

### **SDIs to date, and 'evidence of absence'**

Hi all

Here's a summary of the number and type of SDIs so far this year. To date we have only had a quarter of the number of SDIs seen, on average, in previous years, so with only 4 months to go, it would be great to see more investigations happening.

The SDI in this edition reminds me of the importance of 'evidence of absence' – the contribution that our disease investigations can make to demonstrating Australia's freedom from particular diseases by providing 'rule outs'.

**A negative result from a credible case** – where the disease could be a realistic differential based on the clinical and post-mortem findings – helps to demonstrate absence of the disease in northern Australia.

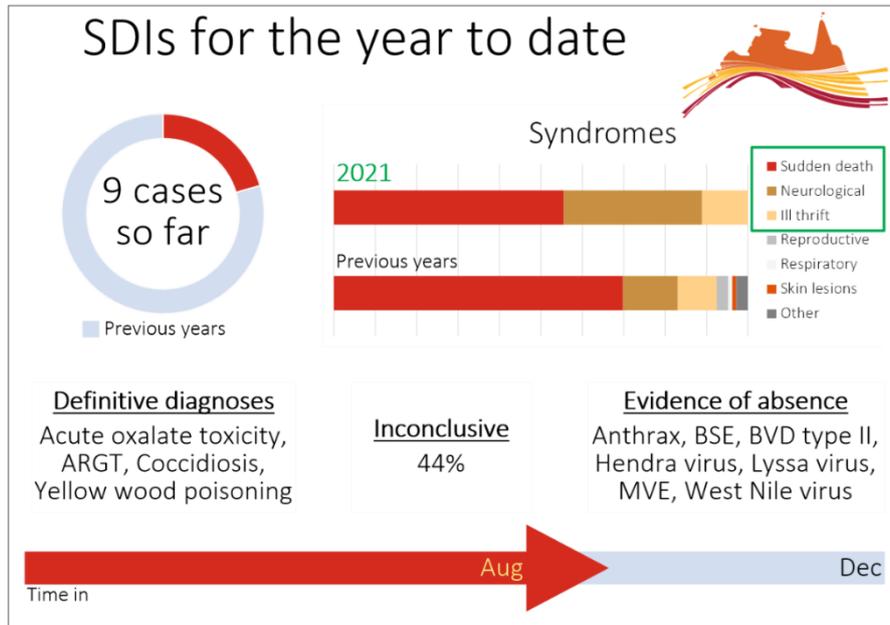
In the SDI featured here, bulls with respiratory signs and lung lesions had Contagious Bovine Pleuropneumonia (*Mycoplasma mycoides mycoides*) **excluded** by culture. CBPP has not been diagnosed in Australia since the 1970s; before eradication it had restricted cattle exports for over 100 years.

SDI exclusions of exotic cattle diseases help our international trading arrangements today.

So do undertake an SDI whenever a client reports a significant disease event – in addition to solving the problem, you and the pathologists can suggest rule outs that are an important part of keeping our export status.

Cheers Kev

Newsletter #32 (20 August 2021)



## What plant is this?



Answer below



## **15 of 40 bulls dead after respiratory and nervous signs**

In July 2021 some bulls in a mob that had been progressively yarded over a month started showing respiratory and nervous signs. The station manager called after 3 had died, four days after the onset of clinical signs.

The signs ranged from mild to severe. Very sick animals were lethargic, stood with a wide-based posture, had a high respiratory rate, nasal discharge and had tremors and twitching.

The bull mob was made up of aged herd Droughtmasters and younger wild cleanskins on a station in the Pilbara. The Droughtmasters had come into the yards earlier than the cleanskins and more were affected.





None of the weaners and spayed cows brought into adjacent pens in the previous 2 days were affected. There was no sign of poisonous plants in the yards. All animals in all of the pens were fed a diet exclusively of grass hay from Perth.

**Post-mortem examinations** were performed on two bulls: one recently dead animal and a severely affected animal that was euthanised by captive bolt.

Both animals had enlarged hearts and pulmonary lesions. Lung pathology was extensive in one bull (consolidation, fibrinous adhesions and firm irregular shaped caseous lumps) and seen as bluish patches of consolidation of cranioventral and middle lobes in the other.

The differential diagnoses included: Annual Rye Grass Toxicity, BRD and pyrrolizidine alkaloid toxicity.

A full set of samples were submitted to the lab including bloods, tissues (lung, heart, liver, kidney, spleen, lymph nodes, GIT, spinal cord, skeletal muscle), rumen contents, brain from one bull, and a hay sample.

The manager was advised to put distance between the bulls and cows/weaners (in case there was an infectious agent involved) and to change the hay. Mortalities continued with 7 more Droughtmaster bulls dying.

**Lab results:** Histopathology of the brain provided the definitive diagnosis for this case - with acute multifocal high protein fluid vascular leakage in the cerebellum being typical of ARGV. The hay sample was negative (see tip about required sample weight and technique) and rumen contents were ELISA positive for ARGV.

Tests were negative for common respiratory pathogens (including BRSV, Bovine Coronavirus, BHV-1, Bovine Parainfluenza virus and pestivirus). The samples contributed to evidence of absence of the exotic Contagious Bovine Pleuropneumonia.

**Recommendations** to the property owner once the ARGV results were known were: not to use any more hay from that batch; to let all animals out of the pens to graze on pasture; and to test hay containing rye grass in the future. Only two more bulls died.

## Tips on submitting samples of hay for ARGT (DPIRD)

Galls are often unevenly distributed within hay bales. Ideally the sample should be a combination of sub-samples. Even with ideal sampling, 'hot' spots may be missed.

**Sample weight** A minimum sample weight of 100 grams is required for testing. Samples should not exceed one kilogram. If you have multiple bales, collect a sub-sample from up to 10 bales to make up a total of 1kg.

**Sampling technique** Take representative 'grab' samples from within the bale. Only ryegrass seeds can contain the toxin. Try to sample as close as possible to the centre of the bale as this area is the most likely to be compressed and holding all ryegrass seed head (if present) in place, rather than falling to the ground.

**Submission** Put the hay sample/s into a clean plastic bag. Label the sample and submit.

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### Q. What plant is this?

A. *Indigofera linnaei* (Birdsville indigo, or nine-leaved indigo) - a native perennial legume that is resistant to drought and palatable to grazing livestock.



Causes: Birdsville horse disease (unidentified toxin); chronic liver poisoning in dogs that eat meat from horses or camels that have grazed the plant (toxin = indospicine)

Indospicine toxicity has recently caused severe liver disease in 68 Victorian dogs (24 died) that were fed pet meat containing flesh from horses sourced from the NT.

[More details from AgVic](#)

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## Tips on testing for Johne's disease

Field vets undertake testing for Johne's disease for diagnostic purposes when livestock are showing indicative clinical signs, as part of industry assurance programs, to meet importing country requirements in livestock export, or to meet inter-state livestock movement requirements.

It's essential to get sampling right – here's a guide from the 3 vet labs (WA, NT and Qld) on what [samples to collect and how to send them](#).

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## NABSnet - what do you want?

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### Key contacts for the NABS SDI network

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

Let us know anything you'd like covered here or on the website