TBfree

# ENHANCING THE BOVIGAM® AND SPECIAL ANTIGEN TEST

The Bovigam® and Special Antigen blood tests recently underwent a series of field trials to enhance the testing process and improve TB detection in livestock. This factsheet explains the key details of the trials and what this means for TB testers and livestock owners. **See the policy note for full details**.

## THE ROLE OF TB TESTING

OSPRI's TBfree programme aims to control and eradicate bovine TB from New Zealand. To help achieve this goal a number of approved diagnostic tests are used within the TB Plan in the national surveillance programme to detect or clear livestock of TB.

## BACKGROUND

The Interferon-Gamma test, known as the Bovigam® blood test, is used as an ancillary test following the skin tuberculin test in cattle, either on skin test positives (in series) to determine if TB likely to be present or not (acting to improve the specificity of the test overall) or on skin test negatives (in parallel). The latter is usually undertaken in infected herds, to determine if potentially infected animals are being left behind (acting to improve the sensitivity of the test overall). Since 2012 bleeding of animals for TB testing purposes was allowed with no minimum timeframe between the reading of the skin test and taking of the blood samples. Following changes to antigens used in the blood test in 2016 a field trial has been implemented to assess the impacts of these under New Zealand conditions.

## KEY DETAILS OF TRIALS

In 2016 there was a change in the antigens used in the test. This then required a revision of the performance of the test in the field to establish the level of sensitivity (tests ability to detect infected animals) and specificity (the tests ability to give a negative result for non-diseased animals).

Following the completion of the field trials, the levels of sensitivity and specificity, plus recommended application (timing) of the test, were presented to the Chief Technical Officer (CTO) of MPI for approval. The approval has now been received.

A second test, known as the Special Antigen test (which utilises the specific antigens ESAT 6 and CFP-10) in the Interferon-Gamma test was also assessed in the trials. This is used in situations where there is known non-specificity (or false positives to the TB skin test) issues, but low risk of bovine TB. There has been no change to the components of this test, but it also now requires that blood is taken between 13 and 33 days from the date the skin test is applied.

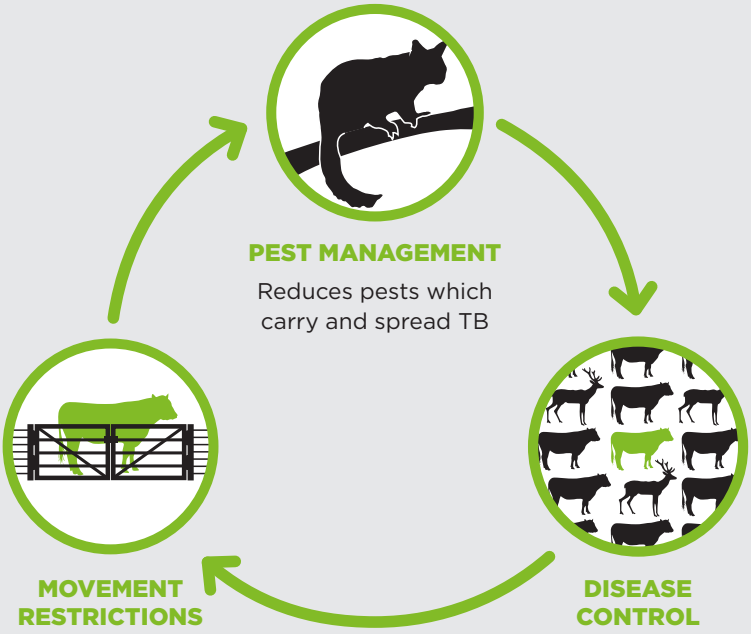
The CTO has approved the application of the both the Bovigam® and Special Antigen tests in this format for use by TBfree from 25 August 2017.

## RESULTS AND IMPACT FOR TB TESTERS

The results show an improved sensitivity on the previous form of the test and equivalent specificity provided the blood for the test is taken between 13 and 33 days from the date the tuberculin skin test is applied.

For testers and livestock owners this now means that any serial or parallel blood testing must wait a minimum of 13 days post injection and must be completed within 33 days of the injection date. These changes are to ensure Bovigam® test results have high levels of accuracy resulting in as low as possible slaughter of false positive animals.

## HOW WE CONTROL TB




## FURTHER INFORMATION

For more information visit **tbfree.co.nz**

If you have questions call OSPRI on

**0800 482 463**