



Vets – essential services – NABS networked

No doubt you will have heard the news that on 27 March the Hon. David Littleproud MP, Minister for Agriculture, recognised that vets play an essential role in Australia. That's not news to those of us who are vets, but it's certainly great to get that endorsement from the highest level of government.

No doubt COVID-19 will have impacted you all in some way – whether personally or from a business perspective. We wish all of you the best in getting through this.

A big part of NABSnet is the network, so if you've got any tips or tricks for how you've been dealing with the current situation, issues you're grappling with, or want to share some stories or photos of your new 'normal', we'd love to hear from you.

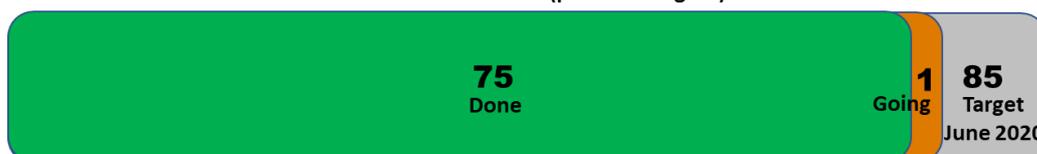
There is a great workup of an SDI of bull fatalities in this newsletter and a reminder again on ocular fluid collection technique.

And ASF moves even closer – now into PNG – remain alert for any disease in feral pigs in the north.

Cheers Kev

Newsletter #19 (15 April 2020)

NABS SDIs (private and govt)





Sudden death of 15 mature bulls

In February 2020 in northeast WA, 15 Charbray bulls (4-8 years of age) died overnight when being held in yards following routine fertility examination. They were part of a group of 40 bulls that had been drafted as culls into a small side yard.

The dead bulls were in lateral recumbency, with no real signs of struggle or bloat, but all with rumen fluids draining orally.

Aqueous humour was collected from the eyes of three bulls. Another three were autopsied but autolysis had started. The blood was dark. The rumens were reasonably full of what looked to be the grasses and weeds present in the yard and not much else. Liver and kidney samples were collected.

Samples of pigweed and button grass were collected from another small, unused yard. Intoxication headed the differential list, with nitrate/nitrite poisoning considered the most likely.

Nitrate-Nitrogen levels in the aqueous humour of all samples exceeded the assay limit and confirmed the diagnosis.

Test Type: Nitrate-Nitrogen in fluids -vitreous humor and water - semi quantitative. (NATA accreditation does not cover the performance of this service.)

Date Tested: 27/02/2020

Spec No	Spec ID	Spec Description	Nitrate-Nitrogen in Fluid mg/L
0001	1	Aqueous Humor	>47.0
0002	2	Aqueous Humor	>47.0
0003	3	Aqueous Humor	>47.0

These level in the aqueous humour of eye is definitive for nitrate poisoning



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The nitrate level of both plant samples was above 1% on a dry matter basis, a level regarded as high and hazardous to stock.

These plants were growing vigorously in nitrogen-enriched soils in the cattle yards. The bulls were hungry, having been off feed, and had little rumen fill to dilute the forage.

Don't underestimate the potency of forage that grows in cattle yards over a wet season especially if the livestock are hungry with empty rumens. Recommendations included ways to mitigate these types of risks in the future.

[Read more](#)



Collecting ocular fluids in cases of sudden death

Clinical chemistry on ocular fluids can help diagnose causes of sudden death, including: urea and nitrate/nitrite poisoning; cyanide poisoning; pregnancy toxaemia/ketosis (beta hydroxybutyrate); ruminal acidosis (D-lactate); hypocalcaemia; and hypomagnesaemia.

The eye is relatively isolated and protected so you can collect aqueous and/or vitreous humour that is of value in an investigation for up to 48 hours after death. Even in autolysed carcasses ocular fluids can provide some useful diagnostic information.

Collect from as many animals as you can in multiple sudden deaths.

Note: Don't use ocular fluid biochemistry as a sole diagnostic criterion but as an adjunct to other information: clinical history, gross pathology and estimated time of death. Reference ranges are not available for many analytes but extreme values are likely to be useful indicators of a particular disease or exposure to a toxin.

How to collect / transport aqueous and vitreous humour

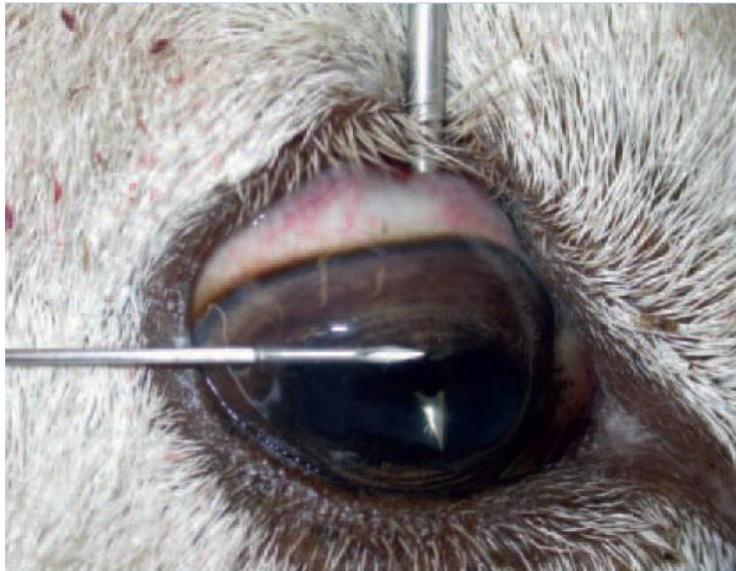


Photo credit Edwards, Foster and Livesey, 2009

- Use an 18-gauge needle and 3 ml syringe. Use a syringe rather than a vacutainer to reduce the likelihood of getting tissue contamination of the sample (which can affect results).
- **Aqueous humour** - the watery contents of the anterior chamber. Insert the needle horizontally just below the cornea. Face the bevel of the needle towards the cornea, to avoid the iris.
- **Vitreous humour** – the gel-like contents of the posterior chamber. Insert the needle via the sclera into the centre of the globe behind the lens (the tip of the needle may be seen through the pupil). The needle and aspiration may need to be slightly adjusted to collect the viscous fluid.
- If there is blood contamination, start again on the other eye with a fresh needle and syringe.
- Transfer the samples to plain blood tubes (without anticoagulant) for transport. Choose as small a tube as you can to reduce the airspace above the sample (to avoid evaporation of analytes). Most samples should be chilled (for ruminal acidosis, ketosis, hypocalcaemia, hypomagnesaemia, salt poisoning, nitrate/nitrite).
- Immediately freeze sample for cyanide and ammonia testing. Alternatively, for cyanide testing, you can send the whole eyeball chilled.
- Label and send to the lab as soon as practicable.

[This guide](#) is in the Resources section on the NABSnet website

African swine fever now confirmed in Papua New Guinea

On 28 March we got the unfortunate news that African swine fever (ASF) has now been confirmed in Australia's nearest neighbour, PNG. The Australian government is working with the PNG government to assist with the response; remotely given current COVID-19 travel restrictions.

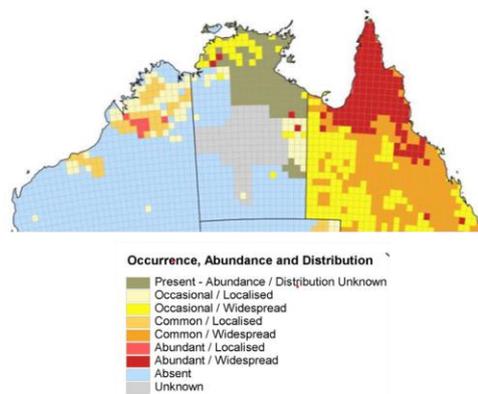
This is a timely reminder that, while the world may be focused on COVID-19, diseases like ASF can and will continue to spread.

While most of you will rightly be focused on livestock or companion animals in your day-to-day, please keep in mind that we want to know about ANY significant disease events, even those in wildlife or feral animals like pigs.

While there's no commercial pig industry in the north, there's plenty of pigs! Talking to your clients about feral pigs and ASF can be a good segue to highlighting the importance of biosecurity and disease investigations for their business.

And lots of stations have pigs for fattening. Also discuss being alert for illness/death in backyard pigs and the dangers of swill feeding and access to rubbish. If they feed table scraps these MUST NOT contain meat scraps or products, including gravy, stock, bones etc. If any doubt (ie risk of tired workers throwing meat scraps into the pig feed bin) then advise them to stick to commercial pig feed products.

Feral pig distribution 2006-07 (Peter West, DPI NSW, Invasive Animals CRC)



[This info resource](#) on African Swine Fever is available from Qld DPI.

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Happy to help

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

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