

# Sheep & Beef Talk

December 2017



## Clostridial Diseases

With weaning lambs on the horizon and immunity from pre-lamb vaccinations disappearing, the risk of clostridial diseases, especially pulpy kidney, increases. The common clostridial bacteria are present on all New Zealand farms and will be with us forever. These bugs produce toxins which almost always result in death of the animal and outbreaks involving a significant number of animals. Fortunately, clostridial diseases are largely preventable with a sound vaccination plan (5 in 1, 6 in 1, 10 in 1 etc).

The common diseases are:

### Pulpy kidney (PK, enterotoxaemia):

- ❑ Caused by the toxins of *Clostridium perfringens*, found in the intestines of healthy animals and is passed on in dung.
- ❑ A change in diet - such as weaning lambs or calves onto high quality feed changes the conditions in the gut which allows rapid growth of the bug and toxin production.
- ❑ Classical signs are sudden death in the best stock in a mob that are well fed and growing quickly.
- ❑ PK can affect animals at any age, especially when they are grazing high quality pastures (e.g. flushing ewes, hoggets on spring pastures).
- ❑ There are several strains of *Clostridium perfringens*, only one strain is covered in 5in1

and 6in1. 10in1 covers 4 strains and has been found to reduce death rates on very high quality forage such as lucerne and clovers where ewes and/or lambs were dying despite a 5in1 vaccination programme.

### Tetanus:

- ❑ Caused by the toxins of *Clostridium tetani*, found in soil and dung.
- ❑ Disease occurs when tetanus spores enter wounds with dead & damaged tissue this allows germination of the spores, rapid growth of the bug and toxin production.
- ❑ Signs usually appear 10-14 days after the injury e.g. docking, especially if rubber rings are used, and shearing cuts. Animals are stiff and go into a spasm if stimulated.

*Lamb affected with Tetnus. Note stiff legs and neck.*



- ❑ Animals found dead look normal

## In this issue

- ❑ Clostridial Diseases
- ❑ What's on in December

Alexandra  
P: 03 440 2277

Ranfurly  
P: 03 444 9615

Cromwell  
P: 03 445 1229

Queenstown  
P: 03 442 9977

Mosgiel  
P: 03 489 4770

Aspiring  
P: 03 443 7262

www.vetent.co.nz  
info@vetent.co.nz

Continued on following page...

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The next 3 cause “blood poisoning” and result in sudden death. The carcass decomposes quickly. The bacteria can only grow in damaged muscles and organs.

#### Blackleg:

- 0 Caused by the toxins of *Clostridium chauvoei*.
- 0 Disease occurs in sheep when wet skin or a wound gets contaminated with soil (wintering stock on crops, docking/tailing in muddy yards).
- 0 In cattle the bacteria is picked up during grazing. In muscle it lies dormant until bruising (e.g. rough handling in yards, injections) occurs which allows bacteria growth and toxins are produced.
- 0 Signs appear within 3 days of wounding or bruising and death is sudden.
- 0 The affected area (wound or muscle) is often dark red or black, swollen and has gas bubbles.



Extensive muscle damage and gas pockets under the skin due to Blackleg.

#### Malignant Oedema

- 0 Caused by the toxins of *Clostridium septicum*, found in soil.
- 0 Similar signs to those for Blackleg.
- 0 Also causes navel ill in lambs.

#### Black disease

- 0 Caused by the toxins of *Clostridium novyi*.
- 0 Liver fluke damages the liver allowing the bacteria to grow and produce toxins.
- 0 Affected animals are depressed and reluctant to move, death occurs within 48 hours.
- 0 Post mortem signs provide the diagnosis.

Less common clostridial bacteria in NZ include *Clostridium sordellii*, which can cause sudden death and *Clostridium haemolyticum* which is a cause of Red Water.

Fortunately, all of these diseases are relatively uncommon due to the widespread use of vaccination.

Because vaccination against clostridial disease is so effective and has been around for a long time many of you may not have seen the diseases. If vaccination of stock is not done, the diseases will happen one year, but no-one knows which year so annual vaccination should be regarded as an insurance policy. We insure our houses every year but not many of us have our house burn down!

The best vaccination strategy for your farm might be different to your neighbour so talk to your local VetEnt vet today about how best to insure your stock against losses due to clostridial diseases.



#### Whats on in December...

- Velvet supervisory visits if you are accredited
- Ram testing
- Calf disbudding
- Bloat Capsule Cattle
- Clostridial vaccine for lambs
- Monitoring stock for signs of fly strike

