Western Canadian Animal Health Network

WECAHN BEEF NETWORK PRODUCER REPORT

OCT —DEC 2022

Beef Network Meeting

INTRODUCTION:

Participants attending the meeting:

The quarterly videoconference meeting of the WeCAHN beef network was held Jan. 31, 2023.
Participants attending the meeting: dairy practitioners, laboratory diagnosticians, veterinary college faculty, and industry representatives.

Report Contents:

1. Dataset Overview:

- **Clinical Impressions Survey**
- **Laboratory Data:**
  - UCVM Diagnostic Services Unit (DSU)
  - Prairie Diagnostic Services (PDS)
  - Manitoba Veterinary Diagnostic Services Laboratory
- **Scan:**
  - BCRC-funded Vaccine Training Project

The clinical impressions survey is to be 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 how frequently they have diagnosed disease syndromes over the past 3 months.
For each category of disease, clinical impressions survey findings are followed by relevant laboratory data.

2. Interesting or Unusual Cases:

1. Lameness in feeders: coronary band and hoof separation
Case 1 History: Nov. 2022: On arrival at Feedlot 1 one bull calf presented as a foot rot and was treated. The calf failed to respond to treatment and was treated ~5 days later on Nov 24 ; still didn't respond to treatment. This calf and another lame one examined Nov 30 for lameness exams and both found to have underrunning of the soles at the heels (separation of the sole from the heel bulb), swelling, and sloughing of the hoof wall. Notable that there were no signs of pus. There have been ~7 additional animals show hind limb heel related problems as previously described and one calf has lost a significant portion of its ear. The newest case noted was on January 5th, so the issue is not subsiding.
Case 2 History: 2 groups of steers assembled and placed in feedlot health problems started when groups were mixed. Lameness occurred mainly in lighter group, with a range of problems including ulcers on coronary band and separation from underlying tissue.
Discussion: Possible ergot poisoning? microbes affecting circulation e.g. Salmonella or BVD? Diagnostics are ongoing. We would be interested in hearing about any other similar cases.

2. Lameness in feeder steers:
Case History: "Visited a small feedlot that was experiencing high number of lame steers. These 700lb steers were Holstein/Angus crosses that were being brought up from the US. They had some of the worst hairy heel wart (digital dermatitis) our practice has ever seen. This was a first for us to see hairy heel wart in 'beef animals', although recognize it's seen in some feedlots."

Interesting or Unusual Cases continued:

COMMENTS ON DIGITAL DERMATITIS (DD):

- Appeared in western feedlots 10-12 years ago, especially in situations in which pen cleaning was difficult, and is very difficult to eliminate once it's present in a pen.
- Generally what's used in feedlots are footbaths, although tough to do successfully in Canadian winter.
- Once a chronic is established it's very tough to treat successfully and these will likely be railed.

Discussion: Challenges in treatment delivery, especially in cold weather.

3. Nervous coccidiosis: One backgrounding lot of 450 to 650 lb steer and hfr calves on feed for 15 to 75 days, on coccidiostat feed medication but still had clinical coccidiosis and a lot of nervous cocci (About 5 cases / 100 animals), clustering somewhat in pens but randomly throughout the feedlot. Switched to medications gave only limited success. Investigation ongoing to determine if misdiagnosis or other factors affecting control measures.

4. Successes! Highest ever pregnancy rate on heifers at one ranch by improving heifer development and managing breeding in smaller groups with less older bulls in the bull herd.

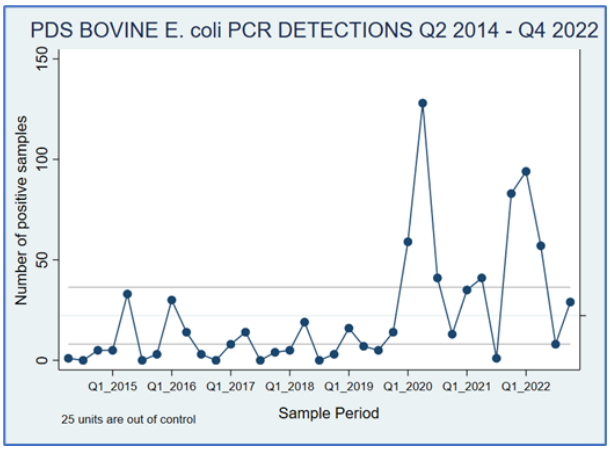
3. Respiratory System

- Sporadic cases of pneumonia in beef cows were reported at UCVM.
- Discussion of potential research at VIDO to update vaccine targets for *Histophilus* somni vaccine, thinking : bacterial genetics may have changed since vaccine was designed.

4. Digestive System

- **Diarrhea** was the most frequently reported digestive syndrome (monthly or more frequently) by network practitioners.

Scours pathogens: *E. coli:*



Recap on 'control charts': For each of the following graphs, each data point reflects the number of positive samples or cases reported, over a 3 month period. The upper and lower horizontal lines, called control limits, are similar to statistical confidence intervals.

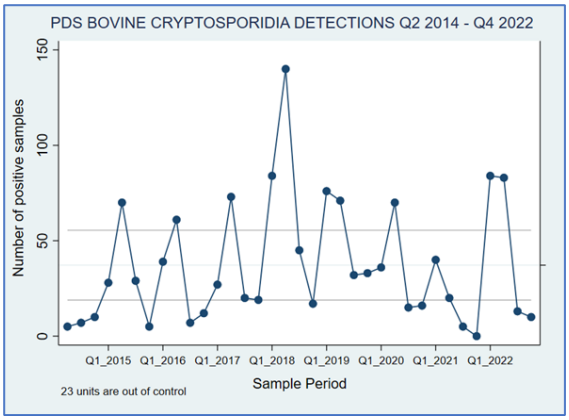
- Control charts are a simple way of presenting data collected over time. Apparent trends (e.g. increasing or decreasing frequencies of detection) over time, or individual points lying outside the control limits, suggest a need for investigation to determine whether/how significant a signal they represent.

- The Trend to increasing isolations since 2020 is mirrored in the total samples submission as opposed to proportion of samples categorized as positive (data not shown).
- In contrast with Rotavirus and Cryptosporidia, which tend to be detected most frequently in Q2 (April—June), *E. coli* PCR detections of pathogenic types in recent years at PDS is distributed more broadly across the calendar year, potentially suggesting detection in older animals.

Digestive System continued:

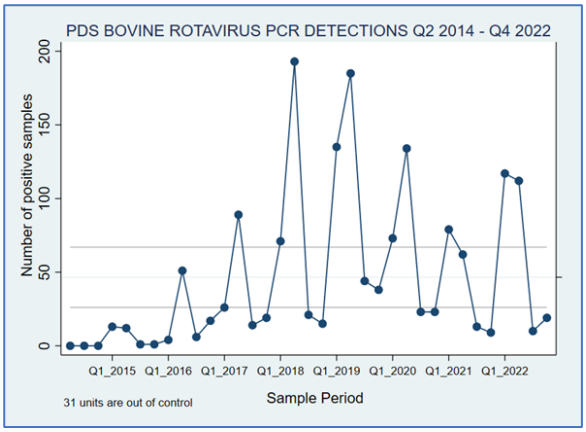
Cryptosporidia:

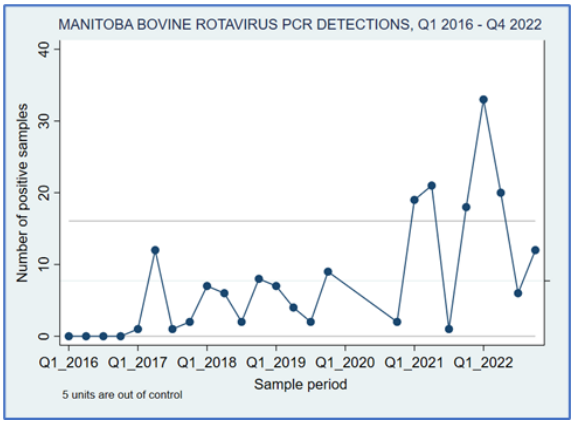
- Bovine Cryptosporidia detections PDS peaked in 2018 and rose again in the first half of 2022.



- Again, the trend in overall detections was mirrored in sample submissions, with proportion of samples positive basically unchanged over time (data not shown). Spring (April – June) was the calendar quarter with greatest frequency of pathogen detection.

- **Rotavirus** detections at PDS , which declined from 2018 – 2021, rose again in 2022.
- Bovine rotavirus PCR detections detection shows an underlying broad increase since 2016 with peak ~ 2018, and another uptick starting in 2022, which is similar to the trend in sample submissions (data not shown).





- In Manitoba Rotavirus detections have been trending upward since roughly 2018. Interestingly, this is underpinned by an increase in proportions of samples categorized as positive, with total quarterly sample submissions for RV assay declining over the past six years (data not shown).

5. Reproductive System

- **Abortions or infectious infertility** were reported diagnosed monthly or more frequently by practitioners.

- Detections of potential reproductive pathogens including IBR, BVD, and *Ureaplasma* at Manitoba VSDL and *Campylobacter*, *Tritrichomonas foetus, Coxiella burnetii*, IBR, BVD, and *Ureaplasma* at PDS, continued to be stable (data not shown).

- **Non-infectious infertility** was reported diagnosed monthly or more frequently by network practitioners, and associated with energy deficiency:
  "We have seen **variability in pregnancy rates** within beef herds. Attribute this to producers feeding programs last spring/winter and the drastic change in feed quality of pastures (First Cut) in respect to the past two previous years. At turn-out this spring pastures appeared lush with a lots of volume but the quality was marginal. I think this was a contributing factor for poor pregnancy rates. Due to the feed shortage, there were many herds feeding straw/grain for the first time resulting in cattle being over or underconditioned last Spring. As a result, there was more variability in conception rates. Body Condition of the herd is so important but can be tricky to assess when cows are seen everyday by producers. Some producers are a lot better at accepting/identifying changes in BCS than others."

- Frequency of reporting of **abortions with no diagnosis** also continued to be stable at both PDS and Manitoba VSDL (data not shown).

6. Multi-systemic Diseases

Practitioner comment: Over this period, we had a 3 -4 malnutrition cases. They were hobby farms, owning 1-2 animals that do not realize they are starving their animals because their 'bellies are full'.

7. Scan:

i. BCRC-funded beef vaccine training project

- **Podcast** describing the overall project: http://bit.ly/3vWRpU2
- **Videos** covering various aspects of vaccine handling:
  1. Administering Vaccines
  2. Vaccination Protocols and Records
  3. Cleaning Equipment
  4. Types of Vaccines and Mixing
  5. Vaccine Transport and Storage
  6. Vaccine Disposal
- These videos are housed on a private Youtube channel can also be accessed from the members' side of the WeCAHN website (www.wecahn.ca).
- Webinar recording of "Beef Cattle Vaccines: the Good, the Bad, and the Ugly" https://youtu.be/nRYHzysFHtE

ii. **WeCAHN Podcast: Foreign Animal Disease Preparedness and Prevention in Cattle,** with Dr. Karin Orsel , veterinary epidemiologist at UCVM. Dr. Orsel has some up close and personal experience with the impacts of bovine infectious diseases of cattle that currently don't exist in Canada. Her experiences highlight the potential risks of international travel, and the importance of vigilance and traceability in the cattle sector to ensure the health of our cattle and the security of our food systems.

Link: https://bit.ly/3KhzakQ

8. Meeting Take-aways:

1. Importance of condition scoring and the effect of poor condition (skinny cows) on disease was discussed repeatedly. Your veterinarian can offer a "second set of eyes" to help assess this. BCRC has some good information: **https://www.beefresearch.ca/tools/body-condition/**

2. With calving season coming, remember that **many common scours pathogens are not bacteria, and therefore antibiotics won't treat these non-bacterial infections.** Your vet can help with a treatment and control plan.