



Why control bovine Johne's disease?

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Bovine Johne's disease (BJD) can have severe economic effects if it is left uncontrolled. In Victoria around 25% of dairy herds, but fewer than 2% of beef herds, are believed to be infected.

Market Access

The Netherlands, Sweden, Norway, USA, Canada and Japan all have BJD control programs. Japan aims to eradicate BJD from its national herd, and the other countries compete with Australia for dairy products, meat and live cattle export markets. Importing countries are increasing the restrictions placed on cattle and cattle products from areas where BJD occurs.

Western Australia, Northern Territory, Queensland, northern South Australia and the majority of NSW are free or have a very low level of BJD. In 1999, BJD zoning was introduced in Australia, resulting in restricted access for Victorian producers to interstate shows, sales, feedlots and agistment.



Figure 1. Controlling BJD in Victorian dairy herds is necessary for product quality and to maintain export markets.

On-farm losses

BJD can have a large impact on individual cattle producers, particularly stud breeders. It can cause major changes to management and marketing arrangements. Where no control is applied, more than 50% of a herd can become infected and significant economic effects will follow.

Cost of treatment

BJD can be hard to identify and affected animals may be treated without result for other diseases such as parasitism. There is no treatment for BJD.

Increased culling

In herds with BJD, infected animals are culled at a faster rate than uninfected cows due to reduced production or overt disease. In heavily infected herds the loss rate can be as high as 30% of the herd each year, however this level of loss is unusual. Under Victorian conditions where controls are applied, the loss is usually 0-5% of the herd each year. Increased culling due to BJD results in loss of genetic material, reduced opportunity to cull for other reasons and increased costs associated with rearing more replacements.

Weight loss

Cows carrying BJD but not showing signs, weigh on average 60 kg less than uninfected mature cows. In obviously affected animals, the weight loss is more dramatic.

Production loss

Several studies have estimated decreases in milk production of infected cows at between 8% and 25%, even before they show signs of BJD. This loss can start from the first lactation.

Predisposition to other diseases

It has been suggested that infected cows have a higher level of mastitis and increased level of infertility compared to their uninfected herd mates.

Property values

The presence of BJD constitutes a potential restriction on land use and must be disclosed under Section 32 of the Sale of Land Act (1962) when land is sold. This can have a significant impact on property values, and can also reduce the ability to sell properties in certain areas of the state.

Industry losses

In 1996, BJD has been estimated to cost the Victorian beef and dairy industries \$7.5 million per year. Of this, \$5.8 million was attributed to direct productivity losses, while the costs of disruption to interstate and international sales

of cattle made up the remaining \$1.7 million. This estimate did not include the costs associated with testing to allow movement to different zones. No allowance was made for the affect BJD may have had on land values.

Other costs associated with BJD, include compensation levies and industry funding of research programs. Government and industry efforts in BJD control, and the presence of an effective animal health service are necessary to protect market access.

BJD also impacts on the artificial breeding industry. While the costs of testing and control are low, BJD considerations result in time-consuming and inconvenient procedures.

Public health

A recent review undertaken by the European Commission's Scientific Committee on Animal Health and Welfare concluded "the currently available evidence is insufficient to confirm or disprove that BJD is the causative agent of at least some cases of Crohn's disease in man" and "there are sufficient grounds for concern to

warrant increased and urgent research activity to resolve the issue".

Much research effort is currently being undertaken both internationally and in Australia to determine whether there is a link between Crohn's disease in humans and BJD.

It is important for the future of the Victorian beef and dairy industries that effective control programs for BJD are in place and implemented.

Further information

Further information on controlling BJD 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 Richard Rubira, and the previous version was published in November 2001.

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