



Johne's disease in dairy herds

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What is Johne's disease?

Johne's disease is an infectious wasting condition of cattle and other ruminants caused by *Mycobacterium avium* subspecies *paratuberculosis* (commonly known as *Map*). It is closely related to the organism that causes tuberculosis. The disease progressively damages the intestines of affected animals, and in cattle this results in profuse and persistent diarrhoea, severe weight loss, loss of condition and infertility. Affected animals eventually and inevitably die. In dairy herds, the presence of Johne's disease will significantly reduce milk yields well before other signs of the disease can be found. Although not a notifiable disease in Great Britain, Johne's disease is notifiable in Northern Ireland.

Why should farmers care about Johne's disease?

The disease can have a significant financial impact on herds through loss of output and early culling. It has been suggested that this organism may also be a possible cause of Crohn's Disease in humans. Such a causal link between the two conditions has yet to be proved or disproved, however the Government is taking a precautionary approach in this area. A possible route to infection in humans could be through consumption of milk containing *Map*.

Control and prevention of Johne's disease makes sound long term sense for three reasons:

1. To reduce or prevent your production losses and income that result from this disease
2. to increase the value of your breeding stock if your herd is certified as free of the disease and
3. to reduce the level of *Map* in milk and the environment.

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How is *Map* spread?

Diseased animals in general pass large numbers of *Map* in their faeces (dung). A single diseased animal can therefore pose a high risk to susceptible animals and in particular to the young calves in the herd. Diseased animals may also excrete *Map* in milk and colostrum. While cattle remain susceptible to infection throughout life, they are at their most vulnerable in the first few months of life. Calves may be infected in the womb but are more commonly infected through:

- drinking contaminated colostrum;
- ingesting dung that may be present on unclean teats;
- contaminated feed; and
- contaminated environment or water supplies.

How can you spot Johne's disease?

Map is a slow growing organism. After infection, it may be years before the infected animal becomes ill. At the early stages of infection, the only way to confirm whether an animal has Johne's disease is to carry out blood tests. These do not detect all infected animals, but at this stage are more likely to identify infection than tests for the organism itself. Signs of the disease are rarely seen before two to three years of age. Generally, there is a period of reduced milk output or fertility well before the animals begin to show signs of advanced disease. These signs include persistent and profuse diarrhoea and significant weight loss, and are seen most commonly in animals at three to five years of age. Once signs of disease have developed, examination of a dung sample through a microscope is a useful way to confirm the diagnosis.

More information

For more information visit www.defra.gov.uk. More extensive Guidance Notes are available for use with your vet. You can download these from the Defra website or you can call Defra publications on 0845 955 6000 for a free copy. The reference number for the Guidance Notes is PB9990.

You can use the Guidance Notes with your vet to discuss Johne's prevention on your farm.

What to do about Johne's disease: 10 steps to consider

1. Prepare a herd health and welfare plan with your vet that includes measures to control Johne's disease.
2. Remove diseased cattle from the herd as early as possible. Do not breed from their offspring.
3. With your vet, discuss screening your dairy herd for Johne's disease infection to establish if infection is likely to be present or to detect its occurrence as soon as possible. Consider removing infected cattle before the disease develops.
4. Infection is most likely to occur in the first few months of life. Put in place strict hygiene on the farm, particularly at calving. Wherever possible, rear calves and young cattle away from adult faecal contamination.
5. Make sure, wherever possible, that all calves only receive colostrum from their own mother. Do not feed pooled colostrum in infected herds.
6. As a rule, do not feed calves discarded milk unless it has been heated to boiling point.
7. Keep a closed herd, but if it is essential to buy in cattle, try to obtain stock from sources that can demonstrate they are tested free from Johne's disease.
8. Delay grazing young cattle on slurried pasture as long as possible and, if practical, for at least one year.
9. Wherever possible, provide mains water and keep troughs clean. Fence off rivers and other water sources if possible, especially ponds and other areas of stagnant water.
10. Avoid co-grazing or sequential grazing with other livestock that can carry Johne's disease infection.

NB. The points above are suggested prevention measures. Steps taken to implement them on your farm should be discussed with your vet.

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