WA livestock disease outlook

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Recent livestock disease cases in WA

Sudden death in Angus calves in the South-West

- Four six-month-old Angus calves died suddenly from a mob of 53. The calves had been grazing pasture. No deaths were reported from another mob of cows on the property.
- The carcasses of the calves had bloated very rapidly and were leaking unclotted blood from all orifices.
- As the appearance of the carcasses was suspicious for anthrax, the vet did not carry out a post-mortem. Samples were collected to exclude anthrax as the cause of death.
- Blood smears, blood swabs and samples of soil mixed with leaked blood all tested negative for *Bacillus anthracis* on immunochromatography, bacterial culture, and special stains.
- **Key considerations:** Anthrax is a serious zoonotic disease. Producers should be advised not to touch or move the carcass until anthrax exclusion testing has been conducted. Post-mortems should not be performed and personal protective equipment (PPE) should be worn when collecting samples.
- Testing ruled out anthrax as the cause of death. Testing was subsidised, as anthrax is a reportable disease. Read more on DPIRD's website on anthrax and see the DPIRD veterinary sampling guide for anthrax.
- Based on the history and once anthrax had been ruled out, the likely cause of death was thought to be blackleg, as the calves had not been vaccinated. The remaining calves were vaccinated and no further deaths occurred.
- Read more on vaccinating against cattle diseases.

Photosensitisation in 100 Merino cross lambs

- Three-month-old Merino cross lambs were affected by photosensitisation, with irritation and swelling around the face, and some lambs with sloughing of the tips of the ears.
- 100 lambs were affected from a mob of 600.
- Lambs were grazing mixed pasture containing clover, grasses and broadleaf weeds.
- Post-mortem examination, histopathology and biochemistry were not consistent with hepatogenous photosensitisation.
- Primary photosensitisation was the likely cause. The producer was advised to submit clover and grasses for photodynamic assay. See the DPIRD photosensitisation webpage for more information.
- **Differential diagnoses** for photosensitisation include scabby mouth, and the exotic diseases sheep pox, bluetongue disease and foot-and-mouth.

- Submission of a complete sample set allowed reportable diseases to be excluded as the cause of the facial lesions. Testing was subsidised as the results will contribute to demonstrating WA's ongoing freedom from these trade-sensitive diseases.
- See the DPIRD webpage Sampling and post-mortem resources for vets for best practice sample selection and submission. Alternatively, contact your DPIRD field vet or the DPIRD duty pathologist on +61 (0)8 9368 3351.

In early spring, watch out for these livestock diseases

Disease, typical history and signs	Key samples
Polioencephalomalacia (PEM) in sheep and cattle • Thiamine (vitamin B1) deficiency is the most common cause of PEM in WA. • Most often occurs in WA when there is a sudden change to feed composition. All ages and classes can be affected. • Most outbreaks involve only a few animals in the mob but can result in death rates as high as 10%. • Clinical signs include muscle twitching, seizures, head pressing, blindness, paddling and head thrown back, death. • **Differential diagnoses:** rabies (reportable), listeriosis, annual ryegrass toxicity, pregnancy toxaemia, pulpy kidney, vitamin A deficiency, focal symmetrical encephalomalacia. • Animals treated in the early stages with thiamine may recover. • Read more about treatment on our PEM webpage.	**Ante-mortem:** • Thiamine levels – EDTA blood **Post-mortem**: • Fresh and fixed brain • In sheep over 18 mths and cattle 30mths–9yrs: include samples for TSE exclusion testing (subsidies apply)
Worms in sheep and cattle • Sheep and cattle – black scour worms (*Trichostrongylus*), brown stomach worm (*Teladorsagia/Ostertagia*), thin-necked intestinal worm (*Nematodirus*) • Sheep – large-mouthed bowel worm (*Chabertia ovina*) and Barber's pole worm (*Haemonchus contortus*) • Cattle – hair worm (*Cooperia*) and large bowel worm (*Oesophagosostomum radiatum*) • Clinical signs for Haemonchus worms include bottlejaw, ascites, anaemia and sudden deaths. Other worm species may cause lost productivity, ill-thrift, weakness and diarrhoea. • On post-mortem, examine the surface of the abomasum/ intestine closely. Larger worms (e.g. *Haemonchus*) may be visible in abomasum; others may be difficult to see unless in large numbers. Look for damaged, thickened gut and lymph node enlargement. • Read more on sheep worm control. • Read more on beef cattle worm control.	**Ante-mortem:** • Faeces: minimum of 2g in sheep; 4g in cattle for worm egg count. • Between 10 (minimum) and 20 (ideal) individual faecal samples from each mob should be submitted. **Post-mortem:** • Alimentary sections: fresh and fixed

Department of
Primary Industries and Regional Development

GOVERNMENT OF WESTERN AUSTRALIA

WA Livestock Disease Outlook – exotic disease alert

Be on guard for African swine fever (ASF) – spreading in China and Europe

African swine fever (ASF) is a highly contagious viral disease of pigs that is not present in Australia. It does not affect human health.

ASF has historically been widespread in sub-Saharan Africa, and spread to Eastern Europe and Russia within the last 10–12 years. On 3 August 2018, the world's largest pig producer, China, reported its first outbreak of ASF, and as of 5 October, 34 farms/abattoirs across eight provinces had been affected. In September 2018, ASF was also detected in Western Europe (Belgium) for the first time.

Figure 1: Pigs infected with ASF can display skin redness and blue areas (tip of ears, below the knees, tail, perianal area, chest and abdomen). This pig has reddened ears, conjunctivitis and had a high temperature (over 41°C).

Photo: The Pirbright Institute.

How it spreads

Pigs usually become infected with ASF through direct contact with infected pigs, fomites (contaminated vehicles, equipment or clothing) or through ingestion of material containing infected pig meat or pig products. The spread in China has been linked to the movement of live pigs. In Eastern Europe, ASF is present in the feral pig population with outbreaks in domestic pigs usually a result of interaction with feral pigs or the movement of infected pigs and meat.

There has never been a case of ASF in Australia. These international events highlight the real risk posed by ASF and importance of early detection of emergency animal diseases. Continual and strong biosecurity practices are vital to prevent the introduction and spread of disease.

Signs of ASF

ASF can affect pigs of all ages.

Clinical signs of fever, 'blotching' of the skin, incoordination, diarrhoea and pneumonia. Mortality rates are often very high.

For more images of AFS disease signs, see: Pirbright Institute/APHA resource and EU Reference Laboratory.

There are no treatments or vaccines available.

Diagnostic samples

The diagnostic samples for ASF include:

- serum for antibody detection and whole blood in EDTA for viral testing from live, unwell animals and
- fresh and fixed samples of tonsils, spleen, lymph nodes (gastrohepatic, mesenteric), lung, kidney, liver and ileum for histopathology and viral testing.

Please remind your clients about recommended biosecurity measures

Producers can take steps to reduce the risk of ASF entering their property if it were to reach Australia. It is recommended that producers:

- Ensure workers who have travelled to countries where ASF has been reported do not enter the pig farm for 7 days, and ensure they are in clean clothes and boots.
- Limit visitors to pig farms.
- Ask visitors to confirm in the visitor's log that they have:
    - showered and changed clothes and boots since their last contact with pigs
    - not returned from countries where ASF has been reported in the last 7 days.
- Provide clean clothes and boots for visitors.
- **Ensure all feed suppliers and workers are aware that it is illegal to feed meat, meat products or products that have had contact with meat to pigs.**
- See the DPIRD pig feed webpage for more information on prohibited pig feed (swill feeding).

You can protect WA's pigs – report any signs of ASF or illegal feeding of pigs

ASF is a reportable disease and early intervention is vital. If you suspect ASF, you must report it immediately to the Department via your local DPIRD field vet or the Emergency Animal Disease hotline on **1800 675 888**. The Department will provide biosecurity guidance and advice on appropriate sample collection to rule out ASF. If you suspect that a business is supplying feed for pigs that may contain meat or have had contact with meat, or that a producer is feeding these products, contact your DPIRD field vet.

For more information about AFS, see the DPIRD webpage and the federal Department of Agriculture and Water Resource's webpage on ASF.

WA Livestock Disease Outlook highlights benefits of surveillance

Australia's ability to sell livestock and livestock products depends on evidence from our surveillance systems that we are free of livestock diseases that are reportable or affect trade. The *WA livestock disease outlook – for vets* summarises recent significant disease investigations by Department of Primary Industries and Regional Development vets and private vets. Data from these investigations provide evidence that WA is free from these diseases and supports our continuing access to markets.

We welcome feedback. To provide comments or subscribe to the newsletter, *WA livestock disease outlook*, email waldo@agric.wa.gov.au . Previous issues can be found on our website.