

The trouble with culling badgers



Badger culling has been tried many times over the last 30 years but studies have failed to prove its ability to reduce levels of bTB.

The best designed and largest cull was the Randomised Badger Culling Trial carried out by the Independent Scientific Group set up to advise the Secretary of State for Environment, Food and Rural Affairs on how best to tackle the problem of cattle TB. Its final report in 2007 showed that small-scale culling, targeted at particular farms, increased the incidence of the disease in herds rather than reduced it.

Widespread culling, over areas of 100km², achieved a modest overall reduction in cattle TB, but increased incidence on adjoining lands which were not culled. The reason was that culling caused badgers to move around more widely, transmitting more infection to one another and to cattle^{1, 2, 3}.

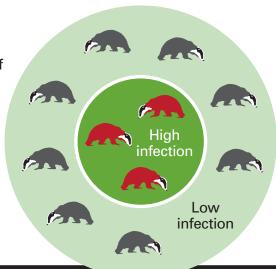
This change in badgers' behaviour (known as the perturbation effect, see diagrams opposite) is likely to undermine the benefits of any form of culling.

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1. Pope LC, et al (2007) Molecular Ecology 16: 4919-4929, 2. Carter SP, et al (2007) Proceedings of Biological Science 247: 2769-2777. 3. Woodroffe R, et al (2006) Proc. National Academy of Science 103: 14713-14717

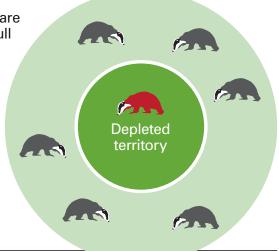
1 PRE-CULL

In a stable badger population, there is limited movement of badgers from one area to another. Badger setts harbouring high levels of bovine TB infection tend to remain relatively separate



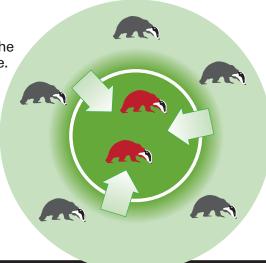
2 IMMEDIATELY POST-CULL

Once most badgers are removed from the cull area, a new territory opens up allowing badgers to come in from the surrounding areas



BADGER MOVEMENTS INCREASE

Badger movements around and beyond the infected area increase. Immigrant badgers pick up the infection from abandoned setts and unculled infected animals. Badger-to-badger transmission increases along with the likelihood of badger-to-cattle transmission



4 NEW EQUILIBRIUM

Because the population is still lower than the carrying capacity of the total area, badgers move around much more than they did before the cull. The movement distributes the original infection over a wider area

