

Leptospirosis is an important public health and animal health issue. It is an infectious disease of cattle, other livestock and humans. The disease can infect family members, employees, consultants or visitors coming in contact with infected cattle. The productivity and reproductive performance of the herd can also be significantly reduced if infected with leptospirosis.

What is leptospirosis?

Leptospirosis, or “Lepto” as it is commonly known, is a bacterial infection that colonises in the kidney and genital tract of its host. Leptospire can be shed from these organs into the urine for more than 12 months, consequently releasing more bacteria into the environment.

What causes leptospirosis?

Leptospira borgpetersenii serovar Hardjo type Hardjobovis (*L. Hardjo*) and *Leptospira interrogans* serovar Pomona (*L. Pomona*) are the most common types of bacteria causing leptospirosis in Australian beef and dairy cattle. There are several other less common serotypes that are found in cattle co-grazing in areas where feral pigs are prevalent.

What are the clinical signs?

L. Hardjo may affect cattle of all ages but clinical signs are usually only seen in pregnant or lactating cows. Most cattle show no obvious signs of infection to *L. Hardjo* but may be shedding the bacteria. Infection has been reported to cause abortion, usually from 4 months gestation to term and the birth of weak or stillborn calves. Sudden milk drop and fever, infertility and mastitis are also clinical signs of infection. A flaccid udder with all four quarters affected may occur. Infection with *L. Pomona* can cause an acute septicaemia in calves, which may result in high mortalities. “Red water”, anaemia and jaundice may also occur and adult cows may abort.

What conditions are favourable for leptospirosis?

Survival of leptospire in the environment depends on moisture conditions in the contaminated area. This includes wetter areas around a dairy, waterways and irrigated pastures. Leptospire will survive for at least 6 months in water-saturated soil, several months in running water and several weeks in stagnant water. Introduced stock can be a source of herd infection, however closed herds are not completely safe either as water from other properties could carry the bacteria.

How is it diagnosed in cattle?

The diagnosis of leptospirosis is difficult and consultation with a veterinarian is required. Blood tests can be used but the best way to diagnose infection is to culture the bacteria from an aborted foetus, placenta or infected milk. However this is not usually very successful as leptospirae are difficult to culture.

How do people contract leptospirosis?

Humans contract leptospirosis from specific host animals. In people, the disease causes a “flu-like” illness that ranges from mild to severe. Infections due to *L. Hardjo* and *L. Pomona* are among the most common types of leptospirosis reported in people in Australia. The main source of exposure is through direct contact with infected urine, for example during milking, artificial insemination or when yarding and loading cattle. Assisted calving may also pose a risk as foetal fluids and placental material may be contaminated. Leptospire enter the body through the mucous membranes of the eyes and mouth, damaged skin due to abrasions or water softened feet.

Who is at risk?

A strong occupational link has been identified for many leptospirosis sufferers. Dairy farmers, beef producers, abattoir workers, meat inspectors, relief milkers, veterinarians, artificial inseminators (AI), herd testers, stock agents, stock transporters and visitors to farms have all been diagnosed with leptospirosis.

What are the symptoms of leptospirosis in humans?

Profound fatigue, severe headache, high fever, muscular aches and pains, sore eyes, nausea and vomiting.

Leptospirosis continued.