

**DEER TB TESTING AND CONTROL FOR VETERINARIANS**

**THE FUTURE**

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**Abstract**

The 1993 Biosecurities Act has legislated for the implementation of the Animal Health Boards strategic plan for the eradication of Bovine TB in New Zealand.

A set of technical specifications has been documented for the process of TB testing in deer. These specifications form the basis of a quality assurance programme to standardise the testing process by veterinarians in the field.

In order to maintain their existing role in Deer TB control veterinarians need to examine their performance in the field and evaluate their motivation for maintaining a place in the overall scheme.

**INTRODUCTION**

Since the introduction of the Biosecurities Act in 1993, the chain of responsibility for eradication of Tb has altered. The act allows for a pest management strategy by an agency (in this case the Animal Health Board), to be proposed via the Minister of Agriculture. This strategy defines an organism (Bovine tuberculosis), and any other organisms or pests to be controlled (e.g. the possum). It outlines the strategies, tactics and technical methods to be applied in the management of that organism. It also outlines the funding information for the pest management strategy, and the proposed allocation of the costs of funding among the parties involved.

What are the implications of these changes for the veterinary profession in the process of Tb eradication?

- i) Technical specifications - Internationally auditable guidelines for the testing process.
- ii) Our performance in the field.
- iii) Our role in the advice / on farm management for Tb problem herds.
- iv) Quality assurance.
- v) Strategic planning - our future role.

1) **TECHNICAL SPECIFICATIONS**

As a consequence of the legal requirements of the pest management strategy, clearly defined specifications for the

process of deer Tb testing have been documented.

This paper is not designed to detail these specifications at length but I feel it is an opportunity to re-emphasise some of the points often forgotten.

**A: MID CERVICAL TEST (MCT)**

(i) Application; - 0.1 ml Bovine tuberculin (50,000 i.u.) is to be accurately injected in a mid cervical site. A bleb should be visible for minimum of 30 seconds in >95% of deer post injection. The clipped area should be 10cm by 10cm and have an even hair length .

(ii) Interpretation; The MCT is read in a minimum of 300 lux of light at  $72 \pm 6$  hours. Record the results on an approved allocation form. The result is positive if a visible or palpable reaction is at the test site, (except for hard nodular rice grain size reactions - with skin thickness difference of less than 2 mm).

Test positive animals must be tagged with reactor tags irrespective of whether an ancillary test is to be applied or not. Record the results on an allocation form and send to a MAFQUAL office.

**B: COMPARATIVE CERVICAL TEST (CCT.)**

(i) Application;

The test is applied between 90 - 120 days post MCT, at a different site to the MCT (plus an allowance of + 30 days for some management procedures on discussion with the VO).

Measure and record skin fold thickness at both sites using vernier type calipers to the nearest 0.1mm.

Inject 0.1 ml tuberculin (avian at top site and bovine at bottom.) Blebs must be visible in all deer at both sites.

(ii) Interpretation;

Measure skin fold thickness at both sites  $72 \pm 6$  hours post injection.

A test is positive if the difference in skin fold thickness at the bovine site is  $\geq 2$  mm and is  $\geq$  than the difference in skin fold thickness at the avian site.

**C) DECISION CRITERIA FOR USE CCT**

(i) The CCT is not to be used in movement control herds or suspended herds (unless RAHC operation plan varies).

The CCT may be used in herds (as a primary test or ancillary test) that meet the defined risk criteria, however;

In non surveillance (ie. fringe or movement control areas) a

positive CCT results in :

- a) Suspension of herd status.
- b) Slaughter or BTB of reactor animals .
- c) The decision tree is used to determine the herds new status following the BTB \ slaughter results. (appendix one)

## 2) VET PERFORMANCE IN THE FIELD

Veterinarians are in my opinion quite unique in that all of their training and job application leads them to a problem orientated - "How can I make this work better" approach.

This is commendable in 95% of our work except when it comes to the application of a technically defined testing regime such as Tb testing deer. It is essential that as a profession we act with a uniformity and quality of standard that is above reproach. So even though we often personally justify our interpretation of technique and results we must all comply if an auditable and repeatable test system is to be used.

The outcome of a refusal to do this will be the loss of the right to continue to test deer. This testing standard is now part of a legal act and is open to audit by quality assurance principles.

## 3) VETERINARY ROLE IN FIELD TESTING

There are now two levels of veterinary involvement in deer Tb testing. One is at a purely technical level. This may require a lot of personal re-evaluation of testing standards within the profession.

The other is on the higher level of on farm advice and management especially in TB outbreak situations. The Profession potentially has a far greater role to play in this area.

As the Tb eradication programme progresses, and the prevalence of Tb outbreaks decrease there is going to be a reduction in individual expertise in TB control advice. It is going to require a much greater degree of specialist knowledge / training and may become more of a unique role for a few, rather than a right that goes with the job. The opportunity exists to build expert teams (consultants, veterinarian, banker) to advise on management plans for the whole farm to ensure survival following a TB outbreak.

In a free market place where the Animal Health Board is able to contract out aspects of its pest management plan contestability is a very real issue, and its the proven ability to perform well in the field in all aspects of Tb control that is going to land veterinarians a continued role in the plan.

#### 4) QUALITY ASSURANCE

Quality Assurance schemes are a means of maintaining a high standard of field performance. The basis for a deer TB testing QA scheme is the technical specifications. A training programme based on a comprehensive manual containing all relevant information for all parties ensures all "testing officers" start well educated.

The second part of a quality assurance scheme comprises;

- i) Auditing
  - on practical application of the test
  - paper trail
- ii) Compliance
  - A body for monitoring standards
  - An understanding of the need for compliance from testing officers to ensure a continued role in testing, and the role of the monitoring body in enforcing this.

#### 3) THE FUTURE - STRATEGIC PLANS

To ascertain what future roles individual practices have in the Tb testing of deer is reliant on;

- i) Their recognition of a need to maintain levels of performance.
- ii) The realisation that the profession has and wants a continued role in deer Tb control.

Economics play a big part in any system involving "user pays" principles. Many practices will have already met with resistance from clients to paying professional fees for a technical job. How many vets actually want to continue actively testing themselves? I believe there is a potential for vets to employ technicians for actual testing but the potential impact on loss of direct client contact needs to be analysed. Are we then creating a further surplus of under-utilised veterinarians? What else could these vets be doing instead of testing?

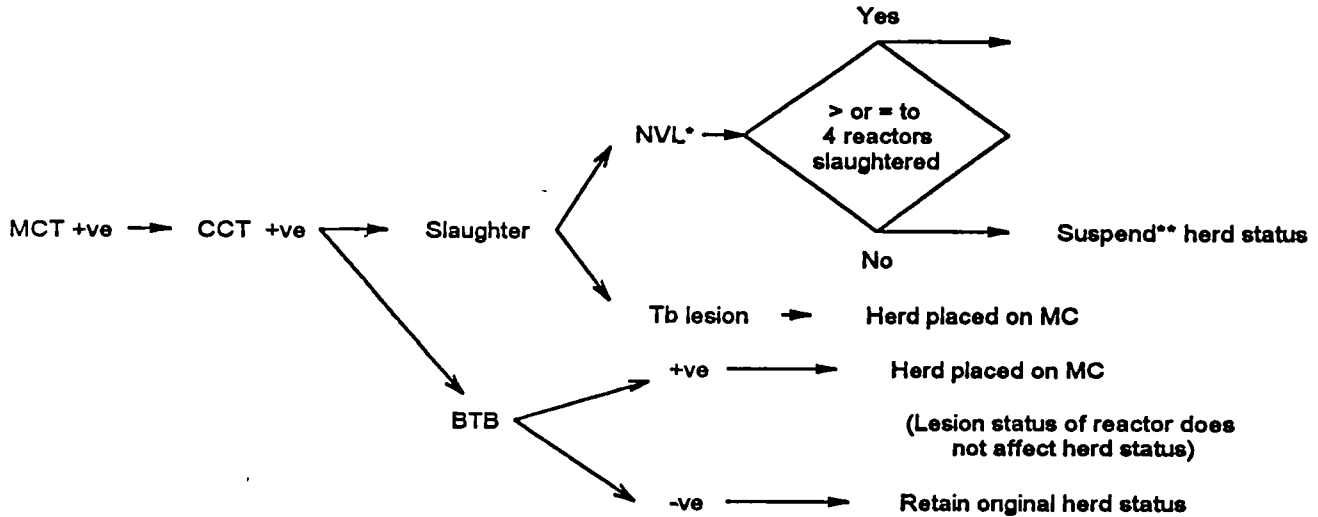
A role may exist for the profession as a whole to contest for the overall administration of the scheme. If field performance is maintained at a high level, and the profession can provide a more efficient service to the Animal Health Board than the existing authorities then any number of opportunities for contesting service delivery and regulatory roles may arise.

There exists a need to lobby those groups that are the end user of such schemes. In a free market situation those that actively fund the service delivery, such as the Deer Farmers Association and Game Industry Board need to be satisfied as much as the Animal Health Board in its legislative role. This is something that both NZVA and the Deer Branch as representatives of the Veterinary Profession can do on behalf of individual practices, once they recognise the role they wish to have in TB control.

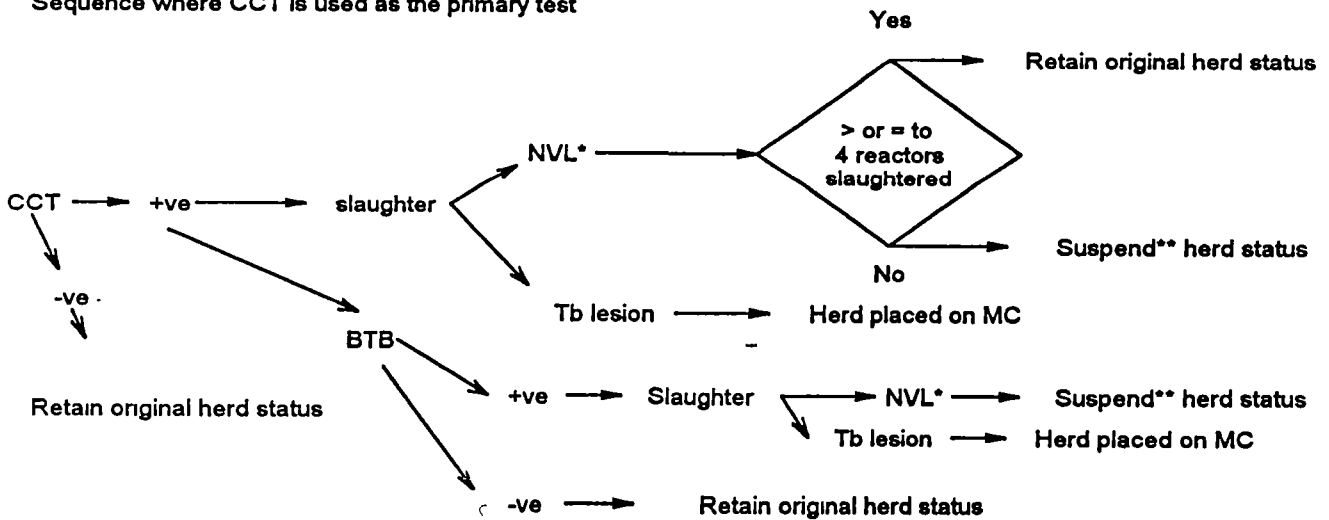
Appendix one: From draft of technical specifications, AHB.

Decision tree for herd status based on the outcomes of a variety of testing regimes and slaughter results

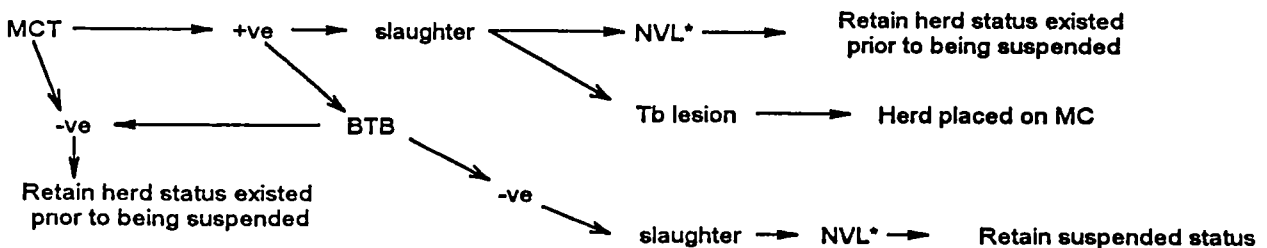
Sequence starting with an MCT



Sequence where CCT is used as the primary test



Testing sequence for suspended herds (except those suspended because of failing to test within the required period.)



\* NVL - No visible lesions on slaughter

\*\* - Suspended herds are required to have another whole herd test between 3 and 6 months after the reactor is slaughtered.