



The WeCAHN Small Ruminants Network held a quarterly videoconference meeting 7th September 2023 to discuss the animal health events occurring April to June 2023, with veterinary practitioners, diagnosticians, veterinary college faculty, researchers, and industry representatives in attendance.

Report Contents:

1. Interesting Cases
2. Meeting Takeaways

1. Interesting Cases

i. Flock with recent mortalities

- **History:** Flock of ~ 300 ewes with multiple mortalities recently. Owner attributed to ruminal acidosis (grain overload) due to feeding issues but post-mortem's have suggested respiratory problems.
- Post-mortem of 4 recent deaths showed:
 - i. Tentative diagnosis Johne's.
 - ii. No obvious abnormalities.
 - iii. Lungs with pneumonia.
 - iv. Ditto.

QUESTION: Seems this problem maybe could have been tackled sooner to help owner understand true causes of deaths. Do you veterinarians use telemedicine with your small ruminant clients? If so, pros and cons?

ANSWER 1: I used it routinely with certain clients: they would take pictures of cases and load to Google drive. Requires a pre-existing VCPR. Challenge is for veterinarian in record-keeping since this often happens while vet is in truck.

ANSWER 2: I use it with small ruminant clients a lot but usually for individual as opposed to herd cases, where economics don't support a farm visit (or trip to town) for 1 sick animal.

ANSWER 3: I use it as part of the process of communicating with the client. They will share pictures of cases; I will include these in reports describing those health problems.

ANSWER 4 : I use it a little with specific clients; most of our clients are geographically fairly close though.

ii. Hyperplastic goiter.

- **History:** 3 does and one ewe have had premature births; most survived. Does on hay, get 8-way and ivermectin 1.5 months prior to kidding. Kids get supplemental selenium.
- The frozen 2.98 kg body of a three-week-old, white and brown, intact male goat kid is received on May 3, 2023.
- **Postmortem examination** is performed on May 4, 2023. External examination of the submitted goat kid reveals marked swelling of the neck region with firm palpable nodules present within the sub-Q region. The body is in good nutritional condition Marked and diffuse enlargement of the thyroid glands (consistent with goiter).

QUESTION: how often do you see this associated with feedstuffs which cause goitre (e.g. turnips, cabbage, kale, cauliflower)? Could this be a flock problem with producers feeding vegetables?

ANSWER: once saw in a flock feeding close to 100% kale. More often we see it associated with mineral supplementation problems (i.e. not feeding iodized salt).

Interesting Cases (continued)

iii. Narasin (chicken coccidiostat) in feed.

- **History:** replacement ewe lambs started dying April 30 (1-4 per day). Post-mortem of 2 ewe lambs 1 May. Diagnosis was atypical interstitial pneumonia (AIP, a non-infectious pneumonia) caused by abrupt change in concentrate fed, and animals died with fluid/froth in airways. Also possible acute *Mannheimia* (bacterial infection involved in pneumonia). 2 whole ewes were also submitted to lab, with following findings:
Post-mortem: extensive muscle damage.
Toxicology: Frozen mineral-grain and silage tested at AHL Guelph for feed additive and mycotoxin screen.
 - Monensin: No Abnormal Findings.
 - Narasin detected— The antimicrobial is not labeled for use in this species and may suggest a mixing error possibly resulting in heart damage in this case.

QUESTION: how often do you see mixing errors originating at the feedmill?

ANSWER 1: Over 20 years, I have seen about 3 mill-level mixing errors.

ANSWER 2: Saw a flock case of copper toxicity which was feedmill error exacerbated by adding trace mineralized salt to a Total Mixed Ration.

QUESTION: How often do you see mixing errors occurring on-farm?

ANSWER 1: lots of farm mills may use coffee cans for measurement. So that leads to lots of errors. Generally smaller farms have very limited capacity for accurately weighing and measuring.

iv. Plant toxicity:

- **History:** adult sheep on pasture (proso millet and kochia) developed swelling around eyes, skin irritation, and eventually deaths.
- **Post-mortem:** pattern of black livers and skin irritation suggesting toxins which are activated by sunlight (photosensitization).
- **Treatment:** brought sheep indoors. Deaths

stopped but some animals lost ears and lips.

COMMENT: Livestock specialist: The kochia contains oxalate as well as high levels of sulphur, and has been implicated in photosensitization and liver damage due to the presence of hepatotoxic alkaloids. The oxalates have been implicated in kidney damage and affect calcium absorption. The sulphur tends to lead to polio and the other usual symptoms and maladies associated with sulphur toxicity. And it's also great at accumulating nitrate. It doesn't take much kochia to cause a whole slew of problems.

We had a number of inquiries/issues in 2021 – there was lots of kochia, it loves a drought; livestock were being turned out to graze drought stricken crops, or it was being baled up and used in rations and not without problems. Typically it will have to be limited to less than 30% of the ration. There was one case in particular that sticks out in my mind where a rancher had moved cattle onto a wrote off lentil field that had kochia in it, lost a number of cattle in a short amount of time.

2. Meeting Takeaways

- The devil is in the details: Mixing errors can and do happen. It's important for producers to understand the potential consequences of these and have procedures in place for measuring and mixing rations to avoid them.
- Wet weather problem: Haemonchus has been reported by two western labs, and associated with wetter weather. This is a post-mortem diagnosis and if the veterinarian is doing a p.m. and then submitting tissues, this diagnosis needs to be made at the time of the post-mortem.
- Dry weather problem: plant toxicities have been repeatedly associated with drought. Producers need to monitor pastures to know what species are present, and mindful of what might be on stubble used for grazing later in the summer and fall.