

Check udders each day for a week

Udder infections of dry cows are most likely to occur immediately following drying-off and around calving. Cows are susceptible to new infections particularly in the first week of the dry period before the teat plugs have formed. (Thomas et al 1972, Woolford et al 1998). Internal teat sealants aim to reduce the effects of delayed teat plug formation but are not guaranteed.

Infections in the drying-off period must be detected and treated so that they do not persist and create problems after calving. Cows should be closely observed during the last week of their lactation and in the first week of their dry period.

18.1 Look at udders of all cows for swollen quarters (larger than other quarters on the same cow), while cows are in the paddock

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18.2 Check swollen quarters manually

In the first few days after dry off, cows should be checked carefully for signs of sickness: e.g. swollen udder, difficulty walking or off their feed. These new infections occur because of poor hygiene at the time of administration of antibiotic dry cow treatment (DCT) and/or internal teat sealant. These types of infections can be life threatening to the cow, so advisors and farmers should be aware of this possibility.

Visual observation of udder size and symmetry is all that is required, and often all that is possible. It is however necessary to manually handle the udders of cows suspected to be infected. Secretions stripped from the suspect quarter after dry off may differ from normal dry cow secretion, which becomes viscous and clear, like honey in colour, over a period of 2–4 weeks after dry off. In contrast, secretions that are very runny, cloudy or clotty may indicate mastitis. If there is any doubt about the status of a cow, she should be treated as a clinical case.

18.3 Treat clinical quarters by stripping out completely and using a full course of lactation antibiotic

Cows that develop clinical mastitis within a week of drying-off are treated in the same way as lactating cows.

Additional considerations when treating these cows are:

- › it is important to not handle or strip the unaffected quarters so the naturally formed keratin plug or any internal teat sealant remains intact;
- › oxytocin should be avoided; and
- › injectable antibiotics or intramammary products for lactating cows can be used even if the quarter was previously infused with Dry Cow Treatment.

Confidence – Moderate

The recommendation that farmers examine udders visually rather than manually may result in some infections being missed, but this is likely to be outweighed by the practical advantages

Research priority – Low

The detection of any cases of mastitis after drying off should be a trigger to review all aspects of the drying off technique.

Technote 17.4 explains why dry cow antibiotics should only be used when the cow is still producing milk.

18.4 If possible, treat again with Dry Cow Treatment and amend record of date for Minimum Dry Period when the case is resolved

The recommendation to re-treat with Dry Cow Treatment only applies to cows that become clinical at drying-off – before the mammary gland starts to involute. In these cases, it may be appropriate, after giving a course of treatment to the clinical quarter, to re-administer Dry Cow Treatment to that quarter if the Minimum Dry Period can still be met.

If clinical mastitis occurs in multiple quarters at drying-off, re-treatment with antibiotic DCT may be inappropriate due to the risk of antibiotic residues.

Cases occurring at any other time during the dry period should not be retreated with antibiotic DCT as:

- > there is no guarantee of normal dispersion of antibiotic through the mammary gland once a significant number of tissues cells have collapsed; and
- > cows may calve before the Minimum Dry Period has elapsed.

Key papers

Thomas CL, Neave FK, Dodd FH, Higgs TM. The susceptibility of milked and un milked udder quarters to intramammary infection. J Dairy Res 1972;39:113-131.

Woolford MW, Williamson JH, Day AM, Copeman PJA. The prophylactic effect of a teat sealant on bovine mastitis during the dry period and the following lactation. NZ Vet J 1998;46:12-19.

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