

Tips to tackle – and stay on top of – digital dermatitis during the winter-housing period

Stay one step ahead of DD

It's all too common – cows are housed for the winter and dormant digital dermatitis lesions and other foot problems flare up. So what's the best way to keep the disease in check – and lameness incidence to a minimum – this winter?

text **Rachael Porter**

With more than 95% of UK dairy herds thought to have digital dermatitis, the winter housing period can present a hoof health challenge on most units. And, as herds' winter management regimes get into full swing, lameness can sometimes be overlooked, according to Gloucestershire-based cattle vet Roger Blowey.

With cases costing around £2 per cow per day, he says that producers must take a closer look at three key predisposing lameness factors during the housing period – standing times, body weight loss, and exposure to slurry.

“When cows exhibit typical behaviour, their optimum standing and eating to lying down ratio is 50:50, but there are many factors that can affect this,” he explains.

Bedding options

“These include cubicle comfort, design and bedding, teamed with shed occupancy rates. The ideal bedding is deep sand because it's easier for cows to get in and out. They dig their toes into the sand when rising to stand and this offers traction and gives them more confidence. You see more problems with reduced lying time in the winter where cows are bedded on rubber mats, as they become slippery in the moist conditions so cows are less inclined to get up and down.”

Dr Blowey says that at calving time

and around peak lactation, producers should aim for between 80% and 90% cubicle occupancy. “It's not advisable but if you must increase occupancy to 100% then try to delay until later in lactation.

“Also consider cubicle training heifers pre calving, so when they calve they're used to the free-stall environment,” he adds.

Digital cushion

Body weight loss also increases a cow's lameness risk, due to a reduction in thickness of the digital cushion that protects the hoof's sensitive corium.

Post calving, Dr Blowey explains that cows and heifers have increased elasticity in certain ligaments from birth hormones, which causes the internal structures of the hoof to be less stable and can result in cows walking with a rolling gait. “You tend to see the sole take more weight than normal, which can increase the chance of claw horn lesions and subsequent lameness.

“The risk of digital dermatitis increases at housing due to slurry exposure, so ensure you're managing slurry efficiently and effectively, and where possible double the width of passages in new cubicle houses, as it reduces exposure to slurry by 50%.”

Dr Blowey says that it's best to be proactive and look at the big picture. “Early detection and prompt, effective treatment should always be the approach with lameness.”





Digital dermatitis: lesions often flare up during the winter-housing period

Vet and lameness specialist Sara Pedersen agrees. “Digital dermatitis will flare up when cows are housed if great care isn’t taken to keep cows’ feet clean and relatively slurry free,” she says. “And all active cases of digital dermatitis should be quickly identified and treated. Discuss treatment options with your vet but I find a licenced antibiotic spray the most effective way to tackle active lesions. And all cows – certainly throughout the housing period and in most cases all year round – should be footbathed regularly and ‘correctly’. This is the only way, in my opinion, to keep the disease ‘dormant’ and prevent recurrent flare ups. It plays a key role in keeping it under control.”

She says that it’s very much about prevention: “Don’t wait until it becomes a problem. At that point, the disease has really taken hold with health, fertility and financial consequences. Treatment is considerably more costly and time consuming than regular footbathing and making sure that cow housing, yards and passageways are as free from slurry as possible.”

Regular scraping – being sure to get into all the nooks and corners – is vital. “The organism can survive in the slurry for up to 24 hours, so it’s a means of transmission, from cow to cow. So remove it – regularly and thoroughly.” And footbathing should be daily, ideally, and through a bath that’s at least four metres long, to ensure that hind hooves are ‘dunked’ three times, as the cow walks through.

“Talk to your vet about the best footbath solution for your farm. Copper sulphate and formalin are still the disinfectants of choice on many units.

“If using formalin then ensure that you are aware of the new regulations, which mean producers have to follow strict guidelines and wear PPE when handling it.”

Controlling disease

Clitheroe-based producer Rob Cowgill takes the preventative approach all year round to stay on top of the digital dermatitis in his 130-cow pedigree Heygill herd, which he runs in partnership with his wife Linda and father David.

Digital dermatitis was introduced to the herd in 2005, via a bought-in cow. And there have been ‘flare ups’ ever

Preventing lameness in pre-calved heifers is vital

Preventing digital dermatitis infection pre-calving and minimising body condition score loss post-calving are both key to ensuring optimum foot health during the first lactation and beyond.

Speaking at a recent AHDB Dairy Calf to Calving (C2C) meeting, AHDB Dairy's Jenny Gibbons said that controlling digital dermatitis (DD) in heifers was extremely important. "The stress of calving means that it will get worse and the heifers can be an infection pressure for the rest of the milking herd."

A recent study in the US revealed that heifers that calved with DD were also 55% less likely to conceive to first service and produced 334kg less milk in their first 305 days of lactation.

To control DD, Dr Gibbons recommended implementing a plan for in-calf heifers, which focused on picking up the early signs of the disease. "Before a control plan can be implemented, a reliable method of detecting DD in heifers is needed. Heifers affected with DD can easily be spotted by the way they behave. For example, they walk on their toes to take weight of their heel."

She advised visually assessing in-calf heifers for heel lesions. Feet with

early signs of the disease should then be cleaned, dried and treated with a topical spray. Infection pressure should also be reduced by minimising contact with slurry, particularly checking that stocking rates are correct to prevent slurry from pooling.

"If you've got signs of DD in heifers, the most effective way to prevent new lesions is to run them through a footbath. But make sure that the disinfectant solution is deep enough to cover the whole hoof and clean enough so that the process is effective."

Dr Gibbons also emphasised the importance of minimising body condition score loss in both cows and heifers post-calving. A Nottingham University study found that animals that lost back fat post calving, or had low back fat thickness, were more likely to develop sole ulcers or sole haemorrhages. This was due to the fact these cows also lost fat in the 'fat pad' or digital cushion in the foot, which acts as a protective layer under the pedal bone.

"At calving, ligaments in the foot relax so there is potential for the pedal bone to sink and cause pinching or bruising, which can later develop into sole ulcers or bruising.

"At the same time, when a heifer calves, she is only 90% of mature body weight so the fat pad is not fully formed anyway,



Jenny Gibbons: "Limit body condition loss and social stress"

so there is increased risk," said Dr Gibbons.

To limit the risk of lameness, focus should be placed on minimising body condition loss and social stress around calving. "Where a separate heifer group is not being used, this could involve moving heifers in groups of twos or threes at the end of the day when things are quieter. This will give her time to find a place to eat and lie down. Plenty of feed space is also vital to drive feed intakes," she added.

➔ Read more about the Calf to Calving programme and up coming events in your area at <http://www.dairy.ahdb.org.uk/c2c>

➔ Read more about Digital Dermatitis control visit at <http://www.nadis.org.uk>



since. "But we're learning how to keep them to a minimum and have been pretty successful during the past 18 months, since taking advice from Sara and adopting a more thorough 'zero tolerance' regime."

Daily footbathing

To comply with the business' Tesco Sustainable Dairy Group contract, Rob carries out quarterly mobility scoring. "This is an invaluable tool for identifying DD and other lameness issues and it also allows us to benchmark our herd and make improvements."

The herd is put through the footbath daily, all year round: "It's part of the afternoon milking routine, so it's just a daily job for us now," says Rob.

There's a three-metre footbath just after the parlour exit. "We have a stretch of clean concrete between the exit and the

footbath and we replace the footbath solution every day. Once a week we hose clean the cows' feet, while they're in the parlour, prior to their evening footbath. We also wash the feet of dry cows and heifers, over a year old, once a week. And they also go through the footbath every Sunday. "This is working for us. When the cows are housed for the winter we see minimal flare ups.

"Continuing treatment during the summer – we alternate between using copper sulphate and formalin as a footbathing solution – really does ensure that we stay on top of any existing lesions and keep cows' feet in great shape for the winter housing challenge. "And any cases that we do see are quickly identified and treated for three days with an antibiotic spray, under the supervision of our vet.

"This approach ensures that we tackle it effectively and keep any potential losses caused by lameness – and antibiotic use – to a minimum." |

Healthy hoof: regular trimming, washing and footbathing are vital