

Lameness 'Feet-ure': Foot bathing

By Paul Doran

Foot bathing is vital for controlling digital dermatitis and heel horn erosion in dairy herds. These conditions are both associated with exposure to slurry so whilst management of the cow environment is important for control, even farms with a very good environment find it necessary to foot bath regularly.

Make life easy

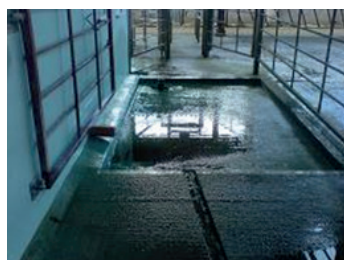
Foot bathing works best when it is stress free for both the farmer and the cows. Making the job easy, ensures that it gets done effectively, even when staff are very busy.

Have a bath which is easy to fill and clean and which the cows are happy to walk through so the process doesn't slow down cow traffic or increase milking time. A simple 'easy fill, easy clean' footbath usually consists of:

- A six-inch diameter drain with quick release bung
- A tank or hose and tap for washing and filling
- A means of dispensing chemical safely, accurately, and easily.

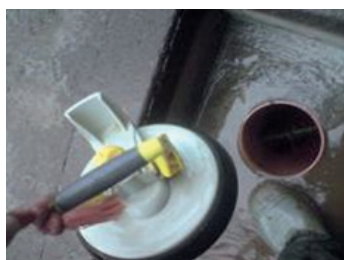
Success Factors

- It should have a step-in height of around 25cm
- Solution depth should be at least 12cm deep (to ensure 10cm remains for the last cow).
- Length should be around 3.6m to ensure each foot is immersed 4 times.
- Width is calculated to give you the correct volume: **1L per cow per treatment, so a typical 200L bath will do a maximum of 200 cows for 1 milking.**
- The whole bath should be set in a race with a width of at least 90cm for Holsteins
- Consideration of cow flow is important. A single width bath is best placed far enough away from the parlour to avoid queues. If this can't be done, a double width bath might be more advisable.



Well-designed double width footbath with bung, overflow and parlour washing divert.

Image courtesy of NADIS and Nick Bell MRCVS



A 6" drain & bung with string attached for easy and safe removal

Image courtesy of NADIS and Nick Bell MRCVS

Feet should stay clean and dry 30 minutes after footbathing to allow the solution time to work. This is best done by allowing them back into clean, scraped cubicle passages or feed stances.



This is a good foot bathing setup. An automatic footbath is installed in a well-ventilated area, a good distance from the parlour exit, ensuring good cow flow. The bath requires minimal labour and ensures staff don't have to handle formalin. The bath can be set to rapidly empty, rinse and refill after a set number of cows have passed through it.

What Chemical?

Copper sulphate in footbaths is common, but the evidence behind this is poor. That doesn't mean it isn't effective, just that there isn't much research to back it up. The relatively high cost of copper sulphate is often an off-putting factor.

Other commercial products for foot bathing cattle are available. However, because of its relatively low cost and proven effectiveness, formalin remains the most commonly used chemical.

Which animals?

Most farms with a significant digital dermatitis (DD) challenge will regularly footbath the dairy herd. The best control of DD however, tends to be in herds that also footbath the dry cows regularly e.g. once per week. If this isn't done, infected dry cows can serve as a reservoir of infection, increasing the challenge in the milking herd environment when they calve. Similar consideration should be given to foot bathing of in-calf heifers.

How often?

This will vary depending on whether the herd is grazing or not and the degree of environmental challenge. Housed herds should treat at least 3 days per week as a minimum. This may not be adequate on all farms and in some cases, daily or even twice daily footbathing may be necessary.

There is evidence that farmers who footbath throughout the grazing season have less lameness in their herds than those who do not. Foot bathing cows throughout the year is an important way to reduce the DD challenge.

Formalin foot bathing – our advice

For routine, daily use, we recommend a 3-4% solution. Lower concentrations are less likely to be effective. Higher concentrations increase both the running cost and the risk of causing chemical injury to the skin around the hoof.

For farms footbathing less frequently than 5 times a week, a slightly stronger e.g. 5% solution might be appropriate.

Foot bathing as treatment

Example of an easy and safe method of dispensing formalin. Container under the IBC can be used to measure chemical then footbath filled via hosepipe. Image courtesy of Nick Bell.

Regular footbathing is best thought of as disinfection; it is effective in prevention of disease but not at treating established infection.

In the event of a flare-up of DD on a farm, a more aggressive, 'rising concentration', regime can be used. **The protocol involves foot bathing at every milking and increasing the formalin concentration over a 4 week period as follows:**

Week 1: 2% Solution

Week 2: 4% Solution

Week 3: 6%

Week 4: 8%

Week 5-onwards: Revert to a 3-4% solution for routine control

In a large herd, treating individually affected cows with DD can be time consuming and labour intensive. The above regime doesn't require identification and individual treatment of every infected animal. However, the protocol is more effective if combined with 'blitz treatment' of individual cattle.



GILLINGHAM AND SHAFTESBURY SHOW - 18th & 19th AUGUST

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Formalin footbathing and safety

The biggest downside of using formalin on farm is the risk it presents to human health. Whilst we would not advise anyone against using formalin, it is a dangerous chemical and should not be used without careful consideration of farmer & staff safety.

All farms using formalin should request a safety data sheet (SDS) from their supplier,

Formalin is a carcinogen and can cause chemical burns if it comes in to contact with skin.

It is also toxic by inhalation so should only be used either outdoors or in a well-ventilated area

The safest way of mitigating the risk of working with formalin is to avoid having to handle it at all. Staff having to carry around buckets of formalin is an unacceptable risk. Automatic footbaths are ideal. The next best thing is to get formalin delivered in an IBC and place it next to the footbath, so it doesn't need to be transported. Formalin is also toxic to aquatic organisms. Disposal via the slurry system is currently best practice.



Example of an easy and safe method of dispensing formalin. Container under the IBC can be used to measure chemical then footbath filled via hosepipe. Image courtesy of Nick Bell.

DATES FOR YOUR DIARY 2021

Thurs 12th August Regenerative Agricultural Meeting
10.30am – 2pm

Tues 24th August AI Course
11:30am – 4:30pm

To register, either ring or email the office to book your place. Tel 01258 472314

BULK TANK TESTING FOR OSTERTAGIA

We have received some funding from Norbrook that allows us to test your bulk tank for ostertagia (gut worms). Please get in touch with either your regular vet or Izzie in the farm office to arrange for a sample collections.

'FARMING LIFE' CALENDAR COMPETITION!

Our photography competition closes at the end of August! To enter please email your photos to: farmoffice@friarsmoorlivestockhealth.co.uk