GUIDELINE 1

Reduce exposure to environmental mastitis bacteria

In this guideline:

1.1 Calve on clean, dry pasture or a clean, dry calving pad

1.2 Monitor the number of cases of mastitis occurring, especially in recently calved heifers

1.3 Bring cows into the dairy as soon as possible to be checked for mastitis and milked

1.4 Take special care with high risk cows

1.5 Take care with pre-milking preparation of udders

Cows are very susceptible to infection around calving because their natural defence mechanisms are low. New infections occur, and subclinical infections which have persisted through the dry period may flare into clinical cases.

High risk cows, e.g. induced cows and heifers, can be more vulnerable to mastitis infections because their immune systems have reduced efficiency at this time.

Around calving, the udder is often filled with colostrum and milk for relatively long periods without the flushing effect of being milked. Bacteria may enter the end of the teat, particularly if high udder pressure opens the teat end. They can then multiply and establish infections.

High numbers of environmental mastitis bacteria may contaminate teats, especially if udders are wet and exposed to mud and manure. This can happen when cows and heifers are on the ground during calving.

Because of the high incidence of mastitis in the first month after calving, special care in this period will pay off.

Cow-associated and environmental mastitis
Mastitis is divided into two types: cow-associated and environmental. The bacteria causing cow-associated mastitis usually live in udder tissue and on teat skin and are most commonly spread at milking.

The bacteria causing environmental mastitis survive in the cow's environment and, although milking may enable their entry through the teat canal, the environment is the primary source of infection. These bacteria include *Strep. uberis* and the coliforms.

Good Read
Technote 1 - Reduce exposure to environmental mastitis bacteria

1.1 Calve on clean, dry pasture or a clean, dry calving pad.

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

Minimise mud to keep teats and udders clean
The calving area should be sheltered and well drained. Avoid pugging and mud. If water is visible on the surface or in your gumboot prints, it is not dry enough for calving cows

Calve heifers separately
If possible heifers should be calved separately from the main herd. Heifers are more likely to be bullied and be forced to calve in the less suitable areas of the calving paddock or calving pad

See *Technote 1* for more on grazing management of springers and managing calving pads.

1.2 Monitor the number of cases of mastitis occurring, especially in recently calved heifers.

The number of clinical cases occurring within 14 days of calving is an indicator of pre-calving management. SmartSAMM has identified industry "triggers for action", which can be found on your SmartSAMM Mastitis Focus report.

SmartSAMM Trigger for Action
Take action if the number of clinical cases within 14 days of calving is greater than:

- 10 clinical cases per 100 calvings of all cows.
- 15 clinical cases per 100 calvings of first-calving heifers.

Take action if your herd is performing "above trigger"
Options include:

- Moving springers to a fresh, clean grazing area.
- Renovating the calving pad.
- Spraying teats of springers with teat spray 2-3 times a week, until calving.

See *Guideline 2* for tips on pre-calving management of heifers to minimise mastitis.

1.3 Bring cows into the dairy as soon as possible to be checked for mastitis, and milked.

Do not leave cows standing in the paddock after calving dripping milk - bring them into the dairy. Check udders, milk them and disinfect teats with teat spray. Cows dripping milk before calving may also benefit from being milked. Make sure their calf receives fresh colostrum once the cow calves.

Milk heifers (and cows) quickly after calving
Milking animals within 9-12 hours of calving, achieved through twice daily pick-up of calves, reduces mastitis by almost 50%.

Detect clinical cases quickly
Strip cows every milking that they are in the colostrum herd to detect clinical mastitis.

Milk cows out completely
For the prevention of milk fever, use oral Ca supplements (not incomplete milking). Consult your vet or nutritional advisor about preventing milk fever.

1.4 Take special care with high risk cows.

Some cows have a higher risk for mastitis, in particular heifers as they spend longer on the ground during calving, and thus their teats have greater exposure to mud and bacteria.

Any cows which have been induced or are sick are also at higher risk for environmental mastitis as their immune system is suppressed.

Minimise access to mud
Use the cleanest, driest paddocks for high risk cows.

Apply teat spray before calving
Apply teat spray to high risk cows that show signs of bagging up. Milking before calving may also help reduce risk of mastitis.

Milk quickly after calving
Milking animals within 9-12 hours of calving, achieved through twice daily pick-up of calves, reduces mastitis by almost 50%. Watch udders carefully for signs of mastitis. Mastitis due to environmental bacteria can be rapid and severe with few changes or abnormalities (e.g. watery milk, clots or flecks) in the milk at first.

See *Guideline 2* for tips on pre-calving management of heifers to minimise mastitis.

1.5 Take care with pre-milking preparation of udders.

Special care should be taken at the first milking to fully clean and dry the teats, and check for signs of mastitis in the udder and foremilk.

Keeping udders clean helps prevent mastitis. Trim up tails and tail switches and remove hair on udders by clipping or singeing.

Fix up areas on the farm that make udders and legs dirty.

See *Guideline 5.3* for tips on cleaning teats before milking and removing hair from hairy udders.

See *Guideline 26* for tips on managing cows' environments.