



KAMOVETS



Mycoplasma Bovis - testing limitations

We are receiving a lot of enquiries about the testing options available.
They are currently limited.

There is a commercial PCR test which we can use, and it is effective for testing suspect sick animals:

Joint taps from swollen joints

Milk samples from mastitis cases

Swabs from sick calves noses

Swabs at post mortem

This test is **not** particularly useful for screening apparently normal animals as part of your biosecurity.

This type of test detects **actual mycoplasma DNA**, and is extremely accurate provided you can sample a site where the bacteria are sitting.

The problem with subclinically infected (carrier) animals is that we don't know where the bacteria are sitting, and the possible sites (eg. tonsils) are hard to sample.

This is why your discard milk was so important. If the mastitis was caused by M.bovis this milk will be rich in organisms and the PCR test will almost definitely detect it.

This test is also very accurate for screening semen from bulls at breeding centres. It can confirm with 99% certainty that the semen does not carry M. Bovis.

It will not be useful for testing a service bull coming onto your property. The testicle is not a predilection site, so we could confirm his semen is clear but he may be carrying it on his tonsils and will introduce infection via nose to nose contact.

MPI are using an ELISA **antibody** screening test, which means it detects the **antibody** response to Mycoplasma infection.

This is a reasonable screening test provided it is interpreted at the herd level and used in the right group of animals at the right time.

Where a possible contact with an infected animal has occurred, the herd will need to be tested monthly for 6 months to see if an antibody response occurs. In at least one case the antibody response occurred 5 months after the initial exposure.

Low level antibody responses are common, due to cross reaction with a pink eye bug (mycoplasma boviculum) which it turns out is common across NZ.

If this occurs the property will need to be put on movement restrictions until it can be determined whether M.bovis is actually present.

Uncontrolled use of this test could really complicate the tracing of the disease.

There is a lot of talk in the media about how 'only one cow' has been found on a given infected farm. The tests are interpreted at herd level.

It is unfortunately true that a lot of healthy uninfected cows will need to be culled to be sure the true infected animals are removed.

Overseas, eradication on individual farms has been unsuccessful.

Mycoplasma Bovis - control points

We can use what we know about M. bovis to assess and minimise the risk to your farm.

1. To date spread has only occurred by a) direct repeated contact with infected animals or b) via infected milk

The main risk animals are calves that were born in 2016 and 2017 from the initial 3 farms and exposed to M.bovis infected milk. It can be assumed that the majority of these animals will be infected.

They have then been disseminated across the country where they will have propagated slower nose to nose spread with contact animals.

We don't know who the infected animals are (but there probably aren't many in Northland):

- A). Protect boundaries – an electrified outrigger will be probably be adequate.
- B). Avoid grazing boundary at same time as neighbour.
- C). Avoid mixing stock with unknown sources;
 - Graze locally
 - Preferably, exclusively your stock at graziers
 - At least, no mixing of stock at graziers
 - No shared cartage
- D). Source bulls locally;
 - Closed beef herds will be low risk
 - Closed dairy breeders will be low risk
- E). Avoid purchasing new stock
 - Use a known, trusted, local source.

Infected milk is a massive risk, a very effective way of infecting a lot of calves in a short amount of time.

- Don't buy or sell discard milk
- If you dump antibiotic milk don't put it into effluent

Any equipment in contact with milk is high risk.

Milk residues are mycoplasmas most resistant form.

Calf shed bedding from an infected farm is high risk. It could be contaminated with infected milk and secretions from infected calves.

Extreme vigilance is required when moving between calf sheds, and any equipment in contact with calf sheds.

This is not a gastrointestinal disease. Faeco-oral spread is not considered important, but effluent can be contaminated with milk.

Stock trucks are low risk from a faecal contamination point of view, but there is always the possibility of milk contamination from a mastitic cow or nasal secretions from an actively shedding animal.

It is not possible to eliminate all risk, so concentrate effort on two main areas:

1. Repeated contact with animals of unknown origin (especially calves).
2. Milk residues.



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