



The National OJD Management Plan 2012-2017

Testing for OJD

Accurate and rapid detection of ovine Johne's disease (OJD) infection, in both individual sheep and flocks, continues to be a major challenge for the management and control of OJD in the sheep industry. Current diagnostic tests for OJD have a limited ability to detect individual infected sheep, particularly in the early stages of infection. However, they can be used with good accuracy to assess the infection status of flocks.

Pooled faecal culture

The main test currently used for on-farm flock screening is Pooled faecal culture (PFC) to detect OJD bacteria in dung. A single dung pellet is collected from each of at least 350 adult sheep (2 years old or more) in the flock and cultured in 'pools' of 50 for the OJD bacteria. On average, the PFC is able to detect OJD in 98% of infected flocks if 2% or more of sheep in the flock are infected. The cost of PFC testing varies, depending on travel costs to the property, and on veterinary associated fees, but costs approximately \$1,000- \$1,500 for an average flock of 4,000 sheep.

NB: If you have less than 350 adult sheep then all adult sheep in the flock must be tested.

Abattoir Surveillance

Abattoir monitoring is a practical and cost effective means of checking for OJD. Trained inspectors at abattoirs inspect lines of adult sheep (2 years old or more) for visible signs of OJD in the intestines and lymph nodes.

Abattoir monitoring aims to identify infected flocks - this is particularly important for areas with little or no known infection. Abattoir monitoring provides feedback to producers on the effectiveness of their OJD management programs and producers with negative monitoring results may be eligible to trade their sheep as having a lower risk of being infected with OJD.

There are two abattoir monitoring negative status results that producers may use:

Abattoir 500 status – where at least 500 sheep, over 2 years of age, have been submitted to an abattoir in the past 24 months, in 1 or more lots, and have been examined and all found negative for OJD. The sheep must have been on the property for at least 2 years.

Abattoir 150 status – where at least 150 sheep, over 2 years of age, have been submitted to an abattoir in the past 12 months, in 1 or more lots, and have been examined and all found negative for OJD. The sheep must have been on the property for at least 2 years.

If producers send adult lines of sheep to abattoirs where abattoir monitoring is being conducted, they can request feedback on the outcomes of the monitoring.

To obtain information about your abattoir monitoring results or to request inspection to be arranged at your abattoir, please contact your state OJD coordinator.

Inspecting for OJD in the abattoir

Sheep that are infected with OJD may show the following changes in their intestines:

- a thickened gut wall, particularly the ileum and ileocaecal valve
- prominent mesenteric lymphatic vessels, and
- enlarged, pale lymph nodes.

If the sheep have lesions suggestive of OJD, the inspector collects samples from up to three sheep in a line. These samples are submitted to a laboratory for microscopic examination.

The pathologist at the laboratory looks for the presence of cellular changes and bacteria that are consistent with infection by *Mycobacterium paratuberculosis*. If no typical cellular changes are present and bacteria are not found the result will be negative. The presence of both lesions and bacteria will result in a positive result. The presence of typical cellular change where no bacteria are found will result in an inconclusive result.

Other tests

A blood test to detect antibodies to OJD bacteria in the blood (serology) is also available but it has drawbacks. It is less sensitive than PFC and so more sheep must be tested to provide a similar level of confidence in the results. Antibodies are also produced in the blood following vaccination. Approval by the state Chief Veterinary Officer may be needed before using the blood test.

Ongoing research is also focusing on the development of new tests that can quickly and accurately detect infected sheep, particularly in the early stages of infection.

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MORE INFORMATION:

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