

Tuberculosis

A potential threat to exports

Controlling TB is vital for our \$14 billion annual 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 1980s to only three today – it remains a serious threat. Past experience has shown that TB can re-emerge when it is least expected.

An independent group has proposed a new plan to have all cattle and deer herds clear of TB by 2026, with full eradication of the disease from NZ by 2055. If this proposal is approved by the minister for primary industries, it will come into effect from 1 July 2016. OSPRI – the government-industry partnership that manages New Zealand's NAIT (National Animal Identification and Tracing) and TBfree programmes – will then implement the new programme.

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

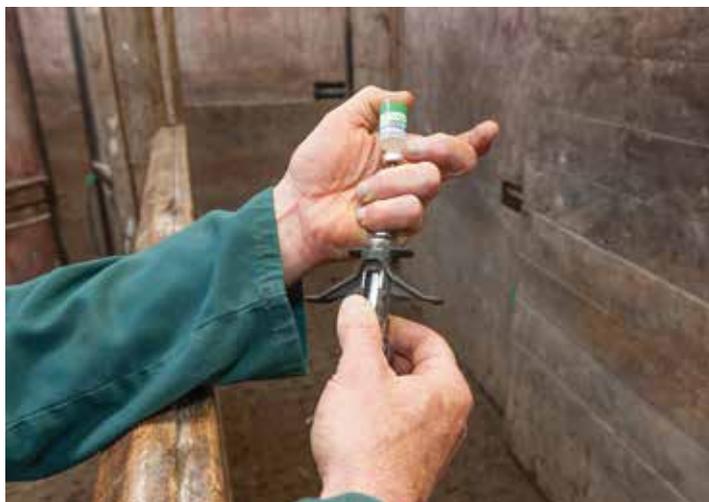
In the early days of the farmed deer industry, when the incidence of TB was high, there was a significant cost to farmers as a result of carcasses with lesions being either condemned or downgraded. There was also some evidence of production losses in deer herds with long-standing infections.

What is TB?

Bovine TB is a bacterial disease caused by *Mycobacterium bovis*.

Deer, cattle, pigs, ferrets and possums are vulnerable to infection, but it can infect a wide range of other species, including humans.

The possum is the only NZ wildlife species in which infections can be maintained. Other vector species are passive 'carriers' of the disease from one animal to another.



Filling a syringe with tuberculin for testing a deer's response to TB

Regular TB testing and the slaughter of reactors have played big parts in reducing the incidence of TB in NZ cattle and deer

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's TBfree programme aims to eliminate the disease from the country through on-farm TB testing of deer and cattle, the control of pest animals that spread the disease and examining all deer carcasses for TB during meat inspection.
- Infected herds are placed under strict movement control, are regularly tested and any reactors are sent for slaughter. This can be costly for farmers.
- These measures have been very successful. Today, there are only three infected deer herds, down from hundreds in the 1980s.
- If you farm cattle and/or deer, even one animal, you must register with both the NAIT and TBfree programmes, and ensure your animals are tagged with NAIT-approved RFID ear tags and registered in the NAIT system.

In New Zealand, the risk of human infection with bovine TB 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 because many infected animals and humans are 'carriers' that show no signs of clinical infection.

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

How is TB spread?

Possums (and to a lesser extent ferrets) are the main 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?

Various agencies have been battling TB in New Zealand since the 1950s. Control is now in the hands of OPSRI through its TBfree programme.

OSPRI also manages the National Animal Identification and Tracing (NAIT) programme, which traces the movements of cattle and deer.

Regional TBfree committees – made up of farmer volunteers and other local stakeholders – communicate, advocate and support the delivery of the TB-control programme.

As a result of these efforts, the number of infected cattle and deer herds has dropped from about 1700 in the late 1990s to 35 in September 2015. Only two of these were deer herds.

In-herd disease management

Most cattle and deer are tested for TB at intervals of between one and three years. How often and when herds are tested is based on the TB risk in a herd or an area.

Farmers are notified when their herd's next TB test is due or they can find out by contacting OSPRI on 0800 482 463. If you don't have a preferred testing provider, OSPRI can provide you with a list of names to choose from.

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 either with CCT (comparative cervical skin test) or blood test (ETB), or they are directed to slaughter.

The tests can differentiate between a genuine bovine TB infection and those caused by exposure to *M. avium* (avian TB) or *M. paratuberculosis* (John's disease) – bacteria which 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, John's disease does cause clinical disease, but it is not covered by the TB control scheme. See the John's disease *Deer Fact*.

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

Each herd is given a TB classification – e.g. Infected, Suspended or Clear (with a number indicating the number of years they have been clear, e.g. C4).

As the number of TB cases falls, herd testing and movement control requirements are being scaled back. Cattle and deer in parts of North Canterbury, Otago and Southland and significant parts of the central North Island no longer require TB testing before they are moved, but they will continue to be tested regularly.

In low-risk areas, herds that send all deer to slaughter may be exempt or subject to less frequent testing, because any TB will be found at meat inspection at the processing plant. Farmers that send a high proportion of their deer for slaughter in any one year can apply for this 'closed herd' deer test status by calling OSPRI on 0800 482 463.

TB-testing of deer is arranged and paid for by farmers. In some cases, a partial refund is available. See www.TBfree.org.nz/deer-refund-scheme-3.aspx

NAIT-approved ear tags

All cattle and deer must be tagged with NAIT-approved radio frequency identification (RFID) ear tags. These tags must be registered within the NAIT system and any off-farm movements of individual animals recorded. NAIT replaces a former national tagging programme.



Photo: OSPRI

Using a RFID tag reader

NAIT enables movements of all cattle and deer to be traced, especially those with suspected or confirmed TB. Missing tags must be replaced with NAIT-approved RFID tags and recorded within the NAIT system.

For all enquiries about the NAIT tagging system go to www.nait.co.nz or phone 0800 482 463.

Movement control areas

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 needed for deer being sent directly to slaughter at a DSP, 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 0800 482 463 to apply.

Pest management

Possoms and ferrets are TB vectors. This means they can carry TB and spread it to cattle and deer. When funding for possum control was cut in the late 1970s the number of infected herds rose from around 550 to over 1700. That number started to drop again when full-scale possum control was reinstated in the early 1990s.

In 2011 the National Pest Management Plan was introduced. Good progress has been made since, with TB eliminated from wildlife from more than 1.2 million ha in the last four years alone. This gives grounds for optimism that the eradication of TB from New Zealand by 2055 can be achieved.

More >>

For more information about TB and TB control in New Zealand, go to www.TBfree.org.nz