



West Sussex-based dairy vet, Rob Drysdale, looks at a common, but preventable, teat-end condition and offers some tips and pointers for spotting and treating it.

## Dynamic testing is key to prevention and 'cure'

# Teat-end damage

**T**eat-end conditions are not only potentially painful for the cow, but they also leave her more prone to mastitis infection and threaten milk quality. Somatic cell counts can start to creep up in a herd with cows that are affected by hyperkeratosis, as can the incidence of environmental mastitis – particularly those caused by Coliforms.

Thought to be more common in during the winter and in high yielding herds, hyperkeratosis has been linked to extended exposure to vacuum, particularly under low flow rates. Keratin formation is a normal physiological response to the forces seen at the teat end during milking. But excess keratin is a sign that the teat end is being damaged during the milking process. I find it best to grade each teat end from zero (perfectly healthy), grade one (see photo), through to three (very roughened and cracking) then to 'extreme', which is when prolapse of the sphincter can be seen.

I rarely see bad cases – the problem is usually picked up when cows have grade one and two cases. It's a condition that used to be quite common when more producers were focused on getting every last drop of milk out of the cow, sometimes putting weights on the cluster to do so. They were less aware of the damage that overmilking can do.

Low grade hyperkeratosis tends to be age related, with grade one and two cases typically developing in older cows. The udder has been subjected to more wear and tear. Once it develops and the teat-end sphincter is weakened, it tends to get worse with every lactation, particularly when the parlour or milking regime is less than optimal.



## The encyclopaedia **Hyperkeratosis**

### Causes

Can be the result of poorly maintained and calibrated milking machines, namely the pulsation vacuum; the milking process (usually poor milk let down at the start of milking or over milking at the end); or sometimes the cow herself, through accidental damage.

### Symptoms

Visual signs of teat-end hyperkeratosis, which can be graded with zero being non-existent and three being a chronic and severe case, can be seen. Most cows and heifers will score grade one immediately post milking, but quickly return to zero.

### Diagnosis and treatment

The cause of hyperkeratosis can be found through a process of elimination. Look at the parlour, the milking process (how staff milk the cows) to identify causal factors and then rectify these as a means of treatment. In severe grade-three cases, where the teat end has actually prolapsed and may be bleeding, a freezing spay can be applied at drying off to give the teat end the chance to heal and recover.

### Prevention

Good milking machine maintenance and regular dynamic testing are vital. Check the regulator at least weekly, if not at every milking, to ensure that vacuum is not too high or fluctuating during milking. Encouraging good milk let down reduces stress on the udder at the start of milking and ACRs can reduce the risk of over milking.

