the event of a disease outbreak.

In light of the financial issues and increased potential for disease spread this process causes, the company looked for safe ways to keep carcasses on the farm to reduce the number of times a rendering truck needs to come out to the farm. Their solution was to put a refrigerated shipping container on each farm. The containers can hold up to 10 dumpsters. A dumpster is placed by the doors of the shipping container so the daily mortality can be placed in the dumpster and frozen within 24 hours. Once a dumpster is full, it is moved to the back of the shipping container and a new dumpster is placed by the doors. Carcasses can be held on a farm for 60-120 days, greatly reducing the number of times a rendering truck needs to come out to farms. They conducted a study of this method on a farm during the summer, and the rendering truck only had to pick up four times, as opposed to 12-15 times (twice a week) with the traditional rendering process.

Dr. Kromm explained the current Board Rule 1721.0730, says carcasses confined in dumpsters and placed outside are required to be picked up every three days, or 10-12 times per month. If carcasses are refrigerated to less than 45 degrees, Board Rule 1721.0730 requires they be picked up within seven days. With this new method, the birds are frozen within 24 hours, so large producers are requesting that the time between rendering pickups be extended to 120 days. The Minnesota Pollution Control Agency will allow the use of the containers on farms if the Board also approves their use.

Dean Compart requested that Dr. Thompson and Dr. Anderson draft modified language for the Board Rules, to be approved at the end of the meeting.

USDA Update

In Dr. Schaeffbauer's absence, Dr. Thompson offered an update on the USDA. In early December, in Kentucky, Dr. Fred Bourgious and Shelly Phillips from the USDA will be offering training on the new Emergency Management Response System (EMRS) Permitting Gateway to 28 managers from different poultry companies, including Perdue, Tyson, Pilgrims and Farbest. The EMRS team has worked previously with these individuals on the project, and this application of the program will help them realize the full capabilities of EMRS. State personnel from Kentucky, Illinois, and Indiana are also invited to attend.

Blue Tongue Virus surveillance began in the U.S. in 2015 and is now happening in Minnesota. Minnesota has always been Blue Tongue Virus-free, but some samples were taken from Brucellosis Market Cattle Testing Program, and found five animals seropositive for Blue Tongue Virus on July 19, 2016. The USDA is still tracing these animals and looking to see if they spent any significant time in Minnesota.

Bovine Tuberculosis in Canada and the U.S.

Dr. Linda Glaser provided an update on the outbreak of Tuberculosis (TB) in Canada and the U.S. The TB-infected animal was found in Minnesota but was traced back to a herd in Alberta. When they looked at the genotyping, the isolate was most similar to one found in an animal in 1997 from Queretaro, Mexico. The USDA is working with Mexico to get their isolates for genotyping. Canada did initial testing on the herd and found 52 animals showing initial TB signs, with six animals infected with TB. The herd is being depopulated.

The Canadian Food Inspection Agency (CFIA) suspects a cattle shipment from the U.S. introduced TB into this herd. The herd grazed on community pastures (similar to grazing leases in the U.S.) and mingled with cattle from different herds. As a result, CFIA placed quarantines on 35 Alberta herds and five Saskatchewan herds. Ten thousand animals will be slaughtered by federal order. The quarantined farms are not allowed to sell their calves, so Alberta Beef Producers may set up temporary feedlots to help feed the animals, as farmers had not planned to have them through the winter. Federal and provincial veterinarians are assisting with testing the quarantined animals.

Southeastern Indiana has had three instances of a cervid strain of TB since 2008. In 2016, they found positive cases at slaughter, and whole-herd testing identified more positive animals. The herd, located on two different sites, was depopulated. In 2016, Indiana also found a wild white-tailed deer on a farm that tested positive for TB, which was the first wild case in Indiana. Due to finding TB in a free-ranging animal, they expanded the test area from 3 miles to 10 miles. All three farms are in close proximity. The test area included 359 herds, and 227 herds have tested negative. The Indiana Board of Animal Health has set up TB Management and Surveillance Zones, in which they will reduce the deer population, implement a feeding ban, and increase testing of hunter-killed deer.

HPAI in Europe and Asia

Dr. Shauna Voss offered an update on HPAI in Europe and Asia. Confirmed H5N8 HPAI cases are in 17 countries throughout Europe and the Middle East. In some countries the virus is in wild birds, and in other countries it is in both wild and domestic species. There have been 35 HPAI outbreaks in domestic poultry, five in captive birds, one in captive wild birds, and more than 150 in wild bird die-offs. In Japan, H5N6 HPAI has been identified in two black swans at a zoo in the Akita prefecture. A domestic duck in Aomori prefecture and a domestic hen in Niigata prefecture also tested positive for HPAI.

The Food and Agriculture Organization (FAO) recommends intensified surveillance and awareness of HPAI and for poultry producers to increase biosecurity precautions. They do not recommend any action on wild bird populations. The risk to human health is probably low, as no cases of H5N8 have been associated with humans.

This virus is different from the virus found in the U.S. in 2015 because the U.S. version was intercontinental, meaning it was a mix of Asian and U.S. strains. The virus found in Europe this year is more pathogenic in wild birds than the 2015 virus found in the U.S.

The FAO predicts Europe and South Asia will continue to see transmission of HPAI, perhaps for several years. The threat to North America for the winter and spring of 2016-2017 appears low, based on the current information. Based on previous experiences, these viruses have been able to spread southwest to northeast and could make their way back in the direction of North America in autumn 2017. However, these viruses are unpredictable. The U.S. and Minnesota will remain vigilant and will keep preparing for the possibility of another outbreak.

Wording for the Board Carcass Disposal Rule Change

The Board discussed the proposed wording for the Board Rule regarding carcass disposal. The wording proposed was:

Carcasses that are frozen within 24 hours following the death of an animal may be kept for an extended period of time, as long as they are maintained in a frozen state in a container approved by the Board. Carcasses must ultimately be disposed of by the methods listed in 1721.0700.

Dean Compart requested that a motion be made to instead keep the existing language because it is within the power of the Board to grant exceptions to situations like the one described by Jennie-O Turkey Store. Matt Anderson made the motion, and Paul Hanowski seconded it. All present voted aye, and the motion carried.

Date and Place of Next Board Meeting

The Board will hold its next quarterly meeting at 9:30 a.m. Wednesday, February 15, 2017 at the University of Minnesota Veterinary Diagnostic Laboratory in St. Paul. A motion was made to adjourn, with all voting aye.

Respectfully Submitted,

Dr. Beth Thompson
State Veterinarian
Executive Director