



Australia's access to markets for livestock and livestock products depends on evidence from our surveillance systems that we are free of reportable and trade-sensitive livestock diseases. To gather this proof of freedom, the Department of Agriculture and Food, Western Australia (DAFWA) investigates cases where livestock show signs similar to reportable or trade-sensitive 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.

## Recent significant cases submitted to the Animal Health Laboratories (AHL) Mid-October to mid-November 2015

### Transmissible spongiform encephalitis (TSE) exclusion in the South-West

- Neurological signs and weight loss were seen in a four-year-old Holstein-cross cow in a herd of 150.
- The mid-lactating cow rapidly developed acute ataxia, peripheral blindness, a right-sided head tilt and hypoaesthesia. There was no response to antibiotics, mineral supplementation and thiamine so the cow was euthanased and a post-mortem performed.
- Gross findings were a dry rumen content and inflamed abomasal mucosa. The neurological signs were likely to have reduced the cow's ability to eat and drink.
- [A basic sample set](#) was collected at post-mortem, including whole brain for TSE exclusion testing as this animal presented with neurological signs, was older than 30 months and less than nine years of age.
- Australia must demonstrate to trading partners annually that it has tested animals in the correct age range showing signs similar to TSE with negative results. Testing for TSE is subsidised and supports WA's continuing access to livestock markets. Read more on [TSE testing](#) and [TSE brain removal tips](#).
- Histological examination of the brain sections proved negative for TSE but diagnostic changes for *Listeria monocytogenes* were seen in the brainstem and midbrain.
- Thiamine levels were in the normal range and annual ryegrass toxicity (ARGT) testing was negative.
- Listeriosis is a sporadic cause of encephalitis in ruminants and infection is secondary to damage to the oral mucosa, with subsequent tracking of the bacteria along cranial nerve pathways to the brain.

### Newcastle disease (ND) exclusion in pigeons in the Perth area

- A pigeon owner lost 30 birds from a flock of 120 over a three-week period.
- All affected birds showed lethargy, diarrhoea and weight loss, which can be signs of Newcastle disease. Newcastle disease would have a devastating impact on the commercial poultry sector in WA, which is valued at about \$300 million annually.
- The owner took sick birds to three different veterinary practices, who suspected bacterial and mycotic causes, but the birds did not respond to treatment. The third clinic submitted birds for post-mortem to AHL.
- Post-mortem revealed fibrinonecrotic serositis, air sacculitis and interstitial nephritis. One bird had intra-lesional bacteria.
- Microscopic findings consistent with pigeon paramyxovirus (PPMV) were observed in the kidneys and polymerase chain reaction (PCR) tests were performed at AHL and the Australian Animal Health Laboratory (AAHL). These tests ruled out Newcastle disease but confirmed PPMV Type 1.
- DAFWA put movement restrictions on the loft and provided the owner with biosecurity and PPMV vaccination advice.
- This is the first recorded case of PPMV in WA, which is a [reportable disease](#).
- Further testing at AAHL has shown that this strain of PPMV poses no threat to chickens.
- Whenever significant mortality events occur, private veterinarians should recommend that the client undertake laboratory testing and include exotic disease in their differential diagnoses.
- DAFWA subsidises investigations into significant disease events to increase the likelihood of early detection of an emergency disease and to provide evidence of WA's animal health status to trading partners.
- Read more on [pigeon paramyxovirus](#) and [Newcastle disease](#).

### Recent cases of jaundice, haematuria and lethargy in dairy cows

- In two cases on different properties, a seven-year-old Jersey cow that had calved 15 days ago and a six-year-old milking Friesian cow that had calved three weeks ago showed jaundice, haematuria and lethargy.
- The vet submitted blood and urine samples to AHL and PCR testing detected a *Mycoplasma* sp. in both cases. Phosphorus levels were normal and *Theileria*, *Anaplasmosis* and *Leptospirosis* tests were negative.

- Infection with a haemotropic *Mycoplasma* is thought to be common but clinical signs are infrequent. AHL requests that vets seeing similar cases report them so that contributing factors can be clarified.

## In summer, be on the lookout for:

Disease	Typical history and signs	Key diagnostic samples*
<b>Blue-green algae poisoning</b>  Read more on <a href="#">blue-green algae poisoning</a> .	<ul style="list-style-type: none"> <li>• Access to a dam or water source undergoing an algal bloom.</li> <li>• Cattle, sheep and goats are susceptible and usually develop:               <ul style="list-style-type: none"> <li>◦ rapid onset of muscle tremors</li> <li>◦ breathing difficulties</li> <li>◦ muscular weakness, and paralysis of skeletal or respiratory muscles</li> <li>◦ sudden death.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Collect 100mL or more of water containing the most concentrated (strongest colour) algae in the dam, refrigerate the sample.</li> <li>• Routine post-mortem samples including liver for histopathology.</li> </ul>
<b>Slender iceplant poisoning in sheep</b>  Read more on <a href="#">slender iceplant poisoning in sheep</a> .	<ul style="list-style-type: none"> <li>• Slender iceplant can cause acute oxalate poisoning, resulting in calcium deficiency, when consumed by sheep.</li> <li>• The plant is particularly prevalent in the eastern wheatbelt. Poisoning typically occurs from November to April after the plant dies.</li> <li>• Often occurs when unaccustomed sheep are moved through or onto stubble paddocks containing the plant.</li> <li>• Signs include thick, clear nasal discharge, bloating, weakness, paralysis, collapse and sudden death.</li> <li>• Affected stock can be treated with calcium borogluconate solution.</li> </ul>	<p><b>Live sheep pre-treatment:</b></p> <ul style="list-style-type: none"> <li>• 5–10mL blood per sheep in lithium heparin tube to confirm hypocalcaemia. Ideally sample 5 affected sheep.</li> </ul> <p><b>Post-mortem:</b></p> <ul style="list-style-type: none"> <li>• Look for plant in rumen. Most distinctive are the seed capsules, which resemble small cloves.</li> <li>• Include fixed rumen, fixed kidney and vitreous humor in submission. Collect vitreous with 18G needle through sclera and place in 5mL plain blood tube.</li> </ul> <p><b>Plant ID/oxalate testing:</b></p> <ul style="list-style-type: none"> <li>• 50g plant material in paper bag.</li> </ul>
<b>Vitamin E deficiency/nutritional myopathy in weaner sheep</b>  Read more on <a href="#">vitamin E deficiency/nutritional myopathy</a> .	<ul style="list-style-type: none"> <li>• In summer commonly occurs in growing sheep with no access to green feed for a prolonged period.</li> <li>• Signs include lameness, general ill-thrift and sudden death if heart muscle is damaged.</li> <li>• Signs are exacerbated with stress such as driving, shearing or heavy worm burdens.</li> <li>• A vitamin E drench can protect for 6 weeks.</li> </ul>	<p><b>Live sheep pre-treatment:</b></p> <ul style="list-style-type: none"> <li>• 10mL blood per sheep in lithium heparin tube for vitamin E levels</li> <li>• Ideally sample 5 affected sheep.</li> </ul> <p><b>Post-mortem:</b></p> <ul style="list-style-type: none"> <li>• Fixed skeletal muscle and heart.</li> <li>• 10g fresh liver for vitamin E.</li> </ul> <p><b>Commercial feed:</b></p> <ul style="list-style-type: none"> <li>• 50g sample for vitamin E levels.</li> </ul>

Include base samples and any clinical or gross lesions in submissions. For sample submission advice, consult the AHL Service Manual or phone your DAFWA veterinarian, or the duty pathologist on +61 (0)8 9368 3351.

## World Organisation of Animal Health review to support access to export markets

As WA exports about 80% of its livestock and livestock products annually, worth \$1.6 billion in 2014/15, it is vital that we can assure trading partners of the effectiveness of our livestock biosecurity systems.

DAFWA recently hosted representatives from the World Organisation of Animal Health (OIE) in WA to review Australia's animal health and production systems. A key component of the visit involved the OIE officials meeting with a stock agent, feedlot operator, feed manufacturer and private veterinarians in order to gain a greater understanding of Australia's livestock sector. The OIE officials were particularly interested in the implementation of WA's animal health surveillance system as well as food safety and traceability systems, including the National Livestock Identification System (NLIS). The OIE report will be delivered in 2016 and will be used to demonstrate Australia's well-developed animal health and animal product food safety systems to trading partners.

We welcome your feedback. To provide comments or unsubscribe, email [bruce.twentyman@agric.wa.gov.au](mailto:bruce.twentyman@agric.wa.gov.au).

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