Department of Agriculture and Food
GOVERNMENT OF WESTERN AUSTRALIA

WA livestock disease outlook

Veterinarian edition | August 2015

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-July to mid-August 2015

Neurological signs in a Dorper sheep in the Wheatbelt

- A two-year-old White Dorper ewe was seen with neurological signs in the Wheatbelt.
- The animal had foreleg knuckling and an uncoordinated gait over two days yet mentation appeared normal.
- A post-mortem revealed a hypervascular and inflamed brain and increased fluid around the brain.
- A full set of tissue samples were taken for histopathology including fresh samples of brain tissue for transmissible spongiform encephalopathy (TSE) exclusion testing. TSE testing was negative. WA must test a target number of cases each year from eligible animals with neurological signs to provide proof that WA is free of TSE in order to support our export trade and public health obligations.
- The **whole brain** must be submitted for TSE exclusions to be carried out. See the attached link for a printable PDF to guide brain removal and TSE submissions.
- Histopathology showed muscle tissue damage severe enough to explain the knuckling with no other changes in other tissues noted.
- Biochemistry showed low vitamin E levels and borderline selenium levels.
- In the absence of other findings and no history of access to toxic plants, nutritional myopathy was diagnosed.
- Read more on selenium and vitamin E deficiencies.

Sudden death in unweaned lambs in the Wheatbelt

- Sudden death in less than six-month-old unweaned lambs was seen in the Wheatbelt.
- Over a four-day period, 15 lambs died and 50 became ill in a mob of 900 Merinos.
- The lambs had been mulesed and marked six weeks ago and were on pasture with their dams.
- The lambs had been vaccinated with 6-in-1 at marking and the ewes had received a pre-lambing drench.
- Three lambs were examined and blood samples taken. All three had pale/white mucous membranes, no scours and a body condition score of two.
- Post-mortem examination on one lamb revealed a pale carcass, enlarged mesenteric lymph nodes, olive-coloured kidneys and light-brown liver.
- Testing of a full sample set revealed moderately severe, acute hepatocellular necrosis. Such a change may result from hypoxia/anoxia at the level of the hepatocyte, often seen when there is significant anaemia.
- Blood samples tested positive on ELISA for *Mycoplasma ovis* and eperythrozoonosis was diagnosed.
- Read more on eperythrozoonosis.

Anthrax exclusion in case of sudden death in calves in the western Midlands

- Cases of sudden death in 20 Hereford calves were investigated in the western Midlands.
- The animals were found dead with blood around the nose and eyes. Predation was excluded as a cause. Bleeding from orifices in cattle and sheep can be a presenting sign of anthrax.
- The animals had been exposed to plants in the genus *Gastrolobium*, which contain fluoroacetate. These were initially described as 'bacon and egg' plants, a non-specific term that describes plants in over 30 genera, and most of these plants are not toxic.
- A necropsy on one calf and histopathology showed acute myocardial necrosis consistent with fluoroacetate poisoning.
- Anthrax testing was negative. Anthrax is a zoonosis and can be fatal in humans. These cases were outside the known areas for *Bacillus anthracis* in WA but whenever veterinarians see animals with signs similar to anthrax, they should carry out a risk assessment and follow recommended sampling protocols for anthrax.
- Read more on anthrax.

Sudden death in ewe weaners in the Great Southern

- A mob of 700 ewe weaners was moved into a new paddock two to three weeks ago.
- The paddock contained capeweed, ryegrass and stubble from last season.
- 15 animals were found dead and one was seen staggering. The staggering animal was post-mortemed.
- There were signs of thickening of the small intestines, enlarged mesenteric lymph nodes and mild inflammation of the abomasum. Histopathology revealed subacute enteritis with associated bacterial colonies.
- *Yersinia pseudotuberculosis* was isolated in the faeces. Even though worm egg counts were low, helminthosis has been suggested as a predisposing cause of yersiniosis by causing villous atrophy.
- Yersiniosis is typically seen in young stock in wet and cold conditions.
- *Yersinia* organisms are zoonotic and can cause enterocolitis and polyarthritis in people.

In late spring, be on the lookout for:

Disease	Typical history and signs	Key diagnostic samples*
Pulpy kidney in lambs (enterotoxaemia) Read more on pulpy kidney.	• Sudden death occurs in rapidly growing unweaned or weaned lambs on lush pasture or grain. • Lambs are in good condition and can be found dead or die quickly with convulsions. • Animals are usually unvaccinated or inadequately vaccinated.	**Post-mortem:** • Collect 5mL of lower small and/or large intestinal content into a labelled plastic container for an ELISA test/smear. Store and transport at 4°C or frozen. • A basic sample set.
Cobalt/vitamin B12 deficiency Read more on cobalt and vitamin B12 deficiencies.	• Occurs in areas receiving >450mm rainfall and more common with sandy soil types. • Ovine white liver disease (cobalt deficiency) has occurred in WA in sheep grazing lush pasture. • Typically causes ill-thrift and wasting in growing sheep and cattle and weeping eyes and scaly ears.	**Live animals:** • 10mL of blood in lithium heparin tube (green/orange cap). • Ideally 10 animals sampled. **Post-mortem:** • 100g fresh liver, fixed liver.
Barber's pole worm in sheep Read more on barber's pole worm.	• Usually seen in late spring/early summer in coastal areas of WA agricultural regions or earlier if weather is warm and moist. • Weaners with inadequate immunity commonly affected at this time of year. • Signs include sudden death, anaemia, weakness and 'bottle-jaw'.	**Faecal sample:** • 20g faeces per sheep for worm egg count and larval differentiation. **Post-mortem:** • Identify worms in abomasum and collect faecal sample.

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

Steps required to meet animal health export certification requirements

The livestock health surveillance undertaken by producers, veterinarians, stock agents and exporters is vital for continued market access for live animal exports. It is important that producers and veterinarians are aware of importing country requirements and their livestock health status before selling for export.

A key component of the live animal export process is the health certification that demonstrates to the importing country the eligibility of livestock for their market. To enable the federal Department of Agriculture (DoA) to issue this certification, DAFWA issues property of origin animal health declarations for reportable diseases.

Importing countries and the DoA may have documentation requirements for other diseases which are not reportable, such as leptospirosis. As these are not included in the DAFWA property of origin statement, the DoA may require a producer vendor declaration in order to issue export health certification. The producer vendor declaration is a legal document and must be completed accurately. More information on exporting livestock can be found at the DoA Manual of Importing Country Requirements (MICoR).

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