



Skin in focus

Hi all in the NABSnet network

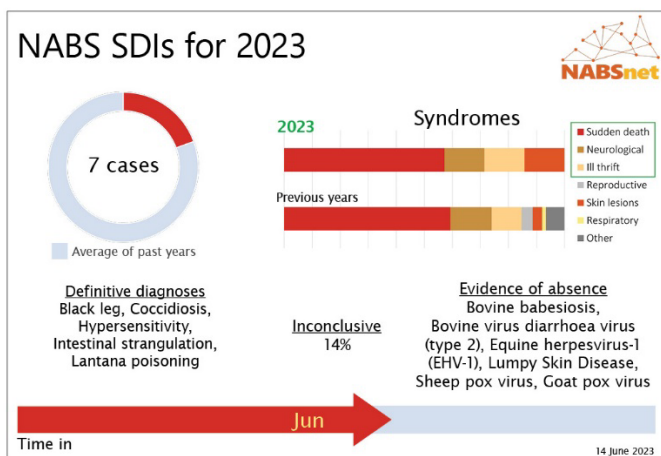
Skin lesions in cattle are getting a lot of attention at the moment, with good reason given we're on the alert for LSD.

What do you make of the lesions in the SDI featured here? Let me know if you have experience with similar cases and can shed light on possible causes. It would be great to know what others have seen.



And don't forget that we are currently running the survey of cattle skin lesions seen at routine work. Send a fresh and fixed biopsy and blood from any animal with a dermatological condition - \$500 per property submission – see below for details.

Cheers Kev



Necrotising skin lesions – open Dx

Have you seen this syndrome? Share your thoughts with Kevin.

Case definition: Multiple animals presenting in the late wet period with large necrotic skin lesions on the lateral trunk and/or rump. Affected animals all light-coloured Charbray, mixed sexes, 3 years or younger.

History: in February 2022, on a property in coastal North Queensland, a weaner steer was noted to have a large band of skin necrosis and sloughing over the tail base/rump. This animal's wound healed and was suspected to be photosensitisation at the time. This animal was the only one affected, so investigation was not pursued.

In February 2023 on the same property, a heifer was noted to have significant necrotising lesions of the skin, extending from caudal shoulder blade to flanks (bilaterally). A large eschar formation was beginning to slough with a serosanguinous exudate. Beneath the eschar was a healthy granulation bed. This animal was not seen at the muster in March so is presumed to have died.

Following this initial case, another 13 animals presented with the same lesions over a period of 6 weeks. The property is 9000 acres so not all animals are seen regularly, and no earlier lesions or clinical signs had been noted.



Cattle with large areas of necrotising skin

The animals affected ranged from 6 months to 3 years and included heifers, steers, cows, and a calf. No old cows were noted to be affected.

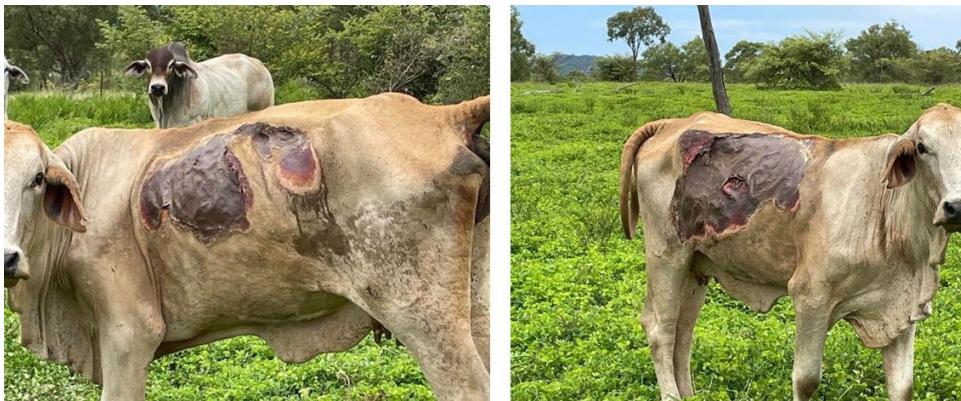
The property runs approximately 950 head of Brahman and Charbray animals with all affected animals noted to be Charbray animals that were light-coloured (grey or yellow).

All cattle are vaccinated with 7in1 and botulism as calves and then yearly for botulism in June/July when bulls are pulled from the paddock. Weaners are wormed with Dectomax at the time of weaning, prior to being bushed and then again 6-12 months later.

All cattle are bred on the property with no introductions except bulls which are typically isolated before joining. At the time of investigation there had been no new introductions to the property for over 12 months. Topical treatments administered include Supona fly spray at the first muster after the wet season, meaning the affected animals had not been treated with any topical products for at least 12 months.

The affected animals were from the first calf heifer paddock and steer paddock, different paddocks which do not boundary each other on the property. The paddocks contain a variety of couch, Seca, Verano and Wynn Cassia mostly and at the time of the investigation a good body of feed was present owing to a good wet season. There is Lantana (pink and white varieties mostly, yellow and orange also noted, no red varieties known to be present), crotalaria and coffee Senna present throughout all paddocks with no cases of toxicity previously noted. Uramol lick blocks and phosphorus lick blocks are fed year-round.

Clinical signs: The lesions varied in size and severity with some animals being affected across the entire lateral trunk and others having smaller patches affected. All lesions were isolated to the trunks and rumps of the animals. There were no lesions noted on the udders, ears or vulvas as would be expected in animals with photosensitisation.



All lesions occurred on the trunks or rump

Field differential diagnoses were:

- Atypical photosensitisation secondary to lantana toxicity
- Primary photosensitisation
- Severe Dermatophilus or other dermatitis
- Contact dermatitis

Post mortem examination: A heifer was selected for post-mortem. Blood samples were taken, and the animal was examined prior to PM with the only changes noted to be pale mucous membranes and mild dehydration. No significant abnormalities were noted on post-mortem. Both fresh and fixed skin samples were obtained.

Two other animals were examined and had blood and skin samples taken with a biopsy punch.

Laboratory findings: Initial reporting on the post-mortem samples was a diagnosis of photosensitisation (primary). No changes to the liver were identified to suggest secondary photosensitisation. However, after receiving the photos and a more thorough history via email, the revised diagnosis was necrosis likely due to a topical caustic substance.

The pathologist requested samples from an animal with earlier lesions as the skin samples sent were showing evidence of healing. However, animals had only been presented with the lesions in the photos above. No other abnormalities were noted on any animals in the month leading up to the first animal presenting.

Case assessment and plan: No new animals have presented since March and wounds are healing progressively. Should the disease follow the same pattern as this year, we should expect new cases in the wet season next year and attempts will be made to catch early lesions for further diagnostic testing.

Post script: Since this SDI was submitted, cattle with very similar lesions were reported seen on a different property 500 km distant in 2022 and 2023 - photos from 2022 below.

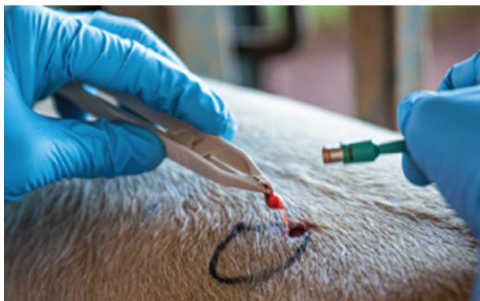


Similar lesions seen on a different property in 2022

NABSnet cattle skin survey

Samples collected from skin lesions observed during routine cattle work can be submitted to the labs to get a confirmed diagnosis, and contribute to our 'evidence of absence' of LSD. Each property submission can be invoiced through NABSnet for \$500 + freight where relevant.

- NABSnet practitioners who are going on property to do routine work identify cattle with skins lesions and draft them off for sampling. Up to 2 animals with a similar clinical condition to be sampled, for as many clinical conditions as seen on that property (eg 2 animals with *Dermatophilus*, 2 with papillomas).
- LSD sampling kits will be supplied, with a standard submission form and simple supplementary form. An info flyer for the property owner will also be supplied.
- What to do to send samples:
 - **Photograph** the lesions
 - Fill in the **history** and **description** of the lesions on the submission form
 - Collect two biopsies from each animal: a **formalin fixed** and a **fresh sample**
 - Collect **serum and EDTA blood from each animal** sampled - NOTE this is not required in WA (different lab protocol).
 - Pack the samples and **send to the state Lab** with the lab submission and supplementary forms, to arrive the next day.
 - **Email the photos** to the lab (or include with the submission).
- Notify Kevin Bell that the samples have been sent and get OK to send an invoice.
- Report the results to the property owner (no written report needed).



[More info on the cattle skin survey](#)

Tips and traps on submitting tissue samples

Fixed tissues

- Collect slices not chunks – maximise surface area for fixative penetration
- Use 10 times the volume of fixative as tissue (10:1 volume ratio)
- Pour off fixative after 24 hours to reduce weight and minimise spillage - tissues should remain damp so add some paper towel soaked in formalin and seal the pot with electric tape.
- Transport fixed tissues in one pot to save space

Fresh tissues

- Always use separate pots for each organ
- Ensure fresh tissues are not exposed to fixative - seal or use a separate box
- Keep fresh tissues cool



Evidence of absence and its trade benefits

Freedom from emergency animal diseases (EADs) gives Australia immense economic benefits and is required for our ongoing exports to important trading partners.

However, being free isn't enough - we must have the evidence to demonstrate the absence of EADs. There are two main channels for this:

- The World Organisation for Animal Health (WOAH) officially recognises countries' freedom status for six trade significant diseases. Each year we must submit the necessary evidence to retain our official freedom status – a process met with increasing scrutiny, especially around exclusion testing data.
- Trading partners also request similar evidence from Australia in separate bilateral processes. The building blocks of this evidence comes from our exclusion tests and disease investigations. Only then can we continue to maintain our access to overseas markets.

Australia's freedom status and transparency in reporting notifiable disease movements gives trading partners the confidence to continue importing Australian goods.

For example, bilateral negotiations with trading partners were needed to restart our exports following the Victorian outbreak of high pathogenicity avian influenza in 2020. The success of these negotiations has meant a strong recovery for our exports. Key evidence submitted during this process demonstrated robust exclusion testing activities and transparency in outbreak locations (and their resolution).

6 diseases with statuses officially recognised by WOAH



African horse
sickness



Classical
swine fever



Contagious bovine
pleuropneumonia



Foot & mouth
disease



Lumpy skin
disease



Peste des
petits



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.