



## WA livestock disease outlook

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### Recent livestock disease cases in WA

#### Sudden death in cows grazing kikuyu in late May

- From a mob of 50, nine cows died and 20 were affected within four days of being placed on lush, ungrazed kikuyu pasture.
- Affected animals were seen drooling, sham drinking, ataxic and extending their necks followed by recumbency and death. One cow had a superficial erosion on one teat and a small mucosal erosion in the mouth.
- On necropsy there was emphysema and rumenitis. Histopathology showed a severe, acute and extensive necrosuppurative rumenitis and omasitis, and a focal area of ulceration of the tongue.
- Abnormalities of protein, haptoglobin and creatinine levels on biochemistry indicated marked dehydration and inflammation.
- The findings were consistent with kikuyu poisoning. There is no specific treatment for kikuyu poisoning, although animals may recover if they are removed from the affected paddock and given supportive care including providing quality hay, water and shelter and minimising other stressors. Some of the cows that were given supportive care survived.
- **Exotic rule-out:** Given the level of morbidity with recumbency, drooling and oral and teat lesions, samples were tested for [foot-and-mouth disease \(FMD\)](#) and other exotic vesicular diseases with negative results.
- Kikuyu toxicity is more common in late summer/early autumn following summer rain that causes the kikuyu to grow rapidly, however other factors that cause plant stress can also be involved.
- Read more about [kikuyu poisoning](#) in livestock and how to avoid high-risk periods.
- Read more about how to recognise the signs of the emergency disease, [FMD](#).

#### Foot-and-mouth disease: signs to look for



Lesions to the dental pad (top) and teat in cows with FMD in Nepal.

Source: [EuFMD](#)

#### Diarrhoea and poor body condition in cows in the South-West

- In a mob of 80 cows, three had died and 30 were affected with diarrhoea and illthrift over an extended period. The cows were aged between two and five years, and 70% were in calf.
- A change from silage to pellet mix had not improved the body condition or diarrhoea in affected animals.
- On post-mortem of one affected cow, there was thickening of the small and large intestine, most notably at the ileocaecal junction, as well as enlarged mesenteric lymph nodes and watery diarrhoea.
- Histology showed extensive and chronic inflammation in all sections of the intestines with large numbers of eosinophils. There were numerous sections of nematode parasites seen in the abomasum despite a negative faecal worm egg count. [Worm egg counts](#) may be low or zero in the presence of a worm burden in older animals; in pre-patent infections, where recent drenching has occurred; or where diarrhoea has resulted from an emergence of arrested larval stages.
- Hepatic copper level was low in this cow, and in the plasma of cohort animals, which is suggestive of a deficiency in the mob. [Johnes' disease in cattle \(reportable\)](#) was ruled out in this case.
- Naturally occurring copper deficiency is uncommon in WA due to supplementation in fertilisers, however excess dietary molybdenum and zinc can cause a secondary copper deficiency.
- Read more on [copper deficiency in sheep and cattle](#).

## In winter, watch for these livestock diseases:

Disease, typical history and signs	Key samples
<p><b>Selenium deficiency in lambs and calves</b></p> <ul style="list-style-type: none"> <li>Occurs in young animals as they have an increased demand for the essential trace element during growth and have not accumulated the reserves of adult animals.</li> <li>Animals are typically grazing lush, rapidly growing pasture or legume-dominant pasture in the higher rainfall areas of the southwest coastal regions.</li> <li>Paddocks heavily fertilised with sulphur-containing or superphosphate applications may also predispose animals to deficiency.</li> <li><b>Key signs:</b> poor growth, stiff gait, arched back, apparent lameness, reluctance to move and sudden death.</li> <li>Animals that show visible signs of deficiency can be supplemented in the short term with a selenium injection or drench. Care should be taken with dose rates and intervals as too much selenium can be fatal in stock.</li> <li>Read more about <a href="#">selenium deficiency in sheep</a> and <a href="#">cattle</a> and how to prevent animals becoming deficient in the long term.</li> </ul>	<p><b>Ante-mortem:</b></p> <ul style="list-style-type: none"> <li>Blood in lithium heparin</li> <li>Feed samples (total mixed ration)</li> </ul> <p><b>Post-mortem:</b></p> <ul style="list-style-type: none"> <li>Liver, fresh and fixed</li> </ul>
<p><b>Listeriosis</b></p> <ul style="list-style-type: none"> <li>Caused by the zoonotic bacteria <i>Listeria monocytogenes</i>. Sources of infection include contaminated soil or where asymptomatic animals (including rodents) have shed the bacteria in their faeces and in feed that is spoiled.</li> <li>Primarily reported in winter and spring when heavy rainfall is more likely to spoil silage and cause a reduction in acidity that enhances the bacteria's growth.</li> <li>Livestock then consume contaminated feed material and can be infected via damage to the oral mucosa caused by rough feed. Silage should be properly prepared and inspected before feeding and leftover feed cleared away.</li> <li><b>Key signs:</b> neurological signs (due to encephalitis), recumbency and deaths. May cause <a href="#">abortions</a> 5-6 weeks prior to lambing, stillbirths or newborn lamb deaths.</li> </ul>	<p><b>Ante-mortem:</b></p> <ul style="list-style-type: none"> <li>Cerebrospinal fluid</li> </ul> <p><b>Post-mortem:</b></p> <ul style="list-style-type: none"> <li>Fixed brain, fresh spinal cord and liver, brain stem swabs</li> <li>If neurological signs are present, discuss with your <a href="#">DPIRD vet</a> subsidies for <a href="#">TSE testing</a></li> </ul>
<p><b>Salmonellosis in sheep</b></p> <ul style="list-style-type: none"> <li>Many serovars exist but the most common in WA is <i>Salmonella</i> Typhimurium.</li> <li>More commonly observed in winter and spring, but can occur at any time of year, and outbreaks are often preceded by periods of stress and high stocking density.</li> <li>Sources of salmonella include carrier sheep (may comprise 2% of the flock), wild birds, rodents and the environment. Salmonella is zoonotic and correct hygiene practices should be used when handling animals and samples.</li> <li><b>Key signs:</b> severe, foul-smelling diarrhoea, fever, dehydration, tenesmus.</li> <li><b>Exotic rule-out:</b> Peste des petits ruminants is known to cause diarrhoea, fever and eye, nose and mouth discharge. If abortions are occurring, an exotic form of <i>Salmonella</i>, <i>S. abortus ovis</i>, and Rift Valley fever should be ruled out.</li> <li>Read more on <a href="#">salmonella in sheep</a>.</li> </ul>	<p><b>Ante-mortem:</b></p> <ul style="list-style-type: none"> <li>20mL faecal sample (chilled) in individual containers</li> </ul> <p><b>Post-mortem:</b></p> <ul style="list-style-type: none"> <li>Liver, gall bladder, abomasum, lung, small intestine, intestinal lymph nodes – fresh and fixed</li> </ul>

Note: Include base samples and any clinical or gross lesions in submissions. For sample submission advice, contact your [DPIRD field vet](#) or the duty pathologist on +61 (0)8 9368 3351.

## Tips for disease investigations

At the livestock disease investigation workshop held in June in South Perth, presenter Dr Tristan Jubb provided attending vets with valuable tips and tools for use during investigations, including the following:

- Temporal pattern of disease** – When did the disease start, peak and what level of disease is occurring now? Did something change before the disease event started?
- Spatial distribution of disease** – One paddock or multiple affected? Is the event confined to one area of a paddock or scattered? Spot the difference – what is different in affected and unaffected paddocks?
- Case definition** – What does the disease look like? (clinical signs, lesions, species, age, parity)
- Attack rate** – How many affected from total population (or subpopulation if differing species, sex or age)?

More tips will be included in next month's issue of the *WA Livestock Disease Outlook*.

**We welcome feedback. To provide comments or to subscribe to the monthly email newsletter, WA livestock disease outlook, email [waldo@dpiird.wa.gov.au](mailto:waldo@dpiird.wa.gov.au)**

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