



The WeCAHN Dairy Network held a quarterly videoconference meeting November 2023 to discuss the animal health events occurring July to September 2023, with veterinary practitioners, diagnosticians, veterinary college faculty, researchers, and industry representatives in attendance.

Report Contents:

1. Overview
2. Interesting Cases
3. Syndromic Surveillance
4. Scan

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).
- iii. Scan: Bovine surveillance reported by other sources or networks.

2. Interesting Cases

i. Stomach ulcers and Hemorrhagic Bowel Syndrome (HBS)

QUESTION: In what livestock groups do you see stomach ulcers?

ANSWER1:

- In young beef calves: Third leading cause of mortality of this group in our practice.
- In dairy cows: Often see with anemia and secondary milk fever.

ANSWER2: we see consistent clinical signs:

- HBS - fresh blood in manure.
- Ulcers: generally higher producing cows, digested blood (not fresh) in manure.
- We see flareups with changes in ration: new bag of silage/new source of concentrate.

ANSWER3: We analysed provincial (AB) veterinary data from 2010-2022 and found the number and proportion of cases of HBS increased ~ three-fold over time. The increase came from the dairy sector and beef reports were stable over the same time period.

ANSWER4: Over the past few years we are seeing increases in the number of cases of HBS in our practice, which we think is related to changes in diet, and use of some lower quality components. We also see occasional spikes in cases of abomasal ulcers.

QUESTION: in what farm setting do you see these syndromes?

ANSWER1: We see HBS more on larger farms, with larger equipment and possibly larger chance of incorporating dirt in feed. Also wonder if these larger operations are able to pack their silage properly; possibly predisposing to moldy feed.

ANSWER2: Agreed! Don't see it in small farms e.g. feeding hay. This is problem of high-producing cows on TMR rations.

Your veterinarian will help in making a diagnosis (e.g. distinguishing HBS from salmonellosis/winter dysentery/ulcers) and identifying underlying causes such as specific feedstuffs.

ii. Bovine coronavirus (BCoV)-associated pneumonia in a new calf barn

- **History:** Occurred in a new calf barn for which ventilation is still not great. Respiratory problems pre-date new barn.
- In the spring we did deep naso-pharyngeal swabs in this and 3 other (beef) problem herds, all well vaccinated, and yielded BCoV as only viral pathogen in some herds and in some cases

Interesting Cases (continued)

the only pathogen recovered, period. Additional frustration is the lack of tools to deal with this BCoV diagnosis. There is a vaccine but this was not available in the spring.

COMMENT1: In a well-vaccinated well-fed herd there should be some consideration of how environment is contributing to this problem, which should otherwise be self-limiting (e.g. ventilation system e.g. appropriate number of air turnovers? Humidity level?).

- Can purchase the tools to do simple diagnostics of the ventilation system off Amazon.
- Appropriate benchmarking values are available at University of Wisconsin-Madison Dairyland Initiative (<https://thedairylandinitiative.vetmed.wisc.edu/home/housing-module/>).

Your veterinarian will support both a microbiological and environmental workup for herd respiratory problems.

3. Syndromic Surveillance

a) Respiratory System

For purposes of the clinical impressions surveys, Rarely = 1-2 times from July - September 2023; Commonly= 1-2 times per month; Very frequently = 3+ times per month).

Respiratory disease was reported Rarely (N = 1) to Commonly (N = 3) by network practitioners, with laryngo-tracheitis seen Never (N = 4), and un-differentiated pneumonia Never (N =1) to Rarely (N=1) to Commonly (N = 2) and broncho-pneumonia Rarely (N=1) to Commonly (N=3).

b) Digestive System

Digestive system disease was reported Never (N = 1) to Commonly (N = 2) to Very frequently (N =1). Diarrhea was reported Commonly N = 2) to Very frequently (N = 2), and associated with *E. coli* Never (N = 2) to Rarely (N = 2), Rotavirus Rarely (N = 2) to Commonly (N=2), Coronavirus or Cryptosporidia Rarely (N = 1) to Commonly (N=2). All were rated Stable relative

to the previous time period (April – June 2023).

Bloody diarrhea was reported Never (N = 2) to Rarely (N = 2) by network practitioners, and Rarely associated with *Salmonella* spp. other than Dublin, or Winter dysentery, and rated Increasing, by one practitioner.

c) Mastitis

Acute mastitis was reported Rarely (N = 1) to Commonly (N = 2) to Very frequently (N =1) by network practitioners, associated most frequently with *E. coli* Commonly (N = 3) and rated **Increasing** by one. *Klebsiella pneumoniae* was reported never (N=2) to Rarely (N=2) and rated **Increasing** by one practitioner.

Across two laboratories, *Staphylococcus aureus* was the most frequently reported pathogen isolated from clinical milk samples from one lab. Many of these isolations occurred in a large temporal cluster occurring the third week of August. *Streptococcus dysgalactia* was the most frequently isolated mastitis pathogen by the other laboratory.

An outbreak of *Streptococcus agalactiae* mastitis was reported .

- *Strep. agalactiae* has been rarely isolated from western Canadian clinical mastitis samples. Previously reported from a western diagnostic laboratory in 2020.



Mastitis continued

Why should we be interested in the occurrence of such a minor pathogen?

- Described as “an emerging pathogen of humans and a re-emerging pathogen of dairy cattle in parts of Europe”.
- Evidence that some strains are not obligate intra-mammary pathogens and so environmental sources can complicate control strategies.
- After being virtually eliminated as a mastitis pathogen in Europe, since the turn of the century the prevalence of infected farms has increased in Scandinavian countries including Norway, Sweden and Denmark.
- In some settings the bacterium may be passed from humans to animals.

4. Scan

Bluetongue outbreaks continue to be reported in Europe, from Netherlands, Italy, France, Germany, and more recently the UK.

Foot and Mouth Disease outbreaks earlier in the quarter in Indonesia, and later attributable to genotype SAT 2 in the Middle East, were reported in Q3 2023.

For more information: Promed <<https://promedmail.org>>

Canadian livestock producers traveling over the winter need to be mindful of good biosecurity practices to avoid bringing foreign diseases home.

Podcast: Foreign Animal Disease Planning and Prevention

<https://wecahn.podbean.com/e/foreign-animal-disease-planning-and-prevention-for-cattle/>

Meeting takeaways:

- i. The increasing frequency of occurrence of hemorrhagic bowel syndrome in dairy cows is associated by practitioners with several factors: larger herds, higher producing cows, and sometimes lower quality feedstuffs.
- ii. Working up pneumonia in problem herds can involve both microbiological and environmental assessment, especially in a well-vaccinated and well fed herd.
- iii. While occurring very sporadically in both clinical and bulk tank milk samples in western Canada, *Strep. agalactiae* isolations are still noteworthy for several reasons including the potential for reverse zoonosis.

