



## Mastitis control in and after wet conditions

# Milking machines

Your milking machines are likely to be operating below par if:

- › cows appear to milk slowly or incompletely
- › cups slip or fall frequently
- › teats look discoloured, swollen or damaged at the ends when the cups come off
- › cows appear nervous or uncomfortable during milking
- › your machines have been affected by flood or storm waters

Milking machine malfunctions increase risk of mastitis.

Wet, muddy conditions can create significant challenges for milking machine operation.

A complete AMMTA milking machine 'dry test' should be conducted by a qualified technician at least once per year (or after each 1,500–2,000 hours of operation). If your machines have been directly affected by flood or storm waters, have a dry test done as soon as possible.

A dry test is essential to check that each of the machine components is operating within specifications, but it does not indicate how they are actually milking the cows.

**It is the interaction between your machines and the cows that affects mastitis risk.**

Measurements of vacuum levels and fluctuations during milking, and observations such as milking times and completeness, teatcup slipping, cow behaviour and teat condition are

needed to assess the performance of your whole milking system. These are best made by a qualified milk quality adviser or milking machine technician during a milking time visit.

Make some regular, systematic checks to help you identify if you have problems that need further investigation and remedy.

### Checks during milking once a week

- Check the evenness of milkout between quarters.** Milkout is uneven if one particular quarter is visibly plumper or less wrinkled relative to the others (or there are 5 or more easy strips from the quarter after cups off).
- Count cup squawks and slips requiring correction.** A running tally during milking provides a guide:
  - › Preferred machine function has no more than five slips per 100 cows.
  - › Machine requires service if more than 10 slips per 100 cows.



Healthy teat end



Open teat end



Rough teat end

- ☑ **Check teats as the cups come off.** Look for discolouration (reddish, bluish or purplish teat skin colour). Look or feel for swelling or hardness at the top, middle or end of the teats and note if teats are unusually sensitive to touch. Examine teat ends for signs of cracking, sores or roughness.

**Teat ends that are open or rough may indicate problems** with milking machines or routines that need to be addressed to reduce environmental mastitis risk.

- ☑ **Check cow behaviour.** Are cows nervous and uncomfortable when teatcups are put on or removed from teats, or during milking?

**Call your milk quality adviser or a qualified milking machine technician if you observe any abnormalities during these checks. These abnormalities are signs that aspects of your milking system (such as vacuum level or pulsation or liners) are not functioning correctly.**

#### Checks at the cluster every day

- ☑ **Check the air admission holes (air vents).** If the air vent is blocked, the claw bowl fills with milk and leads to more cup falling, slow or incomplete milking, and difficulty removing clusters even after the vacuum is cut off. Remove any debris with the probe designed for the task – avoid using drill bits or other tools that may enlarge the holes.
- ☑ **Check liner condition.** Look particularly for distortion of the mouth piece lip or holes in the short milk tube. Split liners leak fluid between the liner and the teatcup shell.

Liners deteriorate under tension, and when exposed to sun, heat, chemicals and ozone (e.g. near motors). The recommended life of rubber liners is 2,000 to 2,500 “cow milkings” but they may deteriorate more quickly if harsher chemicals are being used for cleaning because water quality is poorer. Ensure that alkali chemicals in particular are being used at the correct concentration.

Perished liners can reduce the speed and completeness of milking, increase teat end damage and increase the spread of mastitis bacteria because they harbour more bacteria between cows during milking.

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