

BULK TANK MILK (BTM) TESTING AND JOHNE'S DISEASE (JD)

Liam Doyle, Johne's disease Programme Manager

The Department of Agriculture, Food and the Marine (DAFM) has been conducting a national screening programme each spring and autumn from 2019 on bulk tank milk (BTM) samples for a range of animal diseases, including Johne's disease (JD). All dairy processors provide milk samples from each milk supplier to DAFM. Herdowners which are not members of the IJCP (Irish Johnes Control Programme) are notified of positive BTM results by DAFM, in the form of a letter giving the sampling date(s) of any positive BTM sample(s). These herds also receive communication advising them to join the IJCP. The test used in the BTM screening for JD is an ELISA test, which looks for antibodies. Antibodies are part of an animal's immune response to infection, against the bacteria, *Mycobacterium avium paratuberculosis* (MAP) which causes JD.

One or more positive BTM results indicates that the herd is very likely infected with JD. Current results from IJCP data show that in over 100 herds which have joined the programme (post receiving a BTM letter indicating a positive result) and then completed both their ELISA herd test and ancillary (faecal) testing of individual highlighted animals confirmed JD at a rate of just over 25%. With BTM test results it is important to remember that a negative result does not provide evidence that JD is absent in your herd. The test applied to BTM samples will detect antibodies only if herds have a relatively high proportion of animals releasing antibodies into the milk; many infected herds will have negative BTM test results because they do not yet have a sufficient level of antibodies in the bulk milk samples to be detected.

It is also important to note that rarely other factors such as recent TB testing or exposure to closely related bacteria in soil or water may cause false positive results. Therefore, a positive BTM result should be interpreted carefully, in consultation with your veterinary practitioner who is familiar with the herd's health profile.

Why is it a good idea to control Johne's Disease?

Herds infected with Johne's disease can have reduced milk production and higher rates of mastitis, infertility and lameness, even before the severe signs of disease in individual animals become apparent. Individual cattle with infection can show severe weight loss and diarrhoea, leading to death.

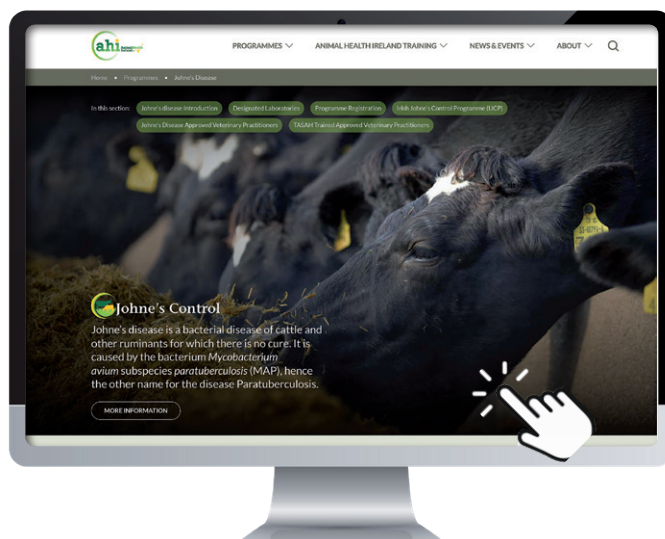
Cattle are usually infected as calves by ingesting (swallowing) Johne's bacteria from colostrum or milk or from their environment. The bacteria are shed in dung from infected animals, especially adult cattle, to contaminate the local environment including bedding and udders and teats. The bacteria may also be shed directly in colostrum and milk. Calves may also become infected before birth. As well as housing, the contaminated environment can include pastures that have been grazed by cattle or have been spread with slurry, and also fodder made from those pastures. Infection progresses slowly.

For two years or longer, infected animals usually remain without apparent disease and test negative for antibodies in blood and milk. Progression of infection to disease is usually triggered by stress, most commonly due to peak milk output in the second to fifth lactations but other stressors such as calving, movement to a new herd, bullying, and concurrent disease may be factors.

Shedding of Johne's bacteria from an animal increases as infection progresses, but can occur before disease becomes apparent. Within a herd, spread of infection is typically slow at first, but gradually increases as more calves become infected each year. Key actions to controlling infection are to identify high-risk animals (mostly test-positive animals) for isolation and removal, and hygienic conditions for calving and calf-rearing. The key to preventing infection is to maintain a fully closed herd. [10 Good reasons to Join the IJCP](#)

Additional information and how to register for the IJCP

Additional information about BTM testing and how to register for the IJCP are available on the AHI web site which can be accessed at the following link: [AHI Bulk Tank Milk Testing \(BTM\) information](#) You can also contact Animal Health Ireland by phone on 091 507 648 for information or to register for the programme, your veterinary practitioner for herd-specific advice, or your Co-op's milk quality advisor.



<https://animalhealthireland.ie/programmes/johnes-disease/>