Recent significant cases submitted to the Animal Health Laboratories (AHL) Mid-June to mid-July 2015

**Lead poisoning in Friesian calves**
- Cases of sudden death were investigated in three-month-old Friesian calves in the South West.
- Six animals were found dead and one was collapsed and moribund.
- Clinical signs included blindness, lethargy, circling when assisted, anorexia and slobbering.
- An old battery which had been chewed was found in the paddock with the calves. Batteries contain lead.
- A post-mortem showed an empty gastrointestinal tract except for pus-like content in the duodenum. A full sample set was taken and sent to AHL.
- Histopathology revealed congestion and haemorrhage in the heart muscle, congestion and oedema in the lungs and congestion in the medulla of the kidneys.
- Blood taken for biochemistry showed elevated blood lead levels consistent with a diagnosis of lead toxicosis. No other significant changes were noted.

Under the *Biosecurity and Animal Management Act 2007*, livestock known or suspected to have lead residues are quarantined to prevent harmful residues entering the human food supply. Veterinarians can assist clients by advising them to ensure livestock do not have access to lead sources such as batteries, machinery and painted sheds and to securely fence farm dumps.

Read more on [preventing lead poisoning in livestock](#).

**Brucella abortus ruled out in three separate cases of abortion**

**Case 1 – Angus heifers in South-West**
- A case of aborted and stillborn calves in an Angus herd in the South-West was investigated.
- Five two to three-year-old heifers had stillborn calves, and four aborted out of a herd of 16 animals. Seven gave birth to live calves.
- Blood samples were taken from the 16 animals to test for causes of stillbirth and abortion. Exclusion testing for *Brucella abortus* returned negative results in all animals.
- Testing for *Leptospira* and *Campylobacter* organisms was also negative, but two animals had positive ELISA tests for *Neospora* antibodies. Low selenium levels were seen in all animals except one.
- Serological testing showed bovine pestivirus (mucosal disease/bovine viral diarrhoea complex) was also circulating in this unvaccinated herd.

**Case 2 – Angus cows in the Great Southern**
- Four cows in a mob of 50 Angus cows had stillborn calves in the Great Southern.
- The mob had access to good pasture, water and supplements.
- One stillborn calf was post-mortemmed. Samples taken for histopathology did not reveal any specific lesions.
- Bacterial culture did not reveal any significant organisms and selective culture for *Campylobacter* spp. was negative. *Leptospira* were not seen in urine examination.
- Blood samples were taken from the affected cows to rule out *Brucella abortus*, *Neospora* and *Leptospira* spp. All tests results were negative.
- One of the cows had a slightly lower than normal blood selenium level.
- No definitive cause of the stillbirth was established.
Case 3 – Friesian heifer in the South-West
- A two-year-old Friesian heifer aborted in the South-West.
- At the time of examination she had retained foetal membranes and a fever.
- Blood samples from the heifer, foetal membranes and fresh and fixed tissues from the aborted calf were submitted to AHL for investigation.
- Histopathology revealed necrotising enteritis, fibrinosuppurative placentitis and meningitis, all with bacilli present in the fields.
- *Brucella abortus* testing was negative, which supports Australia’s disease-free status, and pestivirus and *Neospora* tests were also negative.
- *Theileria orientalis* PCR was positive with *Theileria orientalis* var. ikeda detected. This is the second diagnosis of *Theileria orientalis* in the South West. Read more on BATOG.
- Bacterial culture of the lungs, liver and stomach contents of the foetus returned a pure growth of *Listeria monocytogenes*. The histological changes noted were typical of a *Listeria* infection in a near-term foetus.
- This case shows the importance of submitting the aborted foetus and/or placenta if possible, to improve the chances of a definitive diagnosis.

In late early spring, be on the lookout for:

<table>
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<th>Disease</th>
<th>Typical history and signs</th>
<th>Key diagnostic samples*</th>
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| **Eperythrozoonosis in sheep and goats**<br>Read more on [eperythrozoonosis](#). | - More common in spring in the Geraldton area and Great Southern region.  
  - *Mycoplasma ovis* (formerly *Eperythrozoon ovis*) infects red blood cells causing haemolytic anaemia.  
  - Signs include ill-thrift, anaemia, jaundice, haematuria and death.  
  - Younger sheep and pregnant ewes are more severely affected.                                                                                                                                                                                                                                                                                                                      | **Live animals:**  
  - blood in plain, lithium heparin and EDTA tubes  
  - fresh air-dried blood smears  
  **Note:** Sample at least 10 affected and 10 apparently healthy animals as the organism is easier to identify in healthy animals.                                                                                                                                                                                                                                                                                                               |
| **Hypomagnesaemia (grass tetany) in cows**<br>Read more on [grass tetany](#). | - Commonly affects older beef cows with calves at foot in winter/spring.  
  - Often associated with cold weather, grazing grass-dominated pastures or recent topdressing with potassium (potash).  
  - Affected cattle typically found dead with paddle marks. Earlier signs include aggression, galloping bellowing, muscle twitching, and goose-step gait.                                                                                                                                                                                                                | **Live cattle pre-treatment:**  
  - 10mL blood per cow in lithium heparin tube  
  **Post-mortem:**  
  - vitreous humour in plain tube  
  - blood from dead animals is not reliable.                                                                                                                                                                                                                                                                                                                                         |
| **Copper deficiency in cattle and sheep**<br>Read more on [copper deficiency](#). | - Often seen in late winter or spring in animals grazing rapidly growing grass pastures.  
  - Typical signs:  
    - cattle – ill-thrift, rough hair, sometimes loss of pigment around eyes, sudden death  
    - sheep – ill-thrift, increased incidence of fractures, enzootic ataxia in unweaned lambs.                                                                                                                                                                                                                                                                      | **Live animals:**  
  - 10mL blood per animal in lithium heparin tube. Ideally sample at least 10 animals.  
  **Post-mortem:**  
  - 100g fresh liver.                                                                                                                                                                                                                                                                                                                                                               |

*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.*

**The Agricultural Competitiveness White Paper**

The Federal Government recently released the Agricultural Competitiveness White Paper which includes references to onshore, post-border surveillance and proof-of-freedom for exotic and emergency animal diseases. Veterinarians can access the white paper from this federal [Department of Agriculture link](#).

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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