

Bovine Tuberculosis Strategy Review

Response from Wildlife and Countryside Link to the Godfray Report

August 2019

Wildlife and Countryside Link (Link) is the largest environment and wildlife coalition in England, bringing together 52 organisations to use their strong joint voice for the protection of nature. Our members campaign to conserve, enhance and access our landscapes, animals, plants, habitats, rivers and seas. Together we have the support of over eight million people in the UK and directly protect over 750,000 hectares of land and 800 miles of coastline.

This briefing is supported by the following Link member organisations:

- *Badger Trust*
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EXECUTIVE SUMMARY

Link welcomes the Godfray Report, which has the potential to spark an eradication strategy for bovine tuberculosis (TB) in England which is both more effective and more ecologically sustainable than the current approach.

The main conclusion of the Godfray Report is that **far greater emphasis should be placed on control measures aimed at reducing TB transmission among cattle**. We strongly support this conclusion. We agree that TB control efforts have focused disproportionately on transmission from wildlife, and support the Godfray team's proposals to improve upon the current systems for detecting and removing infected cattle, which have proven inadequate. We also strongly advocate mandatory risk-based trading of cattle, an approach encouraged in the Godfray Report. However, we argue that **improved cattle controls should target all areas, not just those that have been subject to wildlife interventions**.

The Godfray report also calls upon government to conduct a large-scale field trial to **evaluate non-lethal alternatives to badger culling**. Again, we strongly support this conclusion, although we recommend that properly evaluating badger vaccination requires **extending the area of the trial proposed by Godfray** to include parts of the high-risk area with no recent history of culling. Evidence suggests that **badger vaccination is a more promising disease eradication tool than culling** because, while scientific evidence shows that culling is likely to increase the proportion of badgers with TB, vaccination should reduce it. **We strongly oppose the issuing of new badger culling licences**.

The Godfray report also proposes changing the governance of TB control in England, so that both cattle controls and badger management would be overseen by a single body, with less frequent public consultations on policy changes. We strongly oppose this conclusion. We are concerned that transferring responsibility for managing a protected species away from the government's statutory wildlife authority sets **a dangerous precedent for wildlife conservation**. Moreover, we do not support reducing public consultation on policy changes which can have complex outcomes for farm businesses and the wider environment and risk **a disease control strategy which is less effective, less sustainable, and does not carry public support**. Wildlife and the environment are public goods, and the public needs to have a say in their management.

BACKGROUND

In February 2018, the Department for Environment, Food, and Rural Affairs (Defra) commissioned an independent review of its 25-year strategy to eradicate bovine TB from England. This review was led by Prof. Sir Charles Godfray FRS and [its report](#), published in November 2018, is widely termed the “Godfray Report”.

The Godfray Report does not make specific policy recommendations, recognising the complexity of policy decisions and uncertainty about a post-Brexit policy environment. Instead, it uses existing evidence to consider the likely outcomes of a range of potential policy options, highlighting the approaches considered most promising.

Defra is currently developing its response to the Godfray Report and we understand this will not be published until September at the earliest

CATTLE CONTROLS

The main conclusion of the Godfray Report is that TB management has neglected improvements that could be made to cattle-based controls, with too great an emphasis on managing wildlife. The Report highlights major inadequacies in current systems for detecting and removing infected cattle, although we remain concerned that current testing approaches detect even fewer infected cattle than the Report acknowledges. The Report concludes that there would be a strong argument for replacing the current test (which compares cattle immune responses to antigens from *Mycobacterium bovis*, which causes bovine TB, and *M. avium*, which does not) with a simpler test (measuring immune response to *M. bovis* alone). Such a change would lead to the slaughter of many more cattle, increasing costs, but it would detect a higher proportion of infected animals and should therefore reduce transmission both within and between cattle herds and from cattle to wildlife. This change will also help to avoid badgers being wrongly identified as the likely source of many cattle TB breakdowns, when in fact hidden infection in cattle herds is the more likely source of infection.

The Report also argues that supplementary tests, such as the IDEXX ELISA, could help to clear out infection from specific areas.

While we agree with the majority of the Godfray Report’s conclusions regarding cattle management, we highlight one important area of disagreement. The Report places a high priority on rapidly clearing infection from “*herds in badger cull areas where it is important to avoid re-infecting wildlife*”. This statement is based on a false assumption that culling reduces or removes infection from wildlife. To the contrary, in the Randomised Badger Culling Trial (RBCT), culling consistently increased *M. bovis* prevalence in badgers [1, 2]; hence the stated reason for targeting cattle controls at cull zones is not consistent with the scientific evidence. We consider that the deployment of cattle controls should not be dependent on wildlife interventions. We also note that targeting cattle controls at areas with any form of badger management will undermine the assessment of the effectiveness of cattle and wildlife interventions. In particular, this is likely to result in the over-estimation of the impact of badger management on cattle TB, and ultimately lead to an unreliable evidence base for future interventions.

BADGER MANAGEMENT

We agree that the current TB strategy places too strong an emphasis on badger management, when the best available estimates suggest that only a small percentage of cattle herds acquire infection directly from badgers. We agree with the Godfray Report that “*moving from lethal to non-lethal control of the disease in badgers is highly desirable*”, partly [because](#) this would be more humane,

less environmentally damaging, cheaper, and more acceptable to the public, but also because badger vaccination (the Godfray team's preferred option) is more likely than culling to deliver eventual TB eradication.

Badger culling has consistently been shown to increase *M. bovis* prevalence in the badger population [1, 2] and spread infection to badgers and cattle in new areas [4], changes which are incompatible with disease eradication. These changes are thought to occur because of the way that culling alters badger behaviour [5]. In contrast, badger vaccination has no detectable impact on badger behaviour [6], and is likely to lower the density of infected badgers without altering overall badger density. Vaccination should also help to reduce cattle-to-badger transmission, facilitating TB eradication when performed in parallel with improved cattle-based control efforts.

The Godfray Report proposes evaluating badger vaccination in a large-scale trial conducted in areas which have completed four years of culling. However, vaccination is likely to reach its full potential more slowly in former cull zones than in areas which have not previously been culled. Culling weeds out the animals that are easily captured and so, after four years of culling, it will be more difficult to capture badgers for vaccination [7]. Moreover, while vaccination works by protecting animals which have not yet been infected [8], culling increases infection prevalence in badgers [1, 2] and, correspondingly, reduces the proportion of animals that can be protected by vaccination. Hence, a trial conducted entirely in former cull zones is likely to under-estimate the true potential of badger vaccination as a TB control tool. Given the desirability of a nonlethal approach to TB control, we would recommend including some areas where vaccination is implemented from the start, without any prior culling, rather than restricting the trial to previously-culled areas. Because vaccination is substantially [cheaper than culling](#), recruiting new areas to vaccination rather than culling would save the government money, and might be more acceptable to some landowners, as well as to the general public.

Importantly, any trial of vaccination would need to be conducted in areas of relatively high TB risk to cattle in order to enable assessment of the impact of vaccination in the face of significant infection challenge. Currently, most cull zones are in the "High Risk Area", while the largest badger vaccination zone falls in the "Edge Area", which has lower baseline cattle TB incidence. Comparing the effects of vaccination and culling requires having similar baseline incidence, and any difference in effects will be most readily detected where this baseline incidence is high. (This is the reason that the RBCT targeted the parts of England with highest TB risk [9]). We are encouraged by the progress being made to deliver badger vaccination in the Edge Area, but the trial we envisage would require extending these efforts into the High Risk Area.

Link considers badger vaccination to be a promising alternative to culling which, if substantially expanded, is likely to deliver a more effective means of reducing TB transmission from badgers on a more cost effective and humane basis. For this reason, we believe that Natural England should issue no further badger culling licences.

GOVERNANCE

We are alarmed at the Godfray Report's recommendation to amalgamate the roles of Defra, the Animal and Plant Health Agency (APHA), and Natural England as they apply to TB control. Natural England is the statutory authority for wildlife management and conservation in England, and is thus responsible for implementing the Protection of Badgers Act, under which licences for culling and vaccination are issued. Natural England is also responsible for evaluating the environmental impact of badger culling. We are concerned that it would set a dangerous precedent to move responsibility

for managing a protected species to an organisation likely to view it as a pest rather than as an essential component of native biodiversity which requires conservation and not just control. We are also concerned that considerations of the environmental impact of culling (which are already weak enough to be the subject of legal challenge) would become almost non-existent if Natural England's role was taken over by a body concerned entirely with disease control.

We are likewise concerned at the Godfray Report's recommendation that public consultations on changes to TB policy should take place less frequently. Public consultations are not a rubber stamp, but a valuable way to check whether interested organisations and members of the public have insights into the potential consequences of policy changes not identified by the policymakers. For example, respondents to a 2017 public consultation [pointed out](#) that evidence from the RBCT did not support culling beyond the initial four-year licence, a point echoed by the Godfray Report which proposes an end to such supplementary culling.

CONCLUSIONS

To conclude, we consider the Godfray Report an important, timely document with the potential to make England's efforts to eradicate bovine TB more effective, more sustainable, more humane, and less environmentally damaging. We strongly support its key conclusions that greater emphasis should be placed on management targeting cattle rather than wildlife, and that badger vaccination should be evaluated as an alternative to culling. We strongly oppose the issuing of new badger culling licences. Further developing these key points, we call for the proposed trial of badger vaccination to include parts of the High Risk Area with no recent history of culling, and for the deployment of cattle controls to be independent of wildlife interventions. We also oppose suggestions to remove responsibility for licensing badger management from Natural England, and for reducing the role of public consultation in developing TB policy.

REFERENCES

1. Woodroffe, R., et al., *Bovine tuberculosis in cattle and badgers in localised culling areas*. Journal of Wildlife Diseases, 2009. **45**: p. 128-143.
2. Woodroffe, R., et al., *Culling and cattle controls influence tuberculosis risk for badgers*. Proceedings of the National Academy of Sciences of the United States of America, 2006. **103**: p. 14713-14717.
3. Donnelly, C.A. and P. Nouvellet, *The contribution of badgers to confirmed tuberculosis in cattle in high incidence areas in England*. PLoS Currents Outbreaks, 2013.
4. Jenkins, H.E., et al., *Effects of culling on spatial associations of Mycobacterium bovis infections in badgers and cattle*. Journal of Applied Ecology, 2007. **44**: p. 897-908.
5. Woodroffe, R., et al., *Effects of culling on badger (Meles meles) spatial organization: implications for the control of bovine tuberculosis*. Journal of Applied Ecology, 2006. **43**: p. 1-10.
6. Woodroffe, R., et al., *Ranging behaviour of badgers Meles meles L. vaccinated with Bacillus Calmette Guerin*. Journal of Applied Ecology, 2016. **54**: p. 718-725.
7. Tuytens, F.A.M., et al., *Differences in trappability of European badgers Meles meles in three populations in England*. Journal of Applied Ecology, 1999. **36**: p. 1051-1062.
8. Carter, S.P., et al., *BCG vaccination reduces risk of tuberculosis infection in vaccinated badgers and unvaccinated badger cubs*. PLOS One, 2012. **7**(12): p. e49833.
9. Bourne, J., et al., *Towards a sustainable policy to control TB in cattle - A scientific initiative. First Report of the Independent Scientific Group on Cattle TB*. 1998, London: Ministry of Agriculture, Fisheries & Food, <http://webarchive.nationalarchives.gov.uk/20110318144428/http://www.defra.gov.uk/foodfarm/farmanimal/diseases/atoz/tb/isg/report/isg-1st-report.pdf>.

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