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What is Bovine TB?

Information update and facts
relating to Bovine Tuberculosis (bTB)



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What is Bovine TB?

Bovine Tuberculosis (bTB) is a highly infectious disease of cattle caused by a bacterium called *Mycobacterium bovis* (*M. bovis*). *M. bovis* can cause disease in other domestic or wild animals and in humans.

Cattle can become infected by:

- Breathing air contaminated by infected animals;
- Consuming contaminated food or water;
- Moving infected animals into a previously clear herd;
- Contact with other infected animals, such as across fences or at shared watering points;
- Sharing machinery (cattle trailers, muck/slurry spreaders) or facilities (cattle crushes) between farms; and
- Using dirty lorries to transport animals.

Getting rid of bTB involves identifying which cattle are infected and removing them so that they cannot spread infection further. There are different types of tests to detect whether cattle are infected with bTB.



How is Bovine TB detected?

Skin test

The 'skin test' for bTB is called the single intradermal comparative tuberculin test or SICCT. It works by detecting the animal's immune response to the bTB bacteria. Vets conduct this test by injecting cattle with a mix of proteins called tuberculin. This test can detect infected animals whether or not the damage caused by the bacteria is visible at post-mortem.

Blood test

The gamma interferon blood test for bTB (also known as the GIF test) also works by detecting the animal's immune response to bTB. A blood sample is taken and analysed in a laboratory. The advantage of the GIF test is that it can detect infected animals earlier than the skin test.

Post Mortem

When reactors are sent for slaughter, they get a post-mortem inspection by vets as part of the food safety system. A selection of their glands (also known as lymph nodes) are cut into with a knife and inspected by eye. If the vet sees any damage of the sort caused by bTB, this is recorded and the animal is said to have visible lesions. In other words, the disease has developed so far that the damage caused by the bacteria was large enough to be seen by the naked eye.



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In most cases, however, infected animals detected by the skin test or GIF test have not yet reached the stage where the damage can be seen by eye. These animals are said to have no visible lesions (NVL) but they are actually infected.

Laboratory Test

In some cases, the glands (or lymph nodes) may be sent to a laboratory for further study to see if the *M. bovis* bacteria can be grown and identified. If tissue damage caused by bTB is seen under a microscope, or if the bacteria can be grown, then there is no doubt that the animal was infected with bTB.

How soon can bTB in cattle be detected after infection occurs?

There is currently no test that can reliably detect bTB in cattle in the first days and weeks after they get infected. The test that can detect infected animals earliest is the GIF test. At this early stage of infection, it is rare for disease to have progressed so far that visible lesions can be seen at post-mortem.

The skin test can detect infected animals a little later than the GIF test, but still at a relatively early stage of infection (weeks to a couple of months). At this stage, it is common for a minority of those cattle to have visible lesions at post-mortem.

Further information is available at

<https://www.agriculture.gov.ie/animalhealthwelfare/diseasecontrol/bovinetb/>