NABSnet Newsletter

#52 | 6 December 2024

NABSnet info

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Hi all in the NABSnet network

The plans for our next Masterclass (Townsville, 7-8 March 2025) are coming on a pace. Tristan Jubb will join us to explore disease investigation techniques, the JCU pathology team have some hypothetical cases for us, and we will dive into understanding the possible roles for practitioners in an EAD event in the north. Expression of Interest is open until 13 Dec - so shift along now if you haven't applied - info below.

The SDI featured in this newsletter is our first poultry case. When 45% of a small backyard flock were found acutely sick the owner enquired with their local vet about the need to investigate. Fortunately the vet receptionist was alert to the risk of Avian Influenza and the practitioner swung into an SDI approach. Good to identify the problem for the owner, and to have negative PCR results for an important Emergency Animal Disease.

The focus on skin lesions over the last 18 months has shown a range of differentials and stimulated some good discussion about sampling approaches - what's practical, what's needed, how to get the best results from field and lab input. The next one of our syndrome maps captures some of what we have learnt.

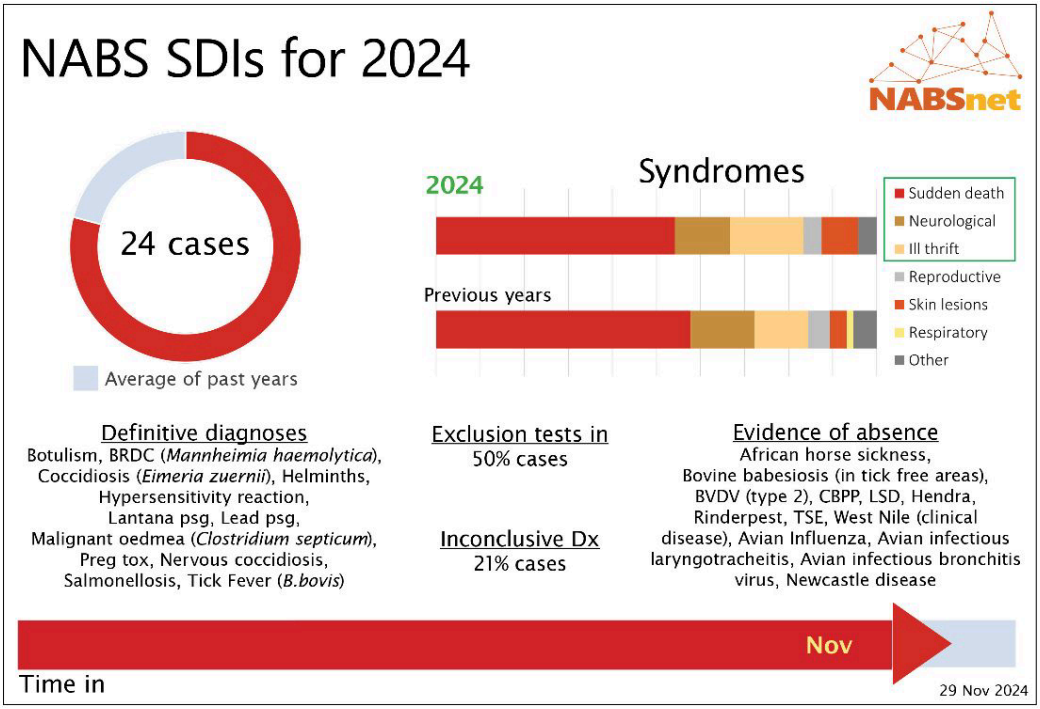
And items featured in this newsletter:

- Getting to know Nina Kung
- Indigenous rangers - another strong arm of northern biosecurity

Now Xmas / New Year is almost here - do have a safe and happy festive season and we'll look forward to connecting again in 2025.

Best wishes from me and Bill

Cheers Kev



! Need to act now - EoI due 13 Dec!
NABSnet Masterclass 2025
Townsville, QLD

When: Friday 7th and Saturday 8th of March 2025
(accommodation check-in available from Thursday 6th March)

Where: Mercure Townsville, and JCU

Who: Large and mixed animal veterinary practitioners in Northern Australia - the NABSnet network

What's on: The two day NABSnet Masterclass 2025 will be a great opportunity to get together with other northern cattle vets. The program will focus on getting the most from disease investigations, post mortem examination techniques and practitioner participation in Emergency Animal Disease responses.

Participation at the Masterclass, accommodation, food and air travel will be subsidised by NABS for up to two veterinarians from each clinic.

Next step: To register your interest, download the form and send to Nina Kung by 13 December 2024 (details on the form).

Expression of Interest form and program

Tristan Jubb will be one of the presenters at the Masterclass - workshopping approaches to successful disease investigations - even when the presentation is 'long dead'!

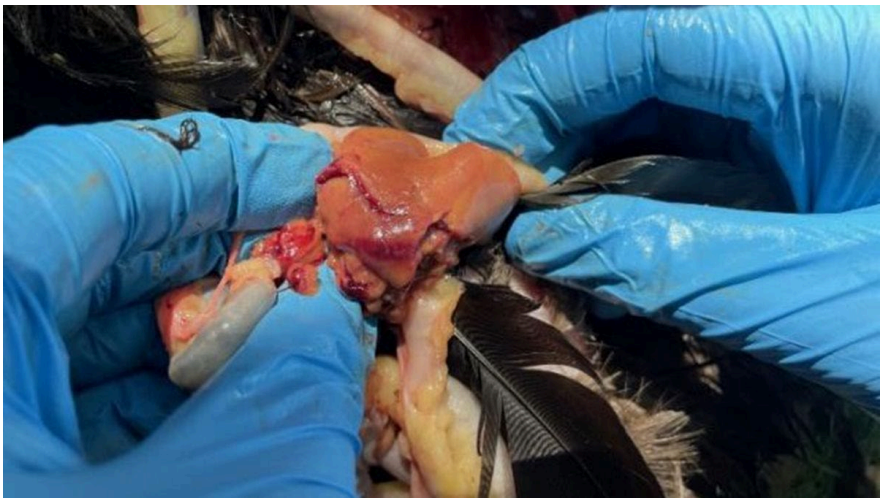
Acute onset paralysis in backyard chickens – not AI

In September 2024, chickens in a small flock of backyard layers in a town in north WA were found paralysed and dying after being healthy 12 hours previously. 11 hens, 8 months old, were kept in a laying pen in the house yard and had intermittent access to the garden. The chickens were fed maize and pellets in the pen. One chicken was found dead and 4 others were seen with mild weakness which became progressively worse over the day, leading to paralysis. The owner contacted their local vet and a disease investigation was arranged.
Three chickens were found with heads hanging and unable to rise. They were slightly low in body condition (2/5). The 4th affected chicken was weak but could still move. A possum or rat carcass that was mostly eaten, rotten and degraded was observed in the pen.

One of the severely affected chickens was euthanised to perform a post-mortem examination.

The following morning the diseased chickens were struggling to breathe and were euthanised. The remaining 6 chickens were unaffected.

Gross autopsy findings:
Fatty liver. BCS 2/5, internal fat still visible but lacking around keel.
Mild clear mucoid discharge in the upper respiratory tract
Moderate worm burden.



Field differentials: Botulism, Marek's disease, ionophore toxicity, avian influenza, avian infectious laryngotracheitis, avian infectious bronchitis.

Lab findings:

- Negative PCR results for avian influenza, avian infectious laryngotracheitis, avian infectious bronchitis, Newcastle disease.
- Bacterial culture did not isolate significant organisms.
- No parasites found on faecal floatation and those seen on PM are likely incidental.
- Botulinum C toxin gene qPCR revealed a positive result in the intestine of the euthanised chicken.

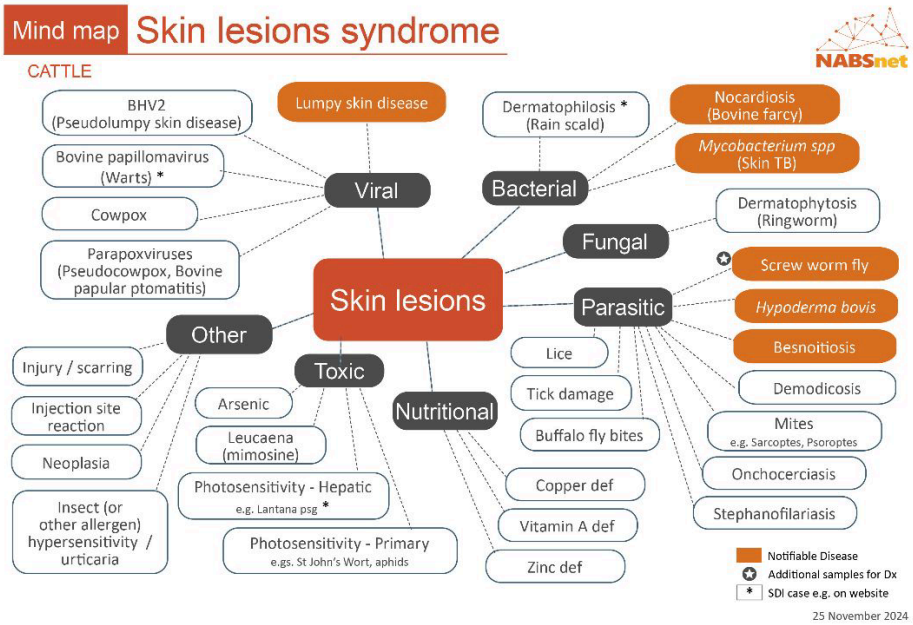
Diagnosis: Botulism.

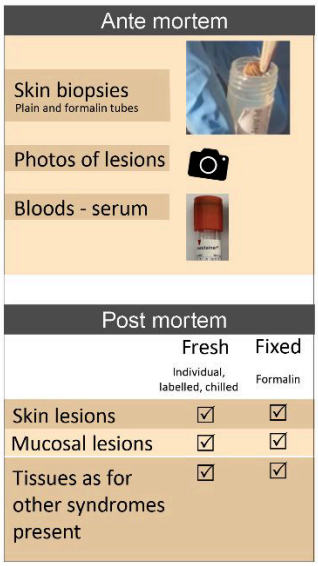
Recommendations:

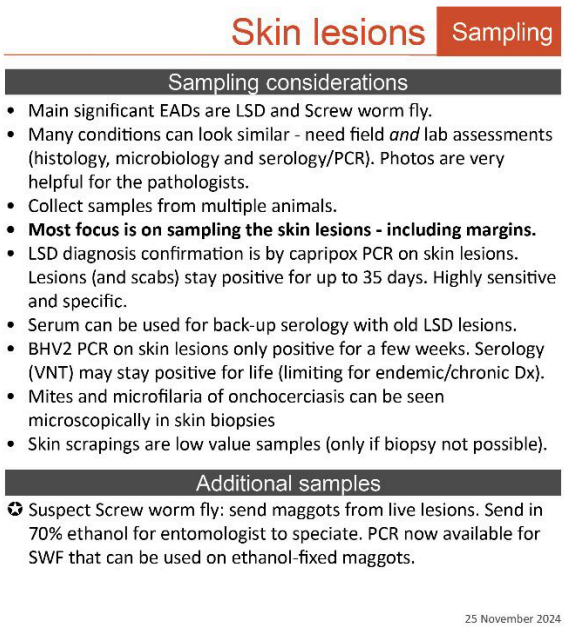
- Botulinum toxin can be ingested from an affected carcass when chickens peck at it or eat the maggots from it. Ensure there are no dead animal carcasses in the pen with the chickens - walk through the cage at the time of feeding and remove any dead animals. Consider control for rodent infestations.
- Provide clean water and feed chickens from a feeder rather than off the ground.
- Worm chickens every 6-8 months.

See WA DPIRD poster guide to chicken necropsy

Skin lesions syndrome ddx and sampling guide



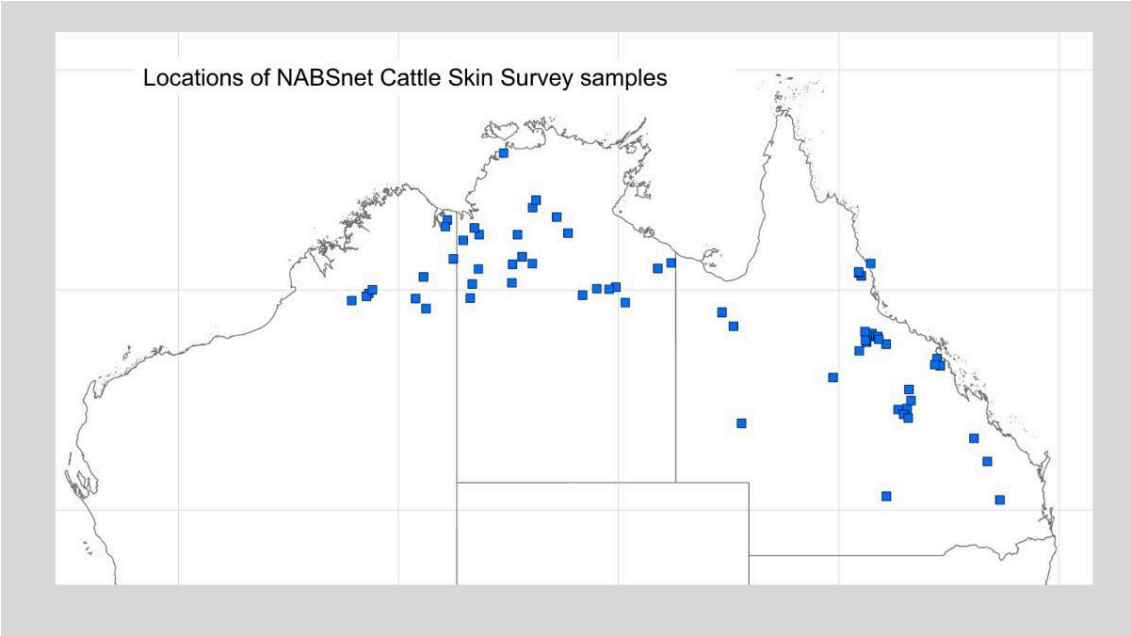


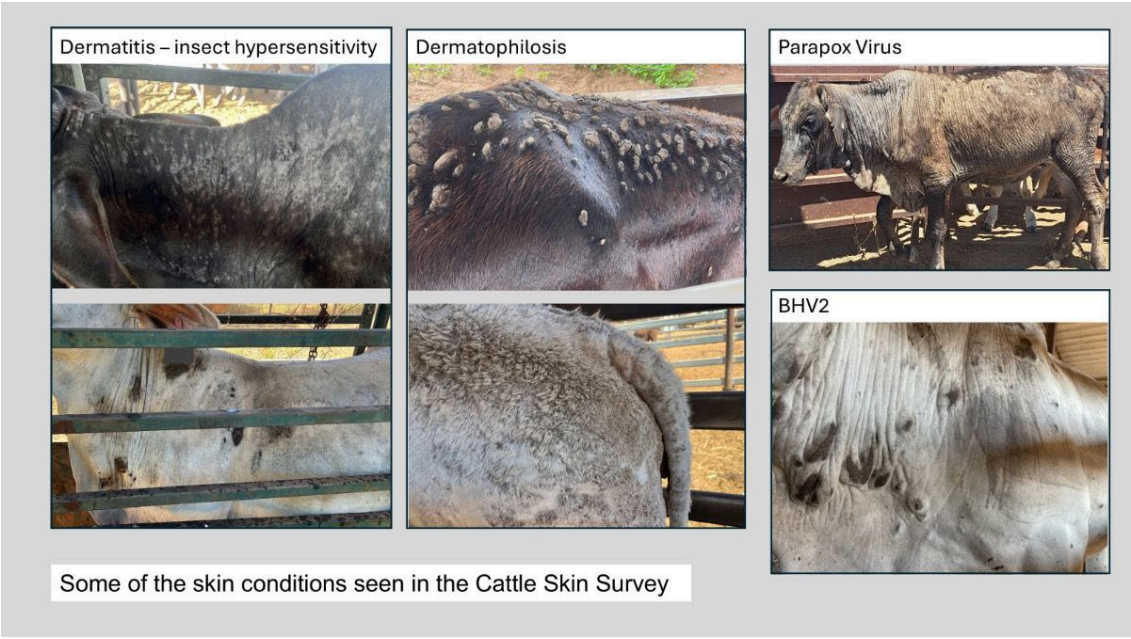


[Download the mind map and sampling guide]

Cattle Skin Survey - a strong northern picture

The NABSnet cattle skin survey is making an important contribution to our understanding of the skin lesions that occur in northern Australia. 156 animals have been sampled to date, with the most common confirmed diagnosis being dermatitis due to insect bite hypersensitivity (43% of cases).





Some of the skin conditions seen in the Cattle Skin Survey

The survey continues to June 2025

The funding arrangements for the NABSnet Cattle Skin Survey continue until the end of this Financial Year (24-25). The subsidy has been increased to $600+GST (+freight if required).

How to participate

- Take photos of the lesions
- Collect punch biopsies (fresh + fixed)
- Collect serum and EDTA bloods (if possible, not critical).
- Fill in the lab submission form AND the Cattle Skin Survey submission form.
- Pack and freight to your relevant state lab, to arrive the next day.
- Submit photos to the state lab email **AND** to Teagan 0466 614 706. **You must send photos to be eligible for the subsidy.**

NT: BVL.DITT@nt.gov.au

QLD: bslclo@daf.qld.gov.au

WA: DDLS@dpird.wa.gov.au

More info and forms here

AI (the bird kind) and flying drones - Nina Kung's career & passions

The notice for next year's Masterclass says '*Send your EoI to Nina Kung*' - because Nina will be hosting the event on behalf of QDPI when it runs at Townsville in March.

Nina Kung has been a key person in NABSnet for the Qld govt since 2018 when the program began. We know she's a Senior Principal Veterinarian in the field and policy for Biosecurity Queensland – but how did she get there and what are her passions?

"Well, I have two bachelor veterinary science degrees, the first from National Taiwan University, and the second from Massey in New Zealand. When my family moved from Taiwan to NZ, my first degree wasn't recognized for registration, so I enrolled in Massey in second year, and did it all again – dedication to wanting to be a vet as my career!"

"In between those degrees I came to JCU and did a MSc degree in Veterinary Virology & Immunology, focusing on bovine viral diarrhoea. And after I'd finished my undergrad degree at Massey an opportunity came up to go to Hong Kong to do a PhD in Veterinary Epidemiology on avian influenza viruses. This was just after the H5N1 outbreak in Hong Kong that AIV was identified for its zoonotic potential which was not recognised previously in history"

When Nina came back to Queensland that experience led her into working on the Equine Influenza outbreak (2007-2008), Hendra virus incidents (2008-2014), White Spot Disease outbreak in prawns (2016-2017), Japanese Encephalitis outbreaks in piggeries (2022) and

the COVID-19 outbreak with Queensland Health COVID-19 emergency response control centre.

Her field role in Hendra took her to every infected horse property, taking histories and sampling to confirm that the transmission was associated with bats. And her interaction with the private practitioners led to a year as President of the Queensland Division of AVA.

“Since then I’m very keen to support private vets interacting with farmers, being out there able to watch for diseases important to biosecurity and human health – that’s what drives my NABSnet involvement”.

Avian Influenza has continued to play a big part in Nina’s career, she samples wild birds (and their poo) as the National Avian Influenza in Wild Bird Surveillance project in Southeast Queensland and has assisted with High Pathogenicity AI outbreak responses such as the recent H7N3 & H7N9 events in Victoria.

Sampling migratory shore birds that had been caught in cannon netting.

And AI has led to one of her passions - being a certified drone pilot. Nina utilizes drones for her wild bird surveillance.

“Sometimes by the time I walked there the birds had just scattered away. So I thought - send up a drone and have a look - then I’ll know where and what species they are and whether they look sick or not”.

When she's not living her veterinary life, she's likely in her garden – "we have lots of fruit - mandarin, orange, lime, lemon, pawpaw, dates, mango, guava. Before I started on my veterinary path I was going to grow flowers commercially – but I decided a professional degree would be a better one – lots of different opportunities and people to meet".

If you come the Masterclass make sure you have a chat with Nina, especially if you're a wild bird, drone, garden, virology, epidemiology, biosecurity or general life enthusiast.

Is everyone in your practice getting the NABSnet newsletter?

If not, or if they are relying on getting a FW: copy, encourage them to sign up to receive it direct and keep up-to-date with info relevant to cattle practitioners across the north. Super easy to do:

click here

First name, last name, email - and it's done

Frontline rangers – biosecurity on coast and Country

Map showing 65 Indigenous Ranger groups working with DAFF through fee for service contract arrangements

More than 60 community-based Indigenous Ranger groups are enhancing Australia's biosecurity effort across the 10,000km coastline and interior Country across the north of Australia. The Department of Agriculture, Fisheries and Forestry's (DAFF) Indigenous Ranger Biosecurity Program (IRBP) brings together local and traditional Indigenous knowledge and stewardship practices with the expertise of Northern Australian Quarantine Strategy's (NAQS) scientists. The IRBP works with stakeholders to build biosecurity capability and provide economic opportunities for Aboriginal and Torres Strait Islander communities.

Indigenous rangers undertake fee-for-service activities including:

- high-risk aquatic infrastructure monitoring
- plant host mapping
- community animal health reporting
- exotic pest, disease and weed surveillance
- trapping for insects that carry animal diseases and
- raising community awareness.

Utilising existing biosecurity fee-for-service contracts to support Indigenous rangers in ghost nets and marine debris clean ups on Sea Country in the north of Australia, the IRBP delivers the Indigenous Ranger Coastal Clean-up Project in partnership with Parks Australia's Ghost Net Initiative.

Cairns' Biosecurity Engagement Officer Kylie Smith and Djunbunji Land and Sea Rangers, Qld.

Through the IRBP, DAFF has contracted 16 Indigenous ranger groups to assist in the vital early detection surveillance for avian influenza. This involves keeping a look out for sick or dead birds and taking samples from locations where the disease could arrive with migratory birds.

The Bulgul team checking marine debris washed up near Horseshoe Bay, Bulgul, NT.

Thamurrurr Rangers from Wadeye, NT collecting samples to test for avian influenza.

Key NABS SDI network contacts

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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.