



Industry update – 31 May 2018

Progress of WA voluntary targeted surveillance program for Johne's disease in cattle

Background

Johne's disease (JD) is an incurable infectious disease of ruminant livestock that causes chronic diarrhoea and weight loss, reducing productivity and eventually resulting in death. JD is caused by the bacteria *Mycobacterium paratuberculosis*.

All forms of JD are reportable in Western Australia – that is, if JD is found, it must be reported to the WA Chief Veterinary Officer and the information is recorded.

Sheep (S) strain vs cattle (C) strain of *Mycobacterium paratuberculosis*

The sheep (S) strain of JD (which causes ovine Johne's disease) is endemic in the WA sheep flock, therefore WA is unable to claim freedom from JD. S-strain is reported when found in sheep but no regulatory action is taken. If S-strain is found in cattle in WA, it would be reported but not regulated given its prevalence in the WA sheep flock.

Cattle (C) strain is known to cause severe clinical disease in cattle and spread easily to younger animals, and was regulated under previous national arrangements. WA has continued to regulate C-strain based on an economic analysis in 2016, which modelled the likely spread of C-strain should deregulation occur in WA. The analysis was commissioned by the WA Cattle Industry Funding Scheme Management Committee (CIFSMC), and the decision to regulate followed extensive consultation with the WA cattle industry through the Bovine Johne's Disease Advisory Committee.

Currently, if C-strain is found or suspected in cattle in WA, it must be reported and a regulated approach will be taken to manage any detections.

Rationale for a targeted surveillance program for JD in cattle in WA

Targeted surveillance for JD in cattle in WA has not been carried out since 2005. WA regularly tests cattle with JD-like disease signs and does not have any reported cases of JD in cattle (of either C- or S-strain). However, in order to verify that WA does not have C-strain of JD in cattle, a scientifically based targeted surveillance program is needed.

The program will determine, with a greater than 90% confidence, whether C-strain of JD in cattle is present in WA's cattle herd. At the same time, it will also test for the presence of S-strain.

The program is now under way and its results will inform WA industry decision-making around future regulation of C-strain of JD in cattle, including maintenance of border controls.

The program is funded by the Cattle Industry Funding Scheme and coordinated by the Department of Primary Industries and Regional Development (DPIRD).



How properties were selected for targeted surveillance

The surveillance program is risk based. A total of 481 WA higher risk properties were invited to participate on the basis of having imported cattle from the eastern states (where the prevalence of JD in cattle is higher than in WA) since 2005. To obtain scientifically valid results, a minimum of six properties were needed from northern WA and 71 (including 10 dairy properties) from southern WA. The program is now fully subscribed with 100 participants.

Testing

DPIRD is coordinating and carrying out testing with some support from private veterinarians at a time convenient to property owners. The samples are being tested for JD using the nationally approved high-throughput polymerase chain reaction (HTJ-PCR) test at DPIRD's laboratories. Any positive results are then subject to a faecal culture for a definitive result.

All samples are tested for both C-strain and S-strain of JD. DPIRD provides de-identified summary results to the CIFSMC on a monthly basis.

Progress of JD in cattle surveillance program to date

Testing of southern WA properties began in September 2017. Testing of northern properties began more recently to coincide with other management practices in order to minimise extra handling. To date, all cattle herds tested under the program have tested negative to all strains of JD.

Targeted surveillance for JD in cattle in WA – interim results – May 2018

Commencement date:	September 2017
Number of properties sampled to date:	76
Number of results received:	62
Number of properties with C- or S-strain JD detected in cattle herd:	0
Number of properties that remain to be sampled:	24
Expected date for testing completion:	Late 2018

Data provided by the Department of Primary Industries and Regional Development.

Additional testing under the Johne's Beef Assurance Score (J-BAS)

In addition to the targeted surveillance program above, 77 other WA properties have completed testing for JD in cattle under the J-BAS with negative results. Further testing is likely to take place, as producers have until 30 June 2018 to undertake testing in order to retain J-BAS 8.

Next steps

The CIFSMC will provide further updates once testing is finalised and/or if significant detections of C-strain or S-strain occur. Depending on the outcome of the program, the WA cattle industry, through the IFS, may further explore the risk presented by S-strain to the WA cattle industry and consider funding research to learn more about its transmission and severity in cattle.

More information

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