



Take steps to improve biosecurity

Boot dips are key to controlling disease on dairy units, and it's vital that they are managed, sited and used correctly – by staff and visitors – in order to be effective.

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Biosecurity remains one of the most important, but often overlooked, tools for disease control on a dairy farm. While much attention is given to vaccination and herd-health planning, the simple act of dipping boots effectively is often underestimated yet it plays a cost-effective and critical role in preventing disease spread and its associated consequences. Pathogens such as digital dermatitis, Johne's disease, Salmonella, E coli and mastitis-causing organisms are easily spread in slurry and faeces. "Research shows they can survive for days or even months in the environment, and crucially, they can hitch a ride on footwear moving between groups of cattle," says Kingshay's vet Michael Head. "Despite most herds having biosecurity protocols in place, only around a third report they are followed consistently, which highlights a clear gap between intention and practice."

Michael Head:

"Protocols need to be simple, visible and easy to follow"



He adds that boot dips are the first line of defence, but are only effective when they are used and managed correctly. Boots contaminated with slurry are a major transmission route, particularly for faecal-borne diseases. "Moving between youngstock and adult cattle areas on the same unit presents a significant risk, as does bringing contamination in from other units via visitors or contractors."

Welfare implications

The financial and welfare implications can be considerable. Infectious disease impacts long-term productivity, profitability and ultimately the farm's environmental footprint. Good biosecurity is therefore not just about disease prevention; it is central to the sustainability of the business. Farm assurance schemes, such as Red Tractor, require effective biosecurity measures, including access to cleaning and disinfection facilities and the use of DEFRA-approved disinfectants. "But compliance is about more than meeting standards on paper," stresses Mr Head. "It depends on having systems in place that are practical and consistently followed. The key principle is simple: boot dips must be used correctly and maintained properly to be effective. If not, they risk creating a false sense of security."

Producers should also remember that not all disinfectants perform equally. Their selection should be based on the specific disease risks on the unit where the product will be used, and how it will be managed in practice. DEFRA-approved disinfectants used in boot dips typically fall into a few broad categories, each with different strengths and limitations.

"No single disinfectant is effective against all pathogens at one dilution, so selecting the correct product for the job is essential. And always ensure products are DEFRA-approved for the disease risks of concern, and check the DEFRA disinfectants approval scheme for current authorisation and dilution rates," adds Mr Head. He says that even the best disinfectant will fail if the setup is poor. "A properly designed boot-dip system should comprise a two-stage process – both cleaning and disinfecting."

The cleaning stage is essential and requires the removal of visible dirt, using a brush, scraper or water, because disinfectants are quickly inactivated by organic matter. Disinfectant can then be applied to clean boots.

Organic matter

"Disinfectants do not work in the presence of visible dirt. Organic matter can inactivate many products, making pre-cleaning essential."

The foot bath or vessel containing the dip should also be an adequate depth – at least between 5cm and 10cm to fully cover soles and the lower part of the boot. It should also be of sufficient size and large enough to ensure proper contact, and for the correct length of time. "Chemicals have different modes of action, some are quick-acting while others require longer contact time. So refer to the manufacturer's guidelines for effective use," says Mr Head.

The foot dips should, ideally, be non-slip, durable trays with covers. This will help to maintain effectiveness by preventing contamination as well as dilution from rainwater. And what's also vital, the foot dips should be placed in unavoidable locations, such as shed and yard entrances and gateways.

"On many units the issue is not the absence of boot dips, but inconsistent use," explains Mr Head. "Effective protocols need to be simple, visible and easy to follow. Clear signage at entry points, supported by written instructions and ideally with visual guides, help to ensure everyone understands what is expected."

He adds that daily management is key. Boot dips should be checked regularly to ensure they remain clean and that the solution is at the correct concentration. "Solutions should be replaced according to manufacturer guidance, but as a rule they should be changed whenever they become visibly dirty or after a defined number of uses," says Mr Head. "In high-traffic areas, this may mean changing them daily."

Some products change colour when they are no longer effective. Virkon S, for example, loses its pink colour, and FAM 30 turns paler – from a tea colour or clear. Accurate mixing is equally important. "Measuring disinfectant rather than estimating ensures the correct concentration is achieved. Under-dosing reduces effectiveness, while over-dosing increases costs and can create unnecessary safety risks," he says.



Covered tray: boot dips should, ideally, be protected from rainwater dilution

"People present one of the greatest biosecurity risks on farm, but they are also the easiest to manage with the right approach. Controlling access is a good place to start, with clearly-defined entry points, visitor parking away from livestock, and straightforward instructions on arrival."

Developing protocols

For staff, Mr Head stresses that consistency is crucial. "This may involve changing boots or using dips when moving between cattle groups, as well as being mindful of contact with livestock off farm," he says. "Involving staff in developing protocols helps build understanding and ownership, increasing the likelihood they are followed properly in day-to-day work. Regular reviews with a vet or adviser will ensure protocols remain relevant as disease risks evolve. "Ultimately, the success of any biosecurity plan comes down to people. The most effective systems are those that are simple, practical and followed every time." |

Boot-dip pointers

- Always clean boots before disinfecting
- Use the correct disinfectant for the job
- Mix accurately and change the foot-dip solution regularly
- Place dips where they cannot be avoided
- Apply rules equally to staff and visitors
- Review systems regularly with herd vet