



Countdown Mastitis Investigation Pack

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Disclaimer

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Advisory team – Veterinarian

Name

Company

Phone

Email

Advisory team – Field officer

Name

Company

Phone

Email

Advisory team – Milking machine technician

Name

Company

Phone

Email

Advisory team – Other

Name

Address

Phone

Email

Client

Date

Staff and herd profile

Available information

Factory and penalty thresholds

The farm's regular vet

Field officer

What does the farm want to achieve?

Farm's herd test organisation

Phone

BMCC

(Refer to sheet B) No Yes Tick when copy received

Have you done a PCR?

(Refer to sheet C1) No Yes Tick when copy received

Milk cultures

(Refer to sheet C2) No Yes Tick when copy received

Mastitis Focus Report

(Refer to sheet D) No Yes Tick when copy received

Milking machine dry test

(Refer to sheet E) No Yes Tick when copy received

Clinical case records

(Refer to sheet H) No Yes Tick when copy received

Do you have calving dates?

(Refer to sheet H) No Yes

Calving pattern

Year round

Split/Batch

Starts (mth)	<input type="text"/>	No. cows	<input type="text"/>
Starts (mth)	<input type="text"/>	No. cows	<input type="text"/>
Starts (mth)	<input type="text"/>	No. cows	<input type="text"/>

Seasonal

Start (mth)	<input type="text"/>	Finish (mth)	<input type="text"/>
-------------	----------------------	--------------	----------------------

Client details

Contact person

Phone

Role on farm

Postal address

What does the farmer want to achieve? What are the farmer's goals?

About the farm

Owner and management structure

Owner/s

Manager

Share farmer/s

Herd size

Herd manager

Dairy herd management software

Shed

Herringbone – swing-over

Herringbone – double-up

Rotary

Other

Automatic/Robots

No. units

Plant

Single brand

Mixed brands

Brand/s

Dairy plant

In-line metering

High-line

Mid-line

Low-line

Have there been any recent changes to the shed? No Yes

If yes, what and when?

Date

Client

A2

Staff and herd profile

Your problem

Discuss the problem – get down to what is the primary concern and when it occurs

Define the problem—tick appropriate boxes (one or more)

- BMCC
 - At calving
 - During lactation
- Clinical cases
 - At calving
 - During lactation
 - Repeat cases
- High ICCV cows
- Teat condition
- Other (eg. thermodorics)

People

Do you employ milking staff? No Yes

How many?

How many operators are in the shed at each milking?

Is the herd ever milked

Once a day When

Three times a day When

Recent changes

Has anything about the milking routine changed in the last six months? No Yes

Note any features about staffing and milking routine consistency that may impact on mastitis such as communication or experience

Any staff changes in the last six months? No Yes

Have managers and milking staff attended a Cups on, Cups off course?

Date

Client

A3

Staff and herd profile

Herd

Is an ADHIS genetics progress report available to inform rate of mastitis resistance improvement? No Yes

	How many first calvers in the herd? (Approximately)	How many mature cows in the herd? (Approximately)	Total
This year			
Last year			

Is the age structure or replacement rate of the herd likely to impact on the level of mastitis in the herd and the management options?

Have any cows in your milking herd been introduced from external sources in the last three years? No Yes

Date	Source	No. maiden heifers	No. cows	Total

What purchasing protocol are used to safeguard against mastitis?

Herd of origin
 BMCC Cultures
 PCR ICC

Have you milked cows belonging to other herds in your dairy in the last three years? No Yes

If yes, when?

What is the risk of introducing mastitis bacteria with cows from other herds?

Culling for mastitis

Do you ever cull clinical cases of mastitis? No Yes

If yes, how do you decide which ones go?

Compare with the culling recommendations in Farm Guideline 15. Warning bells should ring if someone is culling high ICC cows to control BMCC.

Do you use
 ICC? RMT? Conductivity?

What do you do with this data?

How many cows have been culled for mastitis in the last 12 months?

How many cows are culled in total in the last 12 months?

Date	<input type="text"/>
Client	<input type="text"/>



Bulk Milk Cell Counts

Graph BMCC for the past 2–3 years: daily pick ups and 10 day average trend lines.



Attach graph

Large empty area for graphing Bulk Milk Cell Counts (BMCC) data.

Date

Client

C1

Bulk Milk PCR (Polymerase Chain Reaction) testing

Date taken

Who took these samples?

Sample from

Results of PCR Major 4 test

Dates submitted

Tanker

Mycoplasma bovis +ve/-ve/caution

Lab submitted to

Bulk vat

Strep agalactiae +ve/-ve/caution

The samples are

Fresh

Frozen

Hospital herd



Attach report

Date

Client



Attach report

Large light blue rectangular area for report attachment.

Date

Client



Mastitis Focus Report & Individual Cow Cell Counts

If herd test data is available, create a MFR.

Use an MFR to analyse spread of infection (cows vs heifers) and number of chronic cows.

Is in-line metering used? No Yes

If yes, how is data analysed?

In addition to MFR Individual Cow Cell Counts (ICCCs) can be used to:

- > estimate the prevalence of mastitis infections
- > estimate the new infection rate or spread of infection in the herd
- > consider selective Dry Cow Treatment, providing there are at least four ICCC records for each cow in the current lactation
- > identify cows with persistent infections for culling, to assess the contribution of individual cows if there are problems with high bulk milk cell counts (BMCC)
- > determine an appropriate milking order, where subclinical and clinical cases of mastitis are milked last
- > assess the mastitis status of purchased cows and investigate outbreaks of mastitis in the herd
- > identify appropriate cows for sampling for milk cultures
- > identify cows for foremilk stripping
- > look at low producers for dry-off.



Scan the code
to create a Mastitis Focus Report

Date

Client



Attach Mastitis Focus Report (MFR) here

Date

Client



Milking Machine Dry Test

(AMMTA test or equivalent dry test)



Attach copy of dry test here

Milk line position: High Mid Low

Dry test summary	Satisfactory	Unsatisfactory
Milk line position		
Test date (< 3 months old)		
Milk line capacity		
Pulsation system		
Vacuum levels		
Effective reserve		
Clusters		
Regulation efficiency		
Vacuum gauge		
Rubber-ware condition		

Date

Client

Performance tests of milking machines

Worksheet

Clusters

Not during milking

No. clusters	<input type="text"/>	Claw type	<input type="text"/>
Parallel 80–90°		Claw nipple size	<input type="text"/> mm
Attach rear		Air vent size	<input type="text"/> mm
H'bone, attach side		S/off valve leaks	<input type="text"/> L/min
Cluster position in relation to the cows' udders		Air adm. range	<input type="text"/> L/min
Good Fair Poor		Cluster air leaks	<input type="text"/> L/min
Shell dimensions	<input type="text"/> mm		
	(Length x outer diameter x hole)		
Liner brand	<input type="text"/>		
Model no.	<input type="text"/>		
Short milk tube bore	<input type="text"/> mm		

Liner condition

Date liners were installed:

Estimate how many cow-milkings the liners will do
 = $\frac{\text{Herd size} \times \text{no. milkings/day} \times \text{no. days}}{\text{No. milking units}}$

Date new liners need to be installed:

Mouthpiece distortion	Good	Fair	Poor
Barrel shape	Good	Fair	Poor
Abrasion on outside wall of liner	No	Yes	
Rub marks on shell	No	Yes	

	Current	New	
Liner length unstretched (mm)	<input type="text"/>	<input type="text"/>	
Liner stretch (%)	<input type="text"/>	<input type="text"/>	
Ineffective length	<input type="text"/> mm	Effective length	<input type="text"/> mm

Claw vacuum

Unit	Average claw vacuum (kPa)		Pass/Fail guideline Mean claw vacuum within range 36–42 kPa at 5 L/min with simulator; or 90–120 seconds after cups on
	During milking avg at 90–120 sec	Flow Simulator at 5 L/min	
1			
2			
3			
4			
5			Pass/Fail
Mean			

Vacuum levels and differences

Not during milking

		High	Mid	Low
Milkline height				
Vacuum reading	Guidelines	Pass/Fail		
Working vacuum (WV) central test point (ctp)	<input type="text"/> kPa at	High line 47–50kPa		
		Mid line 45–48kPa		
		Low line 42–46kPa		
Unit fall off test		Not more than 2kPa with one unit open (or with two units open when there are more than 32 units in the shed)		
	Level Drop			
1 unit	<input type="text"/> kPa <input type="text"/> kPa			
2 units	<input type="text"/> kPa <input type="text"/> kPa			
Regulator undershoot Minimum B–C		Not more than 2kPa difference with 1 unit open (or two units open when there are more than 32 units in the shed)		
	Min B Min C			
1 unit	<input type="text"/> kPa <input type="text"/> kPa			
2 units	<input type="text"/> kPa <input type="text"/> kPa			
Regulator overshoot Maximum D–A		Not more than 2kPa difference with no units open		
	Max A Max D			
1 unit	<input type="text"/> kPa <input type="text"/> kPa			
2 units	<input type="text"/> kPa <input type="text"/> kPa			
Vacuum change at reg or sensing point		A change of 1.3kPa or more at regulator when receiver vacuum is dropped by 2kPa		
Reg vac with ctp at WV	<input type="text"/> kPa			
Reg vac with ctp at (WV-2)	<input type="text"/> kPa			
Change at regulator	<input type="text"/> kPa			

Vacuum stability in milkline and receiver

During milking

Avg	Min	Drop Avg - Min		Pass/Fail
Not more than a 2 kPa transient vacuum drop for 95% of the total milking time				
Vacuum reading (kPa)				
Milkline vacuum level with all or most units connected				
Receiver vacuum level during cluster changeover	1.			
	2.			

Date

Client



Performance tests of milking machines

Summary report

Tested by

Client

Reason for test

Vacuum recorder Brand

Model

Tested by

Date

Connection used for this performance test

		Response rate	
T-piece	<input type="text"/>	<input type="text"/>	kPa/sec
Needle	<input type="text"/>	G <input type="text"/>	kPa/sec
Other	<input type="text"/>	<input type="text"/>	kPa/sec

Performance test summary

	Yes	Borderline	No	Comments
Compatible cluster components have been selected (liners fit shells and claw nipples)				
Cluster air admission is OK				
Cluster positioning and weight balance is OK				
Vacuum levels and differences meet standards and guidelines				
Mean claw vacuum meets the guidelines				
Vacuum stability in milking line and receiver meets the guidelines				

Recommendations

Considering the results of both the dry test and these performance tests

- No further work or changes are necessary
- Further tests or milking time observations are required
- Please specify

The following changes are recommended

Please specify

Date

Client



Milking routines

Cups on cups off

Refer to Technote 5 and Technote 6, pages 6–7

Name and role of milking staff present/absent

Cows usually enter the shed

On their own

With help Backing gate

 Dog

 Operator

 Poly-pipe

Comment

Most teats are clean and dry as cows enter the shed No Yes

Teats (not udders) are washed No Yes

If yes, are they

 Washed only if muddy

 Washed as part of shed routine

How? eg. scrubber/hose

There are sufficient functional hoses to enable adequate washing No Yes

If washed, teats are dried No Yes

Pre-milking teat disinfection is used No Yes

What product?

Is it removed before cups on? No Yes

Have teat ends been checked with an alcohol teat wipe? No Yes

Mark teat cup slips here

Number of cup slips recorded

Number per 100 cows

Everyone wears clean gloves at milking No Yes

Cups are put on when teats are plump with milk No Yes

The cluster is weighed down (by hand or brick) to finish milking

 Never Sometimes Most cows

At cups off, the vacuum is released by

 Kinking long milk tubes

 Using snap clips

 Pulling the button

 Automatic Cup Removers (ACRs)

 Other

After vacuum is released

 Most cups drop away in 2–3 seconds without help

 Some need assistance to get the cups off

 Most cups hang for 4–5 seconds or longer

 Removal by ACRs is satisfactory

 Cups are being removed while teats are still under vacuum

Effectiveness of teat disinfectant coverage was assessed by

 Visual inspection

 Towel test

 Spray pattern

Comment

What is the number of cows that are switched to manual ACR?

Advisor report

How do you (the advisor) rate the

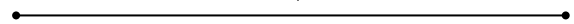
 Consistency of the milking routine in this shed

Poor Adequate Excellent



 Understanding of the protocol for various activities by all staff

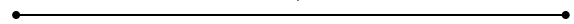
Poor Adequate Excellent



The opportunity for spread of mastitis in this shed through

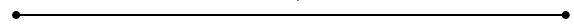
 Physical transfer is

Poor Adequate Excellent



 Impacts

Poor Adequate Excellent



Date

Client



Clinical cases

Refer to Technotes 4, 10

Detection

Describe what is determined as a case to be treated

Practices **routinely** used by milkers to detect clinical mastitis are

- Visual inspection of the udder
- Palpation of suspect quarters
- Stripping of suspect quarters
- Regular stripping of fresh cows
- Routine stripping of the whole herd
- Frequent inspection of filter socks
- Use of inline mastitis detectors Other

Clinical cases are usually detected at

- Cups on
- Cups off

All workers know the protocol used to identify clinical cases for treatment in this herd

- No
- Yes
- Don't know

In your opinion (as the advisor), clinical cases are likely to be

- Missed
- Usually detected
- Overdiagnosed

Milk samples are collected from clinical cases prior to treatment

- All
- Some
- None

Treatment

The treatment routine for clinical cases includes

Gloves changed or disinfected prior to treatment	No	Yes
Stripping quarters out before infusing antibiotic	No	Yes
Milking quarters out fully at every milking	No	Yes
Sterilising teat ends	No	Yes
Hygienic infusion technique	No	Yes
Massage treatment up into the udder	No	Yes
Post-treatment teat disinfection	No	Yes
Gloves changed or disinfected after treatment	No	Yes
Does the treatment protocol include a full course of treatment?	No	Yes

Products used

Comments on selection

Comments on effectiveness

Identification/Hygiene

Cows with clinical mastitis are identified by

- Leg bands
- Tail band
- Spray paint
- Computer/electronic
- Other

Every milker, including relief staff, is familiar with the system used to mark treated cows

- No
- Yes
- Don't know

Clinical cases are

- Milked last
- Milked into a test bucket

Other

If a test bucket is used does it have a separate cluster?

- No
- Yes

How is the cluster washed/disinfected between cows?

If a test bucket is put on a highline, are steps taken to avoid overmilking?

- No
- Yes

In your opinion (as the advisor), the opportunity for spread of mastitis from clinical cases in this herd is

- Low
- Medium
- High

Records

Do the clinical case records show

- | | | |
|--------------|------|-----------------|
| Cow ID | Date | Quarter treated |
| Product used | | Result/outcome |

Are the calving dates recorded and available?

- No
- Yes

Where are clinical cases recorded?

- Whiteboard
- Diary
- Computer system

Who is in charge of the permanent record?

Have you had any bulk tank antibiotic failures in the last 12 months?

- No
- Yes

Comments on antibiotic failures

Date

Client



Teat condition Sheet 1

Refer to Technote 9

Sample size

Herds less than 500 cows assess all teats on at least 25 randomly selected cows throughout milking or 10% of the herd whichever is greatest. Herds over 500 cows assess all teats on at least 50 randomly selected cows throughout milking.

Refer to Technote 9 for trigger levels for different teat conditions.

Cow ID	Skin condition				Colour				Swelling at base				Teat end firmness				Orifice openness				Teat end			
	Normal, Dry, Lesions, Haemorrhages				Normal, Pigmented Red, Blue				Normal Swollen				Normal Firm				Closed Open				No ring, Smooth Rough, Very rough			
	FL	FR	BL	BR	FL	FR	BL	BR	FL	FR	BL	BR	FL	FR	BL	BR	FL	FR	BL	BR	FL	FR	BL	BR
1																								
2																								
3																								
4																								
5																								
6																								
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25																								

	Lesions (%)	Red or Blue (%)	Swollen (%)	Firm (%)	Open (%)	Rough (%)
Results:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Haem (%)					Very rough (%)
	<input type="text"/>					<input type="text"/>

Front Left: **FL** Back Left **BL**
 Front Right: **FR** Back Right **BR**

If an observation is missed place a cross (X) in the table
 If you leave 'normal' findings as blanks in the table, tick here

Date

Client



Teat condition Sheet 2

Refer to Technote 9

Sample size

Herds less than 500 cows assess all teats on at least 25 cows randomly selected cows throughout milking or 10% of the herd whichever is greatest. Herds over 500 cows assess all teats on at least 50 randomly selected cows throughout milking.

Refer to Technote 9 for trigger levels for different teat conditions.

Cow ID	Skin condition Normal, Dry, Lesions, Haemorrhages				Colour Normal, Pigmented Red, Blue				Swelling at base Normal Swollen				Teat end firmness Normal Firm				Orifice openness Closed Open				Teat end No ring, Smooth Rough, Very rough			
	FL	FR	BL	BR	FL	FR	BL	BR	FL	FR	BL	BR	FL	FR	BL	BR	FL	FR	BL	BR	FL	FR	BL	BR
26																								
27																								
28																								
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49																								
50																								

	Lesions (%)	Red or Blue (%)	Swollen (%)	Firm (%)	Open (%)	Rough (%)
Results:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Haem (%)					Very rough (%)
	<input type="text"/>					<input type="text"/>

Front Left: **FL** Back Left **BL**
 Front Right: **FR** Back Right **BR**

If an observation is missed place a cross (X) in the table
 If you leave 'normal' findings as blanks in the table, tick here

Date

Client



Teat condition Sheet 3

Refer to Technote 9

Sample size

Herds less than 500 cows assess all teats on at least 25 cows randomly selected cows throughout milking or 10% of the herd whichever is greatest. Herds over 500 cows assess all teats on at least 50 randomly selected cows throughout milking.

Refer to Technote 9 for trigger levels for different teat conditions.

Cow ID	Skin condition Normal, Dry, Lesions, Haemorrhages				Colour Normal, Pigmented Red, Blue				Swelling at base Normal Swollen				Teat end firmness Normal Firm				Orifice openness Closed Open				Teat end No ring, Smooth Rough, Very rough			
	FL	FR	BL	BR	FL	FR	BL	BR	FL	FR	BL	BR	FL	FR	BL	BR	FL	FR	BL	BR	FL	FR	BL	BR
51																								
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	Lesions (%)	Red or Blue (%)	Swollen (%)	Firm (%)	Open (%)	Rough (%)
Results:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Haem (%)					Very rough (%)
	<input type="text"/>					<input type="text"/>

Front Left: **FL** Back Left **BL**
 Front Right: **FR** Back Right **BR**

If an observation is missed place a cross (X) in the table
 If you leave 'normal' findings as blanks in the table, tick here

Date

Client

J1

Cow behaviour

Refer to Technote 6 page 4

Target: Less than 10% of cows with KiSt at each of the four stages of milking.

Cow ID	Count kicks and steps involving the rear legs			
	In stall waiting to be milked	At preparation/cluster attachment	In first two minutes of milking	In last two minutes of milking
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
Total no. cows				
Cows having a KiSt response	%	%	%	%

Date

Client

J2

Milking time per cow

Refer to Technote 6 page 5

	Cow ID	Clock time (0000)				Milking time per cow (mins)		
		1. At cups on	2. True flow starts	3. Flow ends	4. At cups off	Delayed flow (2-1)	Flow time (3-2)	Total over milking time (2-1) + (4-3)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
Proportion of cows with delayed let-down (>20 seconds)						%		
Average milk flow time per cow							mins	
Average duration of over milking								mins

Date

Client



Completeness of milking

Refer to Technote 6 page 6 for details of an alternative qualitative assessment to reduce OH&S risk

Cow ID	Strip yields per quarter (mL)			
	FL	FR	BL	BR
	L Less than 50 mL, M 50–100 mL, H more than 100mL			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
No. quarters				
Percent yielding more than 100 mL				
Percent of all quarters				<input type="text"/> %

Cluster alignment

Do clusters hang squarely on nearly all udders? No Yes

If no, do clusters appear to be

- Twisted
 - Because of long milk tube positioning relative to udders
 - Because the long milk tubes and pulse tubes are twisted
- Pulling or dragging on the udder
 - Because the long milk tubes are too long or too short
 - Because the stainless steel droppers are too long
 - Due to the lack of easy adjustment for udders of different heights
 - Due to incorrect positioning of milking inlets or ACRs
 - Due to incorrect positioning or lack of travel with swing arms/cluster supports

Date

Client



Teat disinfectant

Refer to Technote 7

The stock product

(as purchased)

Brand name

Purchase date

APVMA approved? No Yes

Product type Concentrate to mix with water
Ready-to-use

The active Iodine gm/L
Chlorhexidine gm/L
Other gm/L

Contains emollient? No Yes
If yes, concentration?

Storage on farm

Product stored out of direct sunlight? No Yes

Product container is sealed at all times? No Yes

Product expiry date

Application

Applied by Spray Dip ADF
for Whole season Part season

Delivery method is Hand held trigger bottle
Portable pressure system
In-line wands
Automated – what type?

The spray stream is Vertically Horizontally

Volume of prepared teat disinfectant used per cow

Volume used per milking mL

No. cows milked = mL/cow

Any recent changes?

Has anything changed in the last six months?
(product type, application, mixing, operators)

Any other comments

Mixing

Do not complete this if using a ready-to-use product

Teat disinfection mix (as applied)

Quantity mixed in each batch litres

The mix

Concentrate litres

Water litres

Added emollient litres
(name)

Calculated active in mix %

If available, tested active %

Calculated emollient in mix %

The water used

Source Tank Spring
Town River
Bore Channel or dam
Other

Via hot water service? No Yes

Treated with any chemicals? No Yes

Water been tested? No Yes

If available, tested hardness ppm
tested total alkalinity ppm

What is the bacterial count in the water? cfu/ml

The routine

Who mixes the solution?

How often is the mix made?

If mixed by an automatic mixer,
how often is the concentration checked?

Are components measured accurately? No Yes

Do the containers keep the
prepared mix clean and airtight? No Yes

How often are mixing containers dismantled and cleaned?

How often is the teat spray unit dismantled and cleaned?

Date

Client



The environment

Refer to Technote 1 pages 6–8, Technote 27

Environmental challenge

Are there areas around the farm that are likely to contaminate udders with environmental bacteria between milking?

No Yes

Low risk Medium risk High risk

Entrance to the dairy

Exit from dairy

Areas around the troughs

Gateways

Laneways

Feedpad (if applicable)

Other

Are there other areas where cows congregate? eg. under trees

Does the manner in which cows get to and from the dairy increase bacterial challenge to the teat end?

No Yes Don't know

Cows can enter dams, channels or other waterways

No Yes Don't know

Cows use parking bays before or after milking

No Yes

Sprinklers are used to keep cows cool in hot weather

Never Sometimes

If sometimes, when?

Before milking During milking On a timer

After sprinklers are used are the teats wet?

No Yes

Describe the cows environment in the first hour after milking when teat end is still closing

[Text input area for describing the cows environment]

The feed pad

Is a feed pad used?

No Yes Don't know

If yes, has it been inspected?

No Yes Date

What kind of feed pad do you have?

Dirt Covered Concrete

Fans Sprinklers

When is the feed pad used?

At calving Seasonally

How do you clean it?

Scraping Flood wash

How often is it cleaned?

The pad is used

Routinely after milking

Seasonally At calving

Part of the year

Other

The pad is used by

Cows only Heifers only Heifers and cows

Other

How deep and liquid is the surface of the pad?

Cows' udders are likely to get soiled

Cows stay relatively clean

Attach/draw maps or diagrams wherever appropriate



Date

Client



Dry-off

Refer to Technote 14–18, Farm Guideline Fact Sheets C,K and M

In addition to this investigation, a full dry cow consultation should be done with your client on a yearly basis to ensure they are making the best dry off management decisions for their farm.

Drying-off management

What percentage of cows were producing over 12L at drying-off? %

Are steps taken to reduce individual cow production prior to dry-off day? No Yes

If yes, what steps were used?

Change in milking frequency Change in routine
Change in diet Other

Did you use antibiotic Dry Cow Treatment (DCT) at the end of last lactation? No Yes

If yes, which cows were treated?

All the milking herd (blanket)
Selected cows ICCC What threshold was used?
Clinical case
Other

What product(s) were used?

Did you use Internal Teat Sealant (ITS)? No Yes

If yes, which cows were done?

What product did you use?

How many cows were dried off in each batch?

What was the maximum number of cows dried off in any batch?

How many people were involved in doing the DCT at each batch?

How long after cups off were cows treated?

Are udders marked prior to treatment? No Yes

How were teats sterilised before treatment?

Were teats sprayed or dipped after treatment? No Yes

Has Fact Sheet C (Farm Guidelines) been referred to in developing a dry cow plan?

Good dry cow records are essential for managing milk quality at calving



Do the DCT records show

Cow ID Treatment date Product used
Did cows drip milk after drying off? No Yes

Were there any cases of clinical mastitis after drying-off? No Yes

How were cows managed after drying-off? (diet, paddock transport)

Do heifers get ITS before calving?

Who does this?

Use the Mastitis Focus Report's "previous dry off strategies" and "your calving systems" boxes, to determine success of current protocols

Date

Client



Calving

Refer to Technote 1

Assessed in calving period? No Yes

Before calving

Has the calving area been inspected? No Yes

Date

Where do cows calve?

Calving pad Paddock

Other

Are there any other points you would like to discuss?

Calving pad

What type of bedding is used?

How is bedding managed during calving?

Is the calving pad undercover?

Paddock

Are there any preventative measures in place to restrict access to recently contaminated areas? No Yes

If yes, when?

Do cows have the opportunity to calve in clean and well-drained areas? No Yes

Cow/heifer management

Does the calving area get overcrowded?

Regularly Sometimes Never NA

What strategies are used to minimise contamination of calving areas? (eg time in calving group or no. of cows)

Do cows tend to concentrate in certain spots (feed points, camps etc) No Yes

Have any special strategies been used to manage the calving area? No Yes

Do heifers calve in the same area as the cows?

Usually Sometimes Never

Are cows teats sprayed prior to calving? No Yes

If so, how often?

Have you seen tight bags that dripped milk?

Cows Heifers

If cows leak milk prior to calving, are they milked? No Yes



Pasture or pads for calving must have minimal manure contamination. If more than two pats of manure are present per square metre, it is not clean enough for calving cows/heifers

Date

Client



Calving

Refer to Technote 1

After calving

How soon after calving are cows in the dairy being milked?

Are cows and heifers fully milked out at first milking after calving?

No Yes

Is **udder oedema** excessive?

Cows Heifers

Is udder oedema being treated? No Yes

How are fresh cows/heifers milked?

Separate herd before main herd after main herd

Test bucket

Does the environment post calving create additional risk? No Yes

Are fresh cows kept out of the vat for 8 milkings? No Yes

Are withhold periods followed? No Yes

Cow/heifer health

Are any of these transition health conditions an issue on farm?

Retained Foetal Membranes (RFMs)

Ketosis

Displaced abomasums

Metritis

Milk fever

If so, describe incidence

Refer to Dairy Australia's Transition Cow Management (TCM) resources www.dairyaustralia.com.au/TCM

Do calving dates allow accurate timing of transition feeding? No Yes



Scan the code to visit Transition Cow Management (TCM) resources

Date

Client



Investigation master sheet

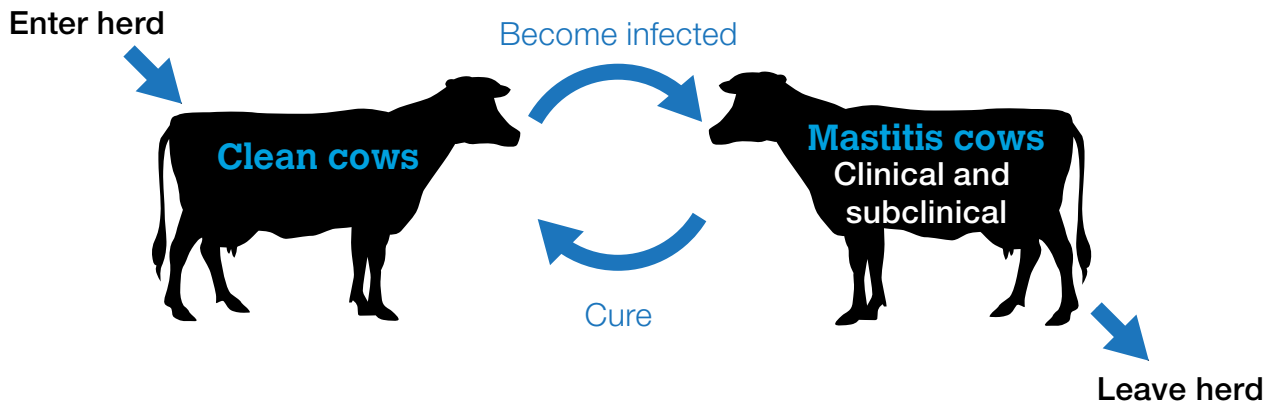
Refer to Technote 13, page 7

Herd mastitis dynamics chart

Major pathogen(s)

Key control points

Other key issues



Date

Client



Investigation master sheet

Description	TN	Y	N	Comment	Priority (1,2,3,4)
A. Staff and herd profile					
The policy used to check introduced (purchased or borrowed) cows for mastitis meets the guidelines	15				
The culling policy for clinical and persistently infected cows meets the guidelines	15				
The ADHIS genetics report demonstrates improvement in mastitis resistance with more recently born animals	Fact Sheet H				
Replacement rate is generally between 20%-30% to maintain a young herd age structure					
Managers and staff have attended Cups on Cups off courses in the past 2 years					
B. Bulk Milk Cell Counts					
2-3 years of BMCC history has been generated from factory records	11				
BMCC has been below warning levels for the past 18 months	11				
C1. PCR					
Bulk and hospital milk samples <i>are negative for Mycoplasma bovis and Strep. agalactiae</i>	Fact Sheet N				
C2. Milk Cultures					
Milk samples were collected from cows representative of the problem being investigated	4				
There are sufficient milk culture results to assess the herd problem	13				
Bacteria have been identified that could account for the herd problem	1, 5				
Other					
D. Mastitis Focus Report					
There is sufficient information to generate a complete Mastitis Focus Report	Fact Sheet K				
New infection rate in heifers is acceptable	Fact Sheet K				
Monthly new infection rate in the herd is acceptable	Fact Sheet K				

Description	TN	Y	N	Comment	Priority (1,2,3,4)
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E. Milking Machine Dry Test

The last test was recent enough to provide valid information on the current problem	25				
The capacity of the milking line (size and slope) meets the current guidelines	25				
The vacuum and airflows meet the current guidelines (working vacuum, effective reserve, regulation efficiency)	25 AMMTA specs				
Pulsators operate within the current guidelines	25 AMMTA specs				
Liners, claw tubes and other rubberware are in good condition	6				
Other					

F. Performance Tests of Milking Machines

Compatible cluster components have been selected (liners fit shells and claw nipples, liners seem OK for average teat size, cluster air admission is OK)	25				
Vacuum levels and differences meet standards and guidelines	25				
Mean claw vacuum meets the guidelines	25				
Vacuum stability in milking line and receiver meets the guidelines	25				
Other					

G. Milking routines

Cups go on clean, dry teats	5				
Cows have let-down by the time the cups go on	5				
Hygiene in the shed (wearing of gloves, stripping methods etc) will reduce the number of bacteria at the teat ends	5, 8				
The technique used by all staff to remove cups is appropriate	5				
Teat disinfectant adequately covers all teat surfaces	7				
The frequency of teat cup slips is within the guidelines	6				
Other					

Description	TN	Y	N	Comment	Priority (1,2,3,4)
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H. Clinical Cases

Permanent and detailed records are kept and accessible on cows with clinical mastitis	4, 13, 24				
The protocol for detecting clinical cases is appropriate	4, 10				
All staff use the same protocol for detecting clinical cases	4, 10				
The protocol for treating clinical cases is appropriate	4, 10				
The way clinical cases are milked (hygiene, milking order etc) will minimise spread to other cows in the herd	4, 8				
Other					

I. Teat Condition

Short-term changes in teat condition (colour, swelling, firmness, openness) are within normal limits	9				
Longer-term changes in teat skin condition and teat end hyperkeratosis are within normal limits	9				
Other					

J. Cow Behaviour and Milking Time per Cow

Cow discomfort is minimal (less than 10% of cows with KiSt response) at each of the four stages of milking	5, 6				
The average milk flow time of the herd meets the current guidelines for their production level	6				
Average over-milking time is acceptable (minimal: less than 1 minute; moderate: 1-2 minutes; excessive: 3 or more minutes)	5, 6				
Delayed let-down in the herd is minimal (less than 10% of cows)	5				
Other					

K. Completeness of Milking

Less than 20% of quarters contain strip yields of 100mL or more	6				
Clusters hang squarely on udders	6				
Other					

Description	TN	Y	N	Comment	Priority (1,2,3,4)
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L. Teat disinfectant

The product is registered by APVMA	7				
Mixing rates, water sources and storage containers meet the guidelines	7				
Iodine and water test results are within acceptable ranges	7				
Other					

M. The environment

Areas around troughs, gateways or laneways do not pose an increased risk for spread of environmental mastitis	27				
Udders remain clean and dry in the first hour after milking	27				
Is there a suitable "wash and dry" protocol in place when necessary?	27				
Feed pads have sufficient drainage and are cleaned frequently enough to reduce risk of mastitis	27				
Cows are only kept in the feedpad area during feeding and do not sit down	27				

N. Dry-off

Clinical case records allow the calculation of calving time mastitis for review of previous calving periods	14				
Appropriate levels of culling for repeat clinical cases and chronic sub-clinical mastitis is done prior to dry off	15				
Production is reduced to 5–12 L for most cows at dry off	16				
Early preg testing is done, allowing more accurate prediction of calving dates	16				
The treatments administered at dry off fit with recommendations from Fact Sheet C	14				
Management of cows and staff optimise hygienic administration of dry cow treatments	17, Fact Sheet M				
Cows are placed in a low challenge environment after drying off and are monitored for signs of mastitis	18,19				

Description	TN	Y	N	Comment	Priority (1,2,3,4)
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O. Calving

Udder oedema condition at calving (no excessive swelling or dripping) meets the guidelines	1,2				
Cows are completely milked out at the next milking after calving ie. less than 12hrs after calving	1				
Milk fever is contained to less than 3% in mature cows					
Calving environment does not pose risk to spread of environmental mastitis.	1				
Cows calve separately to heifers	1				
Less than 5% heifers have clinical mastitis within 14 days of calving	Fact Sheet K				
Milk WHPs for freshly calved cows are adhered to	3				
Mastitis in freshly calved cows is detected quickly	4				
Less than 5% cows have clinical mastitis within 14 days of calving	Fact Sheet K				



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