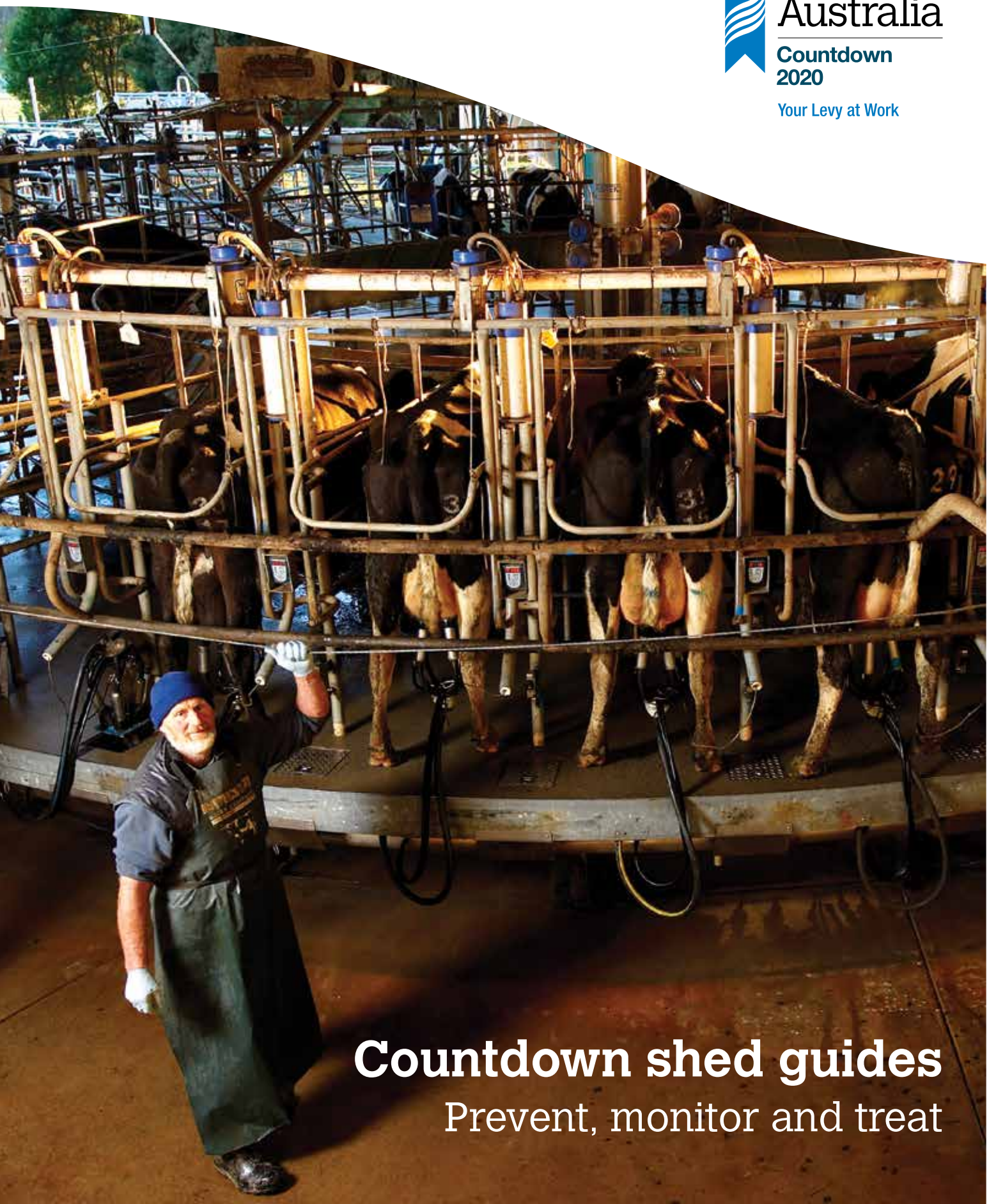
Dairy Australia

Countdown 2020

Your Levy at Work



Countdown shed guides

Prevent, monitor and treat

Supported by National Centre for Dairy Education

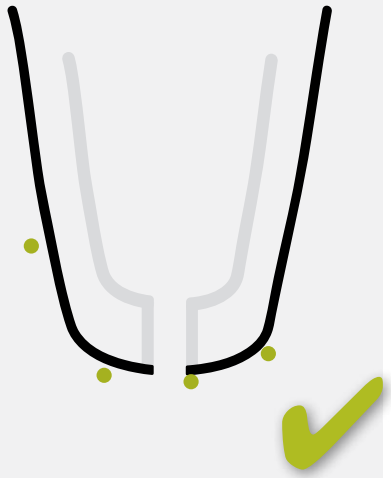
Prevention is better than cure

Minimise bacteria near the teat end and maximise teat end health.

Cross-section of cows' teats

Smooth teat

Lowest risk of mastitis

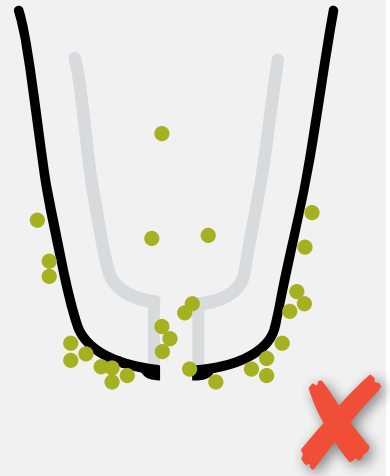


Clean, not many bacteria.

Smooth teat end, no ring.

Smooth or slighly rough teat

Increased risk of mastitis

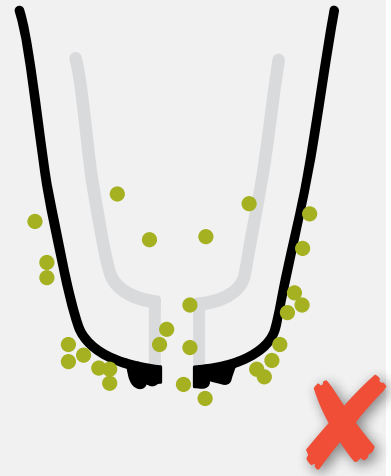


Lots of bacteria, overcome teat canal defences.

Smooth or slightly raised, roughened ring.

Very rough teat end

Highest risk of mastitis



Many places for bacteria to hide, easier for them to enter teat.

Raised rough ring with rough fronds or mounds of keratin 4mm long or more.

Facts

Mastitis is usually caused by bacteria, which enter through the teat canal and infect the udder.

Cows with a healthy udder are comfortable, easier to milk and have a long productive life.

Healthy udders produce quality milk and provide more profit.

Prevention of mastitis at milking time

All milkers should share a consistent milking routine.

Cups on

1 Bring the cows to the shed calmly, to minimise stress, mud splash onto teats and damage to cows' feet. Cows should enter the dairy willingly.

2 Put cups on **clean**, **dry** and **plump** teats. Sometimes you will need to wash and dry or wash, spray with registered teat disinfectant and then dry.

3 Apply cups quietly and smoothly and ensure good alignment.

Cups off

Rough cup removal

Taking cups off too quickly or roughly will allow air to enter cups and force milk droplets onto the teat or into the udder. This can help any bacteria present to spread from cow to cow.

4 Take cups off when milk flow is low and udder is wrinkled and even. Break vacuum by kinking the long milk tube and waiting for the cups to slip free.

Teat spray

5 Cover entire surface of teats with a registered teat disinfectant after every milking.

Partial teat spray

A drop of teat disinfectant seen at the end of the teat does not always indicate adequate coverage.

Full teat spray

Cows leaving

6 Cows should exit the dairy calmly, without excessive splashing of manure. Ideally cows should remain standing for one hour after milking.

Facts

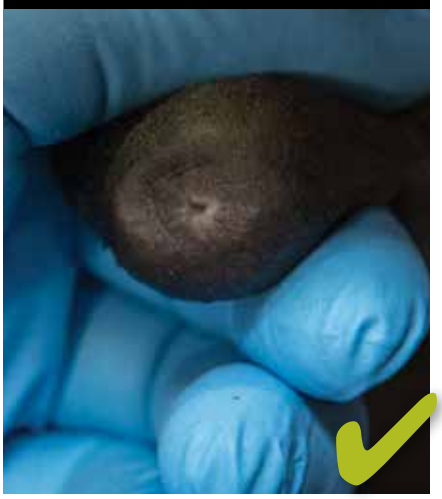
Use low pressure, high volume washing water to wash away manure. Do not use high pressure hoses directly beneath or around cows, to avoid creating aerosols of bacteria laden droplets.

Milking machines

Monitor teats daily. Teat problems can be caused by milking machine function. Teat health can be affected by liners, high vacuum, incorrect pulsation, poor teat spray, over milking and occasionally wet weather.

Keep teats healthy

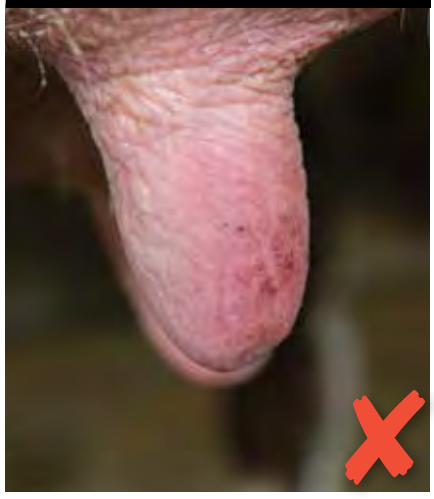
Smooth ends



Rough teat end

Swollen teats

Teat haemorrhage



Contact a Countdown adviser if more than 10% of teats are abnormal.

Daily checks

1 Cup slip - if more than 1 in 20 cows have cup slip, get your machine checked.

2 Check vacuum gauge; monitor vacuum daily.

3 Keep air admission holes in clusters clean.

Score teat ends using *the Countdown mastitis toolkit app.*

iPhone / iPad

Scan the code *to download the app for iPhone / iPad*

Android

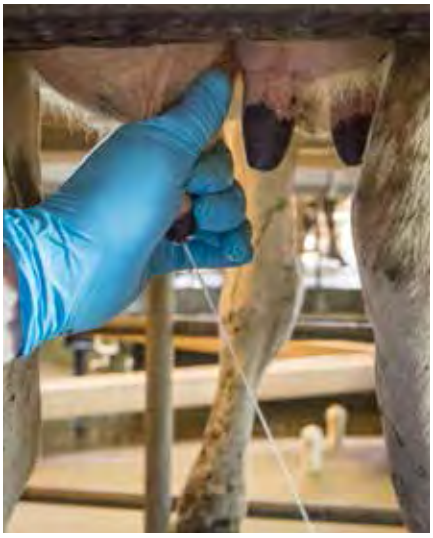
Scan the code *to download the app for Android*

Sub-clinical mastitis

Use a Rapid Mastitis Test (RMT) to identify sub-clinically infected quarters. Sub-clinical mastitis should be monitored (but not treated) during lactation.

How to find sub-clinical mastitis

1 You will need a Rapid Mastitis Test (RMT) paddle, RMT reagent and gloves.



2 Discard first two squirts of milk.

3 Strip each quarter into the separate wells of the RMT paddle.

4 Pour off excess milk down to line in the well.

Facts

Sub-clinical mastitis has no visible signs (udder and milk look normal) but can develop into clinical mastitis (where you will see changes to the milk, and/or heat or swelling of the udder).

Do not treat sub-clinical cows unless advised by vet. Record and monitor.

Facts

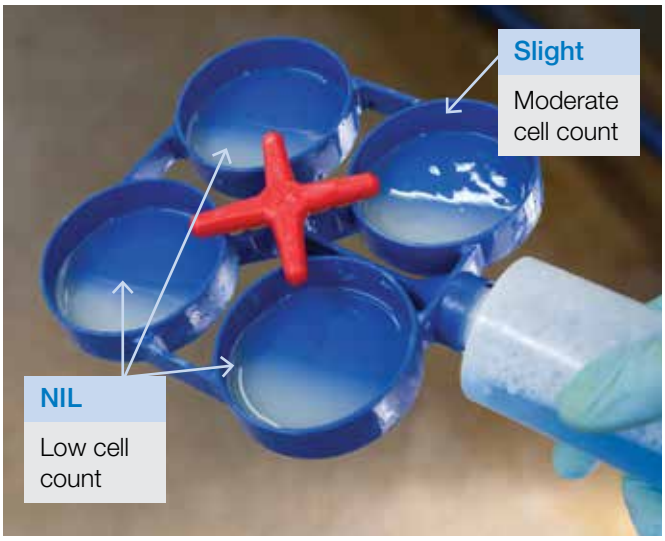
Remember, sub-clinical mastitis needs monitoring not treating. Mark the cow so that all staff know to check her more frequently for signs of clinical mastitis.

The best time to treat sub-clinical mastitis is at the end of lactation when cows are dried off.

5 Add RMT reagent and swirl.

6 Tip side to side slowly to look for egg-like gel.

RMT results



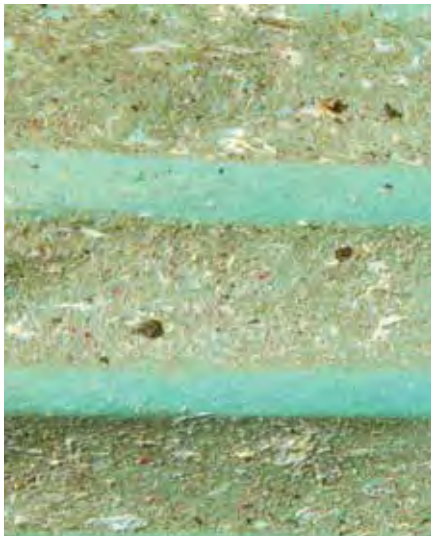
7 Moderate and high cell count cows should be monitored for mastitis.

RMT should not be used to check if a mastitis treatment has been successful. It should not be used to make a treatment decision unless advised by a veterinarian.

Looking for mastitis

Rapidly find, mark, treat, record and separate clinical mastitis cases.

How to find



Facts

The quarter will need to be treated when there is heat, swelling or pain in the udder, or milk changes (wateriness or clots) persisting for more than 3 squirts.

1 **Look for clots** - on the filter after every milking. If clots are present, look more closely for mastitis during milking.

2 **Feel for heat and swelling.**

3 **Look for swollen quarters** - not milked out properly.

4 **Strip the quarter** - look for clots or discoloured milk - avoid getting milk on your gloves.

Sampling

Bacterial culture aids decision making.

How to sample

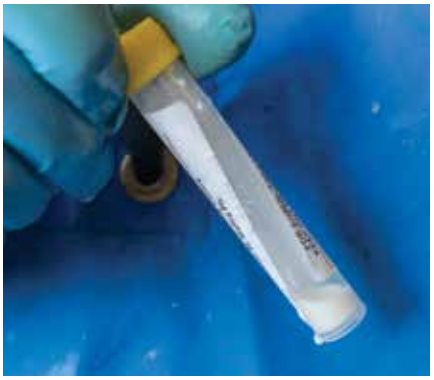
5 Rinse gloves with water then disinfect gloves with 70% alcohol.

6 Label a sterile sample bottle with cow ID, quarter and date.

7 Scrub and disinfect the teat end with 70% alcohol wipes or cotton balls soaked in 70% alcohol.

8 Discard first few squirts of milk.

9 Hold the milk sample bottle at an angle, to avoid anything falling into the sample bottle. Squirt 2-4ml of milk into bottle.



10 Replace cap quickly and cleanly. To keep the sample fresh, either refrigerate the sample if sending on the day or put in the freezer as soon as possible.

Facts

Collect milk samples before treatment for culture to identify bacteria involved.

This helps with treatment plans and identifying how mastitis is spreading.

Prevent a false diagnosis due to contaminants by using excellent hygiene when collecting a sample.

Milk samples

Milk samples can be collected from clinical cases before starting treatments, and stored frozen. A selection of these samples can be sent to the laboratory at a later date if:

- Cows are not responding to treatment eg. >20% of cases are receiving a second course of treatment.
- If you have more than 3 clinical cases in freshly calved cows from the last 50 calvings.
- If you have a high number of clinical cases during lactation eg. more than 2 clinical cases per 100 cows per month of lactation.

Marking and treatment

Appropriate treatment is necessary to maximise treatment success and minimise the risk of antibiotic residues.

How to treat

1 Milk the cow out as completely as you can.

2 Mark the cow before treatment; it's better to mark and not treat the cow than to treat and not mark her.

Discard milk from all quarters of cows that receive treatment and minimise spread of bacteria from infected cows.

- Draft out clinical cases and milk last.
- Run a separate mastitis herd it you can.
- Use test buckets and disinfect clusters before using on the next cow. Do this by removing the long milk tube and running water though cups and claw bowl for 30 seconds.
- Dip the cluster and your hands in a disinfecting solution of 1% iodophor (teat spray).

3 Restrain the cow safely - sometimes another person may be needed to do a tail jack.

4 Scrub and disinfect the teat end with 70% alcohol wipes or cotton balls soaked in 70% alcohol to remove bacteria.

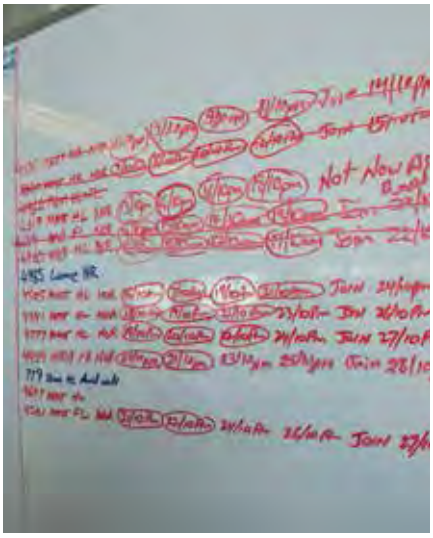
5 Remove cap carefully - nothing should touch the tip of the tube.

6 Insert tube only partially into teat end to avoid introducing bacteria or damaging the teat.

7 Massage the udder to disperse contents of tube into quarter.

8 Disinfect the teat with a registered teat disinfectant.

Record



9 Record the treatment on whiteboard, computer and in the QA book. Complete the full course of treatment, following the label directions. Observe milk, meat and Export Slaughter Interval (ESI) withhold periods.

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