



Australia's ability to sell livestock and livestock products depends on evidence from our surveillance systems that we are free of livestock diseases that are reportable or affect trade. To gather this proof of freedom, the Department of Agriculture and Food, Western Australia (DAFWA) investigates cases where livestock show signs of disease similar to reportable or trade diseases. The *WA livestock disease outlook – for vets (WALDO)* is collated from information collected by DAFWA and private veterinarians as part of proving Australia's freedom from those diseases and in 2015/16 allowed WA to access markets valued at \$2 billion.

Recent significant cases submitted to DAFWA Diagnostic Laboratory Services (DDLS)

Case data from January 2017 to February 2017

Sudden death in Angus steers and heifers in the Goldfields-Esperance region

- Twenty young, recently introduced steers and heifers died in a herd of 400 cattle.
- Some animals showed signs of gait abnormalities and lethargy while others died without any clinical signs.
- The cattle were weaned on hay and then turned out onto barley and oat stubble. Ryegrass and ergot were known to be present in the paddocks.
- Based on the clinical signs, the appearance of ruminal and abomasal inflammation on postmortem and the nutritional history, the main differential diagnoses were acidosis, annual ryegrass toxicity (ARGT), ergotism and bovine viral diarrhoea virus (BVDV).
- Testing for plant toxins excluded the involvement of ergot, ARGT and fluoroacetate-containing plants.
- Samples submitted to DDLS showed severe, necrotising myocarditis with similarly affected areas of skeletal muscle and a mild, necrotising encephalitis and meningitis.
- The acute and severe necrosis and inflammation of the heart were attributed to the bacterium *Histophilus somni*, which was cultured from the heart sample. Low vitamin E in a liver sample coupled with changes to the muscle groups suggested that nutritional myopathy was contributing to disease in the herd.
- Systemic *H. somni* can occur in young cattle with the stress of transport, mixing and new management systems and affected stock may need to be treated with antibiotics.
- Testing was negative for BVDV Type 1 (BVDV-1) and the reportable disease bovine viral diarrhoea virus Type 2 (BVDV-2) was ruled out with PCR testing. BVDV-1 is present in Australia, but the more severe Type 2 found in North America and Europe has not been detected in Australia.

Exclusion testing for [reportable diseases](#) such as [bovine viral diarrhoea virus Type 2](#) supports Western Australia's proof of freedom for export to BVDV-2-sensitive markets.

Annual ryegrass toxicity in a 14-year-old pony in Perth

- A private vet examined a 14-year-old pony that started showing signs of muscle fasciculation, facial twitching, wide base stance, hypermetric hind limb gait and ataxia.
- The pony was being fed meadow hay sourced from a local supplier.
- It was unknown if the meadow hay had been tested for annual ryegrass toxicity (ARGT).
- All grazing animals are susceptible to the toxin, including horses and pigs.
- A faecal sample and hay sample were submitted for testing and the results were ARGT positive in the faeces and high risk in two out of three of the hay samples.
- ARGT may be difficult to diagnose if hay is sampled incorrectly or insufficient samples are provided. Go to DAFWA's webpage on [testing hay for annual ryegrass risk](#) for more information and sampling instructions.

Collapse and anaemia in dairy cow in the South-West

- A private vet was called to investigate a five-year-old cow, 120 days in milk, which collapsed when coming in for evening milking.
- She was found moderately bloated with a fever and increased heart and respiration rate.
- Samples sent to the lab confirmed a non-regenerative anaemia and thrombocytopaenia with hypocalcaemia, hypermagnesaemia and hyperphosphataemia.
- Hypocalcaemia (milk fever) occurs mainly around calving and early signs include agitation or excitement, muscle fasciculations and ataxia. This can lead to collapse and in some cases death.
- Nutritional management of pregnant and lactating cows is important in preventing hypocalcaemia.
- Given the signs and presence of anaemia, the cow was tested for *Theileria orientalis* group by a PCR test and the results were negative.

[Bovine anaemia due to *Theileria orientalis* group \(BATOG\)](#) causes a severe regenerative anaemia in an infected animal and signs can include jaundice, pallor and red urine. The main vector is the bush tick (*Haemaphysalis longicornis*), which occurs in WA south western coastal areas. Veterinary sampling kits are available if *Theileria* is suspected. Samples can be submitted to DDLS for testing for BATOG and other diseases that may cause similar signs. Contact your [DAFWA field veterinary officer](#) to obtain a testing kit.

In March, due to high summer rainfall and flooding, be on the lookout for:

Disease	Typical history and signs	Key diagnostic samples
<p>Conditions associated with feed</p> <p>Read more on supplementary feeding</p>	<ul style="list-style-type: none"> Grain overload/acidosis: Supplementary feeding of animals without sufficient roughage or gradual introduction to grain may result in cases of grain overload/acidosis. Signs include diarrhoea, bloating, sawhorse stance and ataxia. Lupinosis is common in summer and autumn especially following rainfall. Toxicity from the fungus, <i>Diaporthe toxica</i>, that colonises lupin stems and occasionally seeds, tends to increase following summer rain events. Lupinosis signs may be neurological in acute cases and consistent with liver disease in chronic cases. 	<p>Postmortem</p> <ul style="list-style-type: none"> Test rumen pH in the field; a pH of <5 is diagnostic for acidosis, <5.5 is suspicious. Test this during PM as pH increases with time from sampling. Rumen (fixed)
<p>Toxic weeds</p>	<ul style="list-style-type: none"> Assess for a history of access to toxic plants that may have sprouted since the rain. Stock are more likely to eat unusual green plants when dry pasture is wet. Slender iceplant is a prostrate succulent common in the eastern Wheatbelt. Signs of poisoning may include weakness, sternal recumbency, clear nasal discharge and decreased ruminal movement. High levels of sodium attract sheep and high levels of oxalic acid cause oxalate poisoning. <i>Gastrolobium</i> sp contains fluoroacetate (1080) and can cause weakness and sudden death. Caltrop is widely distributed throughout WA, germinates following summer rain, and sheep will readily eat it. Caltrop contains a liver toxin causing jaundice, weight loss and death. Lesser loosestrife is distributed widely through the South-West. When it is the only green feed available, it can cause significant mortalities in sheep as a result of liver and kidney damage. 	<p>Postmortem</p> <ul style="list-style-type: none"> Brain (fixed) – for animals showing neurological signs +/- sample set for TSE exclusion 1mL vitreous humour (chilled) <p>Plant</p> <ul style="list-style-type: none"> At least 50g of plant 50mL of rumen content (frozen)
<p>Barber's pole worm</p> <p>Read more on the Paraboss website</p>	<ul style="list-style-type: none"> The development of eggs and larvae of Barber's pole worms (Haemonchus contortus) is favoured by warm and moist conditions. High summer rainfall may cause cases further inland than normally seen. Larvae can survive on pasture for some time especially during cool conditions. Even adult sheep are at risk of infection with Barber's pole worm. Anaemia, 'bottle jaw', weakness and collapse (especially when moved) are characteristic signs. 	<p>Antemortem</p> <ul style="list-style-type: none"> Faeces – 50g for worm egg count <p>Postmortem</p> <ul style="list-style-type: none"> Alimentary sections – abomasum, jejunum and duodenum (fixed) Abomasal content for total worm count.

Include base samples and any clinical or gross lesions in submissions. For advice on sample submission, contact your [DAFWA field veterinary officer](#), see the DAFWA [sampling and postmortem resources webpage](#) or phone the DDLS duty pathologist on +61 (0)8 9368 3351.

Do you know about recent changes to the Medicines and Poisons Regulations 2016?

Veterinarians should note that updates to the Medicines and Poisons Regulations 2016 came into effect on 30 January 2017. There have been changes to the regulation about veterinary nurses and possession of Schedule 8 (S8) drugs and veterinary disposal of expired or otherwise substandard S8 drugs. The Department of Health has modified how drug [safe sizes](#) are calculated using human doses rather than grams and has specifications for small versus large safes. You can download the regulations from the [State Law Publisher](#).

We welcome your feedback. To provide comments or unsubscribe, email michaela.mcarthur@agric.wa.gov.au

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