

Position Statement

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Bovine Tuberculosis in cattle and badgers

Background

Bovine Tuberculosis (bTB) was once a major problem in UK cattle herds but was virtually eradicated by testing and slaughter of infected cattle. Scotland achieved official TB free status in 2009. In Northern Ireland, bTB in cattle has declined in recent years¹. It persisted in southwest England, some parts of Wales and the West Midlands, and is now increasing across England and Wales. While it can be a serious problem for farmers with affected herds, bTB is still relatively rare in the UK. In 2002, 19,792 cattle tested positive for bTB and were slaughtered, compared to 590,000 cattle slaughtered during the Foot and Mouth Disease (FMD) outbreak². Each year, 90,000 cattle are culled due to mastitis, 31,000 due to lameness and 125,000 due to infertility³. Since the mid-1970s, tens of thousands of badgers have been culled in response to bTB outbreaks because of circumstantial evidence that they spread the disease.

Recent history

In December 1997, a Government review of bTB, chaired by Professor John Krebs, concluded that, "the sum of evidence strongly supports the view that, in Britain, badgers are a significant source of infection in cattle, although evidence is all indirect". The review noted the effectiveness of badger culling as a control measure could not be quantified with the data then available. It recommended the relevant Government department (now DEFRA) should set up an experiment to quantify the impact of culling badgers⁴. In 1998, the Government set up the Independent Scientific Group on Cattle TB (ISG), chaired by Professor John Bourne to advise on implementing the Krebs Report recommendations. The ISG, announced a randomised badger culling trial (RBCT; the Krebs Trial) and research related to diagnosis, development, spread and control of bTB in cattle and badgers⁵.

The Krebs Trial began in December 1998, aiming to establish if culling badgers is effective and sustainable for bTB control. Thirty sample areas were chosen, each c.100km², where recent incidence of bTB was relatively high. These were grouped into 10 'triplets' each part of which was treated differently:

- 'Proactive' culling of all badgers: area to be kept clear for five years
- 'Reactive' culling of all badgers associated with farms where bTB confirmed
- 'Survey only': no badger culling took place.

While the ISG's work was in progress, the House of Commons Agriculture Committee, examining the Government's implementation of the Krebs Report, upheld the need for field trials to test the link between badgers and cattle⁶ and recommended:

- More research into: cattle-to-cattle transmission; developing a cattle vaccine; why the incidence of bTB was rising; other possible transmission routes; and role of trace elements in susceptibility to the disease.
- Identification of husbandry practices that could reduce cattle infection
- Dates of bTB tests should be included in cattle passports.

In 2003, the Environment, Food and Rural Affairs Committee also recognised the need for a broader approach⁷ and recommended:

- Tighter controls on livestock movement
- Financial support to improve husbandry
- Effective pre- and post-movement testing
- Research and investment in husbandry and biosecurity
- No badger culling outside Krebs Trial areas
- Government adopt a holistic bTB strategy.

Whilst awaiting the outcome of the Krebs Trial, DEFRA acknowledged farm practices should be modified to manage bTB in cattle⁸. Cattle-based measures designed to tackle bTB were introduced, including: pre-movement testing of cattle; increased bTB testing frequencies; movement restrictions on herds with overdue tests; and farm management (e.g., herd health plans and quarantine facilities for new stock).

Reason for doubt?

Bovine TB cases were increasing before badger culling was limited to Krebs Trial areas^{9,10,11}. Evidence suggests several reasons:

- Current bTB testing does not always identify infection¹²
- bTB testing was suspended during the FMD outbreak with cattle confined together for months allowing infection to spread
- Restocking after FMD resulted in infected cattle being inadvertently transported to previously unaffected areas.

This well-documented increase in bTB occurred at a time when badger numbers remained relatively stable. Before the Krebs Trial, more than 80 per cent of badgers culled and examined by MAFF were disease-free. In some areas with bTB in cattle, infection in local badger populations was low or non-existent¹³. It is as likely that cattle are responsible for infecting badgers with bTB as the reverse¹⁴.

Research into cattle-based bTB control is not prioritised; only 17% of funding for bTB research focuses on alternatives strategies to killing badgers¹⁵.

The current situation

Professor Bourne's overview of the final ISG report, published in 2007¹⁶, states, "While badgers contribute significantly to the disease in cattle, cattle-to-cattle transmission is also

very important in high incidence areas and is the main cause of disease spread to new areas". The study found reactive culling actually increased bTB infection within culled areas.

While proactive culling was ongoing, there was a modest reduction in bTB in cattle within culled areas but almost cancelled out by an increase on adjoining uncultured land, reflecting social perturbation of badger populations¹⁷. As a result, over the five-year culling period, the financial cost of culling far outweighed savings through reduction in bTB in cattle. Once culling halted, beneficial effects inside culling areas increased while detrimental effects on adjoining land disappeared. Ongoing monitoring of Krebs Trial areas by Imperial College (London) has identified benefits subsided three years after culling¹⁸ but re-emerged six months later¹⁹. Nevertheless, they are now declining once more when²⁰ such benefits would need to be sustained post-culling for at least 12.5 years to equal the costs of five years of cage-trapping²¹.

The ISG concluded that proactive culling will only have a positive effect on infection rates if sustained and coordinated way over a very large area, which it deemed uneconomic and impractical. DEFRA data suggests culling 100 per cent of badgers in an area is virtually impossible, with only 80 per cent caught using cage traps. More than 30 per cent of landowners refused access for the Krebs Trial and past badger culls have been sabotaged through direct action.

The ISG Report also concluded that other approaches to culling were unlikely to generate benefits substantially greater than the RBCT, and many were likely to cause detrimental effects. It stated, "Given its high costs and low benefits we therefore conclude that badger culling is unlikely to contribute usefully to the control of cattle TB in Britain, and recommend that TB control efforts focus on measures other than badger culling."

Responding to the publication of the ISG's final report, the Secretary of State for Environment, Farming and Rural Affairs, David Miliband, accepted the need for cattle-based measures, saying the following had been introduced: a zero tolerance regime for overdue tests; changes to the compensation system; a new requirement for pre-movement tests from high risk herds; and extension of use of the gamma interferon test. He also pointed out the potential cost of further measures.

Defra ministers asked their Chief Scientific Adviser, Prof. Sir David King to assess scientific evidence in the ISG report and elsewhere relevant to consideration of future policy decisions on bTB in England. The King Report was published on 22 October 2007 and informed an inquiry by the Environment, Food and Rural Affairs (EFRA) Select Committee on bTB. King concluded removal of badgers could significantly contribute to control of bTB in cattle where its incidence is high and persistent, if carried out alongside effective cattle controls. While questioning the conclusion of the ISG report, he produced no new data and was not specific as to the scale of action required. The ISG and Prof. Denis Mollison submitted reports to the EFRA Committee in November 2007 stating there were fundamental scientific errors in King's assessment.

On 7 July 2008, Hilary Benn, then Environment Minister, announced that in England, based on the evidence, there would be: no cull of badgers; £20 million would be invested in developing vaccines; and efforts would be made to strengthen cattle-based measures. Trapping and vaccination of badgers was to begin in 2010 in six areas of England most affected by bTB in cattle but is now only being progressed at one location near Stroud, Gloucestershire, where it will continue for five years²². On 22 June 2010, Jim Paice, Environment Minister, stated that the coalition Government is considering all the issues and scientific evidence carefully, and a detailed package of measures in England may include culling in areas with high and persistent levels of bTB in cattle and vaccination.

In Wales, the National Assembly introduced legislation to allow it to cull in an Intensive Action Pilot Area in north Pembrokeshire, beginning in 2010, which has since been quashed by the Court of Appeal ²³.

The Woodland Trust view

The Woodland Trust is sympathetic to the impact that bTB has on farmers' livelihoods. We believe the ISG's work, and ongoing monitoring of RBCT areas by Imperial College (London), shows culling badgers is not the solution to bTB in the UK. Sustained and widespread culling is uneconomic, impractical and publicly unacceptable. It could also cause local extinction of badgers, contravening The Bern Convention on the Conservation of European Wildlife and Natural Habitats, which requires any exploitation of certain animals, including badgers, to be regulated to keep the population out of danger (Article 7). Actions preventing damage to livestock are allowed (Article 9) but only when there is no other satisfactory solution. Cattle-based measures should, therefore, be pursued in preference to badger culling.

What the Woodland Trust will do

The Woodland Trust will continue to:

- Refuse access to sites in our ownership for the purpose of culling badgers unless required by law
- Work with partner organisations to oppose badger culling, in favour of cattle-based solutions and increased biosecurity to keep badgers and cattle apart.

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