



NABSnet

Newsletter

#48 | 29 April 2024

NABSnet info

Hi all

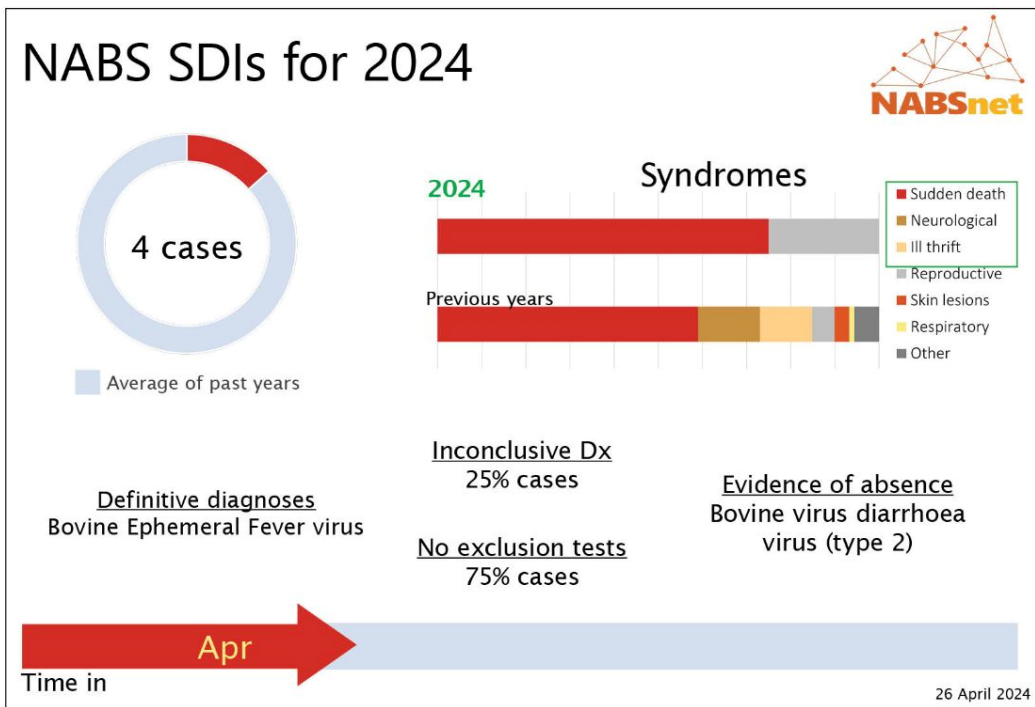
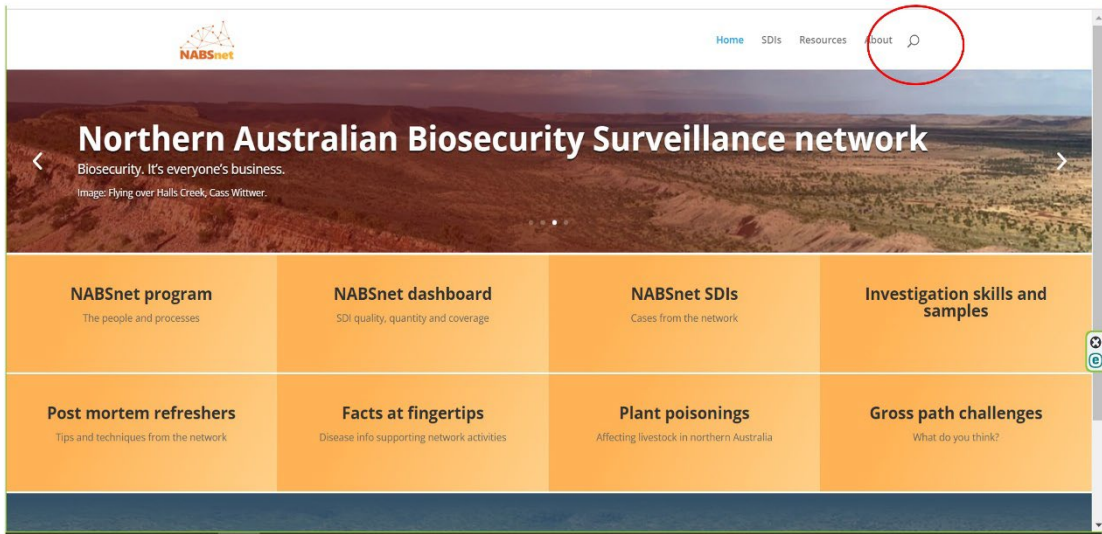
Great to meet so many of you at the Masterclass in Darwin where we were treated to terrific presentations. We'll share lots of the content in coming newsletters and on the website.

Our NABSnet site (<https://nabsnet.com.au/>) has been built up with a heap of useful info from the network over the last 6 years. There are summaries of some of our really interesting SDIs, lots of resources, and materials from previous Masterclasses. An easy way to find things is to use the 'search' function on the top tool bar. Do have a look.

Pics much appreciated. It's a visual world now and other clinicians, pathologists (even the newsletter editors!) find photos super helpful. With Cattle Skin Survey samples and SDIs, I encourage you to take and send in images to give a much richer picture of what you are seeing.

Cheers Kev





11 of 400 heifers dead in 24-48 hours over 2 months



11 of 400 Black Brangus 2.5 year old first calf heifers died over a 9 week period from May-July 2023 on a property in central Queensland. The clinical signs described were lethargy, weakness, disorientation, leading to recumbency and then death within 24-48hrs.

The mob were mid-way through calving (preg tested to calve out of season between June and September). They were fully vaccinated for Botulism and 7in1, grazing black soil country with some Yellow-wood present and were being supplemented with a urea-based dry lick.

Timeline

23/04/2023 – mob preg tested – moved to a better paddock to calve

08/05/2023 – first animal died

25/05/2023 – second animal dead

27/05/2023 – brought in and treated for ticks

16/07/2023 – 3rd animal dead

18/07/2023 – 4th animal dead

19/07/2023 – 5th animal dead

21/07/2023 – 6th, 7th and 8th animals dead

22/07/2023 – vet visit for disease investigation

Location

A paddock drive identified that most of the deaths occurred within 200 metres of a water point.

Differential diagnoses considered

- Tick Fever
- Urea Toxicity
- Bovine Ephemeral Fever (3 day sickness)
- Poisonous Plant – Yellow-wood
- Anthrax
- TSE

Post mortem examination

A recumbent heifer was euthanized for post-mortem examination. Jaundice was seen throughout the carcass and the blood was very watery. The liver was enlarged and the spleen looked abnormal.

Samples taken:

- Fresh and fixed tissues including: heart, lung, spleen, liver, kidney, small intestine, rumen, brain
- Brain smears
- Bloods: EDTA and clotted, blood smear
- Aqueous humour



Field diagnosis

Tick Fever considered very likely based on PM signs

Advice while waiting for results

Treat any other sick animals with Imidox. Because of the close proximity to soak areas, suggest mustering ASAP, very slowly (even if it takes all day to get them there) and leave stragglers behind (injecting with Imidox when you do). Once yarded, treat all for ticks to prevent further infection in healthy animals.

Lab findings and diagnosis

Blood smear and brain smear both positive for *Anaplasma marginale* – laboratory confirmed Tick Fever.

Recommendations

In this case a few risk factors were likely to contribute. Moving cattle to a part of the property closer to the river increases risk of tick exposure. It is likely these heifers have had very little exposure to ticks in their lives, meaning no natural immunity to tick fever. The tick treatment in late May may have prevented the onset of the main outbreak until July.

To prevent further outbreaks, give animals in this mob a few weeks to recover then treat again for ticks with a long acting tick treatment and vaccinate with blood on the same day. Also implement this strategy with any other breeders that have not been vaccinated for tick fever as there is a chance the outbreak may spread.

From this point forward, vaccinate all weaners with blood at the end of weaning.

Tips and traps - brain smears key for Tick Fever

"Get a brain smear if you suspect Tick Fever – we rarely see the parasites in blood samples – they just don't survive – but a tissue smear is really helpful – the affected blood cells get caught in the brain capillaries - always send us a brain smear if you can"

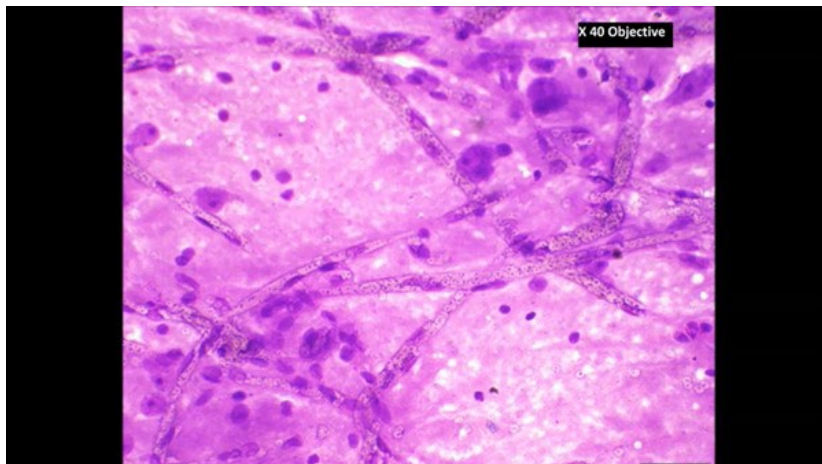


QDAF 2009 'Making blood and organ smears for tick fever diagnosis'

Super simple technique to make a brain smear

- Place a matchhead size piece of cerebral cortex on a clean microscope slide
- Use a second slide held at right angles to squash the tissue
- Move the top slide along the bottom slide (to create the smear)
- Allow to air dry, don't use a coverslip.

TIP: Multiple brain smear slides enables the lab to use more than one type of stain in their diagnostic workup.



Babesia bovis organisms in brain capillaries

Photo credit: Common Parasites of Veterinary Importance, University of Queensland

Cattle Skin Survey – continues to June 2024

The Skin Survey will continue until June 2024, so **NABSnet vets are encouraged to continue to sample cattle they see with skin lesions due to endemic causes. As you gear up and are out on properties, take skin sampling kits.**

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](#)

'Got Maggots' in live animal tissue? – send them in.

Keeping Australia free from Screw-worm fly (SWF) relies on early detection - **lab identification of maggots from infested wounds is essential.**

SWF is found in most tropical regions of the world, including our closest neighbour, Papua New Guinea; it could be introduced by the fly being carried on a storm front, on a boat or plane, or as maggots in animal vectors (it can hide in obscure places and, as its name suggests, screws into the skin, making removal particularly difficult).



Cape buffalo in Africa with horn injury and SWF maggot infestation.

Photo credit: Will Jansen

Collecting and transporting maggots

- Confine the animal
- **Take photos** of the wound and extracted maggots, preferably with a reference object to show scale
- **Gently wash the wound** with running water to reduce decaying matter and secondary-strike flies.
- **Use tweezers** to collect up to 10 maggots from deep in the wound. Collect different sizes if possible.
- **TIP - Put them into hot water** (just off the boil) for 10 seconds. This kills the maggots and helps to preserve their structure, assisting in their identification.
- **Place them into preservative** – the Got Maggots kit bottle, or into a small container of 70% ethanol or raw vinegar, and seal the lid tightly.
- **Fill in the lab submission.** Include information about the history of wound development, the animal's recent travel history and observations about the wound and maggots (sight and smell).

- **Pack** – place tubes and absorbent tissue into the small ziplock bag, exclude excessive air and seal. Place bagged maggot sample into the large ziplock bag and seal. Place into the mailing bag with the completed laboratory submission form.
- **Send by postal mail** to your government laboratory. Contact the lab, if possible, to inform them that samples are on the way, and email or text in the photos.

[More info on SWF and collecting maggots](#)

AI - of the Avian kind - sweeping across the world

At the Masterclass Guy Weerasinghe from Northern Australia Quarantine Strategy (NAQS) provided an update on the march of H5N1 across the globe - initially in the northern hemisphere and now closer to home - in Indonesia and Antarctica.

NAQS is doing targeted surveillance - regular visiting to sites across the north to monitor presence of virus in wild birds over time, and general surveillance investigations into unexplained sick and dead birds.

- 3 or more sick/dead birds in one spot or increasing number of sick/dead birds, call NAQS or Emergency Animal Disease hotline 1800 675 888

NAQS have produced a short animation to spread the word - you may like to share it with clients, birdwatchers or other community groups and schools you are involved with.

← Northern biosecurity

Aquatic pest biosecurity
community awareness

Biosecurity-It's everyone's
business virtual reality
experience

Country Handle with Care -
Costa and dirtgirl Tackle
Biosecurity

Frontline-northern biosecurity's
community song

**Avian influenza awareness -
Keep a TopWatch!**

Rabies Awareness-Keep a Top
Watch! in your community
animation

Report a pest, weed or disease
in Northern Australia

You can be a Biosecurity
Champion too! >

Avian influenza awareness – Keep a TopWatch!

As part of our work under the Northern Australia Biosecurity Strategy (NABS), we have developed an animation to increase awareness and encourage early detection and reporting of the disease.

Keep a TopWatch!



Download

DAFF website

[Avian influenza awareness – Keep a TopWatch! - DAFF \(agriculture.gov.au\)](https://www.agriculture.gov.au/daff/avian-influenza-awareness-keep-a-topwatch/)

Facebook

<https://fb.watch/rxq1tLD5UD/>



Key NABS SDI network contacts

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Missed earlier NABSnet newsletters? [read them here](#)

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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.