



INTRODUCTION:

Participants attending the meeting:

The videoconference meeting of the WeCAHN small ruminant network was held Sept. 7th 2022. Participants attending the meeting: veterinary practitioners, laboratory diagnosticians, veterinary college faculty, and industry representatives.

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1. Dataset Overview:

i. Practitioners' Clinical Impressions Survey

ii. **Laboratory data:** Manitoba Veterinary Diagnostic Services Laboratory, Prairie Diagnostic Services (PDS), University of Calgary Diagnostic Services Unit (UCVM DSU)

iii. **Scan:** Alberta and Saskatchewan governments; Promed

Clinical Impressions Survey and Laboratory Data:

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, 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 Cases

1. Severe pink eye cases:

- 3 flocks in particular. These are responding to an antimicrobial when given for 3 weeks in feed.

Q: Are flies present?

A: Yes, but not major problem-type-level

COMMENT: Have heard of similar cases but these were flocks with lots of flies and lots of parasites.

A: 2 of the 3 affected flocks had quite good management and one was awful.

2. Infectious abortion outbreaks:

- Practitioner saw 2 flocks with cases during spring; treated with antimicrobials.
- No history of new ram introductions but few ewe lambs, which they had done for years
- Encouraged producers to use the new vaccine for this problem (*Chlamydomphilus abortus*).

Q: What *Chlamydia* vaccine are you using?

A1: New Inmeva™ product.

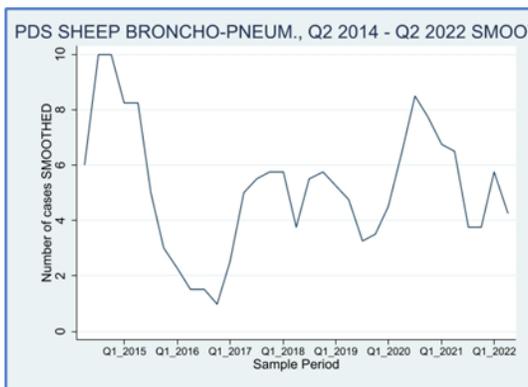
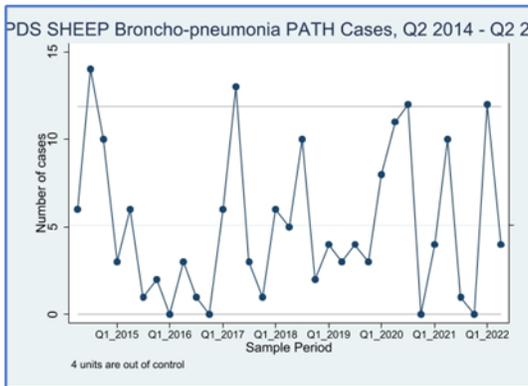
A2: May depend on what is available; supply is sometimes an issue.

COMMENT: Our practice does not usually recommend Chlamydial vaccination. We find that in a flock that hasn't been exposed to *Chlamydomphilus* before, most females are quickly infected, and then replacements are continuously exposed as young lambs. After a flock has experienced a break, we monitor, but have not used vaccination.

UCVM DSU: Received aborted lambs (~ 19 wk gestation, so these were late abortions) and placentas from a large operation with indoor housing, feed Total Mixed Ration, no recent management changes, clostridial vaccine routinely used. PCR test was positive for *C. abortus* (neg for *Coxiella*) confirms diagnosis of Ovine Enzootic abortion.

3. Respiratory System

- Respiratory disease was reported Never to Commonly by network practitioners this quarter (April – June 2022).
- Generally lab diagnoses of the common forms of pneumonia, and associated agents, in sheep and goats, were Stable for this quarter (April – June 2022) relative to the same time period last year.
- Pathologic diagnoses of small ruminant pneumonias at Prairie Diagnostic Services and Manitoba Veterinary Diagnostic Laboratory appeared stable.



- These two graphs (above) both show the sheep broncho-pneumonia cases diagnosed at PDS over time, but the plot on the right has been ‘smoothed’ by plotting a moving average instead of the raw data (number of cases per quarter). Smoothing is a widely used technique which can make trends easier to see. Going forward, we’ll include it where it makes things clearer.

Q: Are people looking for *Mycoplasma ovipneumoniae* (*M. ovi*) in these broncho-pneumonia cases?

A1: At PDS the majority of samples submitted for *M. ovi* assay come from wildlife, not sheep or goats.

A2: At AHC, flocks having a chance of contact with wild sheep [in BC] are encouraged to test.

Mycoplasma ovipneumoniae testing for BC follows. We do a lot of testing for the territories and Alberta as well; this data is not included.

Total counts *M. ovi* testing 2016-September 18, 2020, Animal Health Centre, BC

	Positive	Negative	Suspect	Total
Bighorn Sheep	28	354	5	387
Caribou	0	160	0	160
Dall Sheep	0	14	0	14
Domestic Goat	77	261	18	356
Domestic Sheep	237	821	102	1160
Llama	0	14	0	14
Moose	0	107	0	107
Mountain Goat	0	104	0	104
Stone Sheep	1	101	1	103

- Overall: there is more usage of *M ovi* tests in sheep and goats in BC, relative to at PDS. This likely reflects the proportionally greater chance of BC sheep and goats having contact with wild ones, where *M. ovi* may also be circulating,





4. Digestive System

- Digestive disease was reported diagnosed Never to Rarely to Commonly by network practitioners.
- **Diarrhea associated with *E. coli*** was reported observed Commonly by one practitioner. Laboratory data pertaining to small ruminant *E. coli* diarrhea are sparse.
- UCVN reported two separate cases of **diarrhea associated with coccidiosis**, in sheep 4-6 weeks of age.
- One practitioner saw this Commonly, largely associated with one flock (1200 ewes, extensively managed).
- This flock's mortality is usually very good; this year it's a disaster. Age of affected lambs varied.
- Problem started associated with wet weather but then didn't get better.
- Going through a list of risk factors, identified problems with water quality (pH and bacterial levels)
- Used potato starch- a bypass product which goes to colon (employed after first using a drying agent). In pig barns if we can intervene early, this may be our only treatment for *E. coli* or coccidia.
- Tried to improve colostrum management but this was tough given extensive system.
- Found *E. coli* in water so set up treatment.
- There was a **slight uptick in *C. perfringens*** (pathogen associated with pulpy kidney disease) detections at PDS. This bacterium is only intermittently detected in small ruminants at Manitoba VSDL.

5. Reproductive System

- Reproductive disease was reported Rarely to Commonly by network practitioners in Q2 2022.
- Abortions were reported Rarely (N = 1) to Commonly (N = 1) by network practitioners.
- Infectious causes of abortion (*Chlamydomphila abortus*, *Campylobacter foetus*, *Coxiella burnetii*), diagnosed by PCR, appeared for Stable for sheep and goats in Q2 (data not shown).
- UCVN reported an outbreak of *Chlamydomphila* abortion in sheep, and PDS reported a sheep abortion associated with *Campylobacter* spp.
- Sheep and goat abortions reported from pathology submissions, for which no cause was determined, remained Stable in Q2 at PDS.

Breeding Soundness Exams (BSEs)

Q: Has the overall performance of flocks been impacted by the extreme weather over the past year?

A: Yes. Especially lambing rate.

Q: How much work do you do with ram BSEs?

A: Thousands. However, 95% of decision is made on the four Ts (teeth, testicles, toes, tone) and less frequently problem with semen.

6. Multi-systemic Diseases

- **Nutritional disease**, as with septicemia, was reported rarely to commonly by the network practitioners.
- Energy and protein deficiencies were reported Very frequently, and copper and Vitamin E deficiencies Commonly, by one practitioner.
- UCVN reported cases of **non-viable newborn lambs** associated with both Iodine deficiency, and vitamin A deficiency.
- **Listeria infection** was seen Very frequently and rated Increasing by one practitioner, associated with very wet weather ("feeding in a river").
- ***Strep. plurianimalium***, a bacterial species capable of infecting multiple organs, and also humans, was detected at PDS from ram semen samples and a goat milk sample.



7. Scan

1. Saskatchewan Agriculture: Anthrax in RM of Piapot #110 (Aug. 23/2022)

- 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>.

2. Alberta Veterinary Medical Association: Anthrax in northern Alberta (Aug. 3/2022)

- 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. While anthrax can occur at any time of year, the hot dry weather of summer can often be a risk factor for this disease.
- 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>.



3. 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, Agriculture Minister Murray Watt said at a news conference.
- "We have detected foot and mouth disease and African swine fever viral fragments in a small number of pork products for sale in the Melbourne CBD that were imported from China," Watt said, adding that these 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.

8. Meeting Take-aways

1. Water quality matters. In some infectious disease outbreaks, water has been identified as a source of transmission. In drought-affected areas, water sources may have rising levels of sulfates over time, which can be a problem itself, and also antagonize availability of trace minerals such as copper.

2. Infectious abortion: Flocks may experience problems as abortion storms, when first exposed to a pathogen, or enzootic abortion (fewer cases, primarily in replacement ewes) after. Some pathogens are targeted in current vaccines, and some are also potentially zoonotic.

A factsheet outlining common causes, treatments, and prevention of infectious abortion is available: <https://bit.ly/3rjV0cz>

3. Raw milk: Isolation of a potentially zoonotic pathogen (*Strep. plurianimalium*) from goat milk in Q2 2022 reinforces the dangers of raw milk consumption.



List of Western Canadian Veterinarians Accepting Small Scale Clients

The historical challenges small scale producers have reported in connecting with veterinarians have become more noteworthy given the recent detections of HPAI in Canada, and ongoing concern regarding the global spread of African Swine Fever (ASF). A recent risk assessment for introduction of ASF to Canada identified small scale producers as having the highest relative risk of introduction. Early detection and control of disease requires close communication between producers and their herd or flock veterinarians.

WeCAHN invites veterinary practitioners willing to serve small scale producers to contact us if they are are interested in being added to a public list of veterinarians accepting small scale producer clients.

This is available at: <https://bit.ly/3AXYRle>

For more information, please contact:

we.cahn@pds.usask.ca

or phone 780-853-7820.



WeCAHN contact info:



<http://wecahn.ca>

Small ruminant network online:



<https://wecahn.ca/wecahn-networks/small-ruminants-network>



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