



JOHNE'S DISEASE BULLETIN

WHICH TEST SHOULD I USE FOR JOHNE'S DISEASE?

Managing Johne's disease requires a number of tools to achieve optimal disease control; in particular, a focus on farm practices to prevent the introduction of Johne's disease and/or to prevent its spread within the herd. Herd testing is another valuable tool that supports these biosecurity practices. Understanding when to test and why certain tests are used in preference to others enables you to engage with your veterinary practitioner in developing practical on-farm management plans and in monitoring progress.

There are a number of different tests for Johne's disease, including those using blood, faeces and milk. One type of test measures the level of circulating antibody in the blood or milk and is called the ELISA test. It is approved for use as an individual animal test but is most useful as a herd screening test, where all adult animals are individually tested. The purpose of a herd screening test is to determine whether a herd is infected with Johne's disease or not.

Another test, faecal culture, grows the bacteria from dung, and is usually carried out on individual samples. Because the organism is slow-growing, it may take some weeks to return a result. Also, the test is more costly than the ELISA test. For these reasons, this test is recommended as an ancillary test to confirm the result from an ELISA test-positive animal in a herd in which there is no history of Johne's disease. A third test, the PCR test, seeks to identify strands of DNA from the bacteria that causes Johne's disease. While more rapid than faecal culture, this test is also more

costly than the ELISA test, and again is recommended for use as an ancillary test.

Tests must be carried out by a designated laboratory. A full list of laboratories designated by Animal Health Ireland to carry out testing for Johne's disease is available on our website [click here](#).

The sensitivity of the ELISA test increases as the disease progresses, even before signs of disease are noticeable. However, false-positive and false-negative results do occur in the blood and milk ELISA tests, and are more common in herds that have recently been tested for TB.



There are a number of reasons why your veterinary practitioner may recommend testing of all the adult animals in your herd: as a screening test for early diagnosis; as a monitoring tool to measure progress

in disease control; and as a means to confirm that the biosecurity measures you have put in place are effective. The decision will also be based on a knowledge of the limitations of the current diagnostic tests for Johne's disease.

Most of these tests have an imperfect sensitivity in young animals or early in the onset of disease. That is, a percentage of these animals, if infected, may not test positive (so-called false-negative results). Therefore, repeated testing, or the use of an alternative test may be advised. When large numbers of non-infected animals are tested, there is also the potential for a small percentage of false-positive results (animals testing positive, but not infected), which highlights the need for ancillary testing (faecal culture or PCR) of blood test positive animals in herds not known to be infected.

The sensitivity of the ELISA test increases as the disease progresses, even before signs of disease are noticeable. However, false-positive and false-negative results do occur in the blood and milk ELISA tests, and are more common in herds that have recently been tested for TB. The current recommendation is to avoid testing for 90 days after a TB test.

Your veterinary practitioner, who has a good understanding of your current herd management practices for Johne's disease, can explain whether a herd screening test or an individual animal diagnostic test is most appropriate. For more information on Johne's disease [click here](#).

