NABSnet Newsletter

#45 | 18 October 2023

NABSnet info

Hi all

Beth Cookson has sent her 'Acting CVO' thanks to those in the NABSnet network involved in sampling skin lesions over the past few months. All contribute to a strong picture of disease status in the north. The arrangements will remain in place for you to send these samples - so do keep up the good work. Don't forget to also send photos to receive the subsidy.

The next NABSnet Masterclass will be in Darwin on 15-16 March 2024. Put the dates in your diary. More details and how to put in an EOI in the next newsletter.

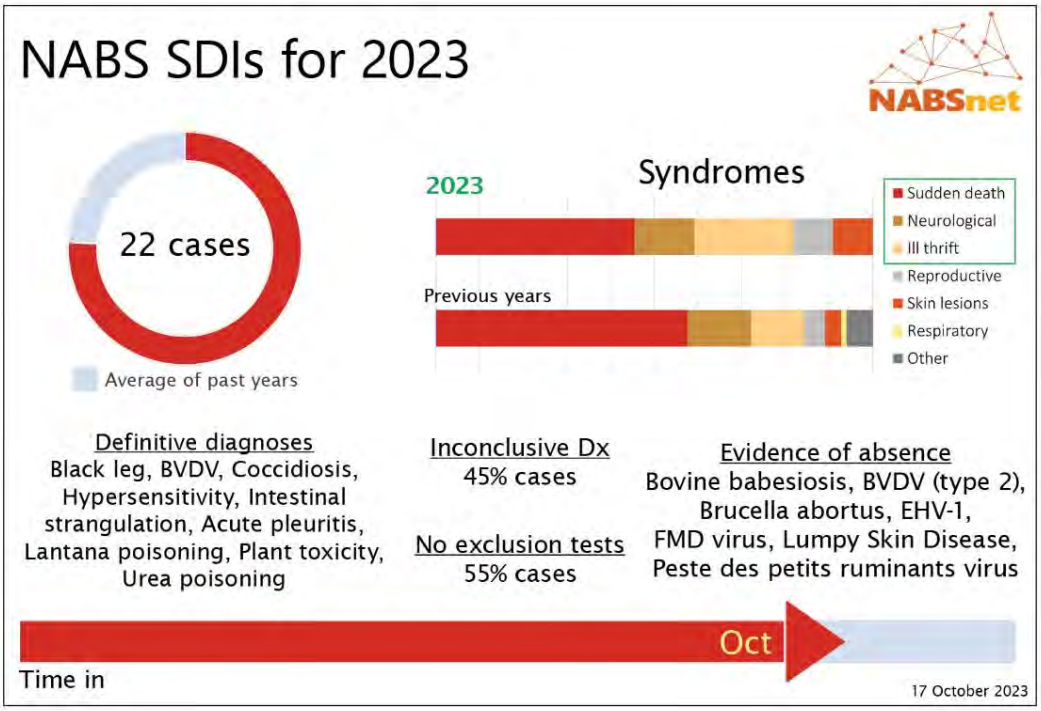
Other things featured down below:

- A really well investigated SDI of 5% weaner mortalities over a week
- A couple of challenges - plants and gross path - to keep the neurones ticking.
- Reminder on the SDI invoice arrangements.
- Link to a free online training course on African Swine Fever

Best wishes Kev

Great to see SDIs coming in.....

Do request all exclusion tests that may be relevant for your SDI cases - evidence of absence is a significant contribution to biosecurity surveillance.



Calendar claim

Masterclass 2024 - 15-16 March in Darwin

More info in the next newsletter

Skin survey – contributing to confidence

Thank you to all those vets who have participated in the recent Northern cattle skin survey. Data from the survey has provided important evidence to support Australia's Lumpy Skin Disease-free status, and was used in the recently released Australia's freedom from lumpy skin disease - DAFF (agriculture.gov.au).

The report provides detailed information on Australia's surveillance systems, and demonstrates that trading partners can have confidence in our animal health status. It highlights the important contribution that both general and targeted surveillance activities have to Australia's animal health system, particularly in northern Australia.

NABSnet is one of the key components of our animal health system in the north, and I thank you all for your individual contributions.

Beth Cookson, Acting Chief Veterinary Officer

NABSnet vets are encouraged to continue to sample cattle they see with skin lesions due to endemic causes.

Sampling kits are available from the primary industries department in your jurisdiction, all diagnostic testing is conducted charge exempt and a NABSnet subsidy is currently available.

DON'T FORGET to take photos of the lesions - this is an important and required step. Email them to the lab OR text direct to Teagan Fitzwater (NABSnet project manager) on 0466 614 706.

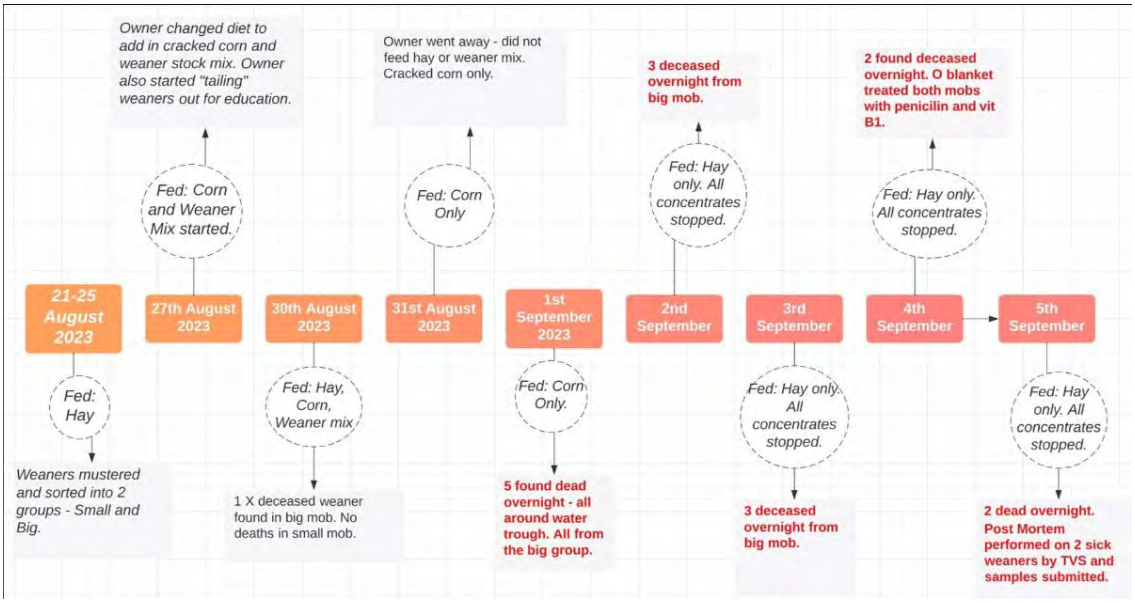
How to participate in the cattle skin survey

5% mortality in 7 days in freshly weaned Brahman cattle

In September 2023, a station in far north Queensland had a mob of 400 freshly weaned brahmans in a feedlot/yard setting and 20 were found dead in the yards over a period of 7 days. They were fed a ration of cracked corn, Rhodes grass hay and a weaner stocklick mix.

Case Definition:
Brahman weaners of less than 8 months of age that were weaned from their mothers and placed in the yards as two separate groups of weaners – small and big. Mortalities only occurred in the 'big' group.

All weaners had received nil vaccinations in their lives. The clinical signs noted by the owner in the sick animals included diarrhoea of a dark green/grey colour, standing by themselves looking “tucked up” and dehydrated and inappetence. Most seemed to be ataxic in the hindlimbs before they were found dead.



Timeline of events and mortalities

Pen walkthrough

There was one dead heifer from the previous night. Faeces throughout the pen were liquid and gelatinous – ranging from dark green to milky grey in colour and almost all contained pieces of corn. There were 10 feed troughs visible in the pens, 4 hay feeders and one water trough.

Clinical and post-mortem examinations

2 heifers were selected for clinical assessment, humane slaughter and full post-mortem examination.

Small Heifer #1:

- BCS: 4/7 - approximately 150kg.
- Slightly ataxia, sunken in the eyes and lagging behind the rest of the mob.
- HR: 180 RR: 24 Temp: 38.9.
- One weak rumen contraction was heard in 2 minutes. Splashing heard on succussion.
- Rumenocentesis: fluid milky/yellow. pH – 4.5-5 (acidotic)
- No gross abnormal findings on post-mortem examination

Big Heifer #2:

- Approximately 250kg.
- Severely dehydrated and with sunken eyes. Ataxic/weak with her hindlimbs and tucked up in the abdomen.
- HR: 92 RR: 24 Temp: 39.3
- Nil rumen contractions in 2 minutes. Fluid splashing auscultated on succussion.
- Rumenocentesis: rumen pH of 5.5-6 (acidotic)
- Gross findings on post-mortem examination were severe abomasal ulceration

Histopathology and lab tests

In both heifers there was locally extensive, moderate to severe rumenitis and reticulitis. There was omasitis and abomasitis in heifer #2. Heifer #1 had a small area of myocardial necrosis.

There were no abnormal findings in lung, liver, spleen, lymph nodes, skeletal muscle, intestine or brain.

ELISA test of rumen contents for Botulinum toxin type C - D was negative, as was faecal culture for Salmonella spp.

Initial differential diagnoses:

- Ruminal Acidosis (Grain Overload)
- Monensin toxicity
- Botulism
- Sulphur Toxicity
- Polioencephalomalacia (PEM)

Diagnosis:
Ruminal Acidosis (Grain overload) - based on clinical history, rumen pH levels and PM results. It is likely that the animals that died were first to eat the concentrates and gorge themselves.

Recommendations to the owner to avoid engorgement and acidosis:

- Don't feed grains to hungry animals.
- Feed freshly weaned animals in smaller groups to avoid some animals overeating. Often in weaned animals there are dominant animals and submissive animals meaning that not all animals are eating their allocated amount.
- Ensure that there is adequate roughage available to enable cud chewing. Pieces of roughage should be between 5-10cm in length to stimulated adequate cud chewing and salvia production. If paddock roughage is short and low in foliage, then hay must be always provided.
- A transition diet onto concentrates is recommended for a minimum of 3 weeks. Methods of adapting animals to a grain diet include using a low grain inclusion introductory diet, and once cattle have achieved stable feed intakes without showing signs of acidosis, increasing the grain inclusion by 5-10%.

What plant is this?

Where is it likely to occur and how might it affect livestock or horses?

[Answers below]

Gross path - the challenge

Transected cerebellum from a feedlot steer: how would you describe the pathology here?

[Answers below]

Tips and traps - brain swabs

From [Bench guides for vets](#) from WA DPIRD

Brain swabbing methods that keep the brain intact

Method 1: For most meningitis cases it is suitable to swab the base of the brain.

Method 2: *Listeria* can be recovered by stabbing a swab through the dorsal cerebellum into the brainstem. The swab must be angled in a cranial direction so it does not damage the obex.

ASF eLearning course now available

Should an Emergency Animal Disease be detected, a rapid response supported by expert on-ground knowledge will minimise the potential impacts that may otherwise cost Australian producers and communities billions of dollars.

One of the best ways you can contribute is by ensuring your knowledge of EAD clinical signs and sampling methods is up to date.

To support this, Biosecurity Queensland's new **African swine fever (ASF) surveillance and sampling eLearning course** is being offered free of charge via the Animal Health Australia (AHA) training portal. Registered veterinarians may claim 2 continuing professional development (CPD) points following completion of the course.

Reminder - new arrangements for invoicing NABS SDIs

The NABS team have updated the process for invoicing approved NABS SDIs - with payment of invoices now made by DAFF (i.e. not by the state representatives in WA, NT and Qld). Once your SDI report is approved by Kevin Bell, the request to issue an invoice will come from **NABS@aff.gov.au** (not your state contact).

Invoices will need to be clearly labelled as a NABS SDI, include your ABN, email, work address and bank details, and addressed to:

The Department of Agriculture, Fisheries and Forestry
GPO Box 858, Canberra ACT 2601
Attn: Teagan Fitzwater

The NABS team will make payment on the invoices either by credit card or bank transfer.

Don't hesitate to reach out to Teagan, your state contact, or the NABS@aff.gov.au inbox if you have any questions.

The plant - the answers

Grey rattlepod (*Crotalaria dissitiflora*) is a native annual that grows in rangeland across northern Australia and can cause pyrrolizidine alkaloid hepatotoxicity.

See more on the plant

Check out a multi-property SDI with horses possibly affected by ingesting this plant.

Gross path - the answers

Description:

- Multiple randomly distributed varying sized (2 mm to 8 mm diameter) foci of red discoloration of the parenchyma involving the grey and white matter (thromboembolism with haemorrhage).
- Thickening of the leptomeninges which are discoloured red brown (meningitis with haemorrhage and thromboembolism).

Diagnosis: Thromboembolic meningoencephalitis (TEME) – *Histophilus somni*.

Key NABS SDI network contacts

Kevin Bell, NABS Vet Adviser

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or visit www.nabsnet.com.au

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Newsletter sent on Kevin's behalf from the team at Harris Park Group

Let us know any topics you'd like to see covered here.