



### INTRODUCTION:

#### *Participants attending the meeting:*

The videoconference meeting of the WeCAHN dairy network was held Aug. 25, 2022.

Participants attending the meeting: dairy practitioners, laboratory diagnosticians, veterinary college faculty, and industry representatives.

### Report Contents:

1. Dataset Overview
2. Interesting or Unusual cases
3. Respiratory System
4. Digestive System
5. Mastitis
6. Scan
7. Meeting Take-away

### 1. Dataset Overview:

- i. Interesting cases
- ii. Clinical impressions survey
- iii. Laboratory data: UCVN Diagnostic Services Unit (DSU); Prairie Diagnostic Services (PDS); Manitoba Veterinary Diagnostic Services Laboratory
- iv. Scan: Saskatchewan Agriculture; Alberta Veterinary Medical Association; Promed

### Clinical Impressions Survey and Laboratory Data:

The clinical impressions survey is a simple, quick overview of diagnoses by practitioners, which does not require practitioners to extract data from their information management systems to complete. Practitioners report, for a list of selected pathogens/syndromes, how frequently they have diagnosed these pathogens over the time period in question. Additionally, they are asked whether, compared to the previous time period, their diagnosis of these pathogens is increasing/decreasing or stable. For each category of disease, clinical impressions survey findings are followed by relevant laboratory data.

### 2. Interesting or Unusual Cases:

#### 1. Holstein cow with twisted bowel: showed signs of colic and died within a few hours.

- Getting up and down, trembling, and died.
- PM- segment of bowel was folded inside itself 2 or 3 times (like telescope).
- Herd has issues with "sorting" of feedstuffs related to running out of corn silage, and so some individuals are eating increased proportion of concentrate.

#### 2. Possible Curly Calf syndrome (Arthrogryposis Multiplex) in 2 Holstein x Angus calves:

- Background- seeing increased interest in beef crosses among dairy producers, with up to 50% of breedings using sexed beef semen, so lots of Angus cross calves.
- Saw 2 calves with similar appearance in 2 different herds, and un-related dams, within last 6 months: stiffness in multiple joints, some joints abnormally curved, unable to walk normally.
- Owners did not want to proceed with further diagnostics
- Monitoring for other potential causes and also for occurrence of more similar cases.

### 3. Respiratory System

- Respiratory disease was reported Commonly to Very frequently by network practitioners.
- *Mannheimia pneumonia* was reported in a 2 day old calf, and a 4 year old cow, by UCVMS DSU.

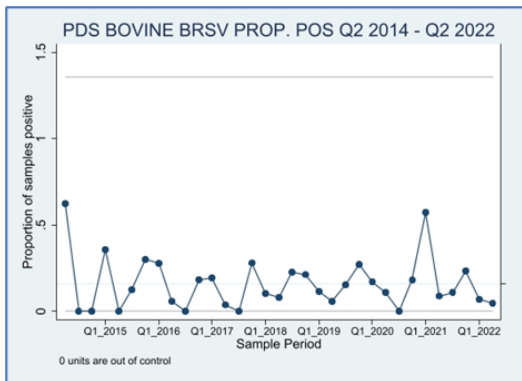
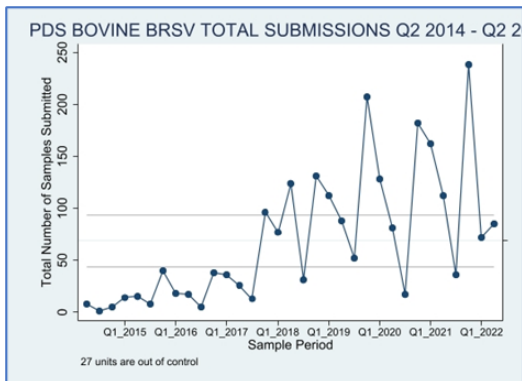
**Q:** Is this 2 day old cse unusually young for pneumonia?

**A:** Age of presentation depends on housing system.

- Team or robotic feeder -> we see pre- weaning pneumonia
- Hutches -> we see post-weaning.

In general, consensus was that 2 days seems very young for clinical pneumonia and one would wonder about an environmental challenge or failure of passive transfer (inadequate colostrum quantity or quality or both) being important factors in this case.

- Bovine respiratory syncytial virus (BRSV) detection data suggest a longer- term trend to increasing BRSV detections at PDS, (and not at



Manitoba VSDL), which seems to be driven more, at PDS, by increasing total sample submissions than by changes in % of samples testing positive.

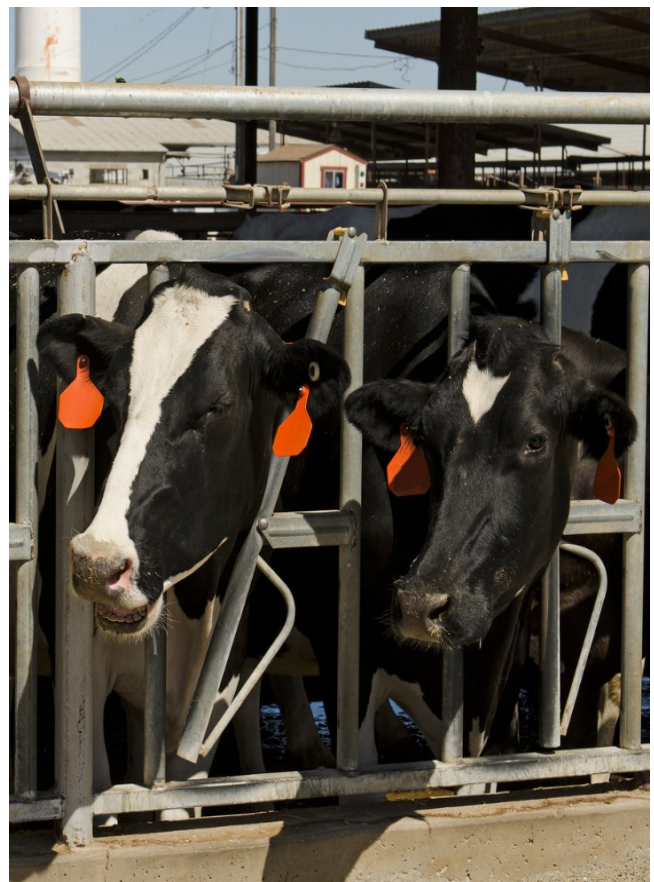
BRSV is encountered commonly and is part of the American Association of Bovine Practitioners' "core" vaccine program.

#### BRSV detection: trend to increasing detections at PDS:

**COMMENT:** We are doing more Deep Naso-Pharyngeal (DNP) swabbing of live animals in our practice. If done within 3 weeks of intra-nasal vaccine administration, the vaccine strain may be detected by the lab test. (we see relatively high uptake of intra-nasal modified live vaccine (MLV); lots of clients use this vaccine).

**QUESTION:** If there were a test to distinguish vaccine from field strains, could this be a useful addition to the diagnostic panel?

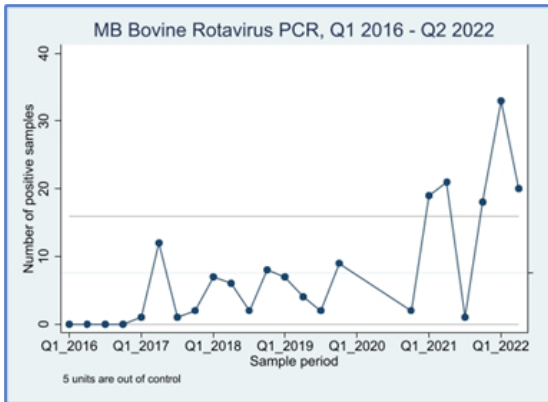
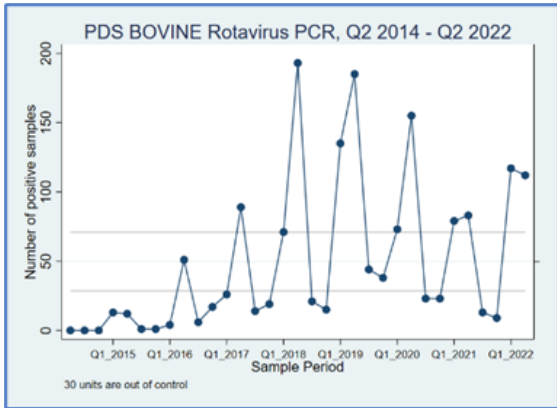
**ANSWER:** Yes! Currently we have to wait 3 weeks after vaccinating calves, before considering swabbing them for lab testing if one is sick, although we would frequently like to do it within this time window for diagnostic purposes on sick animals.



### 4. Digestive System

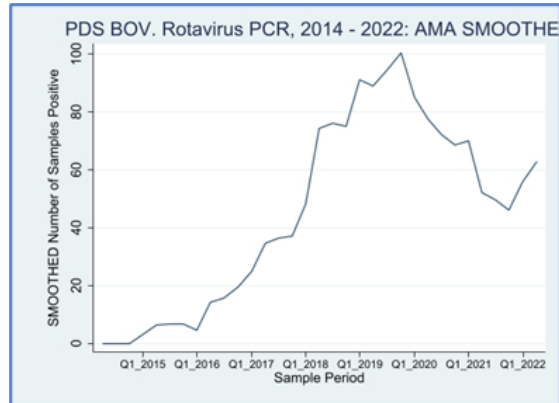
- Digestive disease was reported Commonly to Very frequently by network practitioners.
- Diarrhea was reported Commonly to Very frequently, and seen Commonly to Very frequently, associated with *E. coli*, Rotavirus, Coronavirus and *Cryptosporidia spp.*, by three network practitioners. Rotavirus was rated increasing by two practitioners, and coronavirus by one practitioner, from April—June 2022, relative to January—March 2022.

## Digestive System continued:



- For both PDS and Manitoba the raw data for Rotavirus detections from cattle samples suggest a trend of increasing detections over time.

Moving average smoothing (plotting a moving average of the number of cases for each quarter (3 month period) over the last year, instead of the actual number of case counts in each quarter, makes the trend a little more apparent.



Interestingly this seems to be mirrored in the total numbers of samples submitted for Rotavirus testing, which vary seasonally but have generally increased over time.

Rotavirus is a common cause of calf scours, and the next job for the network is to understand why submissions at PDS are increasing: is rotavirus infection truly becoming more frequent? Are producers-veterinarians more aware of or interested in testing, so doing more? Is there some other reason?





**Rotavirus:** apparent trend to increasing detections at PDS and MB VSDL.

**QUESTION:** Are your clients using an oral [immunological] product for calf scours, and if so, what are the components?

**ANSWER:** Many of our clients use oral Calf guard™, not at our recommendation. It is a modified live virus (MLV) rota-corona product which can be administered orally or IM. It is relatively much cheaper than oral antibody products.

**QUESTION:** Could the vaccine strain remain to be detected in some calves' lab samples?

**ANSWER:** Possibly. Current lab tests can't distinguish wild from vaccine strains of the virus.



**Digestive System continued:**

- In contrast with PDS, however, in Manitoba, total numbers submitted for Rotavirus assay to the Manitoba VSDL appear to be declining, BUT the % of samples testing positive is increasing.

**Cryptosporidia:** detections of cryptosporidia, another common calf diarrhea pathogen, are also trending up at both PDS and Manitoba VSDL (dat not shown).



**Clostridial disease:**

- Holstein and Jersey calves 10 to 12 days old were diagnosed with diarrhea associated with E. coli, Clostridium perfringens, and PCR test was positive for rotavirus, and Cryptosporidium at the University of Calgary Diagnostic Services Unit (UCVM DSU) [so infection of multiple bugs which is common].
- A 2- day old calf was diagnosed with stomach infection associated with Clostridium perfringens, also at UCVM DSU.
- PDS reported a slight increase in the number of positive bovine Clostridial detections by PCR test from April—June 2022.

Digestive System continued:


S. Dublin—B.C. Bulk Milk Testing (BMT) Program:

Dairy Network Meeting

# Salmonella Dublin Investigation and Management Program (SDIMP)

## QUARTER 2 BULK MILK TESTING REPORT

JULY, 2022



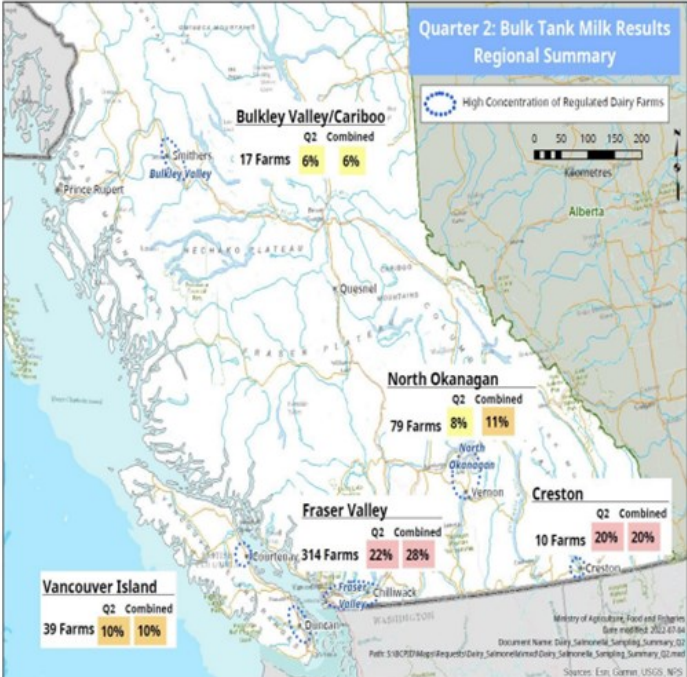
NOTES

If you would like more information on cut-off points and percent positivity please refer to the Quarter 1 report, which can be accessed on our website.

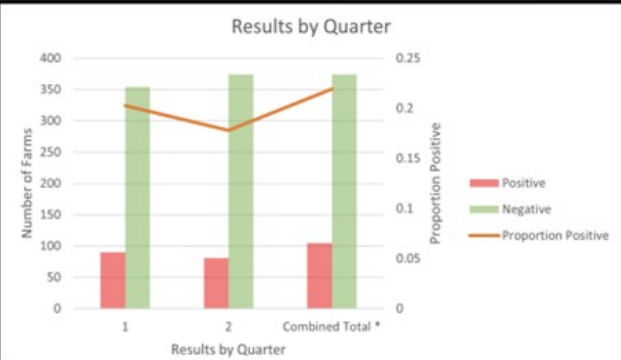
Did you know our SDIMP Team can provide assistance on test interpretation? Contact our team on our website [www.sdublinbc.ca](http://www.sdublinbc.ca) OR at our email: [sdublin@gov.bc.ca](mailto:sdublin@gov.bc.ca).

Your herd health veterinarian is the best resource for disease mitigation, management and risk assessment

In the second sampling quarter (February 1st 2022-May 5th 2022) **455 farms were sampled** and tested for S. Dublin antibodies in Bulk Tank Milk (BTM). Of the 455 farms tested **81 were positive (18%)**. These results combined with the Q1 Results show that **22% of all farms in BC are likely positive**. The presence of antibodies in BTM suggests cows on the farm could be **chronic, subclinical carriers or having a current outbreak**. Presence of antibodies **does not** mean there is bacteria in the milk itself.



Results by Quarter



The test for S. Dublin antibody in bulk milk has a low 'sensitivity' (i.e., it is challenging for the test to detect the antibody in BTM because of dilution). For this reason a farm with a **positive test in any quarter is considered positive** (e.g., a farm that is positive in Q1 and negative in Q2 is still considered positive) and should undergo a risk assessment with their herd health veterinarian.

The above report was obtained from: <https://static1.squarespace.com/static/60e489370e10582b6ac92ede/t/62d5b2dcb4cfd127c3303b9c/1658172125751/Q2+Reportfinal.pdf>

**PDS:** Four S. Dublin cases in dairy calves were identified at post-mortem. Blood testing continued as several Saskatchewan dairy herds attempt to identify and remove S. Dublin positive cows from their herds.

[www.wecahn.ca](http://www.wecahn.ca)  
[we.cahn@pds.usask.ca](mailto:we.cahn@pds.usask.ca)

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## 6. Scan

### Saskatchewan Agriculture: Anthrax in RM of Piapot #110

- Saskatchewan Agriculture is reminding producers to be on the lookout for anthrax in their animals after confirmation that anthrax has been found in the RM of Piapot #110.
- Anthrax was confirmed by laboratory results on Aug. 22, 2022 as the cause of death in nine animals.
- For more information: <https://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/agribusiness-farmers-and-ranchers/livestock/animal-health-and-welfare/anthrax>.

### Alberta Veterinary Medical Association: Anthrax in northern Alberta

- Anthrax has been detected in beef herds on three premises in northern Alberta's MacKenzie County. The premises are in a location where anthrax has been detected previously and as recently as 2015. At the time of reporting, the cattle on two of the premises had been vaccinated to prevent further losses. However, a total of 30 out of 230 animals had died on all three premises thus far. Conditions are reported to be quite dry in the area.
- Also of note, several bison have been lost to anthrax in Wood Buffalo National Park this year, another location known to have had cases in the past.
- For more information: <https://www.alberta.ca/anthrax-overview.aspx#:~:text=Anthrax%20is%20a%20provincially%20notifiable,federal%20Health%20of%20Animals%20Act>.

### Promed:

- **Reports of ongoing Foot and Mouth Disease (FMD) detected in meat being brought into Australia July 20/2022):**  
Foot and mouth viral fragments were detected in meat goods that came into Australia recently from Indonesia and China, during routine checks. Agriculture Minister Murray Watt said at a news conference. were detected during routine checks. "In addition to this a passenger travelling from Indonesia has in recent days been intercepted with a beef product that they didn't declare which tested positive for foot and mouth disease viral fragments," he added. These viral fragments are not live and cannot be transmitted, he said. Watt also said despite these findings Australia remains foot and mouth disease free.

## Meeting takeaways:

### 1. Uptick in lab detections of some bovine pathogens:

BRSV detections are increasing at PDS, driven by an increase in samples submitted. Rotavirus and Cryptosporidia detections are increasing at both PDS and the Manitoba VSDL, driven by increasing samples submitted at PDS, and increasing proportion of samples testing positive in Manitoba.

To understand what this means for industry, we need to be able to distinguish between live virus and virus from recent modified live vaccine use, and identify which specific age groups of cattle, and broadly what locations, are most affected. Work is underway on both points! In the meantime, broad guidelines for cattle vaccination are offered by the American Association of Bovine Practitioners, which includes BRSV in its "core" vaccine program, and Rotavirus in its risk-based group, meaning its use is recommended in some situations based on individual herd risk. (There is no vaccine for Cryptosporidia). Your veterinarian can help you set up a vaccination, biosecurity and hygiene program based on your specific situation.

### 2. As air travel picks up again, it's important to remember that several devastating foreign animal diseases can be accidentally introduced to the Canadian herd by bringing foreign meat or other products home, or visiting foreign livestock operations while on holidays.