

New selective badger cull risks spreading bovine TB

June 9 2014

A new bovine TB control strategy to be piloted in Northern Ireland risks spreading the disease rather than suppressing it, scientists warn.

Researchers from the Zoological Society of London (ZSL), Imperial College London and the University of Sheffield predict that culling [badgers](#) which test positive for TB could increase the movement of remaining badgers, potentially infecting more cattle with the disease.

Published today in the journal *PNAS*, their paper shows that small-scale, selective culling may have the same effect on badger behaviour as the Randomised Badger Culling Trial, where the removal of large numbers of animals led to expanded badger ranging.

The Test-Vaccinate/Remove (TVR) pilot will carry out live TB tests on badgers, aiming to vaccinate healthy animals and cull infected ones. However, the test does have its limitations. In a previous study, only 49 per cent of badgers later shown to be infected tested positive in the live test. This means many badgers carrying TB could be missed.

To predict the impact of the TVR pilot on the remaining badgers, the researchers analysed badger movement in 826 territories where small-scale culling took place between 1986 and 1998.

Their results show that removing a small number of badgers from a social group led to increased dispersal and expanded ranging of remaining badgers, more frequent immigration of badgers from outside

the group, lower genetic relatedness of individuals within a group, and an elevated prevalence of the bacterium that causes bovine TB.

Prof. Rosie Woodroffe, Senior Research Fellow at ZSL said: "TVR sounds appealing because only infected badgers are killed. Unfortunately our findings suggest that the planned TVR pilot could alter badger behaviour in ways which risk exacerbating the bovine TB problem, rather than controlling it. This is one reason why ZSL is exploring alternative options to reduce transmission between badgers and cattle."

The researchers recommend that if the TVR pilot goes ahead, then intensive monitoring of badger behaviour should be put in place, and stopping rules enforced if significant changes are observed.

Dr Jon Bielby, Research Fellow at ZSL said: "Our research is the first to look at the effects of removing small numbers of badgers from social groups. The results reinforce the need to fully understand the consequences of methods to control the spread of bovine TB before we embark on them. Otherwise we risk complicating what is already a very complex issue."

More information: Badger responses to small-scale culling may compromise targeted control of bovine tuberculosis, *PNAS*, www.pnas.org/cgi/doi/10.1073/pnas.1401503111

Provided by Zoological Society of London

Citation: New selective badger cull risks spreading bovine TB (2014, June 9) retrieved 26 April 2024 from <https://phys.org/news/2014-06-badger-cull-bovine-tb.html>

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