

DRY COW MANAGEMENT

Reducing Mastitis Risk

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Maintaining optimal hygiene during the dry period is crucial for the health and productivity of dairy cows. It is a period of increased vulnerability, especially in the first two weeks after drying off and the two weeks before calving. During these times, cows are particularly susceptible to infections, making regular monitoring and good hygiene practices essential for preventing mastitis and other diseases.

After drying off, the teats may remain open for several days before they seal, leaving the cow at risk of new infections. Similarly, the time leading up to calving is another high-risk period, as the body undergoes significant changes that can weaken the cow's immune system. Close monitoring of cows during these high-risk periods is essential to detect any early signs of mastitis, and to deal with them promptly.

Proper housing is the first step in minimizing mastitis risk. Key considerations include:

- **Clean, disinfected, and well-ventilated sheds:** A clean, dry, and well-ventilated environment is vital for maintaining optimal hygiene. Cubicles should ideally be cleaned twice daily and treated with products such as hydrated lime, to absorb moisture and raise the pH of the environment, which help minimise bacterial growth. A minimum of 1.1 cubicles per cow is necessary to ensure adequate space for each cow to lie down comfortably, allowing for normal cow behaviour. Overcrowding exacerbates the risk of mastitis.
- **Reducing bacterial load:** Dairy cows excrete large numbers of bacteria through their faeces—up to 1,000 *E. coli* bacteria per gram of faeces under normal conditions. When this combines with warm, moist bedding, bacteria levels can increase by more than a million-fold. This significantly raises the risk of environmental mastitis.

To ensure high standards of hygiene are maintained during the dry period, two main approaches are recommended:

1. Hygiene scoring of cows

This is done by regularly assessing the cleanliness of key areas: the udder, flank, and legs. The **Winter Housing Checklist** developed by Animal Health Ireland (AHI), provides a structured way to assess hygiene. Studies show that if more than 20% of cows have dirty udders, they are 1.5 times more likely to develop mastitis compared to cows with cleaner udders. Having tails clipped pre-housing also helps reduce the risk of mastitis.



2. Examination of housing and management practices

In addition to monitoring cows themselves, it is crucial to assess the cleanliness and condition of the housing and management practices. Key points to consider when evaluating housing include:

- ✓ **Main passageways and walkways:** These should be cleaned frequently- automatic scrapers should be timed for every 3 to 4 hours or at least six times per day for main passageways and twice per day for minor walkways, to reduce buildup of faecal material.
- ✓ **Feeding and watering areas:** Ensure feeding spaces are sufficient (approximately 0.6 meters per cow) and that water troughs are clean and functional. A minimum of three non-leaking water troughs for every 50 cows is optimal.
- ✓ **Calving pens and bedding:** The management and cleanliness of calving pens are especially critical. Bedding material should be stored properly and kept dry, as damp bedding can encourage bacterial growth. The recommended straw quantity is 55kg per cow per week, with new bedding added frequently and removed as often as possible. A simple “kneel test” in calving areas can help assess bedding quality: if the bedding is damp when you kneel, more bedding is needed.