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LEPTOSPIROSIS

INTRODUCTION

Bovine Leptospirosis is a disease caused by two strains of the bacteria *Leptospira hardjo*. It has been estimated that some 64% of dairy farms and 62% of beef farms are infected with leptospirosis.

The disease is usually introduced into a herd by brought in carrier cattle e.g. a purchased or hired bull. Sheep do not show clinical signs but have been known to carry leptospirosis. Contaminated water courses are also a source of infection.

Leptospirosis is shed in the urine of cattle for months or even years after infection. Aborted foetuses and placentae are also heavily contaminated. The bacteria enters the body through urine splashed into eyes, open wounds or when infected water is drunk.

In cattle, after the first phase of the infection, the bacteria localise in the uterus, sex glands and in the kidneys.

SYMPTOMS

Milk drop
In cattle, the first symptom is often a drop in milk yield in all infected animals. This can be accompanied by fever, mastitis-like changes in the milk and sudden loss of all milk with a flaccid udder (flabby bag).

Abortion
The abortion usually occurs 6-12 weeks after the initial infection. In herds contracting the infection for the first time, up to 30% of the animals may abort. In endemically infected herds, a 5% abortion rate is suggested.

Infertility
The most important effect of leptospirosis infection is on fertility; it will lower pregnancy rates and increase culling rates.

Whilst a natural immunity is established in a herd after the initial infection phase, all new animals that enter the herd are susceptible and suffer from an acute infection with the associated symptoms. Consequently the abortions and infertility problems can go on for quite a while, causing major losses. In endemically infected herds, the drop in 1st service conception rates has been reported to be 16-32%.

RISK TO HUMANS (ZOONOSIS)

Leptospirosis can infect humans. Farmers/farm-workers, abattoir workers and vets have been found to be the main risk groups in the UK. The disease in man is usually acquired from contact with the urine, placental material or aborted foetus of an infected animal or with contaminated water. Clinical signs of the disease are flu-like, with headaches and fever, occasionally progressing into meningitis.

DIAGNOSIS

The bacteria itself is difficult to isolate from infected animals but exposure to disease can be monitored by measuring the level of antibodies to Leptospira in blood or milk. Rising or high levels tend to indicate infection is present in the herd. In dairy herds an easy and cheap way to monitor the disease is by quarterly bulk milk testing.

CONTROL

Although blanket antibiotic treatment is possible, it is rarely done due to the cost of treatment and in the case of dairy cattle, disguarded milk.

Vaccination of all vulnerable stock and annual boosters give herds the best protection.

KEY POINTS

- Leptospirosis is shed in cattle urine
- Milk drop, abortion and infertility are the main effects
- It is zoonotic (humans can become infected)
- Quarterly bulk milk testing is recommended
- Annual vaccination provides good protection reducing production losses

Leptavoid™-H

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