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A newly discovered tick-borne virus, called Bourbon virus, killed a man in Kansas, USA. Soon after he became ill, his organs failed, and he died of cardiac arrest despite undergoing antibiotic treatment. Scientists are now working to understand the disease. They found it belonged to a family of viruses known as thogotoviruses, which can be found all over the world.

Experts have warned for years about the dangers of tick bites; they're the primary cause of Lyme disease, a terrible infectious disease characterized by cognitive impairments, arthritis, and flu-like symptoms that can linger even after treatment.

There are three forms of Theileria that have caused serious effects in NZ, so farmers should learn how to prevent them. Following a mild winter in 2013, Northland and upper North Island had an increase in the tick transmitted Theileria which in some countries is called 'Ikeda'. In 1913 it affected some beef calves and some dairy animals causing anaemia which makes cows' vulva pale, instead of pink.

Animals bitten by the tick, particularly if they are stressed in any way, which many were then and are today, such as being over-stocked, so hungry as well as deficient in some minerals. Ninety percent of cows shown on TV and in the Waikato Times were deficient in selenium, sodium and or cobalt and were too thin, all of which increase tick born diseases such as theileria and internal parasite problems.

They are warm area diseases, but since October 2013, it has been reported as far south as Canterbury.

Fortunately there are no known associated human health or animal food effect risks.

It has been in New Zealand since 1984, but has not previously spread as much by ticks as done in some warm climates, which New Zealand might be joining! However, unfortunately, malnutrition in most of New Zealand has increased simply because of high stocking rates and mineral deficiencies.

Clinical signs are anaemia in cattle include lethargy, exercise intolerance and increased respiratory and heart rates. Feed them fully on pasture and grazed forages with a complete nine element soluble mineral mix in their water, not artificial non-grazing feeds like grains, that are not natural for ruminants.

As with most sicknesses, mineral deficient and thin animals are more inclined to become affected.

It is a sporadic disease that can affect cattle debilitated by another condition, so avoiding infections is extremely important. As with many things, infection occurs more when animals are stressed. Those in the Waikato Times in early 2014 were underfed and showed mineral deficiency symptoms. Their low condition score down to 3 for some, and low production figures confirmed both.

Infected animals should be moved gently to keep stress to a minimum.

If possible check for and destroy all ticks several times a day. Ticks can grow quickly as they suck blood.

Farmers who suspect they have animals with anaemia should contact their veterinarian. There are a number of causes of anaemia. A veterinary diagnosis may be necessary to confirm the causes.

Theileria can be spread through cattle movements, and when cattle are introduced into areas with infected ticks. The disease is not transmitted directly from animal to animal, but is spread by infected ticks feeding on uninfected animals.

Cattle, after a while, usually build up a degree of immunity.

In areas where the disease is known to occur, calves should be closely inspected for ticks and signs of anaemia, especially between 6 and 12 weeks of age.

In areas where Theileria is normally not present, but cattle from Theileria areas have been introduced, they should be checked for 2 to 6 months after the introduction.

### **Bought animals**

Farmers should check the health status of source herds for incoming animals, and quarantine brought-in animals for 2 to 3 weeks, or on pasture that is tick-free or has low tick numbers. Tick treatment on arrival may be needed. Speak to your veterinarian about a suitable tick control programme for your property. When using tick killing treatments it is important to observe

withholding periods.

All farms should have a quarantine paddock where new animals can be grazed and observed.

Cattle can build up a degree of immunity to Theileria.

The biggest risk is to animals that have no previous exposure to Theileria – for example, animals from outside the area that enter a herd where Theileria is present.

Young stock are particularly susceptible; older animals are usually immune if they have been raised in an area where Theileria occurs.

Some vets now have a vaccine available coming from Germany, so there may be a delay in getting it.

I repeat, Theileria and other tick borne diseases are more likely to harm animals severely when they are underfed, lacking any of the nine essential minerals in Solmin or stressed in any other way, as some have been recently in droughts, especially large number mobs.

Vaughan Jones, ONZM Queen's Honour 2013, for services to farming. 99% Honours in Dairying 1948. NZ Dairy Board award for Waikato Most Improved Dairy Farm 1959. International Agricultural Consultant & Journalist. Represented NZ in Ag Journalist Congresses in USA in 1992 & Austria 1994. Managing Director of the website GrazingInfo Ltd, compiled since 1970. NZ M.Mkt.I.