



The WeCAHN Dairy Network held a quarterly videoconference meeting 16th May 2024 to discuss the animal health events occurring January to March 2024, with veterinary practitioners, diagnosticians, veterinary college faculty, researchers, and industry representatives in attendance.

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1. Dataset Overview

Data sources in this report include:

- i. Clinical Impressions Surveys completed by network practitioners.
- ii. Data shared by western veterinary diagnostic laboratories: Manitoba Veterinary Services Diagnostic Laboratory (VSDL), Prairie Diagnostic Services (PDS), and University of Calgary College of Veterinary Medicine Diagnostic Services Unit (UCVM DSU).

2. Interesting Cases

i. HPAI in dairy cows

Background: On March 25, 2024, a herd of dairy milking cattle in Texas was diagnosed with Influenza A H5N1. Since that initial case, there were 62 additional herds identified in the 9 US states (as of May 24th). The clinical signs include decreased feed intake, decreased rumination and rumen motility, and acute drop in milk production. Additional clinical signs may include colostrum-like/yellow milk, negative or trace

positive CMT result, clear nasal discharge, dry-tacky feces or diarrhea, depression, dehydration, and mild fever. The infection can be subclinical (i.e., no clinical signs in an infected animal) and present in other age groups (e.g., heifers).

Multiple research studies are in progress to confirm the safety of the milk and beef supply. The pasteurization process was confirmed effective at inactivating Influenza A in milk. Raw milk remains a transmission risk for Influenza A. In the US, commercial milk samples were tested using a PCR test, and H5N1 fragments were identified; however, these samples did not have viable viruses as tested using an egg inoculation test. Many ground beef samples from retail outlets in states with affected dairy cattle were tested H5N1 using PCR —these were negative. Ground beef was inoculated with Influenza A and then cooked to assess the effectiveness of the cooking process in inactivating the virus – no virus remained in the cooked beef. In Canada, retail milk samples across Canada tested negative for HPAI fragments using a PCR test.



Comments:

- We cannot be sure about the occurrence of cases in beef cows. Not many studies have been done, and virus predilection for the udder could explain why the case definition is restricted to dairy cows. Influenza A was demonstrated to prefer the mammary gland.
- The USDA now offers farmers and dairy workers financial incentives to report signs of HPAI. They recognize that there are limitations to people

wanting to get tested.

- There is no good description of transmission among herds and transmission among cows. The USDA is examining the transmission among cows and determined that milking machines may not be a fomite of concern for transmission.

Canada: CFIA has outlined a testing plan for HPAI in lactating cows without clinical signs and for 'suspect cases.' A 'suspect case' will be based on demonstrating clinical signs without an alternative diagnosis and with a history of recent introductions into the herd, discovery of dead or neurological animals, and potential for feed and water contamination by wild birds.

Comment: A practitioner commented that the industry emphasizes keeping birds out when the focus should be on biosecurity, and the message should be to stop buying cows. Biosecurity measures include designating an area for new introductions to the herd and monitoring these animals daily, requiring visitors to wear overshoes, clean or disposable boots before entering the production area, and other measures recommended in the Pro-Action Plan (<https://www.dairyfarmers.ca/proaction/resources/biosecurity>).

Question: What are the provinces' plans if there were a positive case of HPAI?

Answer:

MB – The attending vet will get back to the producer and build a biosecurity plan and don't move cows.

There was a case in southern MB with decreased milk production. No cause was identified in the feed. Matrix testing for AI was negative. The preliminary diagnosis is *Salmonella* Dublin; this herd was previously identified as *Salmonella* B positive.

SK – Working with SK Milk to develop a response plan. Currently plan to:

- Request voluntary stop movement
- Request maintain voluntary stop movement until 30 days after clinical signs return to normal

- SK Milk is working on biosecurity recommendations as well

(after the meeting) AB – Promptly implement stop movement. Public health agency will follow up with people that may have been exposed and will guide them regarding monitoring of symptoms, testing and when to seek medical care.

Question: A practitioner in SK asked about the voluntary quarantine: what happens with direct-to-slaughter cattle? Will there be a need for a quarantine pen for these animals?

Answer: SK – voluntary quarantine applies only to lactating animals. We will decide on a case-by-case basis, and don't see why direct to slaughter dry cows would be a problem.

Question: Is there an emphasis from the industry on keeping visitors out? For example, breakfast on the dairy was cancelled.

Answer: There is a small risk of introduction from the public. Major events are planned, e.g. stampede, fairs and 4H, and veterinarians are not advising their clients to cancel these outreach projects. AB Milk suggests not restricting visitors to the farm. The consensus from the veterinary network is to advise visitors to wear booties, and masks if symptomatic, and don't worry. There is little evidence that this strain of HPAI differs from other AI. Regular biosecurity measures should be applied. Cattle at 4H and fairs should be dewormed and vaccinated. Animals returning from a show or fair should be kept in the designated area for all incoming cattle and observed daily, as the Pro-Action plan recommends.

Most up-to-date information:

USA (USDA) most up-to-date information: [LINK](#)

Canada (CFIA) most up-to-date information: [LINK](#)

ii. Bovine coronavirus in cows

Background: Multiple practices have noted bovine coronavirus-associated pneumonia in lactating cows, as noted in previous quarters of WeCAHN dairy network meetings.

History: This past quarter, heifers and cows had a fever and an increased respiratory rate. The practitioner prescribed antibiotics to some animals, but there were too many affected to prescribe to all. The heifers and cows quickly recovered. At about the same time, a calf herd was affected by pneumonia, and they were located in a barn 3-400 m away. Unknown how the virus was transmitted between barns and which barn had it first.

Comment (pathologist): Bovine coronavirus is one of the more common viruses. How the infection with coronavirus relates to the clinical signs and symptoms is unclear. This virus can infect the upper respiratory tract (nasal passages and trachea) more easily than the lower respiratory tract (lungs). If the virus reaches the lungs, there are more severe symptoms than when it infects the upper respiratory tract.

Research update

Bovine coronavirus project at Prairie Diagnostic Services in Saskatchewan: The project is to sequence western Canadian bovine coronavirus isolates from the gastrointestinal and respiratory systems to study how the genome of disease-causing viral strains vary across cases and if the vaccine strain differs from the field strain.

Question: Do vets have access to the bovine coronavirus vaccine?

Answer: A practitioner answered that they have not had access to the Bovilis Coronavirus vaccine since early this year. They vaccinated 2 herds and used the intranasal vaccine. It may have made a difference in protecting the herd and limiting disease duration, but cattle recover from bovine coronavirus over time, too.

iii. Ataxic weaned calf without other neurological symptoms

History: She was alert and trying to walk but had a stiff neck and a goose-stepping pattern of the front limbs. The current diagnosis was cervical neck trauma. She improved and was observed to be walking better.

iv. Attempts to remove a mummified fetus from a cow to achieve some reproductive success

Comment: Usually, it is a sporadic finding, and the impression of this practitioner was that it was non-infectious.

v. Other respiratory infections were reported to be increasing by a practitioner

History from multiple practitioners:

- *Mannheimia haemolytica* was identified in a heifer barn and moved to another barn, where it caused the mortality of 2-3 mature cows.
- *Mycoplasma bovis* may be endemic in pre-weaned calves at a site in BC.
- IBR increased diagnosis was likely associated with a decision to stop vaccinating a herd.

v. There was an increase in the culture of *Truperella pyogenes* in cases of mastitis at PDS this quarter.

T. pyogenes causes a mastitis in dry cows and heifers, often during the summer. It produces a profuse, foul, purulent exudate and the infected quarter is often lost. ([Merck Veterinary Manual](#))

Meeting takeaways:

i. HPAI in cattle is an evolving issue. The mainstay of treatment is supportive care. The recommendations are to apply biosecurity measures and ask your veterinarian if you have any questions. In a positive HPAI case, lactating cattle movement is stopped or limited; additional responses will vary per province.



ii. The respiratory pathogens reported by the network veterinarians can all produce pneumonia, but require different treatment and control measures. Involve your veterinarian early if there is a problem to get the correct diagnosis and treatment protocol.

iii. Mastitis in dry cows and heifers that produces purulent material should be investigated by your veterinarian.



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