



The WeCAHN beef network met with veterinary practitioners, producers, provincial veterinarians, diagnosticians, and researchers in attendance.

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1. Interesting Cases and Emerging Issues

**i. DISCUSSION: Pregnancy testing 2023
NETWORK MEMBER COMMENTS ON
OVERALL FINDINGS**

- i. Our findings for % open cows are all over the map, ranging from 2-3% to 40% +.
- ii. Our open % across herds is a little higher this year (10-12%) than last year (8-10%) , and this is a biased group that's being sampled since they may have gotten rid of some open cows before we started testing.
- iii. Open rates from 3-40% varying all over the place. Weaning weights up in some herd and WAY down in others (generally the ones with low preg rates too), cow body condition all over the place this year too. This year I suspect cumulative years of drought, poor water quality, poor forage quality (and in some areas, only weeds really growing) and poor protein/energy this summer causing low to no cycling over the summer. Some guys have said if they put the dry cows on feed before they sell them, within a few weeks the whole pen seems like it starts to cycle which tells me if they get good nutrition they start to rebound.

DIAGNOSTICS

QUESTIONS: Are diagnostics being done on these herds [as they are identified having increased % open cows]?

ANSWER1: We did more liver biopsies this year but not enough and would agree with some Cu deficiency for sure. Protein and energy seemed to be the first limiting steps for most repro issues and cows going out and dropping in BCS.

ANSWER2: It's important to note that serum trace mineral testing can be useful to identify problems such as copper deficiency, which may be linked to reproductive problems. Serum testing may be preferred by clients over more invasive/expensive options such as liver biopsies.

SURVEILLANCE

ALERT: The new version of C3SN, C3/HPEN (Canadian Cow-Calf Health and Production Enhancement Network) is currently recruiting herds. There is a bonus for anyone enrolling 2 or more new herds! What's involved when participating is to complete the annual survey. The participant then receives production data, as well as an opportunity to participate in additional targeted "side" studies.

For more information or to enrol, please contact c3h.pen@usask.ca OR jayce.fossen@usask.ca

Summary: pregnancy rates vary across herds and practices. Some herds with unusually high open rates are being reported across the west.

Consensus is that nutrition, including energy and copper, are problems in many herds with reduced pregnancy rates. Western diagnostic laboratory data do not show any significant difference in detection of reproductive pathogens (e.g. vibrio and trich) relative to previous years.

ii. Brassica toxicity in cows

- **History:** About 1 month ago this group of animals grazed oats and brassica. One cow died of interstitial pneumonia and two others were

Interesting Cases (continued)

affected but recovered. Pulled off pasture. In past two weeks another group was put on pasture near this.

- On evening of Sept 15th noticed this cow was off. Morning of 16th circling. Treated with antimicrobial, thiamine and additional treatments. Down again on 18th; now off-feed as well. Euthanized.
- **Necropsy:** Lungs: Emphysema. Brain submitted to lab. Morphologic changes consistent with polioencephalomalacia.
- “In this case, the history of grazing on Brassica spp. could indicate sulfur toxicity as the underlying etiology in this case. Brassica spp. plants are known to sometimes be high in sulfur content and can lead to polio-encephalomalacia in cattle and small ruminants”.

COMMENT1: Polio from high sulfate diet/water can essentially be hydrogen sulfide toxicity.

QUESTION: In the context of oats and brassica, does this refer to a cover crop that includes canola? ANSWER: Likely.

QUESTION: If the popularity of this kind of grazing forage is increasing, what's the attraction? Drought tolerance? Something else?

ANSWER1: Different blends may have variable drought tolerance. The enhanced feed value of the forage is the attraction.

ANSWER2: Broadly the popularity of cover crops is increasing. The degree of problems clients could see with brassicas will vary with soil type.

Summary: While incorporation of brassicas in cover crops may offer attractive advantages, producers need to be aware of the potential for sulfur accumulation in some circumstances.

iii. *Yersinia pseudotuberculosis* outbreak in grower cattle.

- **History:** Multiple animals dying with blood poisoning with bloody diarrhea in feedlot in southern Saskatchewan. Multiple feedlot crew also had vomiting and diarrhea. Goal of lab submission was to see if *Salmonella* Dublin or other entity cultured. Crew sampled lung, liver, heart, kidney, and intestine with video call with veterinarian.
- **Post-mortem diagnosis:** Acute and extensive ulcers of intestinal tract.
- **ETIOLOGY:** *Yersinia pseudotuberculosis*.
- No *Salmonella* sp. were isolated from the small intestine, large intestine, liver or lung.

QUESTION: How often if ever do you see *Yersinia* isolated from bovine clinical cases?

ANSWERS: Never.

NOTE: An outbreak of bloody diarrhea associated with *Yersinia* was reported by a network practitioner in southwestern Saskatchewan in the winter of 2022, in a pen of purebred bulls.

Discussion followed regarding challenges around protecting winter feed from wildlife, especially deer given population increase in some locations. This is important to preserve scarce feed and also given potential for deer to carry some zoonotic pathogens .

Summary: Bloody diarrhea in cattle may be caused by several different zoonotic pathogens as well as a range of pathogens only occurring in cattle. An accurate diagnosis is important to manage the problem properly and also reduce risks to human health.

2. Syndromic Surveillance

a) Respiratory System

Bovine Coronavirus (BCoV): One beef network practitioner reported treatment failure for pneumonia associated with BCoV, and a dairy network practitioner described three beef “problem herds” with pneumonia in pre-weaning calves, despite being well vaccinated and well managed, in which BCoV was the only potential pathogen isolated, or the only viral pathogen

isolated.

PDS has a project studying intestinal bovine coronavirus sequences from clinical cases. They have developed a method for sequencing the gene for the coronavirus spike protein. The plan is to gather sequence information and compare this with vaccine strain sequences. So far a variety of genetic groups have been identified.

3. Scan

Bluetongue outbreaks continue to be reported



in Europe, from Netherlands, Italy, France, Germany, and 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:

<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

Pregnancy testing fall 2023: variable pregnancy rates are reported across herds and practices, with lower rates often associated with energy and/or copper deficiency where diagnostics were done.

Potential problems with brassica crop grazing, depending on soil conditions, may include sulfur toxicity causing signs including circling, blindness or seizures. Soil and forage testing are important management tools to flag potential problems and optimize feed and forage use.

During the winter feeding period deer are not just a potential nuisance in feedstacks, but are also capable of carrying zoonotic diseases.

Saskatchewan has a new program to support fencing feed yards. <<https://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/agribusiness-farmers-and-ranchers/sustainable-canadian-agricultural-partnership/programs-for-farmers-and-ranchers/animal-health-and-biosecurity-program>>