

TB – VACCINATION

Does cattle vaccination work?

Cattle vaccination is not permitted at present in NI, for legislative reasons, as the skin test cannot distinguish vaccinated cattle from unvaccinated infected cattle. Research continues in England to develop a DIVA (Differentiation of Infected from Vaccinated Animals) test. Phase 3 trials are expected to be completed in 2026/27. Studies to date indicate that the vaccine and DIVA skin test are safe.

Does badger vaccination work?

A vaccine for badgers has been licensed since 2010 and is licensed for cubs from 12 weeks old. The injectable vaccine (there is no oral badger vaccine), which is the BCG vaccine given to humans, has been shown in studies to reduce the severity and progression of TB in badgers. It also reduces the risk of infection and the spread of disease in healthy badgers. The benefits are more apparent when large groups of badgers are vaccinated. Results from badger vaccination in the NI Test/Vaccinate/Remove (TVR) study show that there are likely to be synergistic effects between selective culling and vaccination.

Vaccination has been demonstrated, under field conditions in the ROI, to provide sufficient protection to allow its use. The success of vaccination depends on a sufficient proportion of the badger population being free from disease and therefore responsive to vaccination. While this is not likely to be applicable within NI at present due to the high badger infection prevalence, any intervention would ideally have as an ultimate goal the replacement of badger culling with vaccination.

A thesis by Chang (2024) found that the vaccination of badgers, combined with cattle test-and-removal programs, reduces bTB transmission but may not be sufficient for complete eradication. The paper states: "...we also noted new insights that badger vaccination may not be sufficient to control local transmission in high-risk areas. Such high-risk areas can spread bTB to low-risk areas and sustain infection at a regional level. Based on this understanding, we recommend more stringent interventions in high-risk areas in addition to badger vaccination and cattle test-and-removal. Options include extra intervention in badgers such as badger selective culling, and additional cattle-focused interventions such as cattle vaccination. Lastly, we also recommend the creation of barriers between high-risk areas and low-risk areas, for example, through risk based trading."