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Mycoplasma bovis National Beef Cattle Surveillance

Information for sampling veterinarians and veterinary technicians

What is *Mycoplasma bovis* National Beef Cattle Surveillance?

National Beef Cattle Surveillance for *Mycoplasma bovis* (*M. bovis*) is part of New Zealand's comprehensive background surveillance to provide evidence that infection is not widely distributed among beef and drystock cattle in New Zealand.

Blood samples are taken while cattle are yarded for other management procedures. Flexibility around the time of sample collection allows for it to occur during routine farm management activities. Cattle are also being sampled at meat processing plants and on entry to a large feedlot.

So far, the findings indicate that *M. bovis* is not widespread in beef and drystock properties. National Beef Cattle Surveillance will also be crucial in gathering the evidence needed to be confident that we've eradicated *M. bovis* from New Zealand.

Why collect blood samples during other management activities?

It has been possible to monitor dairy properties contributing to the commercial milk supply for *M. bovis* since Bulk Tank Milk Screening started in 2018. Monitoring beef and drystock properties is much harder because there is no sample from beef and drystock properties that is comparable to a bulk tank milk sample from dairy properties available for testing.

Why have these properties been selected for screening?

Survey properties are not being tested because we think they might be infected. Instead, National Beef and Drystock Cattle Surveillance is a type of risk-based surveillance. In other words, it captures properties across New Zealand and covers all production types, but sampling is more intense in regions and production types that historically have had a higher incidence of links to infected properties. Sampling is informed by two years' worth of the National Beef and Drystock Cattle Surveillance data.

How does testing work for on-farm beef and drystock surveillance?

The number of cattle being sampled varies between regions. A single sample of blood will be taken from 25 to 80 cattle in lower-risk regions, and 25 to 150 cattle in higher-risk regions. Cattle that are yarded for routine farm management procedures (such as pregnancy testing, drenching and vaccinating) are targeted for sampling. Approximately 10ml of blood should be collected from the tail vein of each eligible animal.

The animal's NAIT tag must be scanned at the same time. If the animal is untagged, this detail must be recorded, along with the total number of untagged animals. It is important that the farmer is aware of their NAIT requirements and that all cattle must be tagged and registered in the NAIT system before the visit. The farmer must be ready to supply their NAIT details to the sample collector.

It is important to ensure the information gathered is accurate, so extra time should be taken during the test to ensure:

- *each vial of blood collected is matched to the animal sampled*
- *the location of the property is accurate*
- *the contact details of the farmer are correct, including a current email.*

Incorrect contact or property location details are one of the key reasons that the reporting of results to farmers is delayed.

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How will the samples be tested?

Blood samples will be sent to SVS laboratories. The samples will be tested for antibodies to *M. bovis* using an ELISA test. The test determines the presence of antibodies to *M. bovis*, not the presence of *M. bovis*.

How will the results be interpreted?

Screening does not determine the infection status of the sampled property. The screening results are used to determine whether further on-farm investigation is required.

It is extremely uncommon for cattle to screen positive to the ELISA test. Cattle that screen positive to the ELISA test are called “detects” and it indicates that antibodies may be present. This is not a confirmation of infection.

Several hundred thousand samples have been screened, with at least 99.9% showing a non-detect. This finding means an ELISA test that shows a detect is a very uncommon event that must be followed up with further investigations.

Just as a detect result is not a confirmation of infection, a non- detect result is not confirmation that *M. bovis* is not on the property – the screening is only an indication of whether *M. bovis* antibodies were detected.

When will results be available?

We aim to provide results for on-farm beef and drystock surveillance within 21 business days of samples being taken. These will be reported for the group of cattle sampled and are provided by email to the tested property.

What if results show a detect?

Properties that return a detect result will require further investigation to determine their infection status. If the ELISA results indicate further investigation is required, farmers will receive a phone call from the *M. bovis* Eradication Programme within 14 business days to discuss what further on-farm investigation(s) will be required.

In most cases, further testing is conducted under Active Surveillance. Properties under Active Surveillance are not subject to legal controls, such as restrictions on moving cattle on or off-farm.

Where there is elevated suspicion of infection, a Notice of Direction (NOD) may be served on the property, restricting all cattle movements off the property while on-farm sampling is undertaken, and the infection status of the property determined.

If a NOD is issued, a Case Manager (CM) will be appointed to work with the farm management. The CM will be the primary point of contact for the farmer. The CM will also assist in the gathering of information and to help the farmers in getting through the process as quickly as possible.

For more information

Phone 0800 482 463
Email info@ospri.co.nz