

# Maximise margins by getting a grip on environmental mastitis

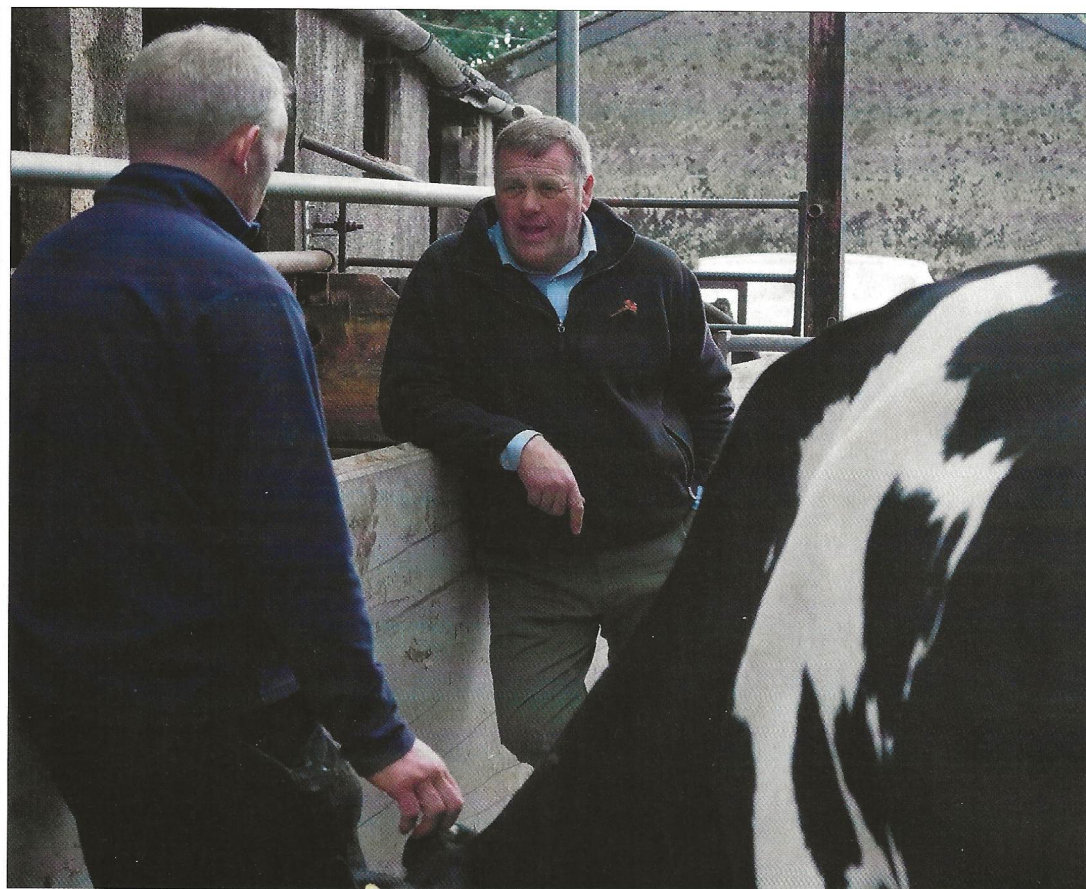
Reducing the consequences of environmental mastitis is as important as ever this winter, helping to reduce production losses and costs, whilst maintaining margins in the challenging economic climate. British Dairying investigates how this can be achieved.

**M**astitis remains a constant drain on dairy herd profitability, with Kingshay reporting the average herd will see 29 cases/100 cows each year.

“Clinical mastitis still costs the average herd more than £10,000/year and is the cause of 9% of all culls,” says Martin Partington, Animal Safety Sales Manager at Neogen. “Cutting infections should be a priority, and during the winter in particular, the emphasis should be on taking a holistic approach to targeting environmental mastitis.”

The combination of cold weather and cows being housed means they face a greater threat of infection, but attention to detail can help reduce the risk, says Martin.

**“Make sure the dip is applied to cover the complete teat evenly with a good film depth.”**



Martin Partington, Animal Safety Sales Manager at Neogen says cutting infections should be a priority in winter

“Environmental mastitis is the most common type of udder infection, with *Strep. uberis* and *E. coli* particularly problematic. Bacteria are everywhere so you can never eliminate them. Rather, the aim must be to do all you can to limit the exposure cows have to infectious agents while also maximising their defences to them. The cleaner cows can be kept, the better.”

## Bacteria

As soon as cows lie down, the teat (specifically the teat end) will come into contact with bacteria, and Martin stresses the importance of investment in good bedding management.

All cows should have the opportunity to lie down in clean bedding, so do not overstock buildings.

Bedding should be clean, dry, and replaced regularly; the frequency

depending on the bedding material. Manure should be scraped off the back of cubicles frequently during the day, he says.

“Wet, dirty bedding provides the perfect environment for bacteria to thrive. This can be greater in the milder winters we have experienced in recent years, making bedding hygiene even more important. To help keep bedding dry, ensure buildings are well-ventilated.

## Cow cleanliness

“It is also vital to keep cows clean. Slurry and muck on their legs represent another potential source of bacteria.

Take the time to score cows for cleanliness and scrape passageways regularly to help keep cows

clean. Some herds also find udder hair removal and tail trimming greatly beneficial.” The milking routine plays a fundamental role in helping to reduce environmental mastitis, providing an opportunity to clean teats before milking and then protecting them after milking.

## Milking protocol

Milking machine operation can result in teat end damage, which leaves cow more susceptible to infection.

Martin advises regular dynamic milking machine testing to ensure vacuum levels and pulsation rates are correct, and that automatic cluster removers are set correctly to prevent over-milking.

He stresses the importance of all staff being trained in, and following,

a clear milking protocol, emphasising the benefits of wearing clean gloves when working in the parlour and comprehensively sanitising the teats before milking.

**“Cows should not be allowed to lie down until the sphincter is fully closed.”**

After milking, it is essential to ensure the whole teat is dipped as soon as possible after the unit is removed and before the teat end



sphincter has closed. This helps prevent the ingress of bacteria.

"During the winter, the post-milking teat disinfectant should be formulated to fulfil several complementary roles.

## "Clinical mastitis still costs the average herd more than £10,000 a year."

Firstly, it must contain an effective biocide to eliminate bacteria present on the skin as soon as it is applied, whether iodine, chlorhexidine, lactic acid, or a combination.

### Dipping

"Whichever the biocide, make sure the dip is applied to cover the complete teat evenly with a good film depth," he advises.

"Cows should not be allowed to lie down until the sphincter is fully closed, usually 30 minutes after being milked."

The second role is that the dip should help maintain optimum skin condition to prevent chapping and cracking, which can be an entry point for bacteria.

Although maintaining good skin condition is important all year round, it is particularly important in cold, damp conditions.

Skin becomes less flexible and more prone to chapping in the cold, as moisture is moved away from the skin surface to help reduce heat loss.

"When you consider that each milking typically requires around 480 pulsations, it is easy to see why it is important to keep the skin flexible and elastic and reduce the incidence of hyperkeratosis (skin thickening).

For this reason, make sure your teat dip contains a balance of emollients."

The principal purpose of emollients is to improve skin condition and elasticity. They help draw moisture into the skin, reducing the degree of chapping.

### Post-milking dip

They also prevent water from evaporating off the skin by forming a layer of fat. Lanolin and glycerine are widely used and effective emollients. Thirdly, the post-milking dip needs



Dipping prevents bacterial ingress

maximum time on the teat and Martin advises the use of barrier dips.

"To help reduce the risk of infection, the teat needs protecting throughout the entire interval from one milking to the next, which means the disinfectant should ideally remain on the teat for as close to 12 hours as possible on a twice-a-day milking system.

"The residual biocidal activity helps reduce the risk of infection while the emollients help maintain

skin integrity, reducing the places where bacteria can hide.

"The thicker the barrier, the better the degree of total protection provided."

Producers can choose from a wide range of barrier dips to suit their own system and preference.

## "The thicker the barrier, the better the degree of total protection provided."

"Spray products, some of which can be film-forming, can be quicker and easier to apply, but provide less film and have lower levels of emollients, enabling them to spray more easily," says Martin.

"However, barriers will provide longer-term protection in the fight against environmental mastitis. With farms focusing on using fewer antibiotics, this can be helped with the right choice of teat dip to play a key role in reducing clinical cases."



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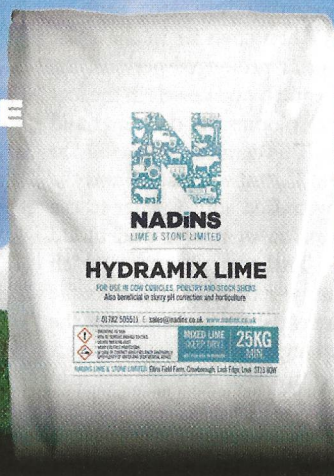
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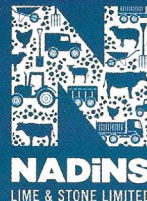
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