

PART II : BOVINE TUBERCULOSIS

4 DEFINITIONS

4.1 MISCELLANEOUS

4.1.1 Apparent Annual Area Prevalence is the number of lesioned reactors and confirmed abattoir cases (excluding reactors being slaughtered at abattoirs) during a specified 12 month period, expressed as a percentage of the animals in the area.

4.1.2 Approved abattoir

An abattoir in which veterinary supervision of meat inspection is maintained and facilities exist for maintaining identity of cattle at slaughter as approved by CVO.

4.1.3 Approved person

A person approved by the CVO to carry out tuberculosis tests.

4.1.4 Cattle

Cattle means both bovines and buffaloes. In some respects buffaloes are different to cattle.

4.1.5 CVO

The Chief Veterinary Officer of a State, Territory or the Commonwealth.

4.1.6 For immediate slaughter

Consigned direct to an approved abattoir or,

consigned to an approved saleyard for sale for slaughter only. The saleyard to be such that animals so consigned are physically separated from all other classes of stock at all times or,

ordered for supervised destruction on the property or other place approved by the CVO.

4.1.7 Herd

A herd is a group of cattle which is managed separately and maintained separate from other cattle by an approved fence or approved natural barrier. A tail tag may be allocated only to a herd as so defined.

4.1.8 Herd breakdown

Those herds which were previously Tested Negative (TN), Monitored Negative (MN) or Confirmed Free (CF) in which tuberculosis has been detected.

4.1.9 Incidence

The proportion of the population in a given area occurring as new cases during a specified period of time.

4.1.10 Positive lesion

A lesion classified as tuberculosis by laboratory examination.

4.1.10.1 Histopathology Positive. A lesion classified as tuberculosis by histopathology.

4.1.10.2 Culture Positive. A lesion from which *Mycobacterium bovis* is cultured.

4.1.11 Prevalence

The proportion of the population in a given area at a given time that has the disease.

4.1.12 Quarantine

Means an official order restricting cattle to a certain location or requiring authorisation for movement to and from that location.

4.1.13 Suspect tuberculosis lesion

Single or multiple granulomatous lesions for which tuberculosis is one differential diagnosis.

4.1.14 Tuberculosis

Tuberculosis is deemed to be bovine tuberculosis caused by the organism *Mycobacterium bovis*.

4.1.15 Traceback

An approved method of identifying the property of origin of animals.

4.2 AREAS

Note: These Definitions should be read in conjunction with Rules in the next section.

4.2.1 Declared area

An area declared by legislative or administrative action to be legally protected from tuberculosis infection by restriction on the entry of cattle.

All cattle entering a declared area and not consigned for immediate slaughter shall be certified free or recently tested, and moved under permit. There shall be an approved monitoring system in operation.

4.2.2 Free area

The area has been an Impending Free Area for at least 5 years during which period the number of breakdowns has been acceptable and effectively handled. All tuberculosis is believed to have been eradicated. Previously infected herds are subject to approved monitoring. An approved abattoir monitoring system and granuloma submission system are in place.

Discovery of infection in a Free Area will not initially affect its classification.

4.2.3 Impending free area

All herds have been assessed, there are no known Infected or Restricted herds at the time of the declaration.

Discovery of infection in an Impending Free Area will not initially affect its classification.

4.2.4 Provisionally free area

The apparent annual area prevalence is less than 0.1% and 5% or less of herds are Infected, with due recognition of the nature of the enterprises in the area. All herds have been assessed. All infected herds are placed in quarantine and active eradication measures are instituted. Where eradication testing is utilised, reactors are identified and consigned for immediate slaughter.

4.3 TESTING

4.3.1 Tuberculin tests

The following tests are official tests for tuberculosis when performed by an approved person and carried out using the defined standard test procedures.

4.3.1.1 Single intradermal caudal fold test using 3 mg/ml purified protein derivative (PPD) tuberculin of bovine origin.

4.3.1.2 Comparative tuberculin test carried out in the mid-neck region using 2500IU/ml PPD tuberculin of avian origin and 1mg/ml PPD tuberculin of bovine origin.

4.3.2 Gamma Interferon Test

This test when carried out on a blood sample according to manufacturers instructions and the Australian Standard Diagnostic Techniques approved by Standing Committee on Agriculture and Resource Management and Animal Health Committee.

4.3.3 Post-mortem examination

The examination of a carcass in an abattoir or at field autopsy.

4.3.4 Clinical examination

The examination of a live animal which may then be deemed suspect if clinical signs consistent with tuberculosis are observed.

4.3.5 Herd tests

4.3.5.1 Eradication

Testing of all eligible animals in a herd when the herd is either known to be infected or its infection status is unclear.

Where tuberculosis has been detected in a herd, Eradication tests are those tests carried out on herds of SU, IN, RD and PC status.

4.3.5.2 Confirmatory

Tests carried out to confirm the absence of disease, after completion of Eradication tests and/or herds have achieved TN, MN or CF1 status.

4.3.5.3 Movement

A tuberculin test of cattle prior to movement or as required in the rules for movement between or within areas.

4.3.5.4 Survey

Tests of some or all eligible animals in a herd to assist in determining the current tuberculosis status of a herd or area, where such testing either does not comply with requirements for eradication or confirmatory testing, or is not intended for that purpose.

4.3.5.5 Miscellaneous

Testing of some or all eligible animals in a herd for purposes not primarily related to the conduct of the eradication program (eg. export, introductory show, sale, etc).

4.3.5.6 Diagnostic

Testing of some animals in a herd for tuberculosis in connection with the investigation of a disease problem.

4.3.5.7 Retest

Testing of selected animals on a later occasion, to clarify their status.

4.3.5.8 Negative Test

A test of all eligible animals in a herd or group in which no tuberculosis is detected.

4.3.5.9 Monitor Test

The final mandatory check test carried out on cattle previously exposed to tuberculosis and carried out eight years after exposure with the herd then achieving Confirmed Free 3 status.

Guidelines for herds requiring a Monitor Test are included in Part V: MONITORING FOR TUBERCULOSIS.

4.4 HERD CLASSIFICATION

4.4.1 Not Assessed

A herd that has not been tested and for which insufficient information is available for it to be classified otherwise.

4.4.2 Suspect (SU)

A herd in which monitoring information suggests that the herd is Infected, but further evidence is required to classify the herd as Infected or otherwise; or in which the field situation suggests that the herd has a high risk of being Infected.

4.4.3 Infected (IN)

A herd determined to be infected with *Mycobacterium bovis*.

4.4.4 Restricted (RD)

A previously Infected herd that has had one herd test without evidence of infection.

4.4.5 Provisionally clear (PC)

A previously Infected herd that has had two consecutive negative herd tests at an interval of not less than six months or a herd which has undergone the required testing to be classified as Tested Negative, Monitored Negative or Confirmed Free but is set at Provisionally Clear status due to a risk of infection.

4.4.6 Confirmed Free (CF)/Confirmed Free One (CF1)

A herd considered free of tuberculosis. It will be as a minimum, a previously Provisionally Clear or Tested Negative herd that has had at least one further herd test without evidence of disease at an interval of not less than six months after achieving that status. Where the herd was previously Infected this may be referred to as Confirmed Free One status.

Confirmed Free Two (CF2)

A herd that has had one further test no sooner than 12 months after the test to achieve CF1 status.

Confirmed Free Three (CF3)

A herd that has had a test 8 years after known infection and meets requirements for the Monitor test.

4.4.7 Tested negative (TN)

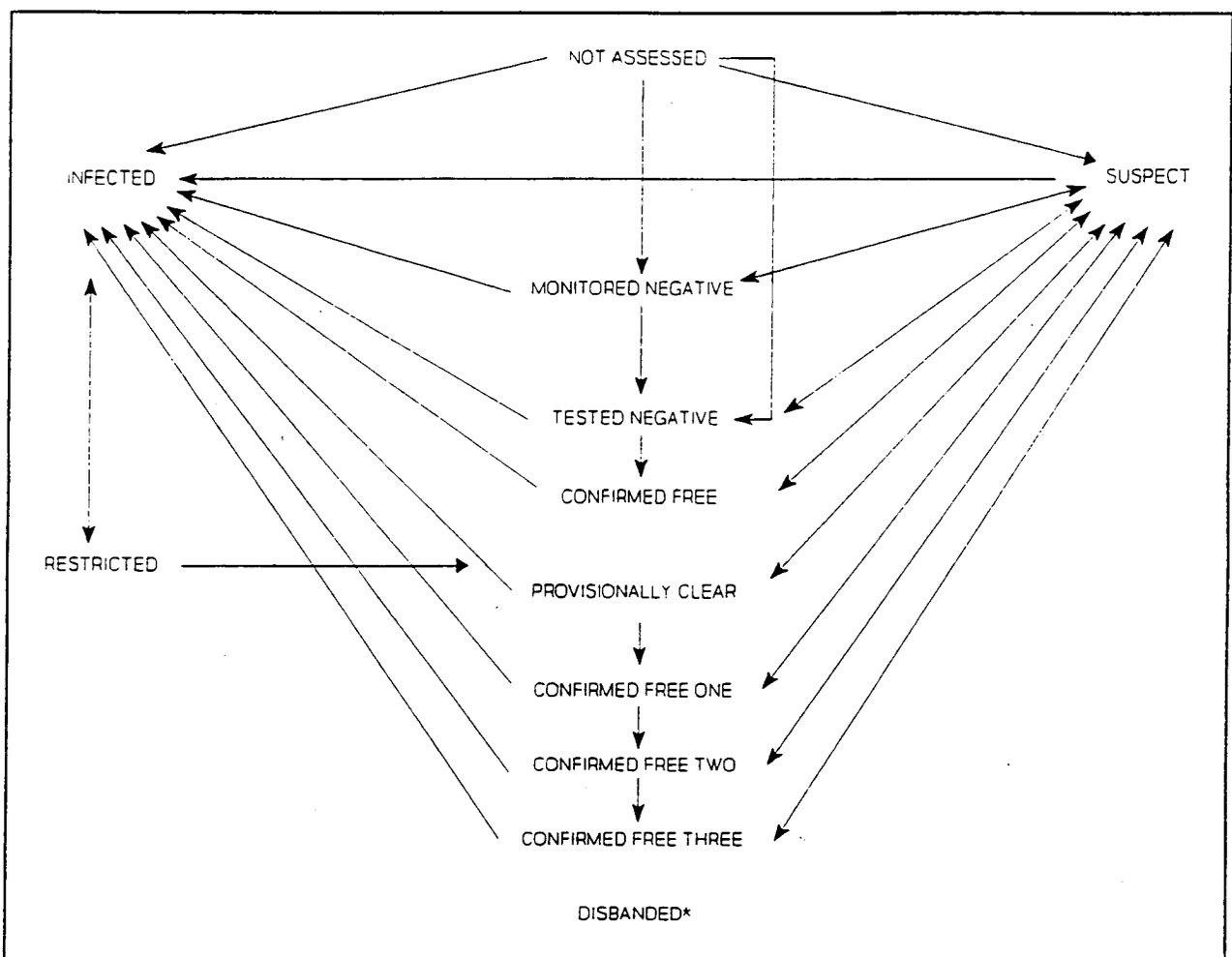
A herd not previously classified as Infected that has had at least one herd test without evidence of infection.

4.4.8 Monitored negative (MN)

A herd in which adequate monitoring information indicates that the herd is free of tuberculosis, but a whole herd test has not been carried out.

4.4.9 Disbanded (DB)

A herd for which records were obtained but which no longer exists.

4.5 PATHWAYS FOR CHANGE IN HERD CLASSIFICATION

* May be attained from any previous status

* For time intervals refer to 5.3.2

5 RULES

5.1 DECLARATION OF AREAS

5.1.1 A Free Area

Australia may be declared a Free Area by Standing Committee on Agriculture and Resource Management when:

- 5.1.1.1 It has been an Impending Free Area for at least 5 years
- 5.1.1.2 Animal Health Committee is satisfied that bovine tuberculosis has been eradicated from the area.
- 5.1.1.3 All tuberculosis is believed to have been eradicated from the area
- 5.1.1.4 No herds are Infected, Restricted or Provisionally Clear.
- 5.1.1.5 Movement controls exist for previously infected herds with Confirmed Free One status.
- 5.1.1.6 An approved abattoir monitoring system and granuloma submission system are in place.

5.1.2 An Impending Free Area

May be declared by the Standing Committee on Agriculture and Resource Management when:

- 5.1.2.1 An approved monitoring system is in operation
- 5.1.2.2 All herds have been assessed
- 5.1.2.3 No herd is Infected or Restricted
- 5.1.2.4 The capacity exists to eradicate any tuberculosis breakdown within 24 months of its detection.

5.1.3 A Provisionally Free Area

May be declared by the Brucellosis and Tuberculosis Eradication Campaign Committee when:

- 5.1.3.1 An approved monitoring system is in operation
- 5.1.3.2 All herds are assessed
- 5.1.3.3 All Infected herds are placed in quarantine and under active eradication measures

5.1.3.4 The apparent annual prevalence of disease is less than 0.1%, and 5% or less of herds are Infected at the time of declaration, with due recognition of the nature of the enterprises in the area.

5.1.4 An Eradication Area

May be declared when:

5.1.4.1 An approved monitoring system is in operation

5.1.4.2 All Infected herds are placed in quarantine and eradication measures implemented.

5.1.5 A Control Area

May be declared when by the CVO when an approved monitoring system is in operation.

5.2 MOVEMENT BETWEEN AREAS

5.2.1 Movement for immediate slaughter

Where applicable cattle movements shall be subject to control by the CVO, and where applicable, supervision in Free and Impending Free Areas. Animals shall be identifiable to their property of origin.

5.2.2 Movement for other purposes

All movements shall be subject to control by the CVO; identifiable to the property of origin, and subject to area status of the herd and area status of destination.

5.2.3 Movement into an Impending Free Area

5.2.3.1 From Free or Impending Free Area

Herd Status	Store (non-slaughter) Movements	To Slaughter
SU, IN, RD, PC	No movement permitted. Within these areas movement only with CVO permission	Prior CVO permission and notification of movement required between administrative areas otherwise no restrictions. Suitable visible identification required.
CF1	Movement test and cattle retain CF1 status. The movement cattle must be held in isolation until completion of CF2 test at the approved interval. Prior CVO approval for movement to other administrative areas.	No Restriction
CF2	Conditions may be applied.	No Restriction
MN, TN, CF, CF3	No Restriction	No Restriction

5.2.3.2 From Provisionally Free Areas.

Cattle moving direct to an abattoir for slaughter:

from CF, CF2, CF3, TN or MN herds - no movement test

from SU, IN, RD, PC or CF1 Herd - no movement allowed except with CVO approval in special circumstances and under specified conditions.

5.2.3.3 Cattle moving for fattening or breeding (store movements):

from CF, TN and MN herds - one negative movement test

from SU, IN, RD and PC herds - no movement allowed.

5.2.4 Movement within and into a Provisionally Free Area

5.2.4.1 Cattle moving direct for immediate slaughter - no movement test required.

5.2.4.2 Cattle moving for fattening or breeding -

From SU, IN, RD, PC or CF1 herds - no movement allowed.

From MN, TN, CF, CF2 and CF3 herds - no movement test required.

5.2.5 For the purposes of movement

Movement testing must include identification of cattle and if more than one test is specified, correlation of animals between tests is also required.

The CVO of the State of destination of a proposed movement not normally permitted under these rules may authorise movements under conditions the CVO may specify.

5.3 INFECTED HERDS

5.3.1 Restrictions

Movement of cattle from the herd is not permitted except as approved by the CVO.

5.3.2 Testing

- 5.3.2.1 An IN herd requires one herd test without evidence of infection not less than 60 days after the previous test to attain RD status.
- 5.3.2.2 A RD herd requires one further herd test without evidence of infection not less than 6 months after the test by which it attained RD status to attain PC status.
- 5.3.2.3 A PC herd requires one further herd test without evidence of infection at an interval of not less than 6 months after the test by which it attained PC status to attain CF1 status.
- 5.3.2.4 A CF1 herd requires one confirmatory test without evidence of infection not less than 12 months after attaining CF1 status to attain CF2 status.
- 5.3.2.5 A CF2 herd requires a review 8 years after the last known infection and all cattle previously exposed to tuberculosis are to be tested. Any test is known as the Monitor test and the herd achieves CF3 status.

5.3.3 Movement of reactors

When reactors are sent for immediate slaughter they will be identified and will go under permit.

5.4 STANDARD TEST PROCEDURES

5.4.1 Testing

- 5.4.1.1 All tuberculin testing is regarded as official and subject to CVO control.
- 5.4.1.2 All testing must be carried out by approved persons.
- 5.4.1.3 Reactors and/or animals deemed to be suspect will be identified by the testing person in a manner prescribed by the CVO.

5.4.2 Reports

The testing person will submit a report on all tests to the CVO.

5.4.3 Isolation

Reactors and animals deemed to be suspect will be placed in isolation from all other cattle pending their disposal.

5.4.4 Disposal

Unless retesting is required, reactor cattle will be disposed of within 21 days by:

- 5.4.4.1 Consignment to an approved abattoir for immediate slaughter. The Officer in Charge of inspection at the abattoir must be advised prior to the dispatch of the reactors, or
- 5.4.4.2 Slaughter and autopsy on the property of origin, with disposal of the carcase in an approved manner to prevent spread of infection.

5.4.5 Examination of reactors

- 5.4.5.1 Using methods described in the Australian Standard Diagnostic Techniques (ASDT) a detailed examination will be made of reactors at slaughter and any suspicious tuberculosis lesions will be examined for tuberculosis at a laboratory approved by the CVO. The essential tissues are required. Other tissues are not routinely required.
- 5.4.5.2 Meat Inspectors or Veterinary Officers in Charge of meatworks will report to the CVO:
 - all reactors processed, with identification and results.
 - all suspect lesions, with identification and description.
 - all specimens submitted for laboratory examination.
- 5.4.5.3 Officers in Charge of laboratories will report to the CVO, and to the Meat Inspector or Veterinary Officer in Charge of the meatworks, the results of all examinations for tuberculosis.
- 5.4.5.4 Departments will ensure that this information is relayed as soon as possible to CVOs of the State of origin of reactors and carcasses with lesions, as appropriate.

5.4.6 Compensation

All cattle ordered to be slaughtered as a part of tuberculosis eradication procedures are subject to compensation.

5.4.7 Animals Eligible For Tuberculosis Testing

All cattle over six months of age are eligible animals. In Infected herds, testing of animals younger than six months may be required by the CVO.

5.5 SINGLE INTRADERMAL CAUDAL FOLD TEST

An intradermal injection of 0.1 ml of Purified Protein Derivative (PPD) Tuberculin containing 3mg PPD per ml [ie. CSL Tuberculin PPD (bovine) 3 mg/ml] is made into the caudal fold. The test is assessed by visual examination and palpation of the injection site. The optimum time for assessment is 72 hours after injection.

5.5.1 Retesting

Where re-testing of cattle is deemed necessary re-tests may be performed at the same injection site or at another injection site not less than 60 days after the last injection.

5.5.2 Equipment

5.5.2.1 Syringe - an approved type of single or multi dose syringe with the means of accurately dispensing 0.1 ml of tuberculin.

5.5.2.2 Needles - 22 gauge or finer, the unsheathed portion of the needle when attached to the syringe, to be no less than 2 mm and no more than 5 mm in length.

5.5.3 Method

The caudal fold should be examined for abnormalities. If any abnormality is detected it should be recorded.

The fold to be injected should be located and immobilised using the fingers or fingers and thumb of the hand not holding the syringe. The fold should be injected at the level of the third or fourth coccygeal vertebrae.

An intradermal injection is made by inserting the needle at an appropriate angle, depending on the thickness of the caudal fold to ensure the delivery of a 0.1 ml dose intradermally. Intradermal deposition of tuberculin is indicated by the immediate formation of palpable bleb at the site of injection.

5.5.4 Reading

Interpretation of the test is made by raising the tail and examining the injection site both manually and visually at or soon after the optimum time of 72 hours after injection. Both caudal folds may be examined to determine if there is any swelling, thickening or oedema of the injected site.

5.6 INTERPRETATION OF SINGLE INTRADERMAL CAUDAL FOLD TEST

Reactor - An animal showing visible or palpable swelling at the site of injection.

Non-Reactor - An animal showing no visible or palpable swelling at the site of injection.

5.7 COMPARATIVE INTRADERMAL TUBERCULIN TEST

The test involves intradermal injections of 0.1 ml of bovine tuberculin PPD and 0.1 ml of avian tuberculin PPD into separate clipped sites in the mid-neck region in front of the line of the shoulder. The test is assessed by examining and measuring the sites of injection before and at an optimum time of 72 hours after injection.

5.7.1 Equipment

- 5.7.1.1 Syringes - as for the single intradermal caudal fold test. Two syringes must be used each identified for the type of tuberculin to be used and used for that tuberculin only.
- 5.7.1.2 Needles - as for the single intradermal caudal fold test.
- 5.7.1.3 Hand clippers or curved scissors
- 5.7.1.4 Tuberculin - bovine tuberculin PPD at a potency of 1 mg/ml and avian tuberculin PPD at a potency of 2500 IU/ml. (IU = international units) ie. CSL Tuberculin PPD (Bovine) 1 mg/ml; CSL Tuberculin PPD (Avian).
- 5.7.1.5 Skin Callipers - of approved design. The callipers may or may not be calibrated in millimetres.
- 5.7.1.6 Ruler - calibrated in centimetres and millimetres.
- 5.7.1.7 Record sheets

5.7.2 Method

The injection sites should be in a line in front of and parallel with the line of the shoulder. The upper site, used only for the AVIAN tuberculin, should be at least 10 cm below the crest of the neck. The lower site, used only for the BOVINE tuberculin, should be not less than 19 cm from the upper site.

For young cattle, in which the two sites cannot be separated sufficiently, an injection should be made on each side of the neck at an equivalent site.

The selected sites should be clipped and clean. A fold of skin within the clipped area should be taken up between the finger and thumb and measured to the nearest millimetre, using callipers, BEFORE injection. The measurements should be recorded. The intradermal injection should be made in a similar manner to the single intradermal caudal fold test. If a bleb is not raised then a further injection should be made preferably on the other side of the neck and at a similar site.

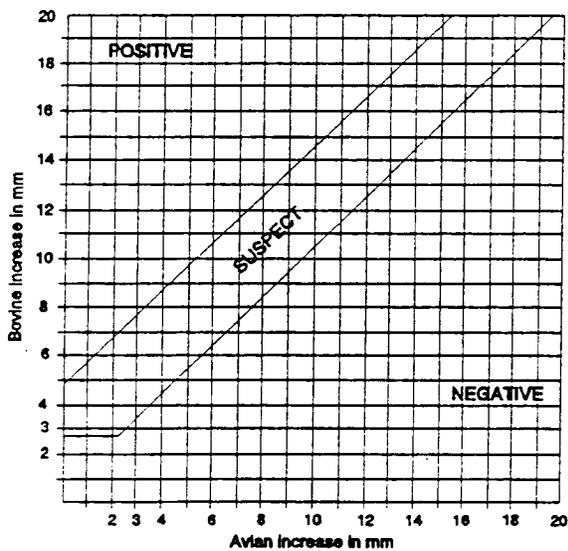
5.7.3 Reading

The test is read by picking up the skin fold so that the swelling or injection site is at the apex. The thickness of the fold is then measured to the nearest millimetre with callipers and recorded. It is important that the nature of the swelling be noted and that the presence of even a minimum amount of either diffuse or discrete oedema be considered as highly significant. The result of the test should be interpreted according to the rules set down.

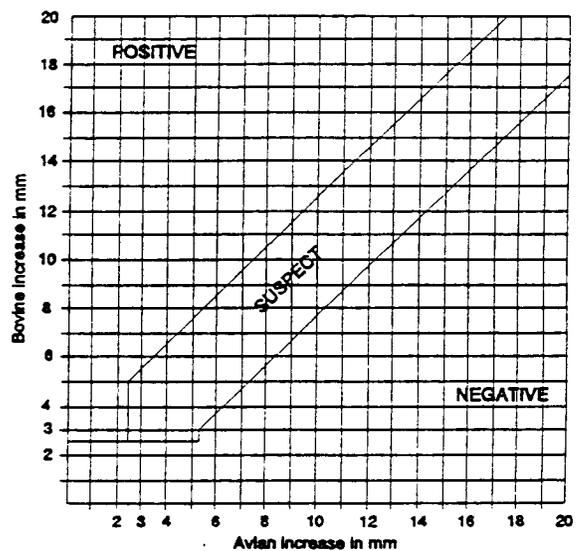
5.8 INTERPRETATION OF COMPARITIVE INTRADERMAL TUBERCULIN TEST

The following graphs explain the STANDARD and SEVERE interpretations of the test.

STANDARD INTERPRETATION
Avian/Bovine Tuberculin Test



SEVERE INTERPRETATION
(To be used only on CVO's instruction)



Interpretation of the Comparative Tuberculin Test

5.8.1 Standard Interpretation:

To be used as the normal interpretation.

Used for herds where the history is not suggestive of TB or herds with a non-specific sensitisation.

5.8.2 Severe Interpretation:

To be used only on the instruction of the CVO.

May be used for herds with a recent history of TB or with an inadequate history.

5.8.3 Reactor:

An animal showing visible or palpable swelling at the injection sites which when measured is interpreted as positive or suspect on the above graphs.

5.8.4 Non-reactor:

An animal showing no visible or palpable swelling at the injection sites and which when measured is interpreted as negative on the above graphs.

PART III: ANIMAL IDENTIFICATION SYSTEMS

6 BRUCELLOSIS AND TUBERCULOSIS TRACEBACK

6.1 AUSTRALIAN CAPITAL TERRITORY

6.1.1 Registered Wrap-around Property Tail Tag

Orange tag with black characters

Example NI750000

Transverse sequential numbering for individual animal identification

N = New South Wales
 I = Check character
 75 = Australian Capital Territory
 0000 = Registered property number

6.1.2 Registered Ratchet Property Tail Tag

Orange tag with black characters

Example NI750000

Explanation as for wrap-around tag. No transverse sequential numbering.

6.2 NEW SOUTH WALES

6.2.1 Registered Tag

Wrap-around or Ratchet Tail Tag or Ear Tag

Orange or pink tag with black characters.

Example NI 240 852

Transverse sequential numbering for individual animal identification.

N = New South Wales.
 I = Check digit.
 24 = Rural Lands Protection District.
 0852 = Registered Owner Number.

6.2.2 Special (Emergency) Tag

Ratchet or Wrap Around Tag

Orange tag with black characters.

Example NZ860982

N = New South Wales.
 Z = Special Tag.
 86 = Region of Issue.
 0982 = Identification of owner of particular animal.

6.3 NORTHERN TERRITORY

Due to low retention of tailtags on buffalo, identification of buffalo is by brands and waybills.

6.3.1 Registered Disease Free Area Tag

Yellow or pink tag with black characters

Example TDBT0024

Transverse sequential numbering for individual animal identification

T = Northern Territory
 D = Check character
 BT = Pastoral district
 0024 = Registered property number

6.3.2 Restricted Disease Tail Tag

Green tag with black characters

Example TDAS 0132

Transverse sequential numbering for individual animal identification

T = Northern Territory
 D = Check character
 AS = Pastoral district
 0132 = Registered property number

6.3.3 Registered Stranger Tail Tag

Used by property owner to indicate that the animal has strayed onto the property.

Blue tag with black characters

Example TGAS0250

Transverse sequential numbering for individual animal identification

T = Northern Territory
 G = Check digit
 AS = Pastoral district
 0250 = Registered property stranger identification

6.4 QUEENSLAND

6.4.1 Registered Property Tail Tag

White or pink tag with black characters.

Example QBGG1060

Transverse sequential numbering for individual animal identification.

B = Check character.
 GG = Shire.
 1060 = Registered property number.
 Q = Queensland.

6.4.2 District Tail Tag

For herds with less than 11 head; such herds are not registered in Queensland.

Red tag with black characters.

Example QZBB

Transverse sequential numbering for individual animal identification.

Z = Constant character substituted on all these tags for check character.
 BB = Shire.
 Q = Queensland.

6.4.3 Saleyards Tail Tag

For use on cattle which have lost their tail tag in-transit to saleyards.

White tag with black characters

Example SBB Q

Transverse sequential numbering for individual animal identification

S = Constant character substituted on all these tags for check character.
 BB = Shire.
 Q = Queensland.

6.4.4 TB Quarantine Property Tail Tag

Green tag with black characters.

Example BXX1060 Q

Transverse sequential numbering for individual animal identification.

B = Check character.
 XX = Shire.
 1060 = Registered property number.
 Q = Queensland.

6.4.5 Approved Ear Tag

Large flexible plastic tags, white with black characters.

Example BGG1060 Q

State, check character, shire and property code as for tail tags. No sequential numbering.

6.5 SOUTH AUSTRALIA6.5.1 Registered Property Tail Tag

White or pink tag with black characters

Example S346553

Transverse sequential numbering for individual animal identification.

S = South Australia.
 34 = Area code.
 655 = Registered property number.
 3 = Check character.

6.5.2 Tuberculosis Quarantine Tail Tag

Green tag with black characters.

Example S140785

S = South Australia.
 14 = Area code.
 078 = Registered property number.
 5 = Check character.

6.5.3 Numbered Departmental Tail Tag

Applied by Government officers to cattle that have not been tagged or have lost tags. Sequential numbers are recorded and related to owners' registered property number.

Yellow tag with black lettering, sequentially numbered.

Example 018196 SA

018196 = Sequential numbering.
 SA = South Australia.

6.5.4 Un-numbered Departmental Tail Tag

Applied by Government officers to cattle that have not been tagged or have lost tags. The property tail tag number is written on by hand.

White or pink with black lettering.

Example S

S = South Australia.
 34 = Area code.
 655 = Registered property number.
 3 = Check character.

6.6 TASMANIA

6.6.1 Registered Property Tail Tag

Yellow or pink tag with black characters

Example MHSL0300

Transverse sequential numbering for individual animal identification

M = Tasmania
 H = Check character
 SL = Municipality
 0300 = Registered property number

6.7 VICTORIA

6.7.1 Registered Property Tail Tag

White tag with red characters; vinyl self-adhesive.

Example VHDK 6001

Transverse sequential numbering for individual animal identification.

V = Victoria.
 H = Check digit.
 DK = Local Government district.
 6 = Local Government sub area or parish.
 001 = Registered property number.

6.7.2 Emergency Tail Tag

White tag with red characters; vinyl self-adhesive.

Example V

No transverse sequential numbering, rest of tag details handwritten.

V = Victoria.
 T = Temporary tag.
 ME = DVO district.
 690 = Identification of owner of particular animal.

6.8 WESTERN AUSTRALIA

6.8.1 Registered Non-Quarantine Property (Brucellosis or Tuberculosis) Tail Tag

White tag with black lettering

Example TAY 123

Transverse sequential numbering for individual animal identification.

123 = Registered property number.

T = Check character.

AY = Shire code.

6.8.2 Substitute Registered Non-Quarantine Property Tail Tag

Issued by District Veterinary Office when owner runs out of tags. Owner under supervision enters registered property number on each tag with black felt pen.

White tag with black characters.

Example 8/TAY 123

Transverse sequential numbering for individual animal identification.

8 = District number.

/ = Substitute tag identification.

123 = Registered property number.

T = Check character.

AY = Shire code.

6.8.3 Registered Quarantine Property (Brucellosis or Tuberculosis) Tail Tag

Issued for movement under permit, to abattoirs, abattoir saleyards or for approved movements to quarantine.

Red tag with black characters.

Example 1/TAY 123

Transverse sequential numbering for individual animal identification.

1 = District number.
/ = Contact cattle tag identification.
123 = Registered property number.
T = Check character.
AY = Shire code.

6.8.4 Green Print Tail Tag

Applied by livestock agent at Midland saleyards only, to cattle which have not been tagged by owner or to cattle that have lost tags. The transverse sequential numbers are recorded and related to owner's registered property number.

White tag with green characters.

Example 12345/6

Transverse sequential numbering for individual animal identification.

12345/6 = Constant characters which identify tag as a green print tag.

PART IV : BREAKDOWNS

7 DEFINITIONS

7.1 BREAKDOWN

A herd breakdown occurs where tuberculosis infection is detected in a MN, TN or CF herd. Detection may be via meatworks detection and traceback, herd testing, or other type of disease investigation.

All breakdowns are to be reported to AHC.

Cases may be classified as follows:

7.1.1 Breakdown

A case considered to be bovine tuberculosis on the basis of:

Histopathology and/or positive culture of the original or subsequently detected lesions; or

Positive histopathology and negative culture, but infection is subsequently detected; or a professional decision has been made that the case is tuberculosis following consideration of evidence such as gross pathology, laboratory findings and epidemiological evidence such as previous history.

Status of the herd reverts to IN.

7.1.2 Incident

A case suggestive of tuberculosis but where there is no strong evidence to support this diagnosis or the evidence is contradictory and further information is required to make a decision. For example, a case where histopathology is positive, culture is negative, no infection is detected subsequently and there is no epidemiological evidence to suggest that the herd may be Infected or a case where histopathology is suspect, culture is negative, no infection is detected subsequently and there is no epidemiological evidence to suggest that the herd may be Infected.

Incidents need not be reported to Animal Health Committee but should be reported to the National Breakdown Register in Brisbane.

Status may revert initially to SU, PC or CF1.

7.2 CRITERIA FOR MANAGING TUBERCULOSIS BREAKDOWNS

7.2.1 Initial investigation

The initial investigation should aim to determine the source of infection to allow subsequent eradication.

7.2.2 Tracing

Upon detection of a suspect tuberculosis lesion the person detecting the lesion or the Veterinary Officer-in-Charge of meatworks shall record the tag number(s) of the lesioned animal and the size, location and description of the lesion(s). This description is submitted with the specimen(s) to the laboratory approved by the CVO.

Culture isolates should be submitted to the National Reference Laboratory for Bovine Tuberculosis.

Any other information that may assist with the traceback should also be recorded. This additional information may include: brand, ear tag, tailtag colour, sex, age, breed, animal colour and any health certification that accompanied the animal. Also identification of other animals in the group if the suspect animal is not fully identified.

Where a lesion is histopathology positive or suspect, traceback of the carcase to the herd of origin must occur and be confirmed to the satisfaction of the CVO.

Where, upon traceback, it is determined that the animal was not born on the immediate property of origin, further tracing shall occur to determine, where possible, on what other properties the animal had been depastured. Appropriate action may then be taken on these herds.

Where tuberculosis is confirmed, full traceback and traceforward are to be carried out.

To identify the direct contacts of all infected animals, tracing may have to go back for the full life time of the infected animal(s). In the absence of knowledge of the source of the infection, tracing should go back five years. All herds which have received animals from the breakdown herd are to be initially classed as SU. This status may be modified or limited to the groups containing, or that have contained, the traceforward cattle following subsequent investigation.

Any risk groups on neighbouring properties may also be placed under quarantine, and appropriate action taken. i.e. herd test or destock. A second test may be required after removal of the original neighbour infection.

7.2.3 Investigation

In suspect cases, the initial investigation should aim to confirm whether or not infection exists on the property.

In confirmed cases, the initial investigation should aim to determine whether further infected animals remain in the herd.

In either case the investigation may take the form of:

testing of the herd or group or;

destocking of the whole herd or group involved, with testing of the remaining risk cattle on the property or;

destocking of defined age groups and testing of the remaining cattle or;

in the case of an incident, the CVO will be determine whether a herd test is required.

7.2.4 Destocking

Factors that may influence the decision to use destocking as part of the initial strategy are:

breakdown

positive traceback to a particular group of animals

previous history of infection in the herd

doubt that testing will be effective e.g. age of cattle or cattle on a falling plane of nutrition

management not capable of implementing the required testing program

inadequate stock control or geographical/environmental conditions prevent adequate musters

destocking is economically advantageous to both the owner and the campaign

7.2.5 Where no further infection is detected on the initial investigation.

Breakdowns - the herd is to undertake all tests required to progress from IN to CF2 status. The number of tests may be reduced where the CVO is satisfied that infection no longer exists in a herd with a long history of negative tests.

Incidents - no further action, or at the discretion of the CVO, one further herd test depending on the epidemiological assessment.

7.2.6 Subsequent action where further infection is detected

Where the initial investigation confirms that further infection is present in the herd destocking of the group/herd will be the program of choice.

Animals may be retained for testing, subject to approval by AHC, where:

there is no evidence of transmission to younger age groups

groups of animals have been segregated from the infected group

destocking of all animals is not economically feasible.

Retained animals will undertake all tests required to progress from IN to CF2 status, except where otherwise approved by AHC in low risk situations.

The number of required tests may be reduced for groups of animals not related to the Infected group, or groups that have been segregated for a significant period of time, especially if these groups have already received tests.

7.3 APPROVED PROGRAM

7.3.1 An approved program may be a test and slaughter program, a destocking program or a mixture of both.

7.3.2 The criteria for selection of the approved program for a particular property should be its ability to eradicate the disease, the capacity of property management to implement the program, the financial effects on the owner and the cost to BTEC. The Approved Program is developed in consultation with the owner.

7.3.3 The program should be able to advance the status of the herd to at least CF1 status within 2 years of detection of infection.

7.3.4 Final approval of individual eradication programs lies with the Chief Veterinary Officer who must also obtain AHC approval where destocking is not adopted.

7.3.5 Capability of management to be gauged by:

Their ability to plan a realistic and detailed management routine integrated with the eradication program.

Their reliability in implementing routine or extra management activities.

The availability of competent staff to support the testing program.

The frequency and thoroughness of paddock inspections.

7.4 ADMINISTRATION AND DOCUMENTATION OF AN APPROVED PROGRAM

7.4.1 An approved program must consider the total cattle/buffalo enterprise on the whole property.

7.4.2 Premises

To assist administration, a property may be divided into premises or areas.

7.4.2.1 Each premise must be a self-contained unit, run separately from all other premises.

7.4.2.2 Such separation should have secure defined boundaries.

7.4.2.3 Each premise may have an individual tail tag number.

7.4.2.4 Movement conditions similar to those applying to movements between properties should apply to movements between premises.

7.4.3 General documentation should include the start, finish and interim target dates; year one in detail, and a three year outline of the program. It should also outline the resources required by the property in the form of paddocks, yards and labour and the acceptance of this by the management. Other information required:

7.4.3.1 An adequate map of the area must be available indicating the area occupied by the cattle and the surrounding discrete herds.

7.4.3.2 The number, sex, age and disease prevalence of the cattle under the approved program and their eartag colour code.

7.4.3.3 The numbers and disease prevalence in the adjoining herds, the tag colours, if any, and security from possible reinfection.

7.4.3.4 The type of program to be undertaken on that herd and any programs being undertaken on adjoining herds.

7.4.4 Detailed documentation of the implementation of the program in the next 12 months should be prepared and incorporated in written agreement with the owner and reviewed annually.

7.5 REQUIREMENTS FOR A TESTING PROGRAM

7.5.1 Facilities

7.5.1.1 Facilities should include sufficient adequately equipped cattle yards with holding paddocks where necessary.

7.5.2 Frequency of testing

7.5.2.1 All cattle in the program should be tested at least twice per year or once if determined appropriate by the CVO, having regard to the program, disease prevalence, and epidemiology of the disease in that area.

7.5.2.2 The ability to muster at short notice is desirable in the event of positive traceback information or in the event of the presence of suspect infected stranger cattle.

7.5.3 Size of group

7.5.3.1 Test groups should be a size that can be safely handled and securely held giving recognition to the quality of facilities. Groups should not be so large as to impair the testing veterinarian's accuracy.

7.5.4 The test group must be secure from reinfection by:

7.5.4.1 Being eartagged with an approved eartag and subject to inspection. If unidentified cattle are found on inspection they must be removed from that group and sent for immediate slaughter or subjected to testing.

7.5.4.2 All areas undertaking tests being inspected for unmustered stock by ground and/or air, as the CVO deems necessary, and appropriate action being taken.

7.5.4.3 Ensuring that fencing or other barriers, provide an adequate degree of security.

7.5.4.4 The disease status of the cattle in the surrounding area being determined.

7.5.5 Areas of mustering difficulty must be defined

7.5.5.1 Areas that cannot be satisfactorily mustered, should be excluded from a testing program and should be destocked over a period to be determined by the CVO.

7.5.6 Age structure, sex and disease prevalence of the cattle.

7.5.6.1 Herds being tested should be subjected to culling for age and heifers should be segregated and tested in isolation.

7.5.7 Plans for contingencies

7.5.7.1 Plans should be available in the event of drought, flood, fire or market depression.

7.5.7.2 The plan must permit cattle under test to remain segregated from untested cattle.

7.6 DESTOCKING AND RESTOCKING

7.6.1 Destocking general

7.6.1.1 A maximum time period must be specified for destocking.

7.6.1.2 Progress must be satisfactory within this timetable.

7.6.1.3 All cattle turned off must go for immediate slaughter, for sale for immediate slaughter, or to a feedlot approved by the CVO.

7.6.1.4 All other remaining cattle must be destroyed or incorporated in a program if suitable.

7.6.2 Restocking general

7.6.2.1 Areas which have been restocked must be capable of being adequately monitored either through meatworks or testing programs after cattle are put back in that area or access of stock permanently denied until the surrounding areas are free of disease.

7.6.2.2 For movement of cattle onto a destocked property confirm that the stock are from a property free of disease. This should include scrutiny of status and testing records.

7.6.2.3 Ensure isolation and security of cattle while they are in transit and on arrival.

7.6.2.4 Ensure that after arrival introductions are identifiable by an approved eartag and are secure from reinfection

7.6.2.5 A decision may be made by the CVO for further testing.

7.6.3 Safeguards to be adopted when destocking and restocking a property:

7.6.3.1 Record movements and keep these cattle under surveillance.

7.6.3.2 Safeguard against losses, unloading or escapes and ensure early notification if these occur.

7.6.3.3 Supply sale and slaughter supervision.

- 7.6.3.4 Period destocked after area destocking to be determined by the CVO but must be a minimum of 30 days following removal of the last animal.
- 7.6.3.5 An aerial and/or ground check must be made by a Departmental Officer at least 30 days after the removal of the last animal. It may be necessary to perform one or more checks within this period.
- 7.6.3.6 The status of the neighbouring areas and the dangers of ingress of infected stock should be considered before restocking is allowed to commence.

7.7 SUPERVISION OF AN APPROVED PROGRAM

Where possible a Government Officer should be present at all eradication procedures involving extensive herds. This will enable:

- 7.7.1 Checking the identity of stock.
- 7.7.2 Checking the accuracy of sample identification.
- 7.7.3 Supervision of age culling if required.
- 7.7.4 Checking the effectiveness of mustering.
- 7.7.5 Checking the effectiveness of destocking.
- 7.7.6 Supervision of ear tagging by the property staff.
- 7.7.7 Reporting to the CVO on the effectiveness of the test and the property's compliance with the approved program.

PART V: MONITORING FOR TUBERCULOSIS

8 APPROVED MONITORING SYSTEMS

An approved monitoring system is used to review the status of herds and to maintain area surveillance.

Monitoring may comprise abattoir monitoring with traceback, field tuberculin testing and/or post mortem examinations.

An approved monitoring system must be capable of detecting infection in a herd giving due consideration to the degree of risk, area prevalence and status, past herd history and property management.

Monitoring to maintain a Confirmed Free, Monitored Negative or Tested Negative status should be at a 95 % probability of detecting a 5 % prevalence. This may be varied by the Chief Veterinary Officer.

In destocked, uncontrolled areas with a previous history of tuberculosis, low cost methods are to be retained to monitor for freedom from tuberculosis. Such monitoring methods shall take into account each area's past history and degree of risk.

8.1 ABATTOIR MONITORING

Any abattoir monitoring system shall have traceback capability and an associated granuloma submission system which emphasises abattoir detection and laboratory diagnosis of all appropriate granulomas.

8.2 MONITOR TEST

- 8.2.1 Eight years after known exposure to infection in a herd, the exposed cattle are to have a mandatory final confirmatory test OR the cattle which had the previous exposure to disease are to be culled by slaughter (this means all exposed cattle eight years of age and over are either slaughtered or have a monitor test).

This final check test is to be known as the Monitor Test.

- 8.2.2 Guidelines for herds requiring a Monitor Test are:

8.2.2.1 The herd undertook a test program rather than a destocking program. If infected groups are destocked and remaining groups were tested up with no infection being detected, then there is little justification for a test. However, the date of removal of infected groups in relation to the testing program should also be considered.

8.2.2.2 Infection had been confirmed in breeders and was not an introduced infection in steers or meatworks type animals (for example the odd animal introduced from an Infected property or infected due to contact with an infected neighbouring property).

- 8.2.2.3 The herd has not had a high level of breeder turnoff, especially age culling of breeders.
- 8.2.2.4 The current herd is derived from the original infected herd, ie the herd has not been destocked for reasons other than BTEC and the property restocked with other cattle.
- 8.2.2.5 Other aspects of the TB history of the herd should also be considered, e.g. if the program consisted of a destocking program in bush areas, with retention and testing of young cattle, the property should not be included where there was a low rate of infection in destock cattle and no infection had been detected in test groups.
- 8.2.2.6 The period over which testing took place should also be considered. In Northern Australia, testing programs commonly have taken four years or more to complete.

PART VI: IMPORTS9 IMPORTATION OF ANIMALS INTO AUSTRALIA

The tuberculosis free status of cattle throughout Australia will be protected at its borders by rigorous importation requirements.

9.1 CONSIDERATIONS

All susceptible species imported into Australia should be derived from populations and herds/flocks where there is information about the status of tuberculosis.

Apart from tests in deer, information is lacking on the accuracy of tests for tuberculosis in non-bovine species. Tuberculin tests should not be presumed to define the tuberculosis status of an individual.

9.2 CONDITIONS FOR IMPORTS

- 9.2.1 Tuberculosis susceptible species shall not be imported into Australia unless the area of origin and the imported animal are considered free of tuberculosis. This requirement is in addition to any test for tuberculosis that may be carried out.
- 9.2.2 Tuberculosis susceptible animals imported into Australia shall not be released from quarantine unless they meet the requirements for the movement of cattle into a tuberculosis Free Area.
- 9.2.3 For the release of imported non-bovine animals from quarantine, the testing regime for tuberculosis on individual animals must be sufficient to ensure the accuracy of the test in that species is equivalent to tests for tuberculosis in bovines.