

Simple steps to healthy hooves



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Lameness is painful for cows and expensive for farmers. It reduces the mobility and appetite of cows, which in turn reduces their milk production. When you combine this with the costs of veterinary treatment, longer breeding intervals, and – in extreme cases – involuntary culling; it is no surprise that lameness is the second highest medical-related cost on dairy farms. Fortunately, it is a problem that you can do something about.



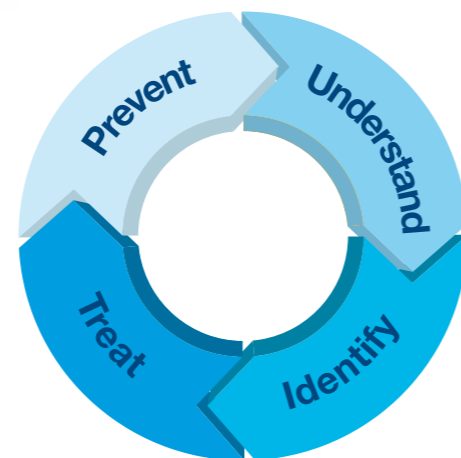
A 360° approach

The key to addressing a problem that has many causes; is to attack it from all sides.

- **Understand what causes lameness;**
- **Identify affected cows and the type of problem;**
- **Treat its effects; and,**
- **Prevent the problem from reoccurring.**

Taking active steps to prevent the problem is more effective and economical than trying to treat it. It is also much kinder to your cows.

While the problem can be treated, it makes more sense to prevent it from happening in the first place. This is better for the welfare of your cows and more effective and economical than waiting until you have a problem.



What is lameness?

Lameness refers to a range of conditions that affect a cow's mobility. The most common of these problems occur in the hooves.

These can be divided into two categories:

Infectious hoof problems

Bacterial hoof infections can affect different areas within the hoof. The most damaging of these are digital and interdigital dermatitis and footrot. These infections are passed from cow to cow and can spread quickly throughout a herd if left untreated.

Non-infectious hoof problems

Injuries sustained by the cow, weight-bearing problems that develop over time, and genetic factors can lead to a range of physical and structural problems in the hoof. Cows' diet and interaction with its physical environment can also contribute to these problems.

Preventing lameness

To overcome a problem with many causes, you need to attack it from all sides. There are many simple steps you can make to manage the problem.

Keep hooves clean and dry

Dirty hooves don't just hide the problem – they can also help cause it. Infections pass from cow to cow via accumulated slurry on standing and walking surfaces. Standing for long periods on wet surfaces also softens claws and makes them more susceptible to load-bearing problems.

An effective manure handling routine is important to prevent excessive manure build up. Automated manure handling systems provide the best way to ensure consistent results at all times, and require much less labour.

Create the right environment.

As modern dairy systems become more efficient, they also move further from a cow's natural conditions and living patterns. These differences can contribute to hoof problems. Wherever possible, you should try and recreate conditions similar to the natural environment.

Walking surfaces should be soft and offer some shock absorbency. This is particularly important where cows must pivot on the hoof to turn corners.

Stalls should be properly measured according to the average size of the cows and provide them with sufficient space to lunge forward and width to lie comfortably. When cows have hoof problems, they tend to stand for longer if they cannot do these things.

Resting areas should be of similar softness to the surfaces that cows would sleep on in their natural environment. This encourages them to get the rest and rumination time they need to maximise milk production. Furthermore optimal cycles of rising and lying also help the recovery of foot lesions. Cow mattresses provide a comfortable sleeping surface with the added benefit of being easy to clean.



Trim hooves regularly

Hooves grow naturally about 5mm per month. This is generally balanced by the rate of natural wear. However, in intensive dairy production conditions, the rate of wear is typically lower and weight bearing can become uneven. Regular hoof trimming helps to equalise weight distribution. It also provides a visual check to detect infections and other hoof problems. As a general guide, hooves should be trimmed 1-2 times a year.

Diet

Nutrition can affect blood flow to the soft tissue of the hoof and the quality of horn production. It is recommended to avoid sudden changes in diet and to pay attention to concentrate: forage ratios – 60:40 is an approximate guide.

Preventative hoof bathing

In combination with good hygiene management, a regular hoof bath routine is the most effective way of managing infectious hoof problems and preventing them from spreading.

Clean then disinfect

The most effective routine is to use two hoof baths: the first containing hoof cleaner and the second containing disinfectant. If the hoof is not cleaned before disinfecting, the contents of the disinfecting bath will soon be neutralised by manure on the hooves and its effectiveness will be lost.

By walking through a cleaning bath first, manure and soil are removed from the hoof and the infected area will be more exposed to the disinfectant. This means the disinfectant will be more effective. It will also need to be changed less often, which makes it more economical.

Position for maximal effect

Hoofbaths should be situated where cows are forced to walk through them when they are moving from high concentration areas to their stalls of feeding areas. An ideal location is the exit from the milking parlour. However, it is also important not to forget to treat heifers and dry cows that are not in the milking cycle. They should also be included in the hoof bathing routine.

Each bath should be long enough that the cow must take two steps, immersing each hoof twice. They should also be far enough apart that the cow needs to take two steps between each bath to allow the cleaning solution to drain from the hoof before entering the disinfectant bath.

Proactive prevention

Preventing infection requires regular treatment. How often depends on farm conditions and level of infection in the herd. For cows in a low-risk environment where infection rates are low, twice weekly can be enough. However for high-risk conditions where infection levels are high, hoof bathing should be done daily.

Replenish regularly

Even after the cleaning bath, each treatment adds a little manure to the disinfectant bath. If the contents are not changed regularly, the bacteria level from the manure will become too high and the bath will lose its effectiveness. Not only will it no longer prevent the problem, it can actually become a bacteria bath and make it worse.

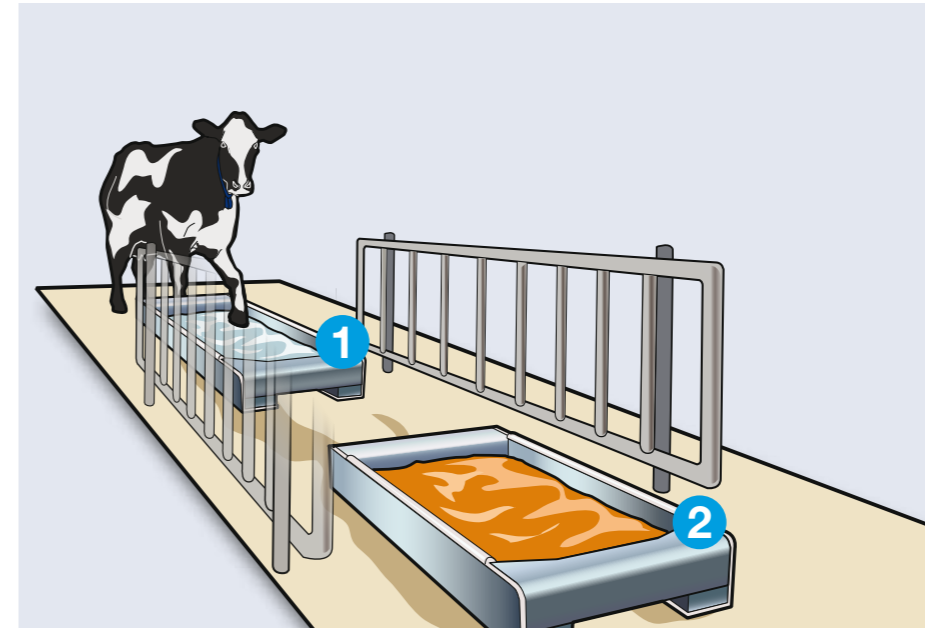
Disinfectant solution should be changed according to the manufacturers instructions – generally once every 200 cows. For large herds, this can mean once or more a day. However for small herds, the same solution may be used a number of times over the course of several days. In this case, it is important to choose a disinfectant that retains its effectiveness over a period of days even with some level of manure in it.

Automatic footbaths provide a simple way to make sure contents of the bath are circulated regularly while minimising labour requirements.



The healing process

When an infection is first treated; the wound can actually look worse than before. This is a normal part of the healing process and is a result of the wound being opened up. Within a short time, the infection will be overcome and the wound will begin to heal cleanly.



Clean then disinfect

Place the hoofbaths approximately 1.5 - 2 metres of one another:

- 1 Hoof cleaner
- 2 Disinfectant

Choose with care

The disinfectant used in hoof baths must be effective – but there is more to it than that. Some of the products that are in use today can have some very negative side effects.

Copper sulphate is a chemical that is widely used in hoof baths. However it is an irritant to the skin and eyes of cows and milkers. It can also reduce the fertility of pastureland. As it is a heavy metal, it accumulates in soil and can reduce crop-growing efficiency. Its use in dairy farming is illegal in many countries.

Another substance that is illegal to use in many countries is formaldehyde and the products that contain it. Formaldehyde is a known carcinogen or cancer-causing agent.

Make sure you understand the risks, and choose a product that is biodegradable and will provide the intended results without the unintended ones.



The right products



DeLaval 4Hooves™

For maximum effect – without the side effects – DeLaval has developed 4Hooves™. It is formulated from fifth generation quaternary ammonium compounds and provides maximum penetration and disinfection for hooves.

4Hooves™ has been proven to be as effective as copper sulphate and formaldehyde and is similarly priced. The difference is that it does not present the same risks to cows, milkers or pastureland.

DeLaval 4Hooves™ has been proven to retain its germicidal efficacy over time. Even when mixed with 15% non-sterilized manure, it has been shown to remain effective for up to 7 days*.

- Phosphate free.
- 2L in 200L is effective for 200 cows
- Safe for cows, milkers and environment



DeLaval HC40

DeLaval HC40 has been formulated to let you get the most out of DeLaval 4Hooves™. It is a gentle yet powerful hoof detergent that removes soil from hooves to enable DeLaval 4Hooves™ to reach and penetrate the infection.

- A gentle detergent
- Helps to clear the interdigital area
- Helps to prevent soil build up on the hoof



DeLaval PVC footbath

The grass coloured DeLaval portable footbath is impact proof, chemical proof, cold resistant, anti-slip and easy to place in the cow's path without the need for digging.

- Impact-proof
- Chemical-proof
- Cold resistant
- Anti-slip and easy to place



Footbath AFB1000

Simplify your life with a footbath that does it all for you. DeLaval Footbath AFB1000 will automatically fill, dose, flush and replenish according to a pre-set time schedule. This minimises the need for manual labour and ensures that unchanged hoof baths don't become part of the problem.

- Effective cleaning
- Reduced water consumption
- Heavy duty stainless steel

The right environment



Automated Manure Handling

Automated manure handling helps to ensure a clean and hygienic environment at all times. Whether it is a robotic manure scraper or a fully integrated manure system that you control centrally from the Barn System Controller (BSC) – automated manure handling takes care of the mess without the stress.



Alley coverage R18P

The surface of this durable rubber coverage offers a good, slip resistant grip for hooves. It is a puzzle mat which slots together in segments, and is fixed to the floor in an animal friendly way. It is available in standard sizes which can be slotted together to cover any open spaces like waiting areas and parlours. This combined with cleaning by manure scrapers improves barn hygiene and provides a dryer, cleaner surface for better hoof health and less lameness.



Slatted Floor Coverage SFC S and F

The patterned surface of both the flat (used with scraper) and the sloped (for applications without scraper) floor coverage has a dual purpose. It provides a good grip for hooves while encouraging liquids to drain away promptly, for a drier, cleaner surface. The grooved base works two ways too, increasing surface comfort and softness while allowing water to flow through.

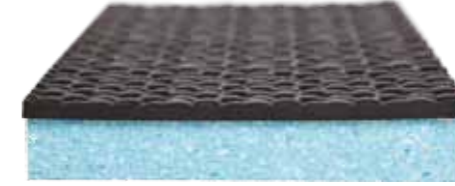


DeLaval cow mat RM21S

It's easy to see what makes this soft rubber mat so special. Designed for stanchion barn application but also applicable for loose-housing, this 21mm thick mat is produced from high quality rubber, including virgin rubber for extra comfort and softness. The cone shaped studs on the underside are shock absorbent and allow water drainage in all directions. The built-in slope at the back facilitates urine drainage and the solid part at the far back end closes the gap towards the gutter, to prevent dirt from accumulating under the mat. The patent-protected top surface provides good drainage and the design makes the mat dryer and easier to clean. DeLaval RM21S is easily installed, with three pre-drilled holes in the front which are countersunk to perfectly fit the fixing plugs.

Technical data

- Mat size: We have a large number of different sizes to suit young stock and cows
- Thickness: 21 mm
- Material: High quality rubber (including virgin rubber)

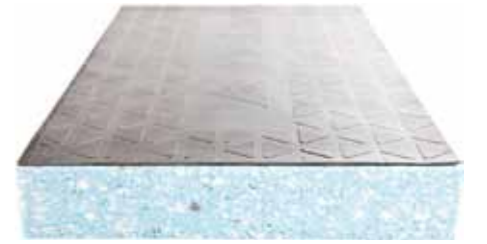


DeLaval cow mattress M40R

DeLaval cow mattress M40R is designed to encourage your cows to lie down and get up easily, so that they can behave as naturally as if they were out in the pasture.

Technical data

- Thickness: foam 30 mm, top-cover 8 mm, plastic foil 0.2 mm
- Foam sheet sizes (cm): 120x150, 120x170
- Material: polyurethane/latex, rubber, LD polythene



DeLaval cow mattress M45S

Premium comfort and hygiene provided by thick latex foam and a flexible synthetic upper. The mattress is hard-wearing and has shown good durability in field-testing.

Technical data

- Thickness: foam 40 mm, top-cover 2 mm, plastic foil 0.2 mm
- Foam size (cm): 120x180
- Material: Polyurethane/latex, synthetic top cover, LD polythene



Cubicle divider CC1800XL

Designed for optimum cow comfort and function, the DeLaval cubicle CC1800XL satisfies the lying requirements of high-yielding cows. The spacious standing space at the front and lower part of the cubicle means, the cow has plenty of room for natural movement when she lies down or stands up.

- Free hanging
- Bolted in floor



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