Deer health

Tuberculosis

A potential threat to exports

Controlling TB is vital for our multi-billion dollar export trade in beef, dairy and deer products.

Being TB-free will help secure New Zealand's reputation as a producer of safe, high-quality produce and help ensure access to international markets. It will also protect farmers from losses resulting from the downgrading of produce from infected animals.

Although the industry has broken the back of TB infections – down from hundreds of infected deer herds in the 1990s to only a handful today – it remains a serious threat. TB can re-emerge when controls are lifted too soon or through movement of animals from high-risk areas.

The statutory body responsible for TB control is TBfree New Zealand, a subsidiary of OSPRI. OSPRI also manages the National Animal Identification and Tracing (NAIT) programme that traces the movements of cattle and deer.

Under the National Pest Management Plan, the aim is to have all cattle and deer herds clear of TB by 2026 and eradication in possums by 2040.

Our trading partners, including the EU, UK and the United States, are also moving down the path to eliminating bovine TB from their herds. Australia is TB-free.

In the early days of the farmed deer industry, when the incidence of TB was high, there was a significant cost to farmers as a result of carcasses with lesions being either condemned or downgraded. There was also some evidence of production losses in deer herds with long-standing infections.

What is TB?

Bovine TB is a bacterial disease caused by *Mycobacterium bovis*. It can infect a wide range of mammals including deer, cattle, pigs, ferrets, other mustelids, possums and humans.

Possums are the only NZ wildlife species in which TB infections are maintained. Other wildlife species are 'spillover' hosts that do not spread the disease within their species, but may infect deer and cattle.

In New Zealand, the risk of bovine TB infection to humans is very low. But historically and in some developing countries today, human (*M. tuberculosis*) and bovine TB infections are significant public health issues.

All forms of TB are difficult to cure. This is due to the resilience of mycobacteria organisms and the slow progression of the disease. This means infected animals and humans may show no symptoms for months or years after infection, but are 'carriers' of the disease.

Prevention is the best option, with the identification and slaughter of infected livestock highly effective at reducing the incidence of bovine TB world-wide.

Photo: OSPRI

Injecting tuberculin to measure a deer's response to TB

Key points

- **The control of bovine tuberculosis (TB) in cattle and deer is needed to retain access to overseas markets and to maintain New Zealand's reputation for safe, high-quality food.**
- **OSPRI is the disease management agency for the TBfree programme. It aims to eliminate the disease from the country by 2055.**
- **The programme involves testing deer and cattle for TB on-farm in areas of risk, examining all carcasses for TB during meat inspection and controlling the possums that spread the disease.**
- **Infected herds are placed under strict movement control, are regularly tested and any reactors are sent for slaughter.**
- **These measures have been very successful. Today, there are only a few infected deer herds, down from hundreds in the 1990s.**
- **If you farm cattle and/or deer, even one animal, you must register your location and contact details with OSPRI. All animals are required to be tagged with NAIT-approved ear tags and registered in the NAIT system.**

How is TB spread?

Possums (and to a lesser extent ferrets) are the main wildlife source of bovine TB in New Zealand, accounting for about half of herd infections in the areas where TB is present in wildlife.

Other cases are caused by movement of cattle or deer carrying undetected TB infections between farms, or residual undetected disease in herds that have had cases in the past.

How is TB being controlled?

In-herd disease management

Most cattle and deer have traditionally been tested for TB at intervals of between one and three years, depending on the TB risk in a herd or an area.

Because the disease is now much better controlled in possum populations, the risk of livestock catching the disease has reduced. In areas of lowest risk, deer herds are no longer required to undertake regular testing, but all deer carcases continue to be closely monitored at deer slaughter premises for signs of infection.

In areas where deer farmers are required to test their herds, farmers are notified in advance of their next test by the national testing contractor, AsureQuality.

Farmers that send a high proportion of their deer for slaughter each year can apply for 'closed herd' deer test status by calling OSPRI. This means skin testing of their herd will only be required once every three years.

For more information about TB testing, contact OSPRI on 0800 482 463.

What does TB testing involve?

TB tests measure an animal's immune response to bovine TB, using the MCT (mid-cervical test). This involves a single injection of tuberculin in a closely clipped skin patch on the neck. Three days later the site is 'read'. Any

swelling at the site is regarded as a positive test.

All animals that test positive are given an official orange reactor ear tag. Depending on the testing policies for the herd and area, the animals may be re-tested with either the CCT (comparative cervical skin test) or blood test (ETB), or they may be directed to slaughter.

The CCT and ETB tests can differentiate between a genuine bovine TB infection and those caused by exposure to *M. avium* (avian TB) or *M. paratuberculosis* (Johne's disease) – bacteria that are closely related to *M. bovis*.

If avian TB is detected no action is needed as it rarely causes clinical disease. On the other hand, Johne's disease does cause clinical disease, but it is not covered by the TBfree programme. For more information, see the Johne's disease *Deer Fact*.

Reactor tags must remain in place until reactor animals are slaughtered or cleared on a re-test. If the animals are cleared, the tags must be removed before the animals are moved off the farm.

Each herd is given a TB classification – Infected, Suspended or Clear (with a number indicating the number of years they have been clear, for example, C4). All deer herds in the lowest risk areas are now classified as CM (Clear Monitored) as they are only monitored through slaughter surveillance.

Movement controls

Areas with a high TB risk are classified as Movement Control Areas (MCAs). A TB test within 60 days or an official permit is required before any deer or cattle in an MCA are moved to another property.

Special pre-movement tests may also be required for herds with an Infected (or Suspended) status, whether or not they are in an MCA.

A pre-movement TB test is not required for deer being sent directly to slaughter at a deer slaughter premise, but they may first require a permit to move.

In certain circumstances an official exemption to move stock without a pre-movement test may be granted. Call OSPRI on 0800 482 463 to apply.

TBfree funding

The government contributes 40% of the funding for the TBfree programme. The remaining 60% comes from levies paid by dairy, beef and deer farmers.

The Biosecurity (Bovine Tuberculosis – Cattle and Deer Levy) Order 2016 determines how much each industry contributes to that 60%. These contributions and the levy rates change from year to year, depending on the relative size of each industry and the value of its production.

Pest management

Possums are TB vectors. This means they can carry TB and maintain the cycle within their species and spread it to cattle and deer.

The TBfree programme has made great progress with possum control since the introduction of the National Pest Management Plan in 2011. The plan involves ground pest control, 1080 aerial operations and wildlife surveillance.

Photo: OSPRI

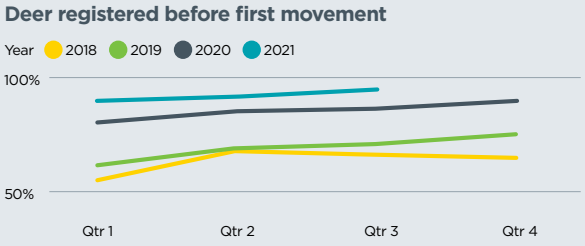
NAIT tagging weaner deer on a Wairarapa farm

NAIT tagging

The ability to rapidly and accurately trace animals from their farm of origin to eventual slaughter is a vital biosecurity and food safety tool.

The National Animal Identification and Tracing (NAIT) programme provides this service. It keeps records of the movements of cattle and deer throughout their lives.

It is important for farmers to comply with the requirements of the NAIT programme, because it enables outbreaks of diseases like TB to be quickly isolated and controls put in place. Thanks to the efforts of deer farmers, compliance levels are steadily improving, as reflected in the graph from OSPRI (below).



Keep up the good work:

- Tag all cattle and deer with NAIT-approved ear tags
- Register them in the NAIT system within 180 days of birth or before they move off the farm for the first time – whichever comes first
- Record all off-farm movements of stock on the NAIT database within 48 hours of the movement
- Replace missing tags with NAIT-approved tags and record them in the NAIT system.

For all enquiries about NAIT and tagging go to www.ospri.co.nz or phone 0800 482 463.

More >>

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The NAIT programme
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