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## Control Options for Bovine Johne's Disease in Dairy Herds

Bovine Johne's disease (BJD) can be present in a herd for years before signs of the disease emerge. For this reason, all dairy farmers should manage their farms as if their herds are infected.

### Introduction

The Department of Primary Industries (DPI) provides advice to the owners of dairy herds infected with BJD. DPI Veterinary Officers and Animal Health Officers conduct a thorough investigation of the source and extent of the problem, and work with owners to develop a BJD control program tailored to the property.

### Recently purchased/introduced infected animal

If an infected animal has been recently introduced into the herd, there is a possibility that the main herd is not as yet infected. Options in this scenario include:

- Cull the infected animal along with all adult animals from the same source as soon as possible.
- Cull all calves that may have been exposed to manure from the source herd. These calves are not likely to shed BJD bacteria until they are 2 years old. They should be sold for slaughter prior to this age.
- Restrict access of calves to any land contaminated with manure from the cattle from the source herd, for at least 12 months.

### Infected cattle bred on the property

If the infected animal was bred on the farm, it must be assumed that BJD is established in the herd. To effectively control BJD in dairy herds, owners must endeavour to:

#### 1. Prevent BJD spread within the herd

Sound calf rearing is the key to stopping BJD spread within the herd. To prevent this spread, you must:

- Calve cows in clean, well-drained paddocks; avoid heavy manure contamination.
- Remove calves from their mothers within 12 hours of birth; use a clean trailer to move calves from the calving paddock to the rearing area.
- Double-fence calf-rearing areas from cow laneways and tanker tracks.
- Ensure calf-rearing areas are not contaminated by dairy effluent, or drainage from paddocks in which adult cattle are run.
- Ensure calves under 12 months only graze paddocks that have been free of adult cattle for at least 12 months.



*Figure 1. Remove calves from their dams within 12 hours of birth*

- Ensure boots, clothing and farm machinery are free of manure before entering calf-rearing areas.
- Consider feeding calves with milk-replacer because milk from infected cows can pass on BJD to calves. Feeding whole milk is very risky in heavily infected herds; If whole milk has to be used ensure that it has

been collected from low risk animals such as cows from family lines which don't have a history of BJD.

- Provide calves under 12 months with clean tank, town or bore water; avoid water from dams, channels and creeks that might be contaminated by manure.

The Johne's Disease Calf Accreditation Program (JDCAP) employs many of the above principles. This program is mandatory for entry into the Test and Control Program (refer to Agnote 1202 - TCP2). However, JDCAP is available to owners of any herd.

## 2. Isolate and cull cattle showing signs of BJD

Cattle showing signs of BJD shed enormous numbers of bacteria in their manure. Scouring and wasting animals must be strictly isolated from calves and investigated promptly by your veterinarian. BJD clinical cattle must be culled to a knackery.

## 3. Identify and cull high-risk cattle

Culling high-risk cattle speeds up the progress of BJD control and may one day lead to eradication.

It is important to identify and cull cattle that might be BJD carriers. These high-risk cattle may show no signs of BJD, but can be shedding the bacteria in their manure. High-risk cattle should be culled for slaughter as soon as possible.

To identify and cull high-risk cattle, it is vital that all cattle are permanently identified and accurate records kept of each animal's origin, birth date and parentage.

High-risk cattle for culling include:

- Cattle that were exposed, as calves, to manure of an animal breaking down with BJD (eg. grazed the same paddock).
- Any other cattle that may have been exposed to the bacteria as calves: eg. reared in the same year as a confirmed case, or purchased from the same source.
- Cattle that test positive (reactors) to a blood test.
- Cattle closely related to a confirmed case: progeny and dams in particular, but also maternal sisters and brothers.

## 4. Keep BJD out of the herd

If you have gone to the effort and expense of bringing BJD under control, it makes little sense to allow the problem back in. To minimise the risk of re-introducing BJD, owners should:

- Secure boundary fences and gates to keep out stray cattle.
- Run a self-replacing herd, or
- Purchase cattle only from owners who:

- practise safe calf-rearing, as per the Johne's Disease Calf Accreditation Program (JDCAP).
- can demonstrate through herd testing and management that their sale cattle are low-risk.
- will provide a signed Vendor Declaration or National Dairy BJD Assurance Score Declaration form (available from [www.dpi.vic.gov.au/farming/bjd](http://www.dpi.vic.gov.au/farming/bjd)), stating a low-risk BJD status
- Avoid introducing BJD through agistment (as above ask for a signed Vendor declaration or Health certificate, stating low-risk BJD status); do not allow contact of calves less than 12 months of age with adult cattle, regardless of their origin.
- Beware of deer, goats and camelids (alpacas, llamas); these species can be infected with BJD. Do not allow them to contaminate paddocks grazed by cattle less than 12 months of age.

**Never introduce cattle from herds of unknown BJD status, particularly if their calf rearing practices are unsound.**

## Contacts/Services available from DPI

Further information about control options for bovine Johne's disease in dairy herds can be obtained from Animal Health staff at your nearest DPI office or on the DPI external web site: <http://www.dpi.vic.gov.au/farming/bjd>.

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