Cattle (bovine) tuberculosis

Tuberculosis is a chronic infectious disease of almost all vertebrates. Cattle or bovine tuberculosis is caused by *Mycobacterium bovis*.

It is a controlled animal disease in South Africa in terms of animal health legislation, because of the long-term detrimental effect of the disease on people and the economy.

How cattle contract the disease

- An infected animal mostly releases the bacteria into the air when coughing. Cattle can only become infected when they inhale these particles or take them in through feed, in other words when they are in close contact with infected animals within a herd.

- Cows with infected udders can also secrete the bacteria into the milk. Suckling calves drinking the infected milk contract tuberculosis in this way.

- Infection frequently occurs through the airways and digestive system (contaminated food, water or grazing).
There are various types of *Mycobacterium* species which are closely related to *Mycobacterium bovis*, for example human tuberculosis, caused by *M. tuberculosis*, and avian tuberculosis, caused by *M. avium.*

**Symptoms**

- Most infected cattle show no clinical symptoms.
- In cases of chronic and widespread infection within the body, the animal may gradually become thin, with a dull hair coat and poor appetite.
- With severe lung lesions a single suppressed, moist cough and difficult breathing may occur.
- Other symptoms such as mastitis, lower fertility, continuous bloat or enlarged superficial lymph glands may occur.

**Diagnoses**

Tuberculosis can be diagnosed directly by means of laboratory tests such as culture or specialised staining of smears made from infected material.

Indirect diagnoses by means of the intradermal tuberculin test (skin test) is most frequently used in South Africa.

This test is highly reliable when performed by an experienced tester and therefore widely used in the Government’s Tuberculosis Eradication Scheme, which was introduced in 1969.

**Can cattle tuberculosis be transmitted to other animals?**

Contamination of pastures, water troughs, mineral and feed-licks with infected particles or saliva from cattle with bovine tuberculosis, can be a source of infection to other animals.

This process is enhanced by moist, cool conditions, which will be favourable for the survival of the bacteria out of the body. A good example is tuberculosis in buffalo and kudu.
Predators such as lion and leopard, feeding on infected carcasses of buffalo and kudu, can, in turn, pick up the infection.

Cats around milking parlours can serve as a constant source of reinfection of bovine tuberculosis in a dairy herd, if they are given unpasteurised milk from infected udders.

**Can cattle tuberculosis be transmitted to man?**

- People, especially children, drinking unpasteurised milk from infected cows, can contract bovine tuberculosis.
- Stable workers, working in a closed environment and in close contact with infected cattle spreading bacteria, can contract the disease when inhaling the contaminated air.
- Laboratory animals and pets in close contact with humans can also infect people.
- Abattoir workers, veterinarians and animal health technicians, working with infected carcasses during meat inspection or postmortem examination can also become infected.

Bovine tuberculosis, caused by *Mycobacterium bovis*, has a similar effect in the human body as human tuberculosis caused by *M. tuberculosis*.

**Control**

The government is following a “slaughtering out” policy for infected cattle under the Tuberculosis Eradication Scheme. The purpose of this scheme is the total eradication of the disease in South Africa. Participation in the scheme is voluntary, except for herds in which infection is diagnosed.

The pasteurisation of milk for human consumption is compulsory in South Africa to prevent the spread of bovine tuberculosis and other zoonotic diseases to humans.

Movement control of tuberculosis-infected cattle, buffalo and other game is instituted in order to prevent further spread of the disease.

Dry conditions, as well as direct sunlight, can help to destroy the bacteria.
We are committed to eradicate cattle tuberculosis from South Africa with all the means at our disposal!

For further information contact your nearest animal health technician or state/private veterinarian

or

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