

WA Livestock Disease Outlook for producers

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Recent livestock disease investigations

Foot-and-mouth disease excluded in a calf at an agricultural show

- A producer noticed oral lesions in a calf during an agricultural show. No other animals were affected.
- The producer contacted their private veterinarian and provided photo evidence.
- The private veterinarian phoned the Emergency Animal Disease (EAD) Hotline and a DPIRD field veterinary officer attended to collect suitable samples for reportable disease exclusion.
- On clinical examination, red circular lesions were

present on the nose, lip, gums and hard palate, with circular pale pink lesions on the tongue. There was no evidence of lesions or lameness in any feet. The calf was otherwise healthy and willing to eat.

- Samples were collected for foot-and-mouth disease (FMD) exclusion testing at both DDLS and CSIRO Australian Centre for Disease Control (ACDP), which is the Australian reference laboratory for suspected FMD exclusions.
- Laboratory testing at both facilities returned a negative result for FMD.

- Results were also negative for pestivirus, bovine viral diarrhoea virus (BVDV), vesicular stomatitis and routine viral culture.
- The biopsy sample returned a positive result for bovine popular stomatitis virus, which was diagnosed as the cause of the lesions in this calf.
- Bovine papular stomatitis is a mild viral disease commonly affecting cattle less than 2 years of age. Viral infection is often subclinical with no development of clinical signs. If signs of infection do occur, they appear as ulcers or papules of the mouth, surrounding areas and other locations on the body. If lesions do appear, they are typically self-limiting and resolve without treatment.
- Please note that bovine papular stomatitis virus is a zoonotic disease. People should avoid direct contact with infected animals, observe hygiene precautions and use appropriate PPE such as gloves.
- Other differential diagnoses of lesions on the skin and mouth in cattle include pestivirus, malignant catarrhal fever (MCF) and herpes virus. Reportable differentials for Australia include vesicular stomatitis and FMD.
- Agricultural shows and field days pose a unique challenge for veterinarians and industry. Mixing of livestock from multiple properties across Western Australia, as well as the range of species attending events, increases the risk of transmission should an emergency animal disease (EAD) such as FMD pose a threat in WA.

Read more on foot-and-mouth disease: prevention and preparedness.



Bovine popular stomatitis virus lesions on the nose of the infected calf

Multiple deaths and neurological signs in horses within the Perth metropolitan region

- A private veterinarian was contacted for the sudden onset of neurologic signs, progressing to the death of 2 horses in the Perth metropolitan area. Three other horses had sudden onset of neurological signs to varying degrees, including muscle twitching, incoordination of the limbs, excessive skin sensitivity and collapse.
- One horse had travelled to the eastern states 9 months prior and returned to Western Australia. This horse was not vaccinated for Hendra virus and has not been ill since re-entering WA. This horse was not affected with neurological signs.
- The private veterinarian contacted DPIRD's Diagnostic Laboratory Services (DDLS) and was granted laboratory-fee exemption to exclude potentially reportable diseases, such as Hendra virus and Japanese encephalitis.
- Two post-mortems were conducted, and further samples were collected by the private veterinarian from both clinically affected and non-clinical animals.
- Laboratory testing at DDLS and ACDP both excluded Hendra virus, Japanese encephalitis virus, novel Henipavirus and equine Herpesvirus 1 and 4 from samples from all 7 horses. Testing was also negative for West Nile virus and Murray Valley encephalitis virus.
- Two of the faecal samples tested positive for Annual Ryegrass Toxicity (ARGT) exposure, and the hay sample submitted returned a positive 'high risk' result for ARGT, making this the most likely diagnosis for the neurological signs and deaths attributed in this case.
- Some of the horses had positive results for exposure to Ross River virus (RRV). This finding is incidental and is not linked to the clinical signs and deaths seen in these horses. RRV is endemic Australia-wide and previous exposure is not uncommon.
- Contact a veterinarian if you see neurological signs or sudden deaths in horses. Some reportable diseases, such as Hendra virus and Japanese encephalitis virus can cause similar signs.

See the DPIRD webpages for more information on <u>Annual ryegrass toxicity in</u> <u>livestock</u> and testing hay for annual ryegrass toxicity (ARGT) risk.

For more information on unusual signs in horses, visit the <u>Emergency diseases in horses</u>, and managing the risk of Hendra virus in Western Australia webpages.

In late summer/ early autumn, be on the lookout for:

Fluoroacetate poisoning in sheep and cattle

• Plants in the *Gastrolobium* genus containing fluoroacetate are likely to have highly toxic leaves in late spring and early summer.

- Poisoning typically occurs when hungry stock gain access to bush, or gain access to new area containing *Gastrolobium* plants coinciding with spring pasture dying and becoming less palatable.
- Plants such as common box, prickly, York road, heart leaf and narrow leaf poisons are in the *Gastrolobium* family.
- Signs in livestock include sudden death and convulsions prior to death.
- Producers should always contact their veterinarian if they see sudden death in livestock, especially where several animals are affected. Animals showing nervous signs should always be examined by a veterinarian. A veterinary investigation is important to rule out exotic diseases. Subsidies may be available for these investigations.

Grain overload, acidosis or grain poisoning in stock

- Also known as acidosis or grain poisoning. Can occur in cattle, sheep or goats.
- Cases are often seen when there is a sudden change in the type of grain or the feed regime, stock are fed grain without gradual introduction, large amounts are consumed or stock graze newly harvested paddocks.
- Carbohydrates in grain are rapidly fermented by some rumen bacteria to produce increased lactic acid, resulting in acidification of the rumen, gut stasis, dehydration and death.
- Signs include depression, recumbency, diarrhoea, thirst, left abdominal bloating, sawhorse stance, staggering gait and death.
- You should always contact your veterinarian if you see these signs in your livestock. Lameness can also occur with some reportable diseases.
- Subsidies may be available under a number of <u>surveillance incentives for</u> producers for a veterinary investigation and laboratory testing.
- Grain should always be introduced gradually so that the rumen (first stomach) has time to adapt to the change in diet. Good quality roughage (hay) should also be provided.
- Read more on grain overload, acidosis or grain poisoning in stock.

Lead poisoning

- Lead is highly toxic to livestock and can result in sudden death.
- Cases often occur when hungry stock seek alternative feed.
- Cattle are more susceptible to acute lead poisoning but sheep and pigs can also be affected.
- Batteries, sump oil, paint, old machinery are all sources of lead and present a risk of both poisoning and residues.

- Affected stock are often found dead but may show muscle tremors, weakness, ataxia, blindness, unresponsive to surroundings.
- Preventing residues in meat and meat products is critical for human food safety and WA's ongoing access to valuable export markets.
- Ensure all potential sources of poisoning are fenced off from livestock access, e.g. old houses, dump sites, old car bodies and areas where batteries are stored for recycling.
- Animals that survive lead poisoning are quarantined to ensure animal products are not sold for human consumption or export, this can be at least 12 months, but may be longer.
- Read more on preventing lead poisoning in livestock.

Slender iceplant poisoning in sheep

- Slender iceplant is a small, succulent, winter-growing annual weed that is most common in the eastern Wheatbelt.
- Poisoning occurs from October to April and the plant is most toxic when it is dead.
- When the plant is dead and dry in summer, it contains high levels of sodium which attracts sheep, and also contains high levels of oxalate which can poison sheep.
- Oxalate poisoning results in a calcium deficiency and kidney failure in sheep.
- Signs in affected animals include thick, clear nasal discharge, bloating, weakness, paralysis, collapse and sudden death.
- Often occurs when unaccustomed sheep are moved through or onto stubble paddocks containing the plant.
- Prevention includes providing sheep with good quality hay when put into paddocks at risk of slender iceplant contamination.
- Provide sheep with a limestone and salt loose mix or a block in a container with drainage holes before and during grazing of paddocks at risk of iceplant contamination.
- Affected stock can be treated with calcium borogluconate solution.
- Read more on slender iceplant poisoning in sheep.
- If you see nervous signs in your livestock, phone a veterinarian. Some exotic diseases, such as transmissible spongiform encephalopathy (TSE), can cause similar signs. Testing helps to prove that WA is free from such diseases and further supports the industry.

Water sampling procedure for toxic blue-green algae

• In WA, the main organisms associated with toxic freshwater blooms are cyanobacteria (colloquially known as blue-green algae - a phylum of photosynthetic

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bacteria). Consumption of water containing these toxins may result in poisoning and sudden death in livestock.

- Read more on blue-green algae poisoning in livestock.
- Test dam water if any of the following are observed:
- sudden change in water colour
- presence of bloom or floating scum
- foul chemical or sewage-type odour
- refusal of livestock to consume the water.
- Procedure:
- Wear gloves and wash hands afterwards.
- Collect water in a watertight plastic or glass bottle with a wide mouth. A clean, disposable water bottle is suitable if no other containers are available.
- Clearly identify each sample container.
- Sample surface water where the bloom is most dense (100 mL is sufficient, no more than 500 mL). Ensure sufficient space is left at the top of the container to allow mixing.
- Thoroughly wash the exterior of the bottle with clean water.
- Samples should reach the laboratory within 24 hours and be kept at approximately 4°c during transport (an ice brick and small esky is usually adequate).
- Do not freeze the water as algal cells may be damaged making identification difficult.

Note: Avoid contact with the suspect water as acute skin and respiratory irritation can occur after short-term exposure to water containing cyanotoxins.

Read more on the sampling procedure for toxic algae.

Courier water samples to:

DPIRD Diagnostics and Laboratory Services

DDLS, Interim Lab, Building 102 3 Baron-Hay Court, South Perth WA 6151

Cost of testing:

- Toxic algae testing \$24.00 per sample
- Water quality (Conductivity) \$11.17 per sample
- Job handling fee \$29.98 (charged once per laboratory submission)
- Cost of freight from regional offices variable.

Please note these fees are subject to change each financial year. See the <u>DPIRD</u> (agriculture and food) services products and fees 2023-2024 manual to view the updated services and fees.

For further information on fees, collecting and submitting samples, please contact the duty pathologist at DPIRD's Diagnostics and Laboratory Services (DDLS) on 08 9368 3351, 8:30 am to 4:30 pm Monday to Friday.

Livestock disease investigations protect our markets

Australia's ability to sell livestock and livestock products depends on evidence from our surveillance systems to prove we are free of livestock diseases that are reportable or affect trade. The WA Livestock Disease Outlook – for producers summarises recent significant disease investigations by Department of Primary Industries and Regional Development (DPIRD) veterinarians and private veterinarians that contribute to that surveillance evidence. Data from these investigations provides evidence that WA is free from these diseases and supports our continuing access to markets.

Find out more about WA's animal health surveillance programs.

Feedback

We welcome feedback. To provide comments or to subscribe to the bi-monthly newsletter, email <u>waldo@dpird.wa.gov.au</u>.

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