

Badgers ultimately responsible for around half of TB in cattle, study estimates

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Badgers are ultimately responsible for roughly half of tuberculosis (TB) in cattle in areas with high TB prevalence, according to new estimates based on data from a previous badger culling trial.

However, only around six per cent of infected [cattle](#) catch TB from badgers, with onward [transmission](#) between cattle herds accounting for the remainder, the study suggests.

The findings are published in the journal *PLOS Currents: Outbreaks*.

The role of badgers in spreading bovine TB has been debated intensely as part of discussions about whether badgers should be culled to control the disease.

The Randomised Badger Culling Trial, which ran from 1998 to 2005, found evidence that culling could reduce TB in herds inside culled areas, while increasing TB in areas nearby.

Mathematical models based on data from the trial were previously used to calculate an estimate of the proportion of TB in cattle that could ultimately be attributed to transmission from badgers.

The new paper, by scientists at Imperial College London, provides a more detailed analysis. It estimates that badgers ultimately account for 52 per cent of cattle TB in areas where prevalence in cattle is high. There is considerable uncertainty around this estimate, but the authors

say that 38 per cent is a robust minimum value for the estimate. There is no robust maximum value.

Professor Christl Donnelly, from the Medical Research Council Centre for Outbreak Analysis and Modelling at Imperial, said: "These findings confirm that badgers do play a large role in the spread of bovine TB. These figures should inform the debate, even if they don't point to a single way forward."

The mathematical model suggested that 5.7 per cent of transmission to cattle herds is from badgers to cattle, with the rest of the contribution from badgers resulting from onward transmission between [cattle herds](#).

More information: Donnelly, C. and Nouvellet, P. The contribution of badgers to confirmed tuberculosis in cattle in high-incidence areas in England, *PLOS Currents: Outbreaks*, 10 October 2013. currents.plos.org/outbreaks/article?id=10.1371/currents.outbreaks.1000001

Provided by Imperial College London

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