

**STANDARD
DEFINITIONS
AND RULES
FOR
CONTROL AND ERADICATION OF
ENZOOTIC BOVINE LEUCOSIS
in
DAIRY CATTLE**

Endorsed by the Animal Health Committee,

February 2009

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LIST OF ACRONYMS

APAV	Accreditation Program for Australian Veterinarians
AGID	Agar Gel Immunodiffusion Test
AHC	Animal Health Committee
ANZSDPs	Australian and New Zealand Standard Diagnostic Procedures
AQIS	Australian Quarantine and Inspection Service
BLV	Bovine Leukaemia Virus
BMT	Bulk Milk Test
CVO	Chief Veterinary Officer
DB	Disbanded
EBL	Enzootic Bovine Leucosis
ELISA	Enzyme Linked Immuno-sorbent Assay
IN	Infected
MF	Monitored Free
NA	Non-Assessed
NAHIS	National Animal Health Information System
NLIS	National Livestock Identification Scheme
OIE	Office International des Epizooties
PC	Provisionally Clear
PCR	Polymerase Chain Reaction
PF	Provisionally Free
SCAHLs	Sub-Committee on Animal Health Laboratory Standards
SDRs	Standard Definitions and Rules
SU	Suspect

INTRODUCTION

These Standard Definitions and Rules (SDRs) comprise the national standards by which States, Territories and industry formulate disease control programs to suit their circumstances, and have been prepared by the Primary Industries Standing Committee (PISC) through the Animal Health Committee (AHC).

These SDRs are designed to assist disease control in a nationally coordinated manner, facilitating the dairy sector to become EBL free (OIE definition) by mid-2012, as agreed with industry and government. They refer to other authoritative documents including the Australian and New Zealand Standard Diagnostic Procedures (ANZSDPs) and are rules drafted within the following parameters –

1. The aim is eradication of EBL from the national dairy herd.
2. The program guidelines have been formulated by AHC on the basis of valid technology and have been endorsed by the dairy industry.
3. Movement controls should be based on valid herd status and vendor declarations.
4. The herd status should be determined under the authority of the Chief Veterinary Officer (CVO).

Control and eradication programs provide dairy cattle producers with a mechanism to control EBL in, and eliminate EBL from a herd. They also provide dairy cattle breeders with a means of providing assurance of EBL disease status to purchasers of their stock. The principles of the programs can be adapted for use by beef producers should they decide to aim for freedom from EBL in the future. The outcome is for milk and dairy products from Australia to be marketed inside and outside Australia as free of bovine leukaemia virus (BLV).

International standards for EBL control have been considered in the development of these SDRs by incorporating key elements of the Office International des Epizooties (OIE) requirements for EBL eradication.

Detailed operating procedures for the implementation of programs are the responsibility of the animal health authorities in each State/Territory. Initially, voluntary EBL Accreditation Schemes were introduced in some states but these have been superseded by State based monitoring and eradication programs. It is expected that with the adoption of bulk milk testing by all dairy herds, all herds will move to Monitored Free (MF) status by the end of June 2009. The value of the accreditation schemes was to emphasise the need for producers to protect their status and only introduce tested animals or animals from other accredited herds of the same or better status. These recommendations have now been extended to all sectors of the dairy industry. Given the industry based nature of the EBL eradication program these recommendations will remain an important element in maintaining Group Freedom.

These definitions and rules have been reviewed in light of progress made towards EBL control and eradication programs in all jurisdictions.

PART 1: DEFINITIONS

1.1 GENERAL DEFINITIONS

1.1.1 Accreditation scheme

Programmes are in place in all jurisdictions with active dairying industries enabling participants to achieve and maintain a herd status at least equivalent to MF.

1.1.2 Approved eradication program

An official program developed with the herd owner and approved by the CVO that enables eradication of EBL from a herd. Approved eradication programs should be based on a written undertaking to implement herd testing and management procedures that address the following issues:

- identification of infected animals,
- husbandry and management procedures to prevent infection of other cattle in the herd,
- preventing spread of infection to other farms, and
- prevent the introduction of EBL into the herd.

A proforma Property Disease Eradication Plan for Victorian herds is attached. This information can be used to create a PDEP proforma for use in other States.

1.1.3 Approved laboratory

A laboratory approved by the CVO of the State/Territory in which the laboratory is located to carry out diagnostic tests for the identification of EBL in cattle.

1.1.4 Approved monitoring program

A bulk milk test monitoring program that is approved by AHC, based on a bulk milk testing year or an equivalent monitoring program sufficient to detect herd prevalence of >0.2% within a Group with 99% confidence as defined by the OIE.

1.1.5 Australian and New Zealand Standard Diagnostic Procedures (ANZSDPs)

The standard diagnostic procedures for animal diseases as approved by the Sub-Committee on Animal Health Laboratory Standards (SCAHLs). The EBL procedures are located at (1 November 2008):

<http://www.scahls.org.au/standardprocedures/terrestrial/EBL.pdf>.

1.1.6 Authorised officer

A government officer or other person approved to undertake control and/or eradication activities by the CVO. This approval will involve specific duties prescribed under specific programs following appropriate training.

1.1.7 Bulk milk testing year

A bulk milk testing year consists of 3 sampling times, four months apart, in any 12 month period. All milk from farms producing milk, at any of these sampling times, must undergo a bulk milk test.

1.1.8 Chief Veterinary Officer

The person appointed as the CVO, or Chief Inspector of Stock or other equivalent title as the case may be, under legislation in the State or Territory, or the person for the time being having the delegated authority of that office.

1.1.9 Dairy Herd

A dairy herd is a group of cattle including buffalo as defined in 1.1.12 that provides milk for human consumption.

1.1.10 Eligible animals

Any cattle or buffalo over 6 months of age are eligible animals for individual testing by a serological or milk test. Cattle or buffalo less than 6 months of age may have circulating maternal antibodies and testing for active infection may be inconclusive.

1.1.11 Enzootic Bovine Leucosis

For the purposes of this document, “enzootic bovine leucosis” is a disease of cattle or buffalo deemed to be caused by infection with bovine leukaemia virus (a type C retrovirus).

1.1.12 Herd

A herd is a group of cattle or buffalo managed as a unit separate and discrete in terms of physical contact from other

groups of cattle. For a particular property or farm all cattle or buffalo grazed together at the same time on the same area are considered to belong to the same herd.

1.1.13 Herd Status

The EBL status of a herd assigned by the CVO in accordance with these SDRs.

1.1.14 Incident

EBL infection occurring in any herd in a Provisionally Free Group or Free Group.

1.1.15 Infected animal

An infected animal is one that returns a positive test result to an approved test, unless after an investigation by an authorised officer, the result is found to be invalid.

1.1.16 Intensive bulk milk testing year

An intensive bulk milk testing year is where samples at one of these three testing times are collected by a method listed in Appendix 3. This is a requirement of EBL surveillance where milking herd numbers exceed the limit of detection of the BMT as defined by ANZSDPs (currently, in practice this means herds milking greater than 200 cows at the time of testing).

1.1.17 Notification

Advice by meat inspectors, veterinarians or persons in charge of cattle or approved laboratories or others, of EBL infection or suspicion of EBL infection in accordance with the legislative requirement of the State or Territory concerned.

1.1.18 Pooled sample

A sample formed by aggregating samples of milk or sera from individual animals using protocols prescribed by the ANZSDPs.

1.1.19 Quarantine

An order empowered by legislation restricting cattle, and on occasions, milk or other animal products to a certain location and requiring authorisation for movement to and from that location.

1.1.20 Reactor

An animal that returns a positive or suspect reaction to an approved test.

1.1.21 Susceptible species

For the purpose of these SDRs, cattle and buffalo are susceptible to natural infection with bovine leukaemia virus.

1.1.22 Suspect animal

An animal that the CVO requires to be further tested or otherwise examined to determine whether it is an infected animal.

1.1.23 Trace-back

The identification of the property or properties of origin of animals identified as infected.

1.1.24 Trace-forward

The identification of the place of destination of animals that had potentially been in contact with infected animals.

1.2 GROUPS

1.2.1 Group

A group is any number of herds in which all members supply milk to a dairy factory, factories or company even though these are not necessarily contiguous properties. Such an aggregation of herds may be drawn from regional or State(s) based herd(s). For the purpose of the eradication programme, a *group* is synonymous with a *compartment* as defined by the OIE.

1.2.2 Compartment

A compartment is defined by the OIE as: *one or more establishments under a common biosecurity management system containing an animal subpopulation with a distinct health status with respect to a specific disease or specific diseases for which required surveillance, control and biosecurity measures have been applied for the purpose of international trade.*

1.3 TESTS

1.3.1 Approved test

An EBL ELISA on serum or milk or any other test approved by the SCAHLS and published in the manual of ANZSDPs.

1.3.2 Bulk milk test (BMT)

The bulk milk test is a test of milk collected as one or more samples from a herd's on-farm bulk milk storage as outlined in Appendix 2. Methods of sampling and testing comply with standards prescribed by the ANZSDPs.

1.3.3 Herd test

A test of individual blood and/or milk samples collected from all eligible animals in the herd. This will include all eligible beef cattle where dairy and beef cattle (including buffalo) are considered to be a single herd by the CVO.

1.3.3 Intensive bulk milk test

A sampling and testing regime by a method listed in Appendix 3, where it is determined that the number of cows contributing to a vat sample is greater than the limit of detection of the BMT. In practice this means herds milking more than 200 cows any one time.

1.3.4 Negative herd test

An approved serological or milk test of all eligible animals without the detection of an infected animal.

1.3.5 Official test

All testing for EBL is official and must be reported to the CVO of the State/Territory in which the herd is located. This includes testing for shows, sales and movements and when testing of herds located in that State/Territory is carried out in another jurisdiction's approved laboratory.

All samples must be submitted and results reported under the Property Identification Code (PIC) for the property.

1.3.6 Positive herd test

A test at which one or more animals in a herd gives a positive reaction to an approved test.

1.3.7 Movement test

A test of individual animals within a prescribed period prior to movement of those animals between herds or groups. The period may be prescribed by the State/Territory or group of destination, or will otherwise be 30 days.

1.4 HERD STATUS

Newly formed herds may be assigned a herd status based on documentary evidence of the EBL status of the origins of all animals. The herd EBL status shall be assigned the lowest status of the herds of origin if the contributing herds have different EBL statuses.

An example is that a newly formed herd, formed from animals all originating from Monitored Free properties, can be assigned Monitored Free status without the need for any further testing.

1.4.1 Non-Assessed

A Non-Assessed (NA) herd is one that has not been assessed by having a herd test or one negative bulk milk testing year.

A NA herd can become MF by achieving a negative herd test, or by having two BMTs (including one intensive BMT for herds with greater than 200 cows) with consecutive negative results.

1.4.2 BMT Negative

A BMT Negative herd can become MF by:

- having two BMTs (including one intensive BMT for herds with greater than 200 cows) with consecutively negative BMT results.

1.4.3 Suspect

A suspect herd is one in which the CVO determines there is sufficient epidemiological evidence to suspect the presence

of EBL, such as

- A herd that has returned an inconclusive BMT and has not undergone a herd test; or
- A herd that has had trace-forward contact with (received animals from) an infected herd(s); or
- A herd that has had trace-back contact with (were the source herd of) an infected animal(s); or
- A herd that contains calves fed unpasteurised milk from an infected herd; or
- A herd that contains one or more animals with clinical signs consistent with EBL infection that remain unresolved; or
- A herd in which eradication of EBL has been attempted in the past, but not under an approved property disease eradication program or where the program has not been completed in accordance with these SDRs.

Suspect status can be resolved by the CVO obtaining evidence to remove the suspicion of infection from the herd. One or more herd tests maybe a necessary component of the process to remove suspicion.

1.4.4 Provisionally Clear (PC)

An Infected herd becomes Provisionally Clear (PC) when it has a negative herd test at least 4 months after all known infected animals are removed from the herd. A further negative herd test at least four months after reaching PC status results in a MF status being achieved.

1.4.5 Monitored Free (MF)

A MF herd is a herd with a consecutive number of negative herd or bulk (including intensive) milk tests as required under sections 1.4.1, 1.4.2, 1.4.3, 1.4.4 and 1.4.6.

From July 2008, all existing and new MF herds will only require an annual BMT.

1.4.6 Infected (IN)

A herd in which one or more infected animals have been detected by individual tests or at the latest herd test OR a herd that has returned a positive BMT result and which has not undertaken a herd test.

An IN herd can attain MF status by undertaking a series of herd tests. After the initial herd test, any identified reactors are to be removed. Four months after reactors are removed, two negative herd tests four months apart, will result in a MF status.

1.4.7 Disbanded (DB)

The State/Territory CVO may allocate disbanded (DB) status to a herd that has ceased to exist as a discrete herd, upon written advice from the herd's owner or an officially recognised body.

PART 2: RULES

2.1 DECLARATION OF GROUPS

Animal Health Committee may declare a Residual, Control, Provisionally Free or Free Group if satisfied that all of the requirements for that Group status have been met. Qualification and maintenance requirements for Provisionally Free and Free Group status is in Appendix 6.

2.1.1 Residual Group (There will be no residual groups from July 2009)

- EBL is present in an unknown number of herds
- EBL may not be notifiable
- No approved monitoring program is in place
- There are no official control or eradication programs

2.1.2 Control Group

- EBL is present in a known number of herds
- EBL is notifiable
- An approved monitoring program is in operation and all positive monitoring results are investigated
- Control and eradication programs are in operation
- Tracing and investigation of all known or suspected infection is undertaken
- Less than 99.8% herds are MF
- Vendor/owner declarations are encouraged for movement of cattle within the group.

2.1.3 Provisionally Free Group

All of the conditions for a Control Group apply, plus

- EBL is not known to exist in the group and there are no Infected herds at the time of declaration
- More than 99.8% of herds are MF
- Eradication is compulsory
- All Infected herds are placed in quarantine or movement controls on infected or suspect animals apply until they reach MF status

2.1.4 Free Group

All of the conditions for a Provisionally Free Group apply, plus

- A Free Group may be declared when it has been a Provisionally Free Group for at least 3 years
- There are no NA, or PC herds in the Group at the time of declaration
- The approved monitoring program continues indefinitely, with a frequency as determined by AHC
- Infected herds are quarantined or movement controls are applied to suspect or infected animals until the herds reach MF status
- Infected herds are tested immediately and infected animals slaughtered as soon as possible under the control of the relevant veterinary authority.
- Eradication must be achieved so that infected herds achieve MF status within the shortest possible time.

2.2 TESTING FOR EBL

2.2.1 Herd Test Interval

The minimum time between successive herd tests, BMTs or IBMTs, is 4 months.

2.2.2 Performance of tests

Laboratory testing must be performed at an approved laboratory. An approved laboratory is required to keep the records of all testing carried out for EBL for a minimum period of 5 years and to provide information to an authorised officer as required.

2.2.3 Reporting of tests

Interpretation and reporting of tests will be done according to the ANZSDPs.

All tests will be reported against the PIC number of the submitting property.

All testing for EBL must be reported to the CVO of the State/Territory in which the herd is located.

2.2.4 Retesting

Retesting of reactors with the same immunological test will only be permitted by the CVO when:

- the laboratory reports inconclusive results, or
- a further sample is specifically requested by the laboratory, or
- to clarify the identity of reactors.

2.3 MOVEMENT CONTROLS

2.3.1 Eligibility for movement within a Group

Movement of cattle within a group should be based on herd status supported by a vendor declaration as outlined in Appendix 5. Herds will be assigned a status equivalent to the lowest status of herds from which the introduced cattle originated.

2.3.2 Eligibility for movement to a Group of higher status

Movement of cattle to a group of higher status must be based on a compulsory vendor declaration.

Cattle moving to Provisionally Free or Free Groups must originate from MF herds or, if from herds with Provisionally Clear status, have a negative test no less than 4 months after the herd achieved PC status.

2.4 INCIDENTS IN A PROVISIONALLY FREE GROUP

2.4.1 Infection found in a Provisionally Free Group

Detection of an infected herd in a Provisionally Free Group will not initially affect the Group's classification. The herd will be quarantined or subjected to movement controls and an approved eradication program so that infected animals will be removed from the milk supply immediately after detection and no more than 30 days after a positive BMT result. Movement controls or quarantine will be released when the herd status returns to MF. Group classification will be re-assessed by AHC if the number of infected herds remains unacceptable.

2.5 INCIDENTS IN A FREE GROUP

2.5.1 Infection found in a Free Group

Detection of an infected herd in a Free Group will not initially affect the Group's classification. The herd will be subjected to an approved eradication program so that infected animals are removed from the milk supply immediately after detection and no more than 30 days after a positive BMT result

Movement controls will be released when the herd status returns to MF. Group classification will be re-assessed by AHC if the number of infected herds remains unacceptable.

2.6 REPORTING INCIDENTS

Incidents should be reported as soon as possible, both to the CVO(s) of the affected state(s), and to NAHIS State/Territory Coordinators.

2.6.1 Reporting of Incidents in a Provisionally Free Group

Incidents in Provisionally Free Groups are to be reported to AHC bi-annually.

2.6.2 Reporting of Incidents in a Free Group

Incidents in Free Groups are to be reported to AHC within 7 days of confirmation.

2.7 PROCEDURE FOR INVESTIGATING INCIDENTS IN PROVISIONALLY FREE AND FREE GROUPS

The investigation by an authorised officer should aim to:

- determine the source(s) of infection,
- determine whether it may have spread to other herds, and
- determine whether infection has spread to other animals in the herd.

Full trace back and trace forward investigations are to be carried out.

Where it is determined that the infected animals originated from another property, tracing shall aim to determine, if possible, other herds in which the animals had been run (trace-backs). Appropriate action should then be taken to reassess the status of these herds.

Herds that have received animals from the EBL incident herd since the infected animals were introduced (trace forward herds) are to be thoroughly investigated.

2.8 IMPORTATION OF CATTLE AND GENETIC MATERIAL INTO AUSTRALIA

The negotiation and development of importation protocols is the responsibility of the Commonwealth Government through AQIS. The conditions detailed below are considered necessary to support a national EBL control and eradication program, consistent with these SDRs

2.8.1 Considerations

EBL exists in other countries and introduction into the Australian dairy industry would hinder eradication and declaration of EBL freedom. Cattle and genetic materials including semen, ova and embryos must be subjected to appropriate importation requirements so as to minimise the risk of introducing disease. Cattle and genetic material imported into Australia should be derived from populations or herds where the EBL status has been scientifically assessed.

2.8.2 Conditions for imports

Cattle and genetic material imported for unrestricted entry into the Australian dairy herd must:

- originate from herds that have been assessed as equivalent to MF status; and
- for live cattle in the country of origin, be subjected to an approved test with negative results on 2 occasions within 6 months of importation into Australia. The 2 tests must be separated by an interval of at least 4 months.

2.9 MISCELLANEOUS

2.9.1 Animal Identification

All cattle in a herd in an approved eradication program must be permanently and uniquely identified so that their identification within the herd can be verified by an authorised officer eg. legible tattoo, freeze brand, individual numbered ear tags or leg bands. Wherever possible, animal identification should be consistent with the National Livestock Identification Scheme.

2.9.2 Property Identification

All dairy properties will be identified by the correct up-to-date PIC number

2.9.3 Compensation

Compensation will not be available unless provided for by the relevant legislation in a State or Territory.

2.9.4 Fate of animals from an infected herd

Untested animals from an infected herd should be consigned direct to an abattoir, consigned to a saleyard for sale for slaughter only or ordered for supervised destruction on the property or other place approved by the CVO.

2.9.5 Fate of infected animals

Infected animals in Control, Provisionally Free and Free Groups must be consigned directly to an abattoir for slaughter or consigned to a saleyard for sale for slaughter only, or ordered for supervised destruction on the property or other place approved by the CVO.

As per OIE requirements, all progeny born to infected animals since their last test will also be culled for slaughter, unless the progeny are more than 6 months old and have been tested negative when the herd was tested.

2.9.6 Herd status

Herds of the same status will be regarded as equivalent for the purposes of eligibility for movement.

2.9.7 Identification of Infected animals

Infected animals must be permanently identified in such a manner that their identity can be easily verified by an authorised officer at all times prior to their disposal for slaughter.

2.9.8 Interstate notification

Where, on the basis of trace-forward or trace-back investigations, there is reasonable suspicion that EBL could have spread to another State or Territory, the CVO of the destination State/Territory must be notified in writing within 30 days of the reasonable suspicion occurring.

CVOs will analyse cases individually to determine if a reasonable suspicion is valid, and subsequently instigate

investigations where there is a reasonable suspicion.

Where there is a reasonable suspicion of EBL in cattle imported from another State or Territory, the CVO of the originating State or Territory must be notified before the suspect cattle are slaughtered. Confirmatory testing can then occur to confirm/refute suspicion of infection.

2.9.9 New Herds

New herds will be assigned a status equivalent to the lowest status of herds from which the cattle constituting the herd originated.

2.9.10 Notification to owners

Where a herd has been determined to have a status of Infected, the CVO will ensure that the owner is notified in writing of the herd status, within 30 days of that determination.

2.9.11 Official herd history

All histories of herds should be held by the CVO and only released to authorised officers. Owners can receive their herd history by applying in writing to the CVO of the State/Territory in which their herd is located.

The EBL status of individual herds will be provided on an annual basis to the owner of the herd by the CVO and/or authorised officers.

The release of Group and herd EBL status information is dependent on privacy, disease control and other relevant legislation.

2.9.12 Owner records

An owner of a herd undertaking an approved eradication program must maintain accurate records of all animals in the herd and make available these records to an authorised officer on request.

2.9.13 Introduced animals

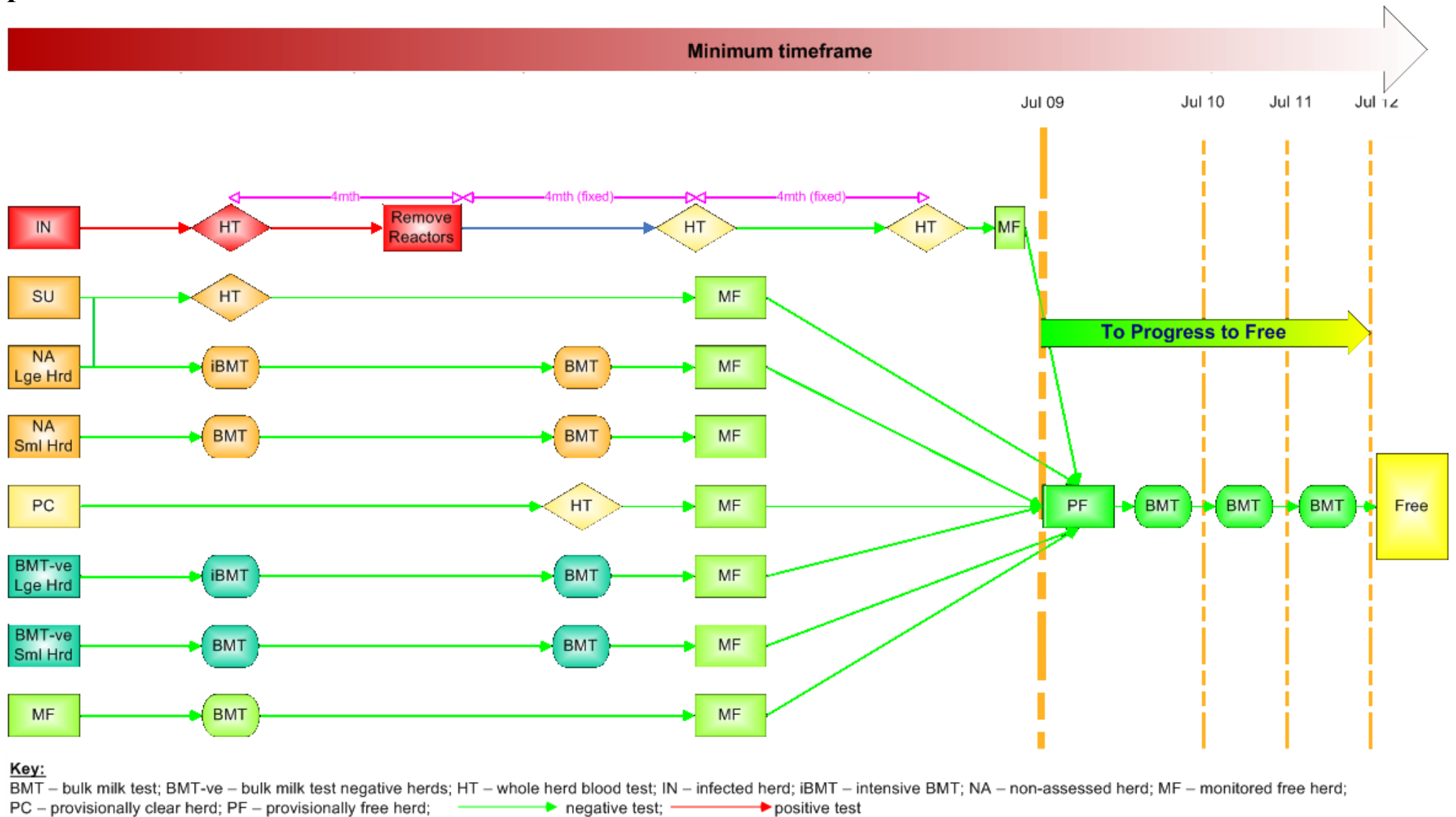
New stock introduced to a herd must be from a property having an equivalent EBL status. The EBL status of the herd of origin of the stock must be obtained in writing from the vendor. Stock should not be introduced from herds of lower status.

If it is necessary to introduce stock from a herd of unknown status (e.g heifers from a heifer rearing herd or beef bulls) the purchased cattle should be tested EBL negative prior to introduction and four months after introduction. The animals should be kept in isolation until the second test.

2.9.14 Heifer rearing herds

Properties on which heifers are reared for sale to dairy herds shall not be given a status. When heifers are sold to dairy herds they will be tested according to section 2.9.13.

Appendix 1: EBL HERD STATUS PROGRESSION POST 1 JULY 2008



Appendix 2: BULK MILK HERD TESTING

Principle

To use a sampling regime that ensures at least 1 sample from each cow in the herd is tested for EBL antibodies annually.

Background

Ongoing demonstration of EBL freedom in dairy herds in Australia is required as EBL has not been eradicated from the beef industry. At present, to support a claim for Provisional Freedom or Freedom all dairy herds in a production group such as a factory or a company must annually demonstrate their freedom from EBL. In addition, the status of most clean herds is retained by regular bulk milk testing. This situation will be reviewed in 2012.

Method

Compliance can be achieved by either:

1. An annual individual milk or blood test of all adult female cattle in all herds or
2. An annual bulk milk testing regime in accordance with the requirements for a bulk milk testing year or intensive bulk milk testing year.

An approved test must be used. BMT sample size must not exceed the lower limit of detection of the test. That is, the number of samples comprising each bulk milk sample must not exceed the capacity of the test to detect one positive cow.

The timing of tests should be decided by the industry and/or milk processing company in close consultation with the relevant CVO(s) to ensure that the regime selected ensures that every milking cow in the herd has milk sampled at least once in the bulk milk testing year. Prior to 2009, herds have undergone 3 tests in a bulk milk testing year unless they have a very well defined seasonal calving period. Post 2009, one bulk milk test will be required annually from each herd. In non-seasonally calved herds, the sample shall be taken when the majority of dairy cattle are in lactation.

Appendix 3: Sampling Strategies for Intensive Bulk Milk Testing

An Intensive Bulk Milk Test (iBMT) is required between October 2008 and July 2009 for all Bulk Milk Test Negative (BMN) herds that contain over 200 milking cows. This will enable these previously BMN herds to progress to Monitored Free (MF). This iBMT shall be done when the majority of cows are in the milking herd.

Responsibility for collection and submission of samples

Blood samples must be collected and submitted under the supervision of a registered veterinary practitioner.

Milk samples must be collected and submitted under the supervision of an appropriately trained technician approved by the CVO.

The property owner must ensure that the correct Property Identification Code (PIC) is recorded on the submission form.

The following strategies may be used to meet the requirements of a Bulk Milk Test.

1. Individual Animal Sampling

Individual milk or blood samples are collected from all adult milking cows in the herd. Samples may be pooled at testing laboratory using sub-samples of equal size. Pool size must not exceed the capacity of the test to detect one positive cow as indicated by the Test-Kit manufacturer.

2. Samples collected during routine monthly or bimonthly production recording

Sample collection will occur on-farm under normal herd testing conditions. Pooling of samples will occur at the herd test centre by a trained technician using sub-samples of equal size. Pool size must not exceed the capacity of the test to detect one positive cow as indicated by the Test-Kit manufacturer.

3. Samples collected during supervised “one-off” herd recording

Milk samples should be collected using the in-line milk meters used for herd recording. The milk collection process and delivery to a herd test centre shall be supervised by a technician approved by the CVO. Samples may be pooled at the herd testing laboratory using sub-samples of equal size. Pool size must not exceed the capacity of the test to detect one positive cow as indicated by Test-Kit the manufacturer.

4. Samples collected during supervised sampling of a herd using in-line milk samplers

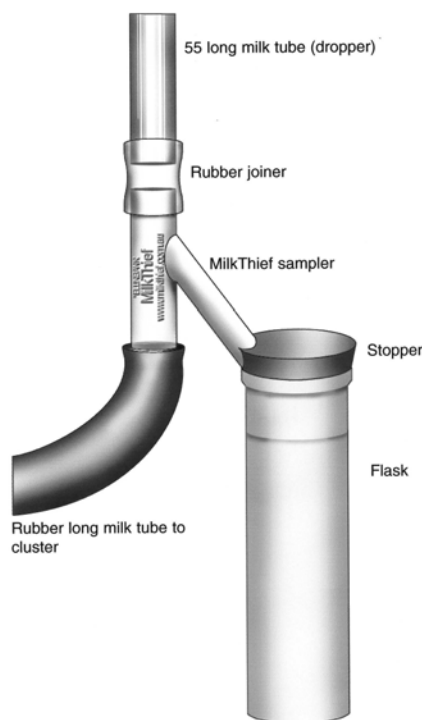
Milk samples shall be collected using milk sampling devices approved by the CVO. The milk collection process and delivery to an EBL testing centre should be supervised by an appropriately trained technician approved by the CVO. Samples may be further pooled at the testing laboratory using sub-samples of equal size. Final pool size must not exceed the capacity of the test to detect one positive cow as indicated by the manufacturer. Three methods of in-line milk samplers are approved by the CVO:

4.1 The Ellinbank Milk Thief

The Ellinbank milk thief is particularly useful for composite milk sample collection for EBL. It is simple and convenient to use in both high-line and low line dairies and can be used in conjunction with herd recording industry standard collection flasks (middi flasks ~220mL capacity). The samplers can collect approximately 2 mL or 10 mL of milk per cow in low-line and highline dairies respectively. Sampling with standard 'middi flasks' has recently been tested and it allows a representative sample of milk to be collected from 10 or more cows without over-filling the sample collection flask in either a high-line or low-line dairy. Such a sampler can be placed conveniently in the long milk tube and be left in place for the whole milking session. See the installation diagrams for an indication of the location and orientation of the sampler. The samplers or the flasks must be removed prior to the commencement of plant cleaning. If the sample flask is removed and substituted with a fresh flask, the samplers can also be cleaned in place with the rest of the plant with only minimal disturbance to the farmer's milking routine. A trained technician must ensure the samplers are installed properly, are not tampered with during milking, are cleaned properly at the completion of the sampling session and returned in good order. There is no need to record the individual identification of all the animals that contribute to a pooled sample (because this is another way of screening a herd to detect infection; any test positive herds will undergo whole herd testing of individual animals).

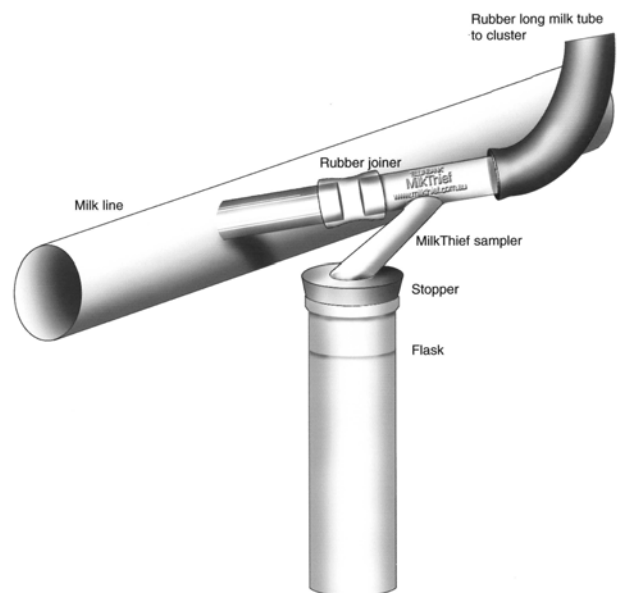
Installation of MilkThief

High-line dairy



Installation of MilkThief

Low-line dairy



4.2 The Alfa Laval in-line milk sampler

Method

The milk tube end of the sample cock is placed over suitable point of the milk delivery line and secured using a Utilux screw clamp over the tube. This varies depending on the dairy but is usually the drain point of a milk pump or a milk take of point at a milk filter. Then place an SS dipper in a suitable position under the sampler. A sample can then be taken every 50 cows for testing. Due to varying back pressures there is sometimes a need to manually adjust the drip sampler during the sampling.

Equipment

Alfa Laval drip sample cock

Male SS socket same size as the sample cock

5 cm of 19 mm SS tube

5 cm of 19 mm milk tube

2 Utilux clamps to suit the milk tube

Approximately 30 cm of suitable size flexible tubing

500 mL SS dipper

Modifying the Alfa Larval Drip sampler

1. Argon the SS socket onto the 19 mm SS tube Screw this into the sample cock

2. Push half of the length of the milk rubber tube over the 19 mm SS tube and screw a worm drive hose clamp (eg. Utilux) over the tube.

3. Attach the flexible tubing to the outlet of the sample cock



4.3 Constant flow sampling from a bleed valve between the pump and the milk vat

This method is the least time consuming and requires no specialist equipment. It is only to be performed by trained technicians and should be done with guidance from the producer as to the most suitable location to sample milk on their dairy. The aim is to collect milk samples that contain representative samples of no more than 50 cows per sample. This is done by collecting a drip sample from the milk line somewhere between the pump and the milk vat.

In consultation with the producer, establish the best place on the dairy unit to take a milk sample. This varies depending on the dairy but is usually the drain point or bleed valve of a milk pump or a milk-take of point or bleed valve at a milk filter. See photos for other options.

a) Hose at filter cage.



b) Manual screw on pipe



c) Screw open filter



1. Release the valve or seal at this point to establish a drip flow from the milk line.
2. Monitor this drip throughout milking and adjust the flow to keep it constant.
3. Place a suitable large container under the drip sample. This sample should be 4-5 litres per 50 cows to ensure a representative sample.
4. Take a subsample of 10 - 50 mL from the large container after every 50 cows have been milked.
5. Empty the large container after the subsample has been taken; this will enable the container to collect milk from the next 50 cows exclusively.
6. At the conclusion of milking ensure that the drip sample point is returned to its original configuration.

Note: Addition of a preservative such as bronopol to milk samples is desirable to ensure sample quality. Preservatives do not affect EBL test unless used in excessive concentrations. All samples are to be submitted to an accredited laboratory (eg. Gribbles Pathology in Victoria) and must be accompanied by the correctly completed submission form.

Appendix 4: Proforma Property Disease Eradication Plan for Infected Properties (VIC DPI)

(Not all components of this PDEP will be relevant to all jurisdictions, eg compensation.)

Owner Name:

Address:

Property:

[Date]

Dear [name]

PROPERTY DISEASE ERADICATION PLAN (PDEP) FOR THE ERADICATION OF ENZOOTIC BOVINE LEUKOSIS

The following plan has been developed in consultation with you, your processor and the [Department of Primary Industries (DPI)], and its components are agreed to by all parties.

The purpose of this PDEP is to:

- Describe your herd and historical EBL testing results
- Outline testing requirements to eradicate infection in your herd
- Detail the agreed culling procedures of animals determined to be infected
- Outline biosecurity practices to minimise spread within your herd and reduce the chances of introducing infection back into your herd

The plan will be updated following each testing round to ensure that you have up to date information and details of further requirements and options.

1.1.1.1.1 BACKGROUND INFORMATION

This PDMP has been prepared for:

Trading Name	
Business Address	
Manager Name	
Manager Address	
Manager Phone Number	
Manager Fax	
ABN	
PIC	
Dairy Food Safety Victoria Licence Number <i>[or equivalent]</i>	
Milk Factory Supplier Number	
Milk Factory	

NATURE OF THE ENTERPRISE

Describe the enterprise (incl. herd details, historical establishment, processors supplied currently and over the last 24 months)

STOCK INVENTORY

(Details of cattle classes and numbers).

HERD RECORDS, IDENTIFICATION AND DOCUMENTATION

1. All cattle over the age of 6 months are to be permanently and individually identified to the satisfaction of the approved veterinarian responsible for collecting the samples.
2. Identify, by means of an official DPI ear tag, all cattle deemed to be EBL positive and retain these cattle on the property until culled for slaughter, which should be as soon as possible after detection. All reactors are to be consigned directly to an abattoir.

3. A copy of this PDMP, all EBL test results and a copy of the Section 17 Agreement for the eradication of enzootic bovine leucosis from a cattle herd should be kept in a file on your property.

EBL ERADICATION PROGRAM OUTLINE

Following the success of EBL control over the past 10 years, Australian animal health authorities and the dairy industry have agreed to a National EBL Eradication Program which seeks to achieve provisional freedom by the end of 2009 and confirm freedom by the end of 2012. Driven by the dairy industry and administered by the Department of Primary Industries this program aims to be able to market Australian dairy products as EBL free.

EBL HISTORY

Outline previous Bulk Milk, Herd and other testing, including dates of testing, details of removal of reactors and level of participation in past program (compile from DPI and farm records). Assessment of likely level of infection in the herd.

EBL TESTING REQUIREMENTS AND AGREEMENTS

Describe herd testing requirements and timeframes, document agreement with producer and development of the PDMP, detail how testing will be performed, by whom and when. Incl. copy of s17 Agreement under the Livestock Disease Control Act 1994 (LDCA)

CULLING OF INFECTED ANIMALS AND CLAIM PROCEDURES

Culling of reactors from the herd is the most time critical element of the dairy industries endeavour to eradicate EBL from Australia. Subsequent testing on your property cannot be done until 4 months after the last reactor is removed from the herd. As such every day a reactor stays in the herd not only increases the chances of that cow passing the infection to another cow but also extends the period before testing can be repeated.

Reactor cattle will be identified by laboratory results received by the private veterinarian and the DPI. A member of DPI Animal health Field Services will visit your property and tag the reactor animal with an "EBL REACTOR" tag and get you to sign a compensation claim form. This tag is to identify the cow as livestock that must only be consigned directly for slaughter. Once the animal has been slaughtered at the abattoir you are to notify your DPI contact and provide them with evidence of slaughter and proof that you have paid stamp duty on previous sales of stock. You will then be payed your \$300 compensation from the cattle compensation fund.

EBL PROGRAM PROGRESSION

[Detail herd progression to MF]

UNEXPECTED RESULTS

In the event that a cow returns a positive test result after a previously clear herd test, the herd will revert to an infected status and testing will continue. In the event that a cow returns an inconclusive test result the cow will be deemed to be infected.

KEY CONTACTS

Veterinarian Name and contact details	
Processor contact details	
DPI contact details	

You must notify your processor if your status changes

BIOSECURITY MANAGEMENT

EBL infection can be transmitted by very small quantities of blood or milk, containing virus-infected lymphocytes. Typically, under Australian conditions, EBL becomes established in herds through management procedures that facilitate blood transfer between animals eg dehorning of groups of cattle using cutting or gouging tools, the reuse of hypodermic needles, rectal pregnancy testing without changing gloves between cows, and/or the use of tattooing or

calving equipment contaminated with blood. Transmission of BLV from infected cows to calves via milk is possible, but has not been reported as a significant feature in the epidemiology of the disease in Victoria.

Recommendations for Management/Husbandry Practices;

Limit the spread of disease by preventing the transfer of infected blood or milk by:

- Ceasing the use of cutting dehorner; use chemical dehorning or cautery
- For any injections (including vaccinations) use disposable needles or needles sterilised by boiling between animals
- Clean and disinfect ear tattoo implements between animals
- Wash stomach tubes and drenching guns between animals
- Use separate gloves for each animal when pregnancy testing or doing AI
- Thoroughly wash and disinfect all calving gear between cows or have separate gear for infected cattle.
- Calve reactor cattle in paddocks away from non-reactors and keep them separate for at least three days or until there are no vaginal discharges or placental membranes present
- Remove calves from cows within 24 hours of birth or as soon as they have a good drink of colostrum
- Feed calves only milk from non-reactor cows or use milk replacer - if using milk from the vat, make sure that no reactors have been milked before milk is removed for the calves
- Isolate EBL reactors that have discharging infections (which may contain blood cells) or clinical mastitis from EBL negative cattle
- Test any introduced cattle before purchase or on arrival and keep isolated until the results are known; it is best to buy cattle from herds tested free of EBL

Buying and Selling Cattle

When purchasing replacement stock only stock from monitored free herds should be purchased.

If you are selling cattle (other than for slaughter) or agisting cattle, you must advise prospective purchasers or agistors of the history of EBL in the herd and the existence of the Section 17 Agreement. This can be done via an EBL vendor declaration form.

MOVING PROCESSOR

If you change milk processors you must fully disclose your EBL status including faxing them a copy of your status notification. You must also notify the DPI of your intent to change suppliers and your new supplier number. These details should be amended on this form at the next herd test.

NON-COMPLIANCE

If for any reason you choose to do any of the following:

- Refuse to sign a Section 17 Agreement
- Refuse to engage an approved veterinarian to herd test your stock for EBL
- Refuse or delay unreasonably the removal of EBL reactor cattle from the herd
- Cease the testing program before your property gains a monitored free status

You may receive milk price penalties from your supplier and or your property may be placed under quarantine under the Livestock Disease Control Act. 1994. This quarantine will restrict movement of cattle and milk products off your property and would only allow this to occur with a written permit from the Department of Primary Industries.

GRIEVANCE PROCEDURE

If you have a grievance with your approved veterinarian, your DPI district veterinary officer or your milk processor to do with the administration of the EBL eradication program, please contact:

[name and contact details]

Please do not hesitate to contact me if you wish to discuss these recommendations or require further information about eradicating EBL in your herd.

I will be in touch on (insert date) to arrange your next testing.

Yours sincerely

(signed: Private Veterinarian/Consultant or DVO)

Appendix 5: OWNER/VENDOR DECLARATION OF ENZOOTIC BOVINE LEUCOSIS

(STOCK AGENTS MUST NOT MAKE THIS DECLARATION ON BEHALF OF CLIENTS)

I, _____
(full name must be shown in BLOCK LETTERS)

of _____ Post Code: _____

declare that the particulars given in this declaration are true:

1. I am the owner/authorised representative of the owner of the cattle detailed below
2. I have a detailed knowledge of the EBL history of the stock
3. The numbers and particulars of the stock to which this declaration refers are set out in the box below and overleaf if space insufficient

Total number of cattle to which this declaration refers: _____ and details of the individual cattle are:

Animal Identification Number	Breed, age and sex	Animal Identification Number	Breed, age and sex
1		5	
2		6	
3		7	
4		8	

4. Each of the cattle referred to above originate from: _____
(Property Name)

at address: _____

_____ Post Code: _____ Owner's Tail Tag Number: _____

5. These cattle left or will leave the property on date: _____ / _____ / _____

6. Each of the cattle originate from a dairy herd which has the following official EBL status:

(Print current EBL status of your dairy herd as stated in the most recent letter from the relevant authority)

7. If the cattle originate from a herd the status of which is other than: MF, all the cattle have been individually blood or milk tested for EBL with negative results on date: _____ / _____ / _____ which is within 30 days of leaving the above property.

I further declare that if EBL infection is detected in any of the cattle referred to in this declaration within 14 days of leaving my property, I will refund the purchase price plus transport costs of these cattle.

Declared at: _____ on date: _____ / _____ / _____

Owner/Vendor signature: _____

Witness full name: _____ Witness signature: _____
(full name must be shown in BLOCK LETTERS)

Witness address: _____

The making of a false statement may be an offence under State legislation.

All purchasers of cattle should retain this Declaration. It is recommended that all cattle should be tested for EBL before entry to a new herd unless the cattle originate from a herd which is MF. Interpretation of the test results will depend on the status of the herds involved and should be discussed with your veterinarian. A single negative EBL test of an animal coming from a herd with a status of Infected, Provisionally Clear, BMT Negative, Non-assessed or test of an animal of unknown origin may not guarantee freedom from EBL.

OWNER/VENDOR DECLARATION OF ENZOOTIC BOVINE LEUCOSIS

Additional space provided for listing details of individual cattle:

Animal Identification Number	Breed, age and sex	Animal Identification Number	Breed, age and sex
9		35	
10		36	
11		37	
12		38	
13		39	
14		40	
15		41	
16		42	
17		43	
18		44	
19		45	
20		46	
21		47	
22		48	
23		49	
24		50	
25		51	
26		52	
27		53	
28		54	
29		55	
30		56	
31		57	
32		58	
33		59	
34		60	

Owner/Vendor signature: _____ Witness signature: _____

Keep this EBL Vendor Declaration form handy for use when you purchase or sell cattle either privately, through saleyards or agents.

*When a Vendor signs one of these forms prior to or upon sale of cattle which are subsequently **tested positive to EBL within 14 days of leaving the Vendor property**, the Vendor has agreed that the purchaser of the cattle is entitled to a refund of the purchase price plus transport costs.*

Appendix 6: Qualification for and Maintenance of EBL Provisional Freedom and EBL Freedom in a Group

1. Qualification for Provisionally Free Status

To qualify as Provisionally Free from EBL, a Group must:

- a) Demonstrate that at least 99.8% of the dairy herds which supply milk for direct or indirect, human consumption have a MF status.
- b) All dairy herds with serological or other evidence of EBL must be promptly notified to the relevant CVO(s). Movement of cattle from infected herds must be restricted by quarantine or other movement control measures whilst the herds are managed to MF status in the shortest possible time using the Australian EBL SDRs.
- c) The Group must apply in writing to the relevant CVO(s). The CVO(s) will review the production group records for compliance with the Australian EBL SDRs before accepting or rejecting the application.

2. Maintenance of Provisionally Free Status

To maintain a Provisionally Free status a Group must:

- a) Conduct a milk or serological survey using an approved EBL test and an approved sampling strategy annually of all dairy herds supplying milk for direct or indirect human consumption. The survey must provide a 99% level of confidence of detecting EBL if it is present at a prevalence rate exceeding 0.2% of the herds.
- b) All introduced dairy cattle must be demonstrated to be free of EBL.
- c) All dairy herds with serological or other evidence of EBL must be promptly notified to the relevant CVO(s). Movement of cattle from infected herds must be restricted by quarantine or other movement control measures whilst the herds are managed to MF status in the shortest possible time using the Australian EBL SDRs.
- d) The Group must apply in writing to the relevant CVO(s). The CVO(s) will review the Group records annually for compliance with the Australian EBL SDRs before accepting, maintaining or rejecting the application.
- e) The Group will lose its Provisionally Free status if less than 99% of herds are MF at any time.

3. Qualification for Free Status

To qualify as unconditionally Free from EBL, a Group must demonstrate that:

- a) At least 99.8% of the dairy herds which supply milk for direct or indirect, human consumption have a MF status for a minimum of 3 years.
- b) All dairy herds with serological or other evidence of EBL must be promptly notified to the relevant CVO(s). Movement of cattle from infected herds must be restricted by quarantine or other movement control measures whilst the herds are managed to MF status in the shortest possible time using the Australian EBL SDRs.
- c) The Group must apply in writing to the relevant CVO(s). The CVO(s) will review the Group records for compliance with the Australian EBL SDRs before accepting or rejecting the application.

4. Maintenance of Free Status

To maintain a Free status a Group must:

- a) Conduct an annual milk or serological survey using an approved EBL test of all dairy herds supplying milk for direct or indirect human consumption. The survey must provide a 99% level of confidence of detecting EBL if it is present at a prevalence rate exceeding 0.2% of the herds. If the Free status is attained a risk assessment may enable a milk or serological survey to be conducted every third year.
- b) All introduced dairy cattle must be demonstrated to be free of EBL.
- c) All dairy herds with serological or other evidence of EBL must be promptly notified to the relevant CVO(s). Movement of cattle from infected herds must be restricted by quarantine or other movement control measures whilst the herds are managed to MF status in the shortest possible time using the Australian EBL SDRs.
- d) The Group must apply in writing to the relevant CVO(s) every 3 years. The CVO(s) will review the production group records annually for compliance with the Australian EBL SDRs before accepting, maintaining or rejecting the application.
- e) The Group will lose its Free status if less than 99% of herds are MF at any time and/or the management of the herds other than the MF herds is deemed to be inappropriate by AHC.

Appendix 7: Roles and Responsibilities

Note: These SDRs have been developed to reflect industry and government roles and responsibilities for the programs as follows:

Roles

- 1 Chief Veterinary Officer of State/Territory (CVO)
The CVO or delegate in consultation with other CVOs and the dairy industry formulates the guidelines for the program and implements the guidelines through agreements with producers and processors or through legislative requirements and policy directions.
- 2 Laboratory Officer in Charge (LOIC)
The LOIC ensures that all EBL tests are carried out according to approved procedures and reports results in a timely manner to submitters and the CVO.
- 3 Dairy Producer
Producers contribute to and agree to the guidelines through a consultation process and implement the guidelines in respect of quality assurance arrangements and the biosecurity of their herds.
- 4 Dairy Processor
Processors contribute to and agree to the guidelines through a consultation process and implement the guidelines in respect of their processing operations and quality assurance arrangements with suppliers.

Responsibilities

- 1 Industry
The dairy industry drives the program through quality assurance arrangements supported by minimal regulations or through more formal agreements between industries and States/Territories.
- 2 Individual Producers
The final responsibility for introduction of disease-free cattle into a herd must rest with individual producers. EBL control and eradication programs should operate in conjunction with vendor declaration systems. Under vendor declaration provisions, a purchaser can request a declaration from the vendor describing the status of the herd as defined by these SDRs. The purchaser can then assess the risk of introduction of EBL and make an appropriate judgement. The vendor carries the responsibility for the truthfulness of the declaration.
- 3 State/Territory responsibilities
State and Territory authorities shall be mindful that these SDRs were developed as the basis of an industry run national program for the eradication of EBL in dairy herds. State authorities will ensure that systems are in place to ensure programs are consistent with the SDRs and are subject to monitor adherence to the specific requirements of the program. They will ensure that the results of all testing for EBL are recorded. All testing is designated as “official” to facilitate this. Where a Group is located in several states the CVOs of those states shall jointly allocate Group EBL status. The CVO may devolve some responsibilities for operational aspects of the program to non-government staff. Such staff includes producers, private veterinarians and milk processing factories.
- 4 Laboratories
Testing procedures shall be of a consistently high quality to maintain confidence in the results. All laboratories shall be approved by the CVO to carry out testing for this program. SCAHLS will define and audit standard procedures for all laboratory techniques to ensure consistency is maintained.
- 5 Private Veterinary Practitioners
Private veterinary practitioners can have a key role in the program. These veterinarians may be accredited under the Accreditation Program for Australian Veterinarians (APAV). They must ensure they comply with these SDRs in order to maintain involvement with approved eradication programs and protect the interests of their clients. They will be provided with nationally consistent information about the program by Animal Health Australia.