Department of Primary Industries and Regional Development

GOVERNMENT OF WESTERN AUSTRALIA

WA livestock disease outlook

Veterinarian edition | April 2019

Recent livestock disease cases in WA

Foot-and-mouth disease (FMD) excluded from feedlot cattle

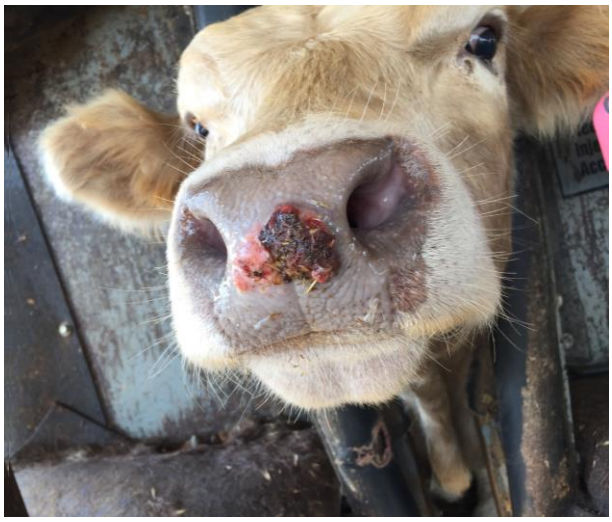

Figure 1: Cow with nasal erosion

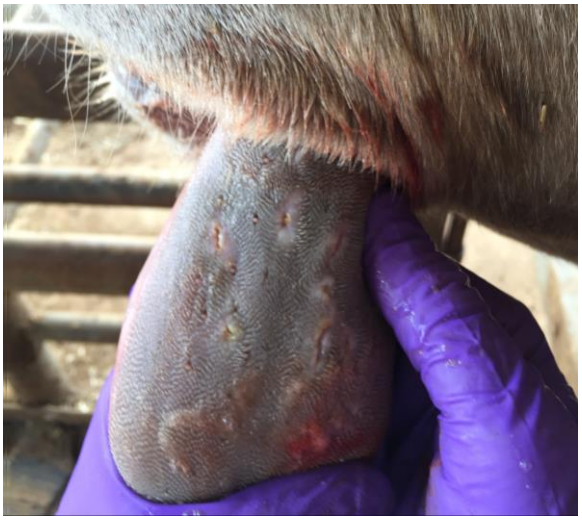

Figure 2: The tongue of the same cow, showing erosions

- In a group of 300 18-24 month-old feedlot cattle, eight died and three more were affected with respiratory signs and depression over a one-week period.
- Clinical signs included depression, serous nasal discharge, salivation and open mouth breathing. Some animals had neurological signs including a high-stepping gait, head pressing and ataxia.
- Staff at the feedlot noticed one animal had healing erosions on the tongue and nose (see Figures 1 and 2) and reported this to the local DPIRD field vet, demonstrating the benefits of prior training in emergency animal disease signs and willingness to report a suspect reportable disease.
- The DPIRD field vet conducted an on-farm investigation including clinical examination of affected cows, post-mortems, and collected a complete sample set.
- Differential diagnoses included *Histophilus somni*, polioencephalomalacia, bacterial pneumonia or acidosis.
- Although FMD was considered an unlikely cause of the disease in this group of cattle, the presence of oral and nasal erosions in the one cow warranted exclusion testing. Oral and nasal swabs from multiple animals were submitted and tested negative to FMD by PCR and

antigen capture ELISA at the DPIRD laboratory and at the Australian Animal Health Laboratory (AAHL) in Geelong.

- Histopathology from two animals showed suppurative meningoencephalitis with vasculitis, as well as suppurative pneumonia, myocarditis and nephritis. Bacterial cultures isolated *Histophilus somni* from the lung and brain of two animals, confirming the diagnosis of *Histophilus somni* septicaemia and thrombotic meningoencephalitis. The oral lesions were suspected to be due to trauma, for example from grass seeds in rough feed.
- The DPIRD vet worked with the feedlot's private vet, who managed the treatment of this condition. All laboratory fees were paid by DPIRD.
- Western Australia's access to livestock and livestock product export markets, worth about $2 billion annually, relies on Australia being free of FMD. Signs of FMD may include: vesicles in the mouth, nostrils, teats or feet; drooling; lameness; depression; inappetence; drop in milk yield in dairy cows; sudden death in young animals and abortion in pigs.
- Clinical signs consistent with FMD should always be reported to a DPIRD vet or the Emergency Animal Disease hotline on **1800 675 888**. **Early detection = faster eradication.**
- **The most likely way FMD could occur in Australia is through the illegal feeding of meat products to pigs.** Pigs infected by FMD produce great volumes of virus, which can spread to susceptible animals on neighbouring properties via wind or by people or equipment movement.
- To find out more about FMD, see our FMD webpage. For information on safe feeds for pigs, see our pig feed webpage.

An unusual presentation of enterotoxaemia in Merino ewes in the Midwest

- In a flock of seven-year-old Merino ewes, four died and two were unwell from a flock of 340.
- Affected ewes were found in lateral or sternal recumbency, with tremors, increased respiratory rate and diarrhoea. All affected ewes were twin-pregnant. The flock was grazing a cereal rye paddock supplemented with lupins, and calcium licks were available.
- The producer contacted a DPIRD field vet, who visited the property and conducted a post-mortem examination on one ewe. This ewe had a full rumen, a pale, swollen liver and was in body condition score of 3. The DPIRD field vet suspected hypocalcaemia, but also observed a creamy content in the small intestine with some whole grain passing into the intestine.
- A range of fresh and fixed tissues was submitted to the DPIRD laboratory. On biochemistry, calcium and magnesium were within normal ranges. Histopathology showed an acute coagulative tubular necrosis, and an ELISA of ileal contents was positive for the enterotoxaemia (pulpy kidney) toxin. There was also histological evidence of vascular protein leakage into the brain, consistent with enterotoxaemia. Read more on our webpage about enterotoxaemia of sheep.
- Given that the affected ewes showed tremors, samples were also collected to exclude transmissible spongiform encephalopathies (TSEs) as the cause of the clinical signs. These samples did not show evidence of TSEs.
- The National TSE Surveillance Program (NTSESP) conducts surveillance for bovine spongiform encephalopathy (BSE or mad cow disease) in cattle and scrapie in sheep. Producers who identify cattle or sheep with neurological signs or sheep with persistent itchiness not caused by lice should contact their DPIRD field vet to discuss inclusion of the animal in the TSE surveillance program. Producers and vets who have suitable cattle and sheep autopsied under the program may claim a rebate.
- The program supports our continued access to markets by proving we are free of TSEs.

In autumn, watch for these livestock diseases

Disease, typical history and signs	Key samples
Calf diarrhoea/scours • Affects young calves in autumn and early winter. Newborn calves that received a good supply of colostrum from their dams will be better protected. • Signs include depressed appearance, diarrhoea, dehydration, recumbency and death. • Calf scours may be caused by single or multiple organisms. Some common organisms include coronavirus, rotavirus, *E. coli*, *Salmonella* and *Cryptosporidium*. Cows can be vaccinated against a number of these prior to calving. • DPIRD's calf scours webpage outlines a number of strategies to prevent and treat an outbreak.	**Ante-mortem:** • 10mL faecal sample (chilled) from 5 affected animals if possible
Pregnancy toxaemia in ewes • Consider pregnancy toxaemia if late pregnant/early lactating ewes present with depression, anorexia, weakness, recumbency, neurologic signs, and death. Signs may be worse following stress. Affected ewes may separate from the mob. • Ewes carrying multiple lambs are at higher risk and if identified early at scanning can be separated and fed carefully. • Pregnancy toxaemia can be avoided if producers provide adequate nutrition to the ewes and minimise stress (e.g. avoid moving and yarding of ewes in late pregnancy and early lactation). • **Differential diagnoses:** scrapie (exotic), cerebral abscess, acidosis, enterotoxaemia, hypocalcaemia, nutritional myopathy in primiparous ewes and meningitis. • Early diagnosis and treatment with glucose and supplementary feeding of good quality hay and oats can halt deterioration. • DPIRD's pregnancy toxaemia webpage has information on prevention and treatment.	**Ante-mortem:** • 10mL blood in lithium heparin tube **Post-mortem:** • 2mL vitreous humour in plain tube (post-mortem) in addition to base tissue sample set. • Adult sheep showing neurological signs should be tested for reportable diseases such as scrapie. Speak to your DPIRD vet about subsidised investigations.

Register now for your DPIRD regional vet workshop

DPIRD held two livestock disease workshop for vets in Albany and Bunbury last week, with two more to come this week in Northam and Dongara. Topics covered will include African swine fever, current livestock disease projects, antimicrobial resistance and discussion of interesting cases. Contact your local DPIRD field vet to register.

- **Northam** – Friday 24 May, 5pm
- **Dongara** – Saturday 25 May, 2:30pm

Joint approach to prevent African swine fever

DPIRD and the WA Pork Producers Association have been working together to ensure WA commercial producers are well informed about mitigating the risks of African swine fever as well as increasing preparedness for a potential outbreak. Pictured above are some of the industry and DPIRD attendees at the African swine fever workshop in April 2019.

Read the latest update on African swine fever from the WA Chief Veterinary Officer on the DPIRD website.

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 DPIRD vets and private vets that contribute to that surveillance evidence.

We welcome feedback. To provide comments or to subscribe to the monthly email newsletter, *WA livestock disease outlook*, email waldo@agric.wa.gov.au