

# BEGA CHEESE ON-FARM QUALITY ASSURANCE

## MANUAL 2

### On-Farm Quality Assurance Plan



October 2018



# Contents

## This manual

### Manual 2: On-Farm Quality Assurance Plan

Introduction .....	1
Farm details and sign-off.....	3
1. Property and herd status and livestock trading.....	5
2. Livestock identification .....	9
3. Antibiotic drugs, agricultural and veterinary chemical use and storage .....	11
4. Livestock health, mastitis and welfare .....	17
5. Livestock feeding .....	19
6. Dairy cleaning and milking practices.....	23
7. Maintenance of dairy, refrigeration, equipment and environment.....	27
8. Managing quality assurance (training, records, audits, corrective actions) .....	31
Appendix 1: Example Treated Stock Recording Procedure .....	33
Appendix 2: Example Procedure for Introducing Purchased Cows or Freshly Calved Cows	34
Appendix 3: Example Procedure for Dairy Plant Cleaning.....	35
Appendix 4: Example of Vat Cleaning Procedure.....	36
Appendix 5: Example Dairy Plant Start-up and Milk Operation Procedure.....	37
Appendix 6: BJD Score .....	38
Appendix 7: Procedure for Calibrating Hand-Held Food Grade Farm Thermometers .....	40
Appendix 8: Liner Replacement Charts .....	41
Appendix 9: Cow Marking Template.....	43

## Other manuals

Manual 1: Hazard Analysis and Standards

Manual 3: On-Farm Quality Assurance Monitor Book

Manual 4: Farmer Self-audit



# Introduction

This On-Farm Quality Assurance Manual is an essential tool for producing safe and high quality milk and meat that meet the quality assurance specifications for Bega Cheese and its customers.

Bega Cheese's on-farm quality assurance system is based around four components:

1. *The 'Hazard Analysis and Standards' (THE RULES)* — which sets out the rules for safe food production for Bega Cheese dairy farm suppliers by listing the hazards, standards and the records and monitoring required.
2. *The 'On-Farm Quality Assurance Plan' (this manual - THE FOOD SAFETY PLAN)* — which is used by farmers and farm advisers to set up an on-farm quality assurance programme.
3. *The 'On-Farm Quality Assurance Monitor Book' (THE RECORDS)* —which is used for most quality assurance records and hygiene and maintenance.
4. *The Farmer Self-audit (THE CHECK LIST)* — which is used to ensure the farm assesses its system and considers all aspects of the system at least once per year.

Note: Reference material and spare recording sheets are available on the Bega Cheese & Tatura Milk supplier portals on the web page.

This manual — the 'On-Farm Quality Assurance Plan' — is the primary tool for implementing the farm quality system and for auditors to accredit the farm quality system.

## How to use this manual

1. Work through the task, activity, training or plan that is required for each of the 'farm control' steps listed in this book.
2. Place a tick '✓' in the box down the right hand side of the page when each is completed.
3. When all the control steps have a '✓' against them, sign-off the manual at the bottom of the farm details page (next page). This shows you have implemented the on-farm quality assurance programme.

Bega Cheese's On-Farm Quality Assurance plans are to be completed at least once. They should then be checked at least annually and amended as required. If there are any significant changes on farm or in farming practices the on farm quality assurance plan should also be reviewed. This manual should be filed for later reference.



# Farm details and sign-off

Your signature on this form is your guarantee that you have implemented the on-farm quality assurance programme outlined in this manual.

Sign this form only **AFTER** completing all the required tasks, activities, training or plans identified in this manual to a standard adequate to tick each of the boxes.

Name of person responsible for the quality assurance system:	
Signature:	Date:
Dairy farm name and address / location:	
Dairy Licence Number:	
Bega/Tatura Farm No:	PIC:
Owner's / Manager's name and address:	Owner's / Manager's name and address:
Phone Number:	Phone Number:
Lessee's / Share farmer's name(s) and address (if applicable):	
Phone Number:	Fax Number:
Signed by: .....	
Name: ..... Date:.....	
(name of person implementing the programme to verify that required tasks, activities, training or plans identified in this manual have been completed and implemented to an adequate standard)	





# 1. Property and herd status and livestock trading

## Farm MAP

- The farm MAP must identify all paddocks.
- The farm MAP should also have temporary notes for paddocks where chemicals have been applied and the withholding period, showing:
  - Calf rearing paddocks (see BJD below).
  - Dairy effluent disposal areas.
  - Details of contaminated sites.

<p>▶ A Farm MAP should be kept up-to-date and displayed for all farm staff.</p> <p>Location of farm map:</p>	<p><b>Farm MAP Completed</b> <input type="checkbox"/></p>
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## On-farm control of Bovine Johne's Disease (BJD)

- The farm will follow a recommended management practice to eliminate or control Bovine Johne's Disease (BJD): (eg The Three Point Calf Plan)

<p>▶ BJD management or control plan in place and followed. The Suppliers Handbook contains detail of the Three Step Calf Plan.</p> <p>Notes:</p>	<p><b>In place and followed</b> <input type="checkbox"/></p>
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- The farm should have calculated its BJD Assurance Score (Dairy Score) and declare this on all vendor declarations for cattle being sold.

<p>► Calculate the farm's Dairy BJD Assurance Score (Dairy Score) by completing the Dairy BJD Assurance Score Declaration Forms supplied in Appendix 6.</p> <p>Notes:</p>	<p><b>Calculated &amp; completed</b> <input type="checkbox"/></p>
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### On-farm control of livestock trading

#### For livestock purchases

- Obtain vendor declarations for all stock purchases before including the milk in bulk supply: (The Dairy BJD Assurance Score may be declared on the National Vendor Declaration Form (NVD) by writing in Section 9 "Dairy Score is..." {as appropriate}).
- If treatment status is unknown, discard milk from the factory supply until milk tests are negative for the presence of antibiotics.
- If the cow is dry and could have been treated with a dry-cow antibiotic, a longer withholding period will be necessary before testing the cow's milk for antibiotics.
- No genetically modified livestock (animals bred using DNA modification technology) can be purchased.

<p>► Vendor declarations filed routinely</p> <p>Location of records:</p>	<p><b>Completed</b> <input type="checkbox"/></p>
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For livestock sales

- Prior to sale, check treatment records to ensure cull cows, bulls and bobby calves have exceeded their Withholding Periods (WHP) or Export Slaughter Intervals (ESI). If not, withdraw animals from sale. (Note: Check abattoir’s requirements for cull cows.)
- Cattle may be sold for slaughter or sold to another producer or feedlot whilst still within an Export Slaughter Interval (ESI) or Withholding Period (WHP) provided the purchaser has notification of such on the National Vendor Declaration.
- Bobby calves are not to be fed milk from cows under veterinary treatment or during the Withholding Period (WHP) for that treatment.
- Bobby calves treated with anti-microbial medication are to be withheld from sale until the Export Slaughter Interval (ESI) is completed or the purchaser is notified.

<p>► Livestock trading procedures in place: Keep records of animals sold and complete National Vendor Declaration (NVD). Copies must be filed</p> <p>Location of records:</p>	<p><b>Procedures in place</b> <input type="checkbox"/></p>
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Note: as the NVD form does not have space to record the identification of all animals sold in a lot or truck load, the back of the NVD can be used to note the identity (ID) of every animal sold. For bobby calves, record the ID of the mother on NVD.

**Control of livestock movement on- and off-farm**

- Paddocks must not be contaminated by persistent chemicals (suspect sites must be securely fenced).
- Paddocks must not be grazed or harvested within any chemical treatment Withholding Periods (WHP)
- Conduct a risk assessment on all new farm land and agistment grazing land for chemical residues, ensure BJD status is equivalent or better than the current status– this requires consulting with the owner and relevant government departments.

<p>► The farm must have a system for quarantining treated paddocks requiring a Withhold Period</p> <p>Describe the system:</p>	<p><b>Procedures in place &amp; completed</b> <input type="checkbox"/></p>
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# 2. Livestock identification

## Livestock identification system

- All livestock must be positively and individually identified to enable traceability and management of records to prevent contamination of milk or meat.
- Under the National Livestock Identification System (NLIS), all livestock require electronic identification when sold. For on-farm management purposes, this technology may require livestock to receive electronic identification as calves and this ID be used as the farm ID. Electronic ID readers will be required to implement this system.
- Calves reared for replacements on property are to be positively identified soon after birth. Acceptable methods of animal identification are:
  - **Freeze brands with a sequential individual numbering system (preferred)**
  - Ear tags with a sequential individual numbering system
  - Electronic individual ID system where the farm has ID readers easily available
  - Other forms can be used in conjunction with above—they include names, photos and tattoos.
- Procedures are to be in place to ensure any purchased livestock are identified and animal details recorded in the Livestock Register.

<p>► Livestock ID system and procedures in place</p> <p>Describe the system:</p>	<p>Procedures in place <input type="checkbox"/></p>
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## Livestock register

All farms are to have a Livestock Register. Acceptable methods may include the following:

- Calf book;
- Herd recording;
- Cow book;
- Computer system.

<p>► Livestock Register established</p> <p>Describe the system:</p>	<p><b>Completed</b> <input type="checkbox"/></p>
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## On-farm control of bobby calves

- Farms must have a method for identifying bobby calves that are not for herd replacement and are destined for the calf market, so they:
  - Are not fed antibiotic contaminated milk.
  - Do not suckle or have access to antibiotic treated cows or their discarded milk.
- Treated bobby calves are to be held from sale until residue levels are acceptable based on the withholding period and export slaughter intervals.
- Methods used to identify bobby calves include, separate pen, tail rump paint, all beef breed types, all bull calves.

<p>► This farm has procedures for identifying and managing bobby calves</p> <p>Describe the system:</p>	<p><b>Bobby calf procedures and ID completed</b> <input type="checkbox"/></p>
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# 3. Antibiotic drugs, agricultural and veterinary chemical use and storage

## On-farm controls for veterinary treatment methods and training (ALL ASPECTS CRITICAL)

- All people administering veterinary medicines animal health preparations are to be trained and competent to undertake these duties.
- Training should ensure that they always follow directions on the container label, paying particular note to: expiry date, dose rate, method of administration, frequency of treatment and approval for class of stock.
- Use only those drugs that are APVMA or NRA registered, legally prescribed and approved for the class of stock.
- Use only veterinary medicines or animal health preparations from their original containers.
- Use of animal health treatments in an off-label manner must have written direction of a veterinarian for each instance.
- Prescription-only veterinary chemicals are to be obtained from a veterinarian and labelled with the following:
  - Name of product
  - Active ingredients
  - Animals or class of animals to be treated
  - Direction for use
  - Withholding period (WHP)
  - Name of prescribing veterinarian and contact phone number
  - Expiry date
  - Storage instructions.
- Empty containers are not to be reused for any other purpose.
- Always use clean, calibrated veterinary equipment to administer treatments.
- Ensure cows have a satisfactory dry-off period before calving.
- No drugs to be held post their expiry date.
- All antibiotics, agricultural and veterinary chemical must be stored as per label instructions.
- Injections are administered in the neck region where practical and where livestock are designated “beef only production”.
- Train staff in how to advise Bega Cheese of any contaminated bulk milk, and immediately apply the “stop” sign to the vat outlet until the milk status has been determined.
- At least one farm operator must hold a current Chemical User Certificate.

<p>► One farm operator holds a current Chemical Users Certificate.</p> <p>Notes:</p>	<p>Person Identified &amp; copy of certificate held. <input type="checkbox"/></p>
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<p>► This farm has training and procedures in place</p> <p>Notes:</p>	<p><b>Training &amp; procedures in place</b></p> <input data-bbox="1430 176 1481 230" type="checkbox"/>
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**On-farm control of livestock treatment records (CRITICAL)**

- All livestock treatments must be recorded and all livestock that have been treated must be identified. This is critical.
- To ensure comprehensive trace-back, ALL treatment records shall be permanent, be recorded within 48 hours of treatment and include the following:
  - Treatment date
  - Reason for treatment
  - Animal ID or group and location
  - Name of drug or chemical used
  - Use-by date and batch number of chemical
  - Supplier of drug or treatment
  - Application rate and method
  - Withholding period for milk and meat
  - Export slaughter intervals
  - Who applied the drug/chemical.
- The farm must use:
  - the Stock Treatment Record, OR
  - the Mastitis Treatment Record supplied by Bega Cheese located in the Bega Cheese On-farm Quality Assurance Monitoring Book, OR
  - equivalent records that contain all information required above including the rolling stocktake (see example in the Bega Cheese On Farm Quality Assurance Monitoring Book)

Acceptable methods for recording treatments include:

- Treatment book
- Computer program
- Daily diary

<p>► The farm uses a Stock Treatment Record, or the Mastitis Treatment Record, or an alternative acceptable method for recording treatments.</p> <p>Describe recording system:</p>	<p><b>Acceptable treatment records in place</b></p> <input data-bbox="1430 1552 1481 1606" type="checkbox"/>
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### On-farm control of chemicals and drug storages

- All veterinary medicines, animal health preparations and agricultural chemicals must be stored securely so they do not pose a risk to food safety from accidental milk or livestock contamination or accidents.
- Chemicals and drugs are not permitted to be stored in the milking area, with the exception of a lockable refrigerator or cabinet in the vat room.

<p>▶ Agricultural and veterinary chemical 'Storages' checked and completed</p> <p>Location of storages:</p>	<p><b>Checked and completed</b></p> <input type="checkbox"/>
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### On-farm control of chemical traceability

- Tax invoices for the purchase of agricultural and veterinary chemicals must be kept and filed for tax purposes. The same tax invoices can be re-used, without duplicating the information, for quality assurance purposes. The records must be easily accessed for trace-back and for auditor cross-referencing.

<p>▶ Tax invoices filed to allow easy access</p> <p>Location of records:</p>	<p><b>Filing Completed</b></p> <input type="checkbox"/>
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### Identification of treated livestock (CRITICAL)

- Cows and calves treated with drugs, medicines or chemicals requiring a withholding period (as per the label or veterinary instructions) must be positively identified and temporarily marked for easy identification.
- This enables cows to be readily identified at milking time to prevent the inclusion of contaminated milk in the bulk supply and to ensure that treated cull calves are not sold for slaughter. Temporary marks such as tags, paint, tape, leg bands, etc must last as long as the withholding period for that treatment.

<p>▶ Complete the Instruction sheet titled 'HOW TO IDENTIFY TREATED COWS' (supplied with the Bega Cheese On-farm Quality Assurance Monitoring Book) and locate in the dairy clearly visible for all milkers</p> <p>Location of procedure:</p>	<p style="text-align: right;"><b>Completed</b> <input type="checkbox"/></p>
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### Instructions displayed for treated cows (CRITICAL)

- The method used for identifying treated stock (as described above) must be clearly displayed for all milkers, staff and visitors to your dairy at the dairy **AND**
- Staff and milkers must have access to all treatment records to enable cross-referencing.

<p>▶ Treatment records to be available to all staff</p> <p>Location of records:</p>	<p style="text-align: right;"><b>Completed</b> <input type="checkbox"/></p>
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### On farm controls for the separation of purchased cows and treated cows from bulk milk supply

- The ID (e.g. ear tag number) of treated cows to be withheld from supply must be displayed for milkers during milking. Method and systems to do this could include a notice board, whiteboard or blackboard, or a computer system.

<p>▶ Method for displaying treated cow ID in place</p> <p>Describe system and identify display location:</p>	<p style="text-align: right;"><b>Method in place</b> <input type="checkbox"/></p>
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- For treated DRY COWS, list the calving date and ensure the calving date is outside WHP before including milk in the bulk supply.

► Methods and system in place. An example procedure for recording treated stock is in Appendix 2 of this Manual.

Describe system and location of records:

**Completed**



## 4. Livestock health, mastitis and welfare

### On-farm control of animal welfare

- Staff and management should be trained in and understand appropriate humane treatment of livestock. Guidelines for the management of farm animals can be found in the 'Code of Practice for the Welfare of Animals – 'Cattle' '. Copies can be obtained from the Milk Supply Team.

<p>▶ Training in animal welfare completed</p> <p>Notes:</p>	<p>Training completed <input type="checkbox"/></p>
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### Recommendations for the on-farm control of mastitis

- Dairy Australia's national programme for mastitis control is called Count Down. A copy of the Count Down farm guidelines is on the Dairy Australia website. It provides a farm with a mastitis control plan for use in addition to existing programmes. See also <[www.mastitis.focus.com.au](http://www.mastitis.focus.com.au)> to generate a Mastitis Focus Report.

<p>▶ Mastitis control programme in place</p> <p>Notes:</p>	<p>Completed <input type="checkbox"/></p>
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### On-farm control of herd health

- Farms must implement a herd health programme that addresses all disease risks for a region and ensures the herd is healthy. The following management programmes are to be implemented (see reference material for forms and guidelines):
  - External parasite control programme
  - Internal parasites control programme
  - In northern Victoria, Anthrax control programme
  - Effective vaccination programme

- Footrot treatment and control procedures as listed in DPI Agfacts
- Laneways, yards and pens of good design, well-maintained and clean
- Ensure calves receive the recommended volume of colostrum within the recommended time.
- Milk should only be harvested from healthy cows. Milk must be isolated from cows which may have the potential to transfer disease to humans. Milk to be disposed of safely. See Supplier Handbook.

<p>▶ Herd Health programme established</p> <p>Notes:</p>	<p>Programme established <input type="checkbox"/></p>
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**On farm control of stock water**

- The farm must have methods in place to ensure stock have safe drinking water by doing the following:
  - Assess the quality of the stock water supply for possible contamination—prevent cattle access if risks are identified
  - Prevent effluent entering the stock water supply
  - Treat contaminated water supply or seek alternative supply suitable for dairy stock
  - File records of water quality tests if required.

<p>▶ Methods in place to ensure safety of stock drinking water</p> <p>Notes:</p>	<p>Completed <input type="checkbox"/></p>
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# 5. Livestock feeding

## On-farm controls for purchased stockfeed

- All purchased stock feed is to comply with state stockfeed requirements.
- Commodity Supplier Declaration Forms must be obtained for all purchased feed. If feed has been treated only as per label of a registered chemical, then the withhold periods supplied on these forms must be observed.
- Vendor declarations must include the name of the supplier, description of the feed, date of supply, chemical residue status and any withholding periods.
- Refuse delivery of any stockfeed of doubtful chemical residue status or GMO status.

<p>► Retain feed purchase invoices and batch details to facilitate trace-back in case of a chemical contamination of milk or meat</p> <p>Location of records:</p>	<p><b>Filing completed</b> <input type="checkbox"/></p>
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## Stockfeed vendor declarations

- Where feed is supplied from the one stockfeed vendor, a 12-monthly declaration is adequate provided the supplier is FeedSafe® or Fodder Care® accredited. Each new supplier of stockfeed is required to provide a vendor declaration. Note the date the next 12-monthly Vendor Declaration will need to be obtained on the Quality Assurance Yearly Schedule.



<p>► Vendor declarations from all stockfeed suppliers are provided initially and every 12 months</p> <p>Location of records:</p>	<p><b>Completed</b> <input type="checkbox"/></p>
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## On-farm control of feed mixing

- For farm-mixed feed, the Australian Code of Good Manufacturing Practice for home-mixed feeds (SCA 1991) provides guidelines.
- Feed mixing operations should be designed in such a way that it prevents feed dust contamination of milk.
- Farm chemicals and pesticides must be stored in a secure location to prevent contamination of stockfeed.
- If feeds are mixed with additives such as vitamins and minerals, mixing instructions must be available for staff at the mixer. These instructions must follow label directions for dose rate, mixing method, and storage. Withholding periods must be followed.
- Stockfeed containing any material derived from animals with the exception of tallow, gelatine and dairy products must not be fed to ruminants. .

<p>► Ensure staff are trained in the operation of the mixer</p> <p>Notes:</p>	<p>Training and mixing instructions completed <input type="checkbox"/></p>
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## On-farm Control of Forage Feed and Stored Grain Treatments (CRITICAL)

- Ensure all chemical applications to pastures and crops are recorded for trace-back and that withholding periods for the grazing of cattle, harvesting of grain, or cutting of crops or pastures for fodder can be referenced and are observed.
- All treatment records shall include the following:
  - Treatment date and reason for treatment.
  - Paddock identification and paddock area, OR grain storage identification and amount of grain.
  - Name of chemical, trade name of product, use-by date and batch number when first used.
  - Application rate and method.
  - Total amount of concentrated chemical.
  - Beaufort Scale Wind speed (for spraying).
  - Withholding period (WHP) (days), and date for safe-to-graze/harvest/feed.
  - Name of person.



- The Paddock and Stored Grain Treatment Record supplied in the Monitor Book should be used. Otherwise:
  - Ensure that the treatment records contain all information required above including the rolling stock take (see example in the Monitor Book).

<p>▶ Paddock and stored grain treatment records in place</p> <p>Location of records:</p>	<p><b>Records in place</b> <input type="checkbox"/></p>
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- Treated paddocks requiring a quarantine period prior to grazing shall be clearly identified and a method established (e.g. warning signs on all gateways) to ensure there is no grazing of livestock for the duration of the grazing withholding periods.
- Restrict access of cows to paddocks containing tainting plants and remove cows from paddocks containing risky levels of toxic plants. Eliminate and eradicate problem plants. Delay milking for four (4) hours after grazing such plants.

<p>▶ Quarantine methods and grazing systems in place</p> <p>Describe the system:</p>	<p><b>Completed</b> <input type="checkbox"/></p>
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**On-farm control of GMO stockfeed**

- All suppliers are required to sign a declaration regarding the use of genetically modified organisms (GMO).
- It is a supplier’s responsibility to identify GMO products and avoid them.
- As many feeds are now unable to be determined to be GMO free, Bega will accept a tolerance of 1% in individual stockfeeds, or up to 5% of the total ration can be made from feedstuffs with unknown GMO content (e.g. Up to 1.5Kg of canola meal can be fed in a 30Kg DM daily ration).

<p>▶ Notify all feed merchants of these GMO requirements</p> <p>Notes:</p>	<p><b>Completed</b> <input type="checkbox"/></p>
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## 6. Dairy cleaning and milking practices

### On-farm control of dairy cleaning and hygiene

- Farms are required to undertake two (2) hygiene checks of the dairy plant per year and record this in the Bega Cheese On Farm Quality Assurance Monitoring Book.
- It is recommended that these checks are conducted in conjunction with the scheduled replacement of dairy liners.
- Use only APVMA **registered** dairy detergents and sanitisers that are suitable for their intended purpose for which all major chemical manufacturers provide cleaning advice—follow the recommendations for use.
- Monitor quality results daily and act on any results outside the standard or on any non-conformance issued by Bega Cheese.
- Cleaners and sanitisers are to be appropriately labelled and stored (see section 3 of this manual for on farm control of chemical and drug storages).

<p>► Dairy plant hygiene checks scheduled</p> <p>Notes:</p>	<p>Schedule completed <input type="checkbox"/></p>
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### On-farm control of milking practices

- Establish a method for checking treatment records and for the identification of treated cows (see Section 3 of this manual).
- Establish methods for identifying freshly calved cows and discarding milk until suitable for inclusion in bulk supply. If milk is stored for calves, ensure there can be no accidental inclusion in the bulk supply. Antibiotic milk should not be fed to calves.
- Establish a method for discarding and withholding milk from treated cows for the duration of the withholding period.
- Recommended milking practices include the following:
  - At each milking, check udders for inflammation and the presence of clinical mastitis.
  - Apply teat cups to clean dry teats only.
  - If required, wash and dry dirty teats.
  - Sanitise teats after milking with a recommended sanitiser and emollient at correct strength to label.
  - Maintain a clean milk harvesting area, milking platform and clean hands and aprons
  - Practice good hygiene, especially when handling or treating infected or sick cows.

<p>► Instructions for plant and vat washing procedures completed and displayed. (Example procedure is located in Appendix 3 &amp; 4 at the end of this Manual)</p> <p>Location of instructions:</p>	<p style="text-align: right;"><b>Completed</b> <input type="checkbox"/></p>
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- The following instructions MUST be displayed at the dairy:
  - How to set the dairy up for milking.
  - How to identify cows to be withheld from supply.
  - How to identify cows treated with veterinary drugs or chemicals with a withhold period.
  - How to identify freshly calved cows.
  - How to identify treated dry cows.
  - How to identify mastitis cows to be withheld from supply.
  - How to clean the dairy plant.
  - How to clean the bulk milk vats.
  - How to operate the effluent system.
  - How to ensure that the milk refrigeration vats and milk cooling is operating correctly.
  - Water treatment instructions (if required).

<p>► Instructions for start up and milking operation completed and displayed (Example procedure is located in Appendix 5 at the end of this Manual)</p> <p>Location of instructions:</p>	<p style="text-align: right;"><b>Completed and displayed</b> <input type="checkbox"/></p>
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### **On-farm control of dairy water**

- If the quality of the dairy water supply has been assessed and tested in the past for total hardness and bacteriological quality then FILE THE RESULTS.
- Re-test ONLY when supply circumstances are altered or as required.
- Establish detergent–water mix requirements based on the test results.
- If dairy water is found to be inadequate for dairy cleaning, treat the water or change the water source. DISPLAY the treatment instructions at the dairy.

- Hot water washes require boiling water above 94°C and above 65°C on exit from the plant. Use a minimum of five litres per set of cups per wash cycle
- Water quality must not jeopardise food safety. If concerned test water to see if in standard
- Ensure new milking personnel are trained in methods described above.

<p>▶ Water results must be filed, and the water treatment instructions must be displayed</p> <p>Location of records:</p> <p>Location of treatment instructions if required:</p>	<p style="text-align: right;"><b>Completed</b> <input type="checkbox"/></p>
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### **On-farm control of milking personnel**

- Ensure milking personnel follow good personal hygiene practices.
- Persons with contagious diseases, relevant to the dairy industry, or open infected wounds must not milk cows or enter the dairy and milk handling areas.
- Where appropriate staff and or stock should be vaccinated for zoonotic diseases.
- Relevant training of staff should be provided.

<p>▶ Training and systems completed</p> <p>Notes:</p>	<p style="text-align: right;"><b>Completed</b> <input type="checkbox"/></p>
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# 7. Maintenance of dairy, refrigeration, equipment and environment

## On-farm control of milk refrigeration

- It is recommended milkers monitor the milk vat temperature before the start of the each milking, and at the end of each milking. The normal temperature range for each of these times should be clearly displayed for all milkers in the vat room.
- The temperature of milk at pick-up should also be monitored by the milker.

<p>► Systems for monitoring temperatures in place</p> <p>Notes:</p>	<p>Completed <input type="checkbox"/></p>
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- Farmers are required to make at least two (2) checks (in summer and winter, and at peak milk production and periods of peak heat) of the refrigeration system performance (eg 5° within 3.5 hours from the commencement of milking) and the washing hot water with a calibrated food-grade farm thermometer. These checks are listed on the Hygiene and Maintenance Checklist in the Bega Cheese On Farm Quality Assurance Monitoring Book.

<p>► Temperature checks scheduled for summer and winter on the yearly calendar</p> <p>Notes:</p>	<p>Completed <input type="checkbox"/></p>
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<p>► An annual refrigeration service is required</p> <p>Notes:</p>	<p>Completed <input type="checkbox"/></p>
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- The hand-held farm thermometer shall be calibrated at least annually.
- A CSIRO method for calibrating a hand-held thermometer is included in Appendix 7 at the end of this manual.
- Hand held thermometers must be made from food grade metal or plastic. Mercury in glass is NOT allowed.

<p>► Farm Thermometer calibrations scheduled</p> <p>Notes:</p>	<p>Completed <input type="checkbox"/></p>
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## On-farm controls for dairy repairs and maintenance (R&M) and surrounds

- Controls include:
  - Monitoring of the condition of the premises and plant regularly.
  - Ensuring poisonous or odorous substances are not stored in a milk storage room or near the milk storage area.
  - Maintaining of vermin and fly control programmes for dairy premises and surroundings—use only approved pesticides and record any chemical applications and records of pest control maintained (see Pest control records Manual 3). Records to be kept include:
    - Date of use.
    - What area was treated.
    - Pesticide used.
    - Rate of application.
    - Who applied.
  - Baits must not be placed above stockfeed in the dairy.
  - Implementing a suitable waste management programme.
  - Ensuring tanker and driver access is free of manure and meets Bega Cheese Standards.
  - Non milking animals are adequately segregated from the dairy and surrounds to reduce potential of milk contamination.

<p>► R&amp;M methods and systems scheduled</p> <p>Notes:</p>	<p>Completed <input type="checkbox"/></p>
--	---

## On-farm controls for the repairs and maintenance (R&M) of milking machines and plant

- An annual milking machine service and a performance test are required.

Follow manufacturer’s recommendations for the replacement of milk contacting rubberware, and teat cup liners. Liners need to be replaced every 6 months or after 2500 milkings, whichever comes first. Appendix 8 contains a table to help you determine replacement frequency for your herd.



- Use only approved food grade and corrosion resistant materials.
- Cooling towers requiring registration are to have a risk management plan completed. Details for cooling tower requirements are contained in the reference material.

<p>▶ R&amp;M and rubber replacement scheduled on the yearly planner</p> <p>Notes:</p>	<p>Completed <input type="checkbox"/></p>
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### On-farm control of the dairy effluent system

- The farms' effluent system must comply with industry guidelines.
- Withhold periods of pasture treated with effluent must be observed. 14 days for irrigation application method and 21 days for direct sludge application.
- There should be NO access of stock to effluent for drinking or wading.
- Environmental regulations are controlled by the EPA and local government. Direct disposal or point source disposal is a prosecutable offence and you can have an immediate prohibition order placed on your farm for breaches of the relevant Acts.
- The industry agreed four-point plan is:
  - Do you have an effluent system (pond or direct application)?
  - Is your effluent contained on site – does not leave the property boundary or enter surface waters (waterways, drains, etc)?
  - Does your pond ever overflow, become crusted or never need emptying?
  - Do you spread or rotate your effluent over at least 10% of farm to avoid nutrient overload?

<p>▶ Check your system complies and train staff</p> <p>Notes:</p>	<p>Completed <input type="checkbox"/></p>
---	---



# 8. Managing quality assurance (training, records, audits, corrective actions)

## On-farm controls for managing the quality system

- Provide training for staff in their areas of responsibility and maintain staff training records.
- It is recommended that responsibility lists for staff and instruction sheets for all critical farm operations are compiled.
- Staff or contractors involved in the application of farm chemicals should attend or be supervised by a person who has completed an approved Farm Chemical Users’ course or equivalent before applying chemicals.

<p>► Complete the ‘duties and responsibilities’ table at the front of the Bega Cheese On-farm Quality Assurance Monitoring Book</p> <p>Notes:</p>	<p><b>Completed</b> <input type="checkbox"/></p>
---	--

## Farmer self-audits

- Conduct Farmer Self-audits at least annually to review the system and record Corrective Actions when a fault or mistake is identified.
- Corrective Actions must also be recorded in response to any of the following:
  - A QA failure occurs during routine on-farm activities.
  - Under instruction from an external auditor.
  - A complaint is received from a purchaser or processor of the cattle.
  - A non-conformance is identified by Bega Cheese or the Food Safety Authority.
  - An adverse reaction to a veterinary chemical or an unexpected treatment failure has occurred.
  - Cattle are identified as being of doubtful chemical residue, or BJD status.
  - Stockfeed is identified as being of doubtful chemical residue status.
- Farmer self audits:
  - Enable a review of the quality system and ensure continuous improvement.
  - Ensure corrective actions are followed up.
  - Ensure that farm management controls are up to date.
  - Prepare the farmer for a formal audit.

- It is expected that a FARMER SELF AUDIT will occur once each year and just before the formal audit.

<p>▶ Schedule the farmer self-audit one month before the normal formal audit timing on the yearly planner</p> <p>Notes:</p>	<p style="text-align: right;"><b>Completed</b> <input type="checkbox"/></p>
<p>▶ At the completion of a FARMER SELF AUDIT record NON-CONFORMANCES in the 'QA Incident Reports and Diary Notes' table in the Bega Cheese On-farm Quality Assurance Monitoring Book</p> <p>Notes:</p>	<p style="text-align: right;"><b>Completed</b> <input type="checkbox"/></p>

**GO TO THE FARM DETAILS PAGE IN THE FRONT OF THIS BOOKLET**

**(PAGE 2)**

### **SIGN-OFF COMPLETION**

**OF THE BEGA CHEESE ON FARM QUALITY ASSURANCE SYSTEM FOR THIS FARM**

# Appendix 1:

## Example Treated Stock Recording Procedure

### Treated Stock Recording Procedure

**This completed procedure must be placed in the dairy. The procedure explains a detailed step-by-step protocol for cows once treated with any antibiotic or veterinary medicine during lactation or at the beginning of the dry period.**

**Procedure:**

- 1: Establish whether any treatment carries a milk or meat withholding period by thoroughly reading the label.
- 2: Who ever treats a cow is responsible for recording the treatment on the 'Stock Treatment' record sheet and clearly and correctly identifying the treated cow.
- 3: Each group of cows Dry Cow treated, must be recorded on the 'Stock Treatment or Mastitis Treatment' record sheet. Individual cows treated must also be recorded in Cow number order (on a wall chart or in a book) so when the cow calves, her withholding period information can be easily accessed.
- 4: Any cow **treated with a chemical or antibiotic** is to be identified.
- 5: Lactation treated cows must have marks for easy identification by the dairy shed operator.
- 6: Dry cow treated cows, as for lactation treated cows, must be identified but with different marks from the lactation treated cows.
- 7: **NO animal with a mark signifying she has been treated, is to be milked into the vat at any time. Milking personnel must re-apply the mark if it is becoming difficult to see.**
- 8: When animals exit the withholding period (lactation treated cows) as indicated on the 'Treatment Record' they are to be marked for easy identification so they can be milked into the vat at the next milking. Check the animal prior to the first milking to be sure she has recovered from her ailment and is clear to be milked into the vat.
- 9: **If in doubt about any cow, ASK** the farm manager or owner or milk the cow into the bucket to be safe.

# Appendix 2:

## Example Procedure for Introducing Purchased Cows or Freshly Calved Cows

### Purchased Cows or Freshly Calved Cows Procedure

**This completed procedure must be placed in the dairy and be understood by all staff. The procedure explains a detailed protocol for cows purchased or freshly calved and before they are milked with the main herd and into the vat.**

#### Procedure:

##### A: Purchased Cows

- 1: Cows purchased must be entered on to the 'Livestock Register'.
- 2: Cows will be given a new herd identification number if required which will be recorded alongside its original number.
- 3: This will allow the Farm Manager to establish whether any cow(s) have to be withheld from the vat due to a recent treatment.
- 4: If there is that necessity that cow(s) require to be withheld from the vat, the cow(s) should be identified and the procedure followed as per the 'Treated Stock Recording Procedure'.
- 5: All cows in this category should also be entered into the 'Treatment Record' sheet using the new identification number.

##### B: Calving Cows

Once a cow has calved, there are some vital steps to be undertaken prior to allowing that cow's milk to enter the milk vat.

- 1: The cow's identification number must be correctly viewed and recorded.
- 2: The cow's drying off records must be checked (the wall chart or book where the details were listed in numerical order).
- 3: The date the cow was dried off, the treatment used and the date the milk was permitted for human consumption all must be identified.
- 4: If the cow has calved after that date go to item 7.
- 5: If the cow has calved early, you will have to keep the milk out of the vat until the withholding period has passed and check the milk status prior to including the milk in the vat.
- 6: If the cow is to be withheld, the cow must be identified. **No animal is to be milked into the vat at any time during the withhold period.**
- 7: Cows free of the withholding period must be 'stripped' in each quarter to determine any mastitis infection or blood in the milk. If present, they require withholding and item 6 above followed.
- 8: All cows require to be withheld from the vat for four (4) days or eight (8) milkings to avoid colostrum entering the vat.
- 9: If teat seal was used, then follow the instructions for withholding milk and stripping out the product prior to inclusion in the vat. Again, these cows must be marked. Procedures are contained in the Suppliers Handbook.

# Appendix 3:

## Example Procedure for Dairy Plant Cleaning

### Cleaning Procedure

**This procedure must be displayed in the dairy. It contains a detailed step by step procedure for dairy plant cleaning**

#### **Morning:**

- 1: Rinse plant with cold/warm water (as close to 35°C as possible) using a minimum of 5 litres of water per set of cups (preferably 10 litres per set of cups).
- 2: Hot water with Acid detergent at the recommended rate (read the label and find a cup/scoop that will measure accurately). Using 5-7 litres of hot water (80-85°C) per set of cups.
- 3: Rinse using 5 litres of hot water (80-90°C) per set of cups.

#### **Evening**

- 1: Rinse plant with cold/warm water (as close to 35°C as possible) using a minimum of 5 litres of water per set of cups (preferably 10 litres per set of cups).
- 2: Hot water with alkaline detergent at the recommended rate (read the label and find a cup/scoop that will measure accurately). Using 5-7 litres of hot water (80-85°C) per set of cups.
- 3: Rinse using 5 litres of hot water (80-90°C) per set of cups.

#### **Critical Comments & Safety**

- No hot water temperature with detergent should fall below 65°C during washing
- Deviation from the above programme must be notified to the Milk Supply Manager if it presents the likelihood of a milk quality problem
- Label instructions must be carefully followed.
- A separate scoop/cup is to be used for each detergent to avoid any chemical reaction.

## Appendix 4: Example of Vat Cleaning Procedure

Step 1	Vat Control to "OFF"
Step 2	Check detergent jars
Step 3	Connect 2" hose
Step 4	Turn sight tube to Position "B"
Step 5	Open TCP sample valve & fit tube
Step 6	If "Cycle Complete" or "Fault Light" is <b><u>ON</u></b> PRESS "Reset Stop" then "Start"
Step 7	Turn Wash Control to "ON"
Step 8	Push Reset / Stop
Step 9	Push Start
	Man hole door to be ajar



# Appendix 5:

## Example Dairy Plant Start-up and Milk Operation Procedure

### Dairy Plant Start-Up and Milk Operation Procedure

**This procedure is to be displayed in the dairy. The procedure contains a detailed step-by-step protocol for the set up and start up of the dairy plant.**

#### **Procedure:**

- 1: Ensure the yards are set up for herd access and exit to required paddock.
- 2: Shut yard gate once the herd is assembled.
- 3: Check the Vat is clean. Outlet is closed, milk line is placed into the vat and refrigeration **turned ON**. (Follow any specific Vat procedures required).
- 4: If milk is already in vat, check milk temperature.
- 5: Replace any air and milk plugs in the milk line.
- 6: Insert filter sock and turn plate cooler on.
- 7: Be **sure** the milk line is in the vat.
- 8: Read 'Treatment Record Sheet' to be aware of all of the cows to be withheld from the vat.
- 9: Start up plant (green switch in motor room).
- 10: Lift buttons on claw bowls in dairy pit.
- 11: Wait for vacuum to be functional and pulsators are operating correctly.
- 12: Begin placing cups on cows – **Any Identified Cows MUST Be Withheld** as per the 'Treated Stock Recording Procedure'. These cows are to be milked into a test bucket.
- 13: After the first row of cows are put on and are milking effectively, check the vat room to be sure that milk is entering the vat and the vat cooling is on.
- 14: **Throughout the entire milking be sure that ANY Identified** animal is withheld from the vat and milked into a test bucket.
- 15: **At the completion of milking, be sure milk is cooling.**

# Appendix 6: BJD Score

Version 4 July 2012

## Dairy BJD Assurance Score Declaration Form

### PROPERTY DETAILS

Trading name:							
Address of property:							
Property Identification Code (PIC)							
Animal description No, breed, sex, type eg weaners							

Please provide a different form for cattle of different Dairy Scores

### PART A – HERD BASE SCORE DETERMINATION

Applies to the lowest Score animal in the herd. Select ONE Score only

Australian Johne's Disease Market Assurance Program for Cattle (CattleMAP)					
The herd is in the CattleMAP. The herd has a biosecurity program in place which is audited annually and has undertaken one or more whole herd tests with negative results. (select one score only and provide CattleMAP status expiry date and certificate number)	MN3	Expiry date:	Cert.No	10	<input type="checkbox"/>
	MN2	Expiry date:	Cert.No	9	<input type="checkbox"/>
	MN1	Expiry date:	Cert.No	8	<input type="checkbox"/>

Herd tested negative	
The herd is not known or suspected to be infected and has tested negative by being either: (Tick test type) <input type="checkbox"/> Tested 4 year old or <input type="checkbox"/> Tested to MAP Standard in the last 24 months. or <input type="checkbox"/> Check Tested in the last 12 months	7 <input type="checkbox"/>
Name of approved vet:	Date of Test

Approved BJD Control Program		
BJD has been diagnosed in the herd in the past but an approved BJD control program has been implemented and the herd's current official status is: (select one score only)	Restricted 2	6 <input type="checkbox"/>
	Restricted 1	5 <input type="checkbox"/>
	Tested Low Prevalence	4 <input type="checkbox"/>
	Tested Moderate Prevalence	3 <input type="checkbox"/>
	Tested High Prevalence or untested but on an approved control program	2 <input type="checkbox"/>

Infected or Suspect herds	
Herd is known or suspected to be infected and has not been tested or had an approved BJD control program implemented	1 <input type="checkbox"/>

Non-Assessed herds		
The herd has not recently been tested but is not known to be Infected or Suspect and is located in: (select one score only)	Free Zone	10 <input type="checkbox"/>
	Protected Zone	7 <input type="checkbox"/>
	Beef Protected Area	0 <input type="checkbox"/>
	Management Area	0 <input type="checkbox"/>

Non Assessed Herds on long term approved calf rearing programs	
Herd has not recently been tested but is not known to be Infected or Suspect and JDCAP or 3-Step Calf Plan has been implemented and audited for the past 4 years or more. Years audited:	4 <input type="checkbox"/>
Herd has not recently been tested but is not known to be infected or suspect and the JDCAP or an auditable 3-Step Calf Plan was implemented prior to July 1, 2008.	3 <input type="checkbox"/>

### PART B – CALF CREDIT POINTS (IF APPLICABLE-SEE NOTES OVERLEAF)

Approved calf rearing programs		Score
These calves have been reared for the first 12 months of their lives, under an audited JDCAP. Certificate No. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Years of participation:		+3 <input type="checkbox"/>
These calves have been reared in accordance with the 3-Step Calf Plan		+1 <input type="checkbox"/>

PART C – TOTAL SCORE FOR CATTLE = Part A base score + Part B calf credits =

### PART D – For Cattle purchased into your herd as adults and being resold:

I hold a Declaration Form relating to the purchase and the Dairy Score on this form is:

### DECLARATION

I	of	Date
am the person with day to day responsibility for managing the dairy cattle herd described above and I declare that the information on this form is correct and I attest that I have documentary evidence to substantiate this declaration		Signature

Please Note: Making a false or misleading declaration may make the signatory liable to prosecution and/or civil action under the Trade Practices Act 1974 and relevant State legislation. Beef herds purchasing cattle with Dairy BJD Assurance Score of 4 or below will not be eligible for the Financial and Non-Financial Assistance Package for BJD affected beef herds

## Dairy BJD Assurance Score Declaration Form

### Explanatory notes

#### PART A – HERD SCORE

##### **Johne's disease Market Assurance Program (MAP)**

MN1 to MN3 are Monitored Negative statuses in the Australian Johne's Disease Market Assurance Program for Cattle (CattleMAP). The herd's approved veterinarian issues a herd status certificate that is valid for 12 months.

##### **Herd Tested Negative**

Check tested, Tested 4 Year Old and Tested to MAP Standard are statuses allocated to eligible herds that have had a negative test by an approved veterinarian. A Check Test can only be conducted on an established herd that is not infected or suspect for BJD. A herd that has introduced cattle with a Base Score (Part A) of 1-6 is ineligible for a check tested status. In eligible dairy herds a Check test can be conducted by sampling the faeces from the concrete yard/standing area prior to wash down or by sampling (blood or faeces) 50 adult cattle (2 years of age and older) in the herd that are most likely to be infected. A Check test status can be maintained by testing every 12 months. Tested 4 Year Old and Tested to MAP Standard are tests of all or up to 300 of the cattle over 4 years old and 2 years old respectively in the previous 24 months, and these statuses can be maintained by a Check Test every 24 months. The date of test is the date samples are collected.

##### **Approved BJD control programs**

An approved BJD control program is approved by the State or Territory animal health authority for an infected herd. The authority allocates the herd status to reflect the stage of the herd's progress.

To attain and retain a status of High Prevalence, Moderate Prevalence or Low Prevalence, a herd would also have to implement a disease program comprising at least:

- Individual animal identification
- 3-step calf rearing plan
- immediate culling of clinical cases
- herd retest at a maximum interval of 2 years to maintain or progress status
- culling priority for reactors and other high risk animals at the end of lactation
- introductions of same or higher assurance score

High Prevalence herds have more than 4% (4 years and older) test positive by ELISA or have not been tested and Moderate Prevalence herds have equal to or less than 4% test positive by ELISA. A Low Prevalence herd has 2% or less ELISA positives among cattle that are 4 years and older (or 1.5% or less in cattle 2 years and older). Restricted 1 and Restricted 2 are statuses for infected herds that have had one and two consecutive negative herd tests respectively in an official control program, as per the Standard Definitions Rules and Guidelines for BJD.

##### **Approved calf rearing programs**

Young animals are most susceptible to becoming infected with BJD. The risk of calves becoming infected can be lowered by reducing their exposure to infected cattle and contaminated environments on the farm.

The JD Calf Accreditation Program (JDCAP) is a voluntary comprehensive audited program that has been implemented on some dairy farms in Victoria and is a compulsory part of participation in the Victorian Test and Control Program from 2003 onwards.

The Three Step Calf Plan is a voluntary calf rearing program that can be included in dairy factory audited on-farm QA programs.

The following three steps are management practices that minimise the risk of spread of BJD infection in cattle under 12 months:

- Calves should be taken off the cow within 12 hours of birth.
- Management of the calf rearing are should ensure that no effluent from animals of susceptible species comes into contact with the calf.
- Calves up to 12 months should not be reared on pastures that have had adult stock that are known to carry BJD on them during the last 12 months.

##### **Infected and suspect herd**

The herd is classified by the animal health authority as infected or suspect and has not been tested to achieve a status under sections above.

##### **Non-assessed herds**

Herds that are not known or suspected to be infected, and have not qualified for one of the above statuses by testing, are classified as Non-Assessed. The risk that they are infected may be determined by their location. If you are unsure of your Zone/Area, please contact your local state government animal health office.

Dairy herds in the Beef Protected Area or Management Area that have not been tested or implemented an auditable hygienic calf rearing program have a Herd Base Score of 0.

#### PART B – CALF CREDITS

##### **Approved calf rearing programs**

Only calves that have been reared under JDCAP or the Three Step Calf Plan are eligible for calf credits. Individual calves that are classified in an approved BJD control program as having a high risk of being infected are not eligible for calf credits.

#### PART C – TOTAL SCORE FOR CATTLE

Scores for individual animals are calculated by adding the Herd Base Score from Part A and any eligible calf credits from Part B. Calves reared under JDCAP can attain a maximum of Score 7 which is maintained for life eg. base Score 4+3 JDCAP credit points. The animals must have been reared under the JDCAP program for 12 months-although this may not necessarily have been continuous on the same property.

#### PART D – FOR CATTLE PURCHASED INTO YOUR HERD AS ADULTS AND BEING RESOLD

If you are selling cattle originally purchased into your herd as adults and you hold a Declaration Form relating to the purchase, these cattle retain their original Dairy Score unless they are from CattleMAP herds entering non-MAP herds, when their maximum Dairy Score is 7.

# Appendix 7:

## Procedure for Calibrating Hand-Held Food Grade Farm Thermometers

- Step 1: Clean and wash the hand-held thermometer and store in the refrigerator for several hours before checking.
- Step 2: Prepare a mixture of finely crushed ice and water, mix well in an insulated flask (e.g. an insulated drink container or thermos). It should appear to be a clear slurry. There should be enough ice to cover the full length of the thermometer probe. Drain off any excess water.
- Step 3: Fully immerse the thermometer probe in the ice and take a reading when the gauge comes to rest. The 'ice-point reading' should be 0°C. The accuracy of this method is to 0.001°C.
- Step 4: Record the reading and remove the thermometer for 5 minutes to the fridge and repeat the test recording. Do this three times. An average of the three test results can be used to determine the variance of the thermometer from 'true' reading.
- Step 5: An average variation greater than 1°C is not acceptable and the thermometer should be adjusted or replaced.

Example:	1 <sup>st</sup> test recording	0.5°C	
	2 <sup>nd</sup> test recording	0.6°C	
	3 <sup>rd</sup> test recording	0.4°C	
	Average variance	0.5°C	$0.5 + 0.6 + 0.4 = 1.5$
			$1.5^{\circ}\text{C} \div 3 = 0.5^{\circ}\text{C}$

# Appendix 8: Liner Replacement Charts

## Liner Replacement – Small to Medium Herds

Liners need to be replaced every 6 months or after 2500 milkings, which ever comes first. The tables below show maximum liner service life (days) (based on 2500 cow milkings, milking twice a day).

		Number of Cows														
C L U S T E R S		100	120	140	160	180	200	210	220	230	240	250	260	280	300	
	16	180	166	142	125	111	100	95								
	18		180	160	140	125	112	107	102	97	93					
	20			178	156	138	125	119	113	108	104	100				
	22			180	171	152	137	130	125	119	114	110	105			
	24				180	166	150	142	136	130	125	120	115			
	26					180	162	154	147	141	135	130	125	116		
	28						175	166	159	152	145	140	134	125		
	30							180	178	170	163	156	150	144	133	125
	40													180	178	166

## Liner Replacement – Large Herds

Liners need to be replaced every 6 months or after 2500 milkings, which ever comes first. The tables below show maximum liner service life (days) (based on 2500 cow milkings, milking twice a day).

		Number of Cows														
C L U S T E R S		300	320	340	360	380	400	450	500	550	600	700	800	900	1000	
	24	100	93	88												
	26	108	101	95	90											
	28	116	109	102	97	92										
	30	125	117	110	104	98	93									
	40	166	156	147	138	131	125	111	100	90	83					
	50				180	164	156	138	125	113	104	89	78			
	60						180	166	150	136	125	107	93	83		
	70							180	175	159	145	125	109	97	87	
	80										180	166	142	125	111	100

# Appendix 9: Cow Marking Template

Cow treated with antibiotics



Freshly Calved Cow



Finished Treatment Out Of Withhold



Other:



