

Letters & Notices



BOVINE TB

Badger culling to control bovine TB

ON 5 May, the Defra Bovine TB Programme apologised to us by email¹ for incorrect data in a letter published in *Vet Record* in March by chief veterinary officer (CVO) Christine Middlemiss and chief scientific adviser Gideon Henderson,² who were trying to rebut the findings of our study.³ They illustrated in Fig 1 how the incidence of confirmed bovine TB (bTB) herd breakdowns (Officially Tuberculosis Free – withdrawn [OTFw]) in cattle in uncultured areas was higher than in badger culled areas, in four of five years. This included, importantly, the latest study year 2019/20. Their letter, which was not peer-reviewed, indicated that culling reduced OTFw incidence in culled areas more rapidly than uncultured areas in England's high-risk area (HRA) and claimed that this negated our analysis.

The stark difference between Middlemiss and Henderson's original graph and their revised version (see Correction, Fig 1 amended) can be seen when the graphs are viewed together.

Defra's exaggerated claims were substantial, with overestimations of OTFw incidence in uncultured areas of approximately 30 per cent in 2017/18, 40 per cent in 2018/19 and 24 per cent in 2019/20. The revised graph shows that the uncultured area had a similar and often lower OTFw incidence when compared to culled areas in each year, supporting the results of our peer-reviewed study. Defra indicated that the 'corresponding data and workings' used to generate the revised graph had been sent to us, however, despite multiple requests, these remain undisclosed, making both of its analyses impossible to verify.

We find the OTFw incidence for 2015/16 of approximately 11 per cent for uncultured areas notable, as OTFw incidence for 'all uncultured' areas in that year was 14.0 per cent and for the previous year was 15.6 per cent.² This further suggests that Defra's selective

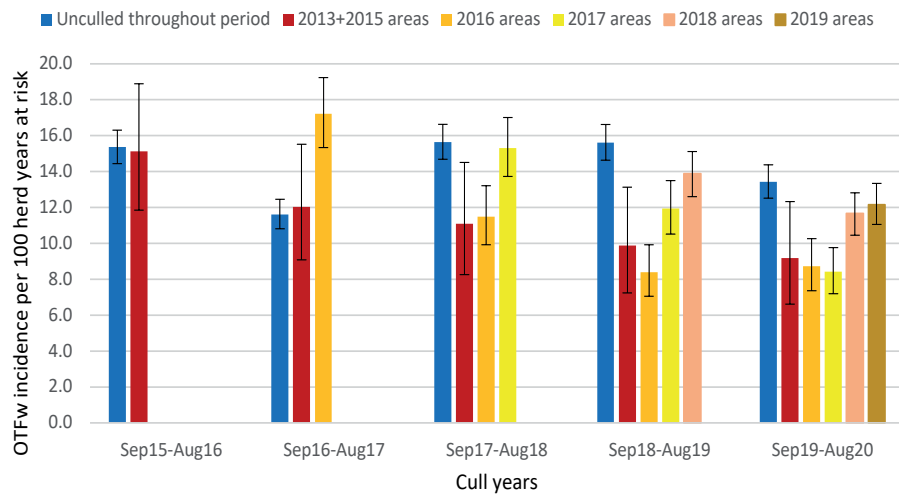


Fig 1: Incorrect data cited in Middlemiss and Henderson's letter.² Annual Officially Tuberculosis Free – withdrawn (OTFw) incidence in the high-risk area of England from 2015 to 2020

CORRECTION

LETTERS & NOTICES: Badger culling to control bovine TB (*VR*, 19/26 March 2022, vol 190, pp 243–244). In Fig 1 the Officially Tuberculosis Free – withdrawn (OTFw) incidence for 'uncultured throughout period' (shown in blue) was incorrect for all cull years. The figure should have been displayed as shown in the amended graph below (Fig 1 amended). The error bars correspond to the 95 per cent credible intervals, following the methodology described by Langton and colleagues.

The wording of the last sentence of the fifth paragraph of the original letter should therefore read 'In contrast, in the parts of the high-risk area (HRA) where no culling took place, incidence has only fluctuated slightly from year to year, from 10.9 in 2015/16 rising to 12.8 in 2016/17 before returning to 10.9 in 2019/20.' The data presented for the cull areas are unchanged and the authors state this correction does not alter their conclusions in the original letter. The authors regret the error.

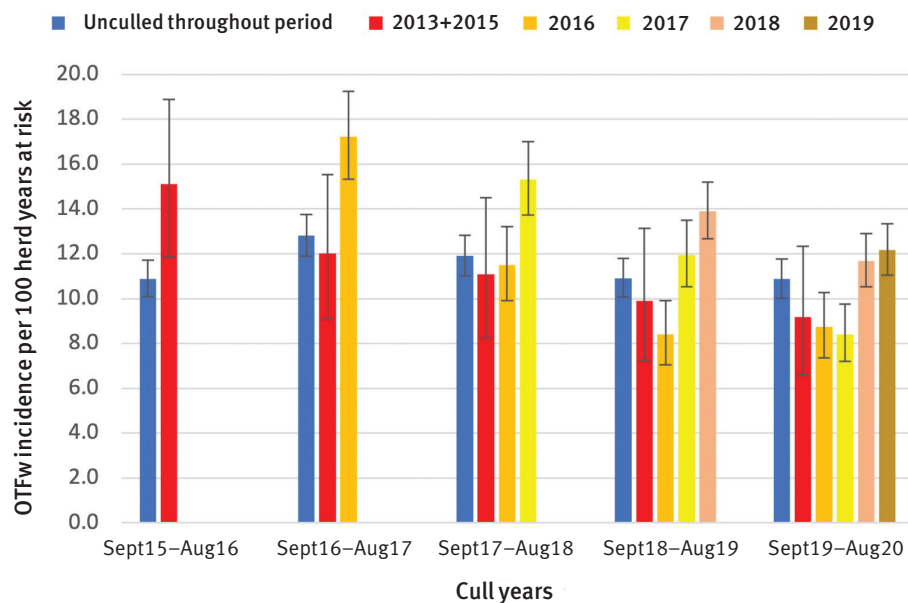


Fig 1 amended: Annual Officially Tuberculosis Free – withdrawn (OTFw) incidence in the high-risk area of England from 2015 to 2020. The blue bar represents areas where no culling occurred during the entire period. Other colours show areas where culling commenced in a particular year

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use of a smaller amount of ‘never culled’ data, instead of ‘all uncultured’ data, as we have used, creates an anomaly to artificially lower uncultured incidence for 2015/16. Once again, this gives a misleading impression that incidence have not lowered over time in the uncultured area in response to cattle measures, when our study holds much stronger evidence that they have.

However, in its email,¹ Defra stated its belief that the error ‘does not change the overall argument in the letter signed by Profs Henderson and Middlemiss’, despite the letter’s additional errors and unsubstantiated claims based upon them, which remain unacknowledged. Middlemiss and Henderson’s core argument relating to what they described as our ‘inappropriate grouping’ of data has already been addressed in our response to them,⁴ yet they remain silent.

Based upon their original incorrect analysis, Defra⁵ and the CVO⁶ made flawed and damaging claims and accusations against us and our research, with Defra also circulating negative insinuations against *Vet Record* and its peer-review process.⁵ We believe a public retraction of these is now warranted and must be made with equal prominence to the original criticisms. A detailed explanation of Defra’s internal process by which such significant data errors came to be published is also warranted given it implies a lack of year-to-year monitoring required for the policy to be able to ‘adapt and learn’. Defra’s failure to use the opportunity of its revision to further elaborate and acknowledge the numerous other errors, speaks volumes.

Our peer-reviewed examination of government data, which failed to identify a meaningful effect of badger culling on bTB in English cattle herds, stands robust. Our call on the government to immediately review and reconsider the issue and renewal of all badger culling licences from June of this year remains valid.

Thomas ES Langton, Mark W Jones, Iain McGill, authors of research paper
c/o Born Free Foundation, Frazer House,
14 Carfax, Horsham, West Sussex RH12 1ER

email: mark@bornfree.org.uk

References

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- 2 Middlemiss C, Henderson G. Badger culling to control bovine TB. *Vet Rec* 2022;190:243–4
- 3 Langton TES, Jones MW, McGill I. Analysis of the impact of badger culling on bovine tuberculosis in cattle in the high-risk area of England, 2009–2020. *Vet Rec* 2022; doi:10.1002/vetr.1384
- 4 Langton TES, Jones MW, McGill I. Badger culling to control bovine TB. *Vet Rec* 2022;190:289–90
- 5 Defra press office. Rebuttal of claims on TB cull effectiveness. <https://bit.ly/3wrA4Tj> (accessed 16 May 2022)
- 6 Middlemiss C. CVO comments on a recent paper on the effectiveness of badger culling. <https://bit.ly/3lc2v2r> (accessed 16 May 2022)