

# State and territory reports

In Australia, the states and territories are responsible for animal disease control within their borders. National animal health programs are developed through consultation with the Animal Health Committee and are managed by Animal Health Australia.



## South Australia

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### Cattle

#### *Fog fever in beef cattle*

In October 2010, a producer in the south-east reported five deaths and one ill animal in a herd of 30 mature-aged Poll Hereford cows. Symptoms included respiratory distress and acute loss of body condition over a 3–4 day period before death. The affected animals had been grazing dry feed on hilly, sandy soil and had then been moved to a flat, wetter paddock with more lush feed. Necropsy examination of one of the cows revealed patches of emphysematous lungs. No bacteria or fungi were cultured from the lung samples. Histopathology revealed interstitial pneumonia with lung oedema and emphysema. These lesions are consistent with fog fever (acute bovine pulmonary oedema and emphysema).

This is a disease usually seen 4–10 days after cattle have been moved from a dry pasture to a fast-growing, lush pasture with high protein levels. The rumen is unprepared for the sudden exposure to high-protein forage, which results in an increase in tryptophan levels. Tryptophan is metabolised in the rumen to 3-methylindole, which enters the lungs via the bloodstream. The cells lining the lungs become damaged, resulting in pneumonia.

There is no specific treatment for fog fever. Mild cases will recover without treatment, but handling and moving severely affected cows can exacerbate the disease, often leading to death. Prevention is by limiting the initial time spent grazing on fast-growing,

lush pastures, especially in the first 10 days. Supplementing cattle with an ionophore can also help inhibit 3-methylindole production.

The producer was provided with advice on the management of fog fever, and no further cases were reported.

### Poultry

#### *Avian influenza and Newcastle disease exclusions — increased mortalities in free-range layer chickens*

In November 2010, a free-range layer producer on the Fleurieu Peninsula reported an increase in hen mortality from 4% to 10% in a group of 600 birds aged about 8 weeks (out of a multi-aged flock of 1200 birds). The birds became ‘fluffed up’, had droopy wings, stumbled and then died. Affected birds had been recently moved from brooder housing to outdoor, movable pens. Histopathology revealed bursal and gut-associated lymphoid depletion with moderate coccidiosis. Testing for avian influenza and Newcastle disease was negative. The stress of movement, in conjunction with unusually cold weather in South Australia in November, is thought to have caused a weakened immunity in affected birds. This resulted in coccidiosis and cold exposure, causing death. Management changes recommended to the producer included increasing the age at which birds are transferred from brooding and providing extra protection from the weather during the transition period.

### Sheep

#### *Wild parsnip poisoning in lambs*

In November 2010, producers on two neighbouring properties in the north of the state each reported that between 100 and 150 animals out of a group of 300 lambs had leg deformities. Affected lambs were markedly stunted and had difficulty walking, often with a stiff gait. They had varying degrees of bent or bowed front or hind legs. On one property, lambs were born in April–May and were marked (earmarking,

castration and tail-docking) in June, with no growth deformities noticed until shearing in September–October. The other property had lambed in June–July, with a few abnormalities observed at lamb marking time; however, the deformities were much more obvious by September–October. Neither producer had any previous record of seeing anything similar in sheep on these properties.

Necropsy examination and histopathology findings included forelimb angular deformities associated with external rotation of the radius or ulna (or both), bowing of the distal radius, varus deformity of the carpi, internal rotation of the fetlocks with valgus deformity of the feet, as well as metaphyseal flaring and fibrous joint thickening, and bilateral suppurative arthritis in the fetlock joints. No infectious diseases were diagnosed in any of the tested lambs.

History revealed that both properties had experienced high rainfall in April 2010, which had resulted in a significant flush of pasture growth. One producer reported wild parsnip (*Trachymene* spp.) on some of the sand hills where sheep were grazing. A final presumptive diagnosis of wild parsnip poisoning was made based on clinical signs, presence of significant numbers of the plants in the two affected paddocks, and literature reports of these plant species causing similar clinical signs and histopathology in sheep in other parts of Australia.

#### *Lamb losses in the mid-north and Adelaide Plains*

In late November 2010, a sheep and crop producer from the Adelaide Plains reported the deaths of 15 out of 400 unweaned lambs over a week. The lambs had been vaccinated twice, and were grazing dry pasture

with ewes. Necropsy examination showed a full rumen containing fibrous feed and apparent oedema of the intestinal tract. Histopathology revealed severe submucosal oedema of the small and large intestines. A section of nematode was also observed. Blood albumin levels were low (11 g/L), and faecal egg counts were high (11 400 eggs/gram). Poor nutrition and gastrointestinal verminosis were diagnosed. Nutritional and worm control advice was provided to the producer, and no further deaths occurred.

In December 2010, a sheep and crop producer from the mid-north reported continued losses of spring Merino lambs, despite recent veterinary treatment and advice. Lambs were in poor condition, and had not been marked (earmarking, castration and tail-docking) or vaccinated. Necropsy examination revealed an absence of body fat, abundance of fibrous grass in the rumen, heavy grass seed and burr content of the fleece, and numerous small subcutaneous grass seed infections. Faecal egg count results were also significantly high (5100 eggs/gram). A multifactorial diagnosis of poor nutrition, oral and subcutaneous foreign body penetration, and enteric verminosis was made. Specific nutritional, vaccination and worm control advice was provided to the producer.

Both these cases demonstrate how unseasonal heavy rain may reduce the nutritive value of standing dry feed and delay the availability of stubbles, as well as increase the survival of worms on pasture. This may cause significant physiological stress to lambs, which, when compounded with other factors (such as grass seed infestation or lack of vaccination), may result in lamb mortalities.