

Johne's Disease in Cattle

Background

Johne's disease (or paratuberculosis) is a common infectious disease of cattle caused by the bacterium *Mycobacterium avium* subspecies *paratuberculosis* (or MAP for short). Infection normally leads to chronic weight loss, diarrhoea and other symptoms such as reduced fertility and milk yield. Disease typically progresses to death. Currently there are no effective treatments available for diseased animals. A vaccine is available but is of limited use (see below).

How Do Cattle Become Infected?

Most animals become infected in the first few months of life (occasionally before birth) although older animals should not be considered completely non-susceptible. A single infected animal can shed millions of the bacterium each day in their dung which can then contaminate teats, milk, water or meal and the environment generally. Infected cows can also shed the bacterium directly into the milk. Cattle become infected orally by swallowing the bacterium in food, milk or water.

On-Farm Control

These are general guidelines to consider when attempting to control the disease. They should be discussed with your veterinary surgeon as they will need to be tailored to your particular farm's needs and circumstances.

Remove sources of infection:

- Any cattle showing signs of disease or diagnosed with infection should be removed as quickly as possible.

- Any offspring from infected cows have a high likelihood of being infected and therefore should not be kept as breeding stock.

Prevent new infections occurring:

- Each calf should receive colostrum only from its dam.
- Do not feed pooled colostrum or discarded milk to calves.
- Adopt strict cattle housing hygiene. In particular, avoid adult faecal contamination of the environment of stock less than 6 months of age and keep calving boxes clean.
- Keep a closed herd or only buy from farms certified free of Johne's Disease.
- Delay access of young stock to land after spreading slurry, for several months.
- Avoid sharing slurry-spreading equipment with other farms and spreading slurry from farms of unknown Johne's status.
- Provide clean troughs and drinking water.
- Consider vaccination. This can reduce the number of cattle that develop clinical signs of the disease the associated losses. However, vaccinated cattle can still become infected and develop disease. Vaccination complicates the interpretation of diagnostic tests and can also interfere with the TB skin test leading to false positive reactions. As a consequence, use is restricted and your local DVO should be consulted about current policies of use. The vaccine is most likely to be of use where a farm is suffering from heavy losses due to Johne's disease and where the incorporation of other strategies such as a test and cull policy are not feasible.