



Herd testing programs to control bovine Johne's disease

Updated: December 2005

AG0935

ISSN 1329-8062

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Herd testing for bovine Johne's disease (BJD) provides information on herd status, disease prevalence, and can assist control.

Tests for BJD

A number of tests have been used for whole herd testing, including faecal (manure) culture, various blood tests and skin testing (Refer to Agriculture note: *Diagnostic tests for bovine Johne's disease*). The test now most commonly used is the ELISA blood test.

Why test?

Herd testing can be used to determine or resolve the BJD status of a herd. For example, herds where there is some suspicion of BJD may be able to revert to 'Non-Assessed' status after a whole herd blood test with negative results. This suspicion may have resulted from trace-forward or trace-back contact with an infected herd, or a history of infection some years ago. In addition, a whole herd negative test in a herd with no history of BJD demonstrates a low risk of the herd having BJD. This is the basis of CattleMAP (Refer to Agriculture note: *What is CattleMAP?*).

Testing can also be used in an infected herd to determine infected cattle, affected age groups, family groups and purchase groups. Even a single whole herd test is useful for planning and monitoring control programs.

On-going testing programs for BJD aim to reduce the number of infected cattle in the herd, and in time, eliminate the disease completely. In addition to whole herd testing, the two main principles of BJD control must be applied:

- preventing infection of calves, and
- culling test-positive and high-risk cattle.

A strong commitment to these on-farm control principles over many years is required. Blood testing alone is not able to eliminate BJD.



Figure 1. Herd testing can provide information on infection rates in the herd.

Test and control program

In 1996, Victoria introduced a voluntary Test and Control Program (TCP) for BJD infected herds. The program was reviewed and relaunched as TCP2 in July 2003. This program aims to contain the spread of the disease within and between herds. It incorporates whole herd blood testing, culling of test positive cattle and management to control BJD. The program provides owners of infected properties with a clear and structured opportunity to eradicate BJD. In herds where BJD is well established this process can take many years. Herds that successfully complete the official Test and Control Program can, with the approval of the Chief Veterinary Officer (CVO) and sometimes further testing, apply to join CattleMAP.

Analysis of the results of testing in the Victorian TCP to date has shown some interesting features. While cattle are infected as calves, testing is not effective in detecting infected cattle until they are adults, so the number of test positives can increase for several years before it starts to decline. Furthermore, as testing only detects about half the infected animals, the rate of progress in eliminating infection from herds can be slow.

A feature of the Victorian TCP has been a marked reduction in the number of cattle showing signs of BJD, thereby reducing the amount of BJD contamination on the farm. The number of blood test positive cattle in a herd should decline substantially once a large proportion of the herd has been born after the start of the program.

As situations vary between herds, it is advisable to contact DPI or your private practitioner to discuss a control strategy that is appropriate for your herd, prior to blood testing.

Further information

Further information about blood testing programs for herds can be obtained from Animal Health staff at your nearest DPI office or on the DPI external site: <http://www.dpi.vic.gov.au/farming/bjd>.

Acknowledgement

The original author of this note was Tristan Jubb, and the previous version was published in November 2001.

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