

Theileria and anaemia in cattle

Fact Sheet #4: Managing Theileria infection

October 2013

Theileria orientalis (Ikeda) is a microscopic blood-borne parasite that can cause anaemia in cattle and, in more severe cases, lead to death.

Theileria is transmitted by the cattle tick. Cattle cannot transmit *Theileria* directly to each other.

Theileria only infects cattle, so is not a risk to human health, or a food safety issue.

All cattle in areas where ticks are present are at risk of contracting *Theileria*. In these areas farmers should be aiming to minimise the severity of infection in their herds.

To make good management decisions farmers need to understand the *Theileria* status of their cattle. This status is likely to change over time so should be regularly evaluated.

- Understand the risk of infection with *Theileria* for your herd. This depends on a number of factors (see *DairyNZ Fact Sheet #2*). Your veterinarian will be able to give you up to date advice on the presence of *Theileria* in your region.
- Monitor the health and condition of your animals and seek veterinary advice if you have any concerns. Signs of infection with *Theileria* may be subtle in mildly affected animals so careful observation is necessary.
- Discuss with your veterinarian the value of conducting some screening blood tests as an indicator of *Theileria* infection.

Measures to help minimise the severity of infection

General biosecurity practices to protect the health status of your herd

- Understand the health status of incoming stock – ask for records of veterinary and other treatments. Farmers should discuss with their veterinarian preventive measures to reduce the risk of disease in their herd and check the health status of incoming cattle.
- Quarantine stock coming on to the farm for at least seven days and treat them for ticks. Monitor for signs of anaemia and general health status. Seek veterinary advice if you have any concerns.
- Stock newly introduced to an area where *Theileria* is present should be closely observed for signs of anaemia for up to eight weeks.
- Inspect cattle for the presence of ticks. Tick treatments can be useful to reduce the tick load and severity of the *Theileria* infection. Use according to label instructions or on advice of your veterinarian.

Service Bulls

- If your herd has *Theileria* there is a risk in bringing bulls onto your farm that have not been exposed to *Theileria*. They could become infected, be affected by anaemia and not be capable of mating with the required number of cows.

- If you do not have *Theileria* in your herd, mating time is not a good time to introduce it to your farm, because of the increased activity the herd is under at this time. If your herd is *Theileria orientalis* (Ikeda) free then ideally source bulls that are confirmed to be *Theileria orientalis* (Ikeda) free. Have bulls checked and tick control/quarantine bulls as they arrive on farm or prior to arrival on farm.
- Monitor your bulls to see they are working properly. Rotate bulls to give them a rest and this season have a few backup bulls or do AB longer using either dairy or beef semen.

Young stock

- Young stock in good condition and on good feed will be less susceptible to infection. Careful attention to nutrition, worm control, overall health management and trace element supplementation (if required) will minimise susceptibility to disease.
- Regularly monitor the health of calves and closely monitor growth rates of young stock.
- Wean calves “gently” to minimise stress and allow them time to adapt to changes in feed and management practices. Assess calves individually and only wean individual calves when they are ready. Ensure a gradual change from milk to pasture.

(cont'd overleaf)

Measures to help minimise the severity of infection (cont'd)

Supportive care for affected cattle and cattle susceptible to Theileria infection

- Stock in good condition and on good feed will be less susceptible to disease. Careful attention to nutrition, worm control, overall health management and trace element supplementation (if required) will minimise susceptibility to disease.
- Closely monitor cattle during critical periods such as late pregnancy, calving, early lactation, and possibly mating.
- Affected cattle should be rested, given high quality feed and have easy access to water. Consider once-a-day milking or dry off.
- Don't graze residuals too low if cows are under Theileria stress. Maintain pasture quality using a mower if necessary.
- Lower stocking rates could be an option for minimising stress.

Managing pasture to reduce ticks levels

- The tick lifecycle consists of four stages – egg, larva, nymph and adult. All stages live at the base of pasture plants. Each stage, apart from eggs, needs to feed on a warm blooded host and finds its host by climbing up plant stems and attaching to a passing animal. Feeding lasts 4-19 days after which the larva, nymph or tick drops off the host and returns to the bottom of the pasture to

mature to the next stage, or lay eggs if it is an adult tick. At any one time many more ticks are in the pasture than on the animals in the area.

- All stages of the tick like warm damp conditions and long grass.
- Avoiding long rank pasture that has not been grazed for some time, such as pasture around the edge of crops, riparian strips and gullies, hill paddocks and scrub areas will reduce the likelihood of animals picking up ticks.
- Other possibilities for reducing tick numbers in pasture include:
 - 'Vacuuming' ticks off pasture by grazing with older, less susceptible cattle or sheep prior to grazing with more susceptible animals
 - Keeping pastures shorter to make the habitat at the pasture base less suitable for ticks

Submission rates of cows and heifers may be impacted by Theileria infection

- Pre-mating heat detection is essential to ensure your herd is cycling at expected levels to make mating a success. If cows and heifers are not cycling at required levels then speak with your veterinarian about treatment options.
- Monitor your herds mating performance diligently throughout the mating season (submission rates, returns).

Further advice is available

- From your veterinarian
- dairynz.co.nz/theileria for all fact sheets
- 0800 4 DairyNZ (0800 4 324 7969)

