Disease Factsheet

Fog Fever

Fog Fever is a very uncommon respiratory disease of cattle, which despite the name is unrelated to foggy weather and does not usually produce a fever! It is also sometimes referred to as:

- Acute Bovine Pulmonary Oedema and Emphysema
- Atypical Interstitial Pneumonia
- Acute Respiratory Distress Syndrome

The condition occurs in hungry, adult cattle, having been fed on dried feed indoors, and then moved to fast growing, lush pasture, with high protein levels. The cattle gorge on the new feed and clinical signs begin within 2 weeks. The condition can affect up to 50% of the herd, and around 30% of affected animals may die as a result.

Clinical signs

- Air hunger (standing with neck outstretched to maximise air flow), often with tongue out
- High respiratory rate, often loud and may be frothing slightly at mouth
- Normal – slightly high temperature
- Cyanosis (blue discolouration around muzzle) results from the reduced ability to exchange oxygen within the lung

Cause

'Fog fever' is a result of the rumen being too slow to adjust to a new diet. The cattle have generally been fed on a low-protein dried formulation indoors and the rumen is not prepared for the sudden exposure to high protein grass. Specifically, the treatment of the amino acid tryptophan is inadequate. The bacteria in the rumen convert tryptophan to 3-methylindole, which is readily adsorbed through the rumen wall into the portal circulation. Clara cells in the terminal bronchioles (lung tissue) convert the 3-methylindole to 3-methyleneindolenine, which is toxic to the adjacent alveolar epithelial cells, prevents oxygen exchange and leads to the clinical signs described above.

Treatment

There is often little that can be done for affected animals, since the high risk period is usually approaching its end by the onset of clinical signs. Whilst you may be tempted to move affected animals off this pasture, stressing animals that are already struggling to breathe may worsen their condition and hasten death.

Prevention

Ideally pastures should be grazed before they become overly lush and protein-rich. If this is not possible, introduce the new diet slowly, grazing the animals just a few hours each day and increasing gradually, over a period of a fortnight. Cutting the pasture immediately before putting the cattle out may help.