



The WeCAHN Dairy Network held a quarterly videoconference meeting 22nd August 2024 to discuss the animal health events occurring April to June 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: Influenza A(H5N1) in dairy cattle is a continuously evolving issue. Between March 25th and September 17th, 2024, there were 208 confirmed cases in 14 states; this includes the recent detection of influenza A (H5N1) in California.

USA most up-to-date information can be found here ([LINK](#)).

In response to the outbreak, there has been much discussion, planning, testing, and the implementation of additional import controls.

The Canadian Food Inspection Agency (CFIA) has in place requirements for testing of lactating cattle prior to importation from the US for breeding cattle and immediate slaughter. There are new requirement for Canadian cattle returning from the US after a stay of less than 60 days ([LINK](#)) and for cattle and bison imported from the US for a temporary stay in Canada ([LINK](#)). The CFIA started a pilot project testing processor bulk tank milk for influenza A. The CFIA has also begun a 4th round of retail milk testing.



Animal Health Canada (AHC) published biosecurity recommendations for Canadian fairs and exhibits ([LINK](#)). **Advisory: CFIA “advises against all Canadian cattle travelling to and participating in agricultural exhibitions in the US at this time”** ([LINK](#)). The provinces have plans to respond in the event of a positive test of influenza A(H5N1) in Canadian dairy cattle:

MB – The attending vet will get back to the producer, build a biosecurity plan, and stop the movement of cows.

SK – Developed a response plan with SK Milk. Currently plan to request don’t move cows until 30 days after no signs of illness.

AB – Promptly implement a stop to the

movement of cows. The provincial public health authority will follow up with people who may have been exposed and guide them regarding monitoring symptoms, testing and when to seek medical care.

BC – The producer is required to take actions to:

- i. Protect the health of workers
- ii. Protect the health of bulk tank milk graders conducting milk pick-up
- iii. Ensure food safety
- iv. Prevent the transmission of disease to other livestock and poultry farms
- Initiate a voluntary stop to the movement of cows; BCDA can support producers in instituting it. Producers not instituting voluntary quarantine may be subject to provincial and national disease control orders.
 - Stop movement of cattle on and off the premises until 30 days after the herd shows no more signs of disease OR
 - Herd shows no more signs of disease, and test results on at least 3 bulk milk tank loads are negative
- v. Authorized movement of a limited number of animals may be permitted on a case-by-case basis by the CVO under certain conditions.

Canada (CFIA) most up-to-date information can be found here ([LINK](#)).

A risk assessment was released by the Community for Emerging and Zoonotic Diseases (CEZD) on The Risk to Dairy Cattle in Canada from Avian Influenza A(H5N1) in Dairy Cattle in the US ([LINK](#)). The document outlines multiple key findings and knowledge gaps:

- i. Importation of infected dairy cattle is of higher concern compared to cattle transport trucks and wild migratory birds
- ii. The risk of importing an infected dairy cow is

small because of import conditions (i.e., a lactating cow must test negative for influenza A before transport from the US)

- iii. More information is needed on the number and movements of cattle transport between the US and Canada
- iv. More information is needed on the true number of affected herds in the US, which must be broken down into lactating vs. non-lactating, and infected and showing signs of sickness vs. infected and not showing signs of sickness

ii. Caudal vena cava thrombosis

Background: A practitioner examined 3 beef cross calves that died with some signs of pneumonia. These calves had caudal vena cava thrombosis (a blood clot in the large vein in the body), which can occur after infected material moves from the lungs or liver into the bloodstream. It can happen in adult dairy cattle after changes to higher grain diets.

Take-home message: Unspecific calf deaths should be evaluated by a veterinarian.

iii. Lumpy jaw

History: A practitioner diagnosed 3 cases of lumpy jaw on 3 separate farms. The cows had slowly enlarging lumps that were firmly attached to the jaw, and the lumps broke and drained. The practitioner applied an antibiotic treatment and the cows appear to be doing well. Usually, these cases are due to trauma or coarse feed that caused irritation and led to the infection.

Take-home message: Avoid feeding coarse feed and call your veterinarian to treat lumpy jaw as the infection can affect the teeth and chewing.

iv. Large wound in brisket

History: A lactating cow had a large wound at the brisket with no known cause. The wound was cleaned, and the cow was treated with antibiotics for a week. Despite the cow responding well to treatment, the dead skin dropped off, and there was no way to close the hole; the cow was euthanized as a result.

Take-home message: Bacteria that can cause this type of wound can affect humans (zoonotic), and proper care should be taken when managing the wound (i.e., gloves and proper hand washing).

v. Embryo transfer calf born dead

History: The dead calf had abnormalities not normally associated with embryo transfer calves. The calf was produced most likely from an internal flush than *in vitro* fertilization (IVF). There is a trend for larger-than-expected calves as a result of IVF, which has improved with the development of the technology.

Take-home message: The loss of embryo transfer and IVF calves may be more memorable and notable than the loss of pregnancies and calves produced by insemination.

vi. *E. coli* abortions in a dry cow pen

Background: There was a notable case discussed of multiple abortions in cows and heifers in a dry pen cow at a farm these past two quarters. Few animals were sick and treated with antibiotics. The veterinarian investigated the case. High coliform bacteria (including *Escherichia coli*) were measured in the well water feeding the pen, and *E. coli* was presumably diagnosed as the cause of the abortions. However, *E. coli* is hard to definitely diagnose.

Comment: The contamination of groundwater with coliforms depends on a number of factors: aquifer type and geology, well depth, well integrity, and precipitation ([LINK](#)).

Pathologists: Aborted calves with their placenta need to be examined while fresh. As part of the post-mortem, tissues will be collected for bacterial culture. The results of the post-mortem and ancillary tests, along with the clinical picture, will help to determine the cause of the abortion. There are many disease agents that can cause abortions, including *Neospora*, Bovine Herpes Virus, and *E. coli*.

vii. *E. coli* diarrhea

Diarrhea is a common digestive disease in dairy cattle and *E. coli* is a common cause of diarrhea. Some types of *E. coli* can cause disease in humans so they are monitored. The diagnosis of *E. coli* infection and disease depends on isolating *E. coli* during culture, characteristic tissue lesions, and clinical picture. It can be challenging to get a true diagnosis of *E. coli*. For these reasons, it is important to contact your veterinarian to diagnose bacterial infections.

viii. Mastitis

At the Veterinary Diagnostic Services (VDS) laboratory, there was an increase in the cases of cultured *Staphylococcus aureus* and a decrease in the cases of cultured *Streptococcus uberis* compared to the previous two quarters. *S. dysgalactiae* ssp. *dysgalactiae* was cultured in a smaller number of samples compared to the previous years. At PDS, compared to the previous quarter, the cultures were lower for *S. aureus* and the same for *S. uberis*. *S. dysgalactiae* was cultured in a larger number of cases this quarter (Q2 2024) compared to the previous 3 years at PDS.

ix. Lead toxicity in a cow

Background: A downer cow was diagnosed with lead toxicity; this is reportable to the office of the Chief Veterinary Officer in Alberta. There were no elevated lead levels in the samples collected from other cows at the farm. It is unknown how this cow had such high levels of lead. (for additional information, see: [Alberta.ca](https://www.alberta.ca))

Toxicologist during the WeCAHN Beef Network 2024 Q2 meeting: The whole herd needs to be tested because it is possible that an animal has a high lead level but no acute or chronic signs ([Waldner et al., 2002](#)).

x. Quebec (RAIZO) update

- i. Some practitioners noted an increase in the cases of environmental mastitis
- ii. Some practitioners commented on an increase in cases of *Streptococcus uberis* mastitis, which may be resistant to antibiotics
- iii. *Salmonella* Dublin case in June. At first, it was a false negative for the Dublin serotype.
- iv. Clinical cases of *Salmonella*. Serotyping identified the serotypes Typhimurium monophasic, Typhimurium, and others
- v. Two cases of sick calves associated with *Salmonella* serotype I:4,(5),12:i-; the clinical signs included rapid decline, weakness, diarrhea and mortality. This serotype was associated with an outbreak in companion animal raw food ([link to Public Health of Canada](#)).
- vi. 3 cases of *Coxiella* abortion: 1) an abortion, embryonic deaths and a few positive serologies that were linked to the introduction of 2 goats in the spring; 2) premature births; 3) unknown history.

Meeting takeaways:

- i. Active surveillance initiatives (pre-determined collection of samples) for influenza A(H5N1) in processor bulk tank milk have been implemented in the USA and Canada.
- ii. A risk assessment by the Community for Emerging and Zoonotic Diseases (CEZD) on The Risk to Dairy Cattle in Canada from Avian Influenza A(H5N1) in Dairy Cattle in the US concluded that the importation of infected dairy cattle is of higher concern compared to cattle transport trucks and wild migratory birds.



- iii. *E. coli* is a type of bacteria that can be found in animals and in people. Diagnosing *E. coli* as the cause of disease depends on the clinical picture, results of bacterial culture, and changes in the affected tissues (e.g., intestines). Therefore, it is important to consult with your veterinarian to diagnose bacterial infections.

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