

Three Day Sickness, or Bovine Ephemeral Fever (BEF), is a viral disease of cattle that is spread by mosquitoes and biting midges. It occurs in northern Australia and along the eastern seaboard south to the NSW-VIC border.

It is called three day sickness because the clinical signs of the disease usually last for three days.

This disease usually occurs between January and April, with the greatest number of cases in March. However, cases can occur from December through to early June. Cases in the winter or spring months, even in coastal districts, are rare.

Clinical signs

There is a sudden onset of fever- as high as 41°C compared with the normal temperature of about 38°C. Animals stop eating and drinking and become depressed. They usually dribble saliva, develop a stringy nasal discharge, and may have watery eyes.

Affected animals may shiver and often become very stiff with a shifting lameness, and are reluctant to move. Some animals - particularly the heavier ones - just lie down and refuse to move.

By day three the affected animal is usually standing again and will begin to eat. However, lameness and weakness may last for another two or three days.

In the vast majority of cases the disease runs a short course, followed by rapid and complete recovery. However, the disease can vary in severity. Some animals may show only slight symptoms for about 24 hours, while a small number may stay down for many weeks. The disease is usually milder in calves under 12 months of age. Bulls and fat cows tend to show more severe signs than other cattle. Such animals lose condition rapidly and are slow to regain their body weight. A proportion of bulls will suffer temporary infertility lasting from three to six months because of the high fever. Permanent infertility is uncommon but can occur.

Although most of the herd can be affected, deaths from ephemeral fever are uncommon and rarely involve more than 1% of the herd. Death is usually the result of misadventure or being down for a long period.

Treatment

Animals that have gone down should be provided with adequate shelter, water and food, as cattle left exposed in hot weather are much more likely to die.

They should be rolled over several times a day to help avoid loss of circulation to the underside limbs, which will result in permanent muscle damage. The heavier the animal is, the more critical it is to get it back on its feet as quickly as possible. Bulls and other valuable stock that become recumbent should be treated as soon as they are found.

The use of anti-inflammatory drugs is recommended for any animals that become recumbent, and would be useful for any clinically affected animals. This treatment is only available through veterinary prescription. Long withholding periods may apply to some anti-inflammatory drugs, so read the label carefully.

BEF can impair the swallowing reflex, so affected animals should not be drenched or force fed. This may result in the inhalation of food or water, which can cause pneumonia.

Immunity

Once cattle have been infected with the disease most are resistant to infection for many years or for life. However, some animals lose immunity after a few years, especially older animals.

Severe disease can occur in animals of any age that are introduced to districts where the disease is frequently observed from areas where the disease is uncommon.

Prevention

Both live and inactivated vaccines against BEF are available.

The live vaccine gives at least 12 months protection after two doses. The live vaccine is a freeze-dried preparation that must be kept frozen and then requires reconstitution immediately before use.

The killed vaccine is a refrigerated bulk product like most other vaccines. It is easier to use and is cheaper, but only gives about six months protection.

With either vaccine, two doses are required four weeks apart to achieve adequate protection. Animals can be vaccinated from six months of age and should then be revaccinated each year to ensure continued protection.

More information

New South Wales Department of Primary Industry -

<http://www.dpi.nsw.gov.au/agriculture/livestock/health/images/information-by-species/cattle/bovine-ephemeral-fever>

Northern Territory Department of Primary Industries, Fisheries and Mines publication [Three Day Sickness or Ephemeral Fever](#)

Queensland Government Department of Agriculture & Fisheries - <https://www.daf.qld.gov.au/animal-industries/welfare-and-ethics/animal-welfare/natural-disasters/animal-disease-issues-after-flooding/infectious-diseases/bovine-ephemeral-fever>

A recent MLA [research project](#) developed new diagnostic tests for reproductive diseases of cattle, including three day sickness