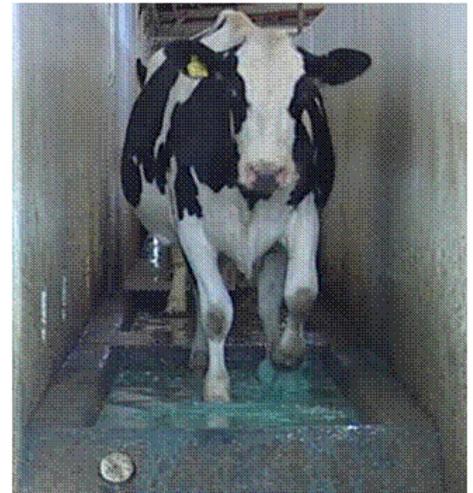


Considerations and management of footbaths

Foot-bathing is now becoming a necessity on farms, being integrated into routine management practices in order to stay on top of contagious lameness problems such as digital dermatitis. The aim is to keep these issues to a minimum so as not to impact on the welfare and productivity of the herd. Optimal frequency of foot-bathing is twice daily, at the time the cattle are moved to or from the milking area; the minimum should be once daily.

Certain management practices are required in order for foot-bathing to be of value, simply walking the herd through contaminated formaldehyde on leaving the parlour does not fall into acceptable practice. A summary of the important points follows:

- Ideally **incorporate into the normal daily route** for cows exiting the parlour on their way to the loafing/lying/feeding areas. If sited at the mouth of the collecting yard, selection of footbath additive has to avoid chemicals which may cause irritation to the milkers, plus cows are more likely to foul & contaminate the footbath as they stand at the back of the yard.
- **Permanent concrete footbaths are most suitable** as they do not move around with cows walking through them, nor is any noise created which could be distracting and impede cow flow. Plastic footbaths are easier to clean. Metal footbaths are mostly unsuitable due to the highly corrosive nature of the chemicals used, for example copper sulphate.
- **Dry cows and heifers should be included** into routine foot-bathing strategies.
- Site the footbath so as not to cause any adverse effects on milkers from fumes. In addition to **avoid any interruption in cow flow** on entering or leaving the parlour.
- To maximise efficacy a series of **two footbaths should be used**, the first with water to act as a pre-wash and minimise contamination of the second medicated footbath.
- Allow cows to stand on a clean dry area after passing through the foot baths to **give time for treatment to work**.
- **Maintain a clean area surrounding the footbaths** to prevent spread of infections, in addition proximity to taps/drains/hoses will help daily management. Fitting a sidewall drain makes drainage & cleaning significantly easier. Thorough cleaning out of footbaths between uses is important for their efficacy.
- Depth of the footbath should be a minimum of 4 inches but ideally 6-8 inches; sufficient to allow feet to be well soaked but not to allow udder contamination. The width should be enough to allow one cow to pass another which will help cow flow. **Minimum length is 2.4m**.
- **Correct disposal** (some are toxic) and adherence with organic farm regulations is essential.
- **Any element of poor management practice will actively INCREASE spread of infectious foot conditions and even CAUSE lameness.**



Considerations and management of footbaths



In some cases, antibiotic sprays may be a more effective treatment method than product application via a footbath. **Individual cases do vary** so please discuss any concerns with a member of the farm team.

Other footbath variations include sponge rubber mats soaked with treatment solution which pools around the cows feet as the cow stands on them, and disinfectant foam systems used in collecting yards. These tend to be viewed as a least preferable option.

Automated footbaths are now available from some manufacturers. Benefits are in reducing labour input, and technical enhancements to refresh the footbath part way through with large herd treatments. The disadvantage is the higher financial requirement.

A leaflet is available from the practice, or on the website which outlines and discusses the available chemicals and products for inclusion in footbaths. In addition, a very valuable reference site is www.cattle-lameness.co.uk.

Footbath Volume Calculation

Total footbath capacity is calculated simply **by multiplying the length by the width by the effective depth of the footbath**. Remember that the effective depth is the depth of footbath solution that is going to be used and not the measurement from the bottom to the lip of the bath. 1,000cm³ is equal to 1 litre, therefore a bath measuring 2.4 metres in length by 1.5 metre in width, with an effective depth of 15cm (6 inches) is:

$$240\text{cm} \times 150\text{cm} \times 15\text{cm} = 540,000\text{cm}^3 = \mathbf{540 \text{ litres.}}$$

The **preparation of foot-bathing solutions must be accurate** if the correct concentrations are to be used. If too dilute, they may not be effective; using concentrations of solution that are too weak is a major reason for farmers experiencing poor results and thus giving up on foot-bathing, often with disastrous results. If solutions are too strong, they may do more harm than good (especially formalin which

Total solution in footbath (litres)	Required concentration rate					
	2%	4%	5%	6%	8%	10%
	Required amount of chemical (litres)					
200	4	8	10	12	16	20
250	5	10	12.5	15	20	25
300	6	12	15	18	24	30
350	7	14	17.5	21	28	35
400	8	16	20	24	32	40
450	9	18	22.5	27	36	45
500	10	20	25	30	40	50
550	11	22	27.5	33	44	55
600	12	24	30	36	48	60
650	13	26	32.5	39	52	65
700	14	28	35	42	56	70
750	15	30	37.5	45	60	75

can cause chemical burns to the cow's skin at concentrations greater than 10%). Either way the solutions are not being used efficiently if they are used at the wrong concentrations.