

BVA response to: Bovine TB: consultation on proposals to manage the delivery of both badger vaccination and culling in Edge counties

Who we are

1. The British Veterinary Association (BVA) is the national representative body for the veterinary profession in the United Kingdom. With over 18,000 members, our primary aim is to represent, support and champion the interests of the United Kingdom's veterinary profession. We, therefore, take a keen interest in all issues affecting the profession, including animal health and welfare, public health, regulatory issues and employment matters and the wellbeing of the profession.
2. We have worked jointly on this response with colleagues at the British Veterinary Zoological Society (BVZS), the specialist division of BVA recognised as having responsibility for exotic pets, companion avian species, zoo animals and wildlife.

Our response

3. We welcome the opportunity to comment on this proposal to manage the delivery of both vaccination and culling of badgers in the Edge Area of England.
4. Halting the spread of bovine Tuberculosis (bTB) is essential for both animal health and welfare and the profitability and sustainability of the livestock industry, and it is vital that we continue to utilise every tool in the toolbox to curb this devastating disease. This includes support for control measures in cattle and simultaneous and coordinated measures in badgers.
5. Targeted and managed badger culling is an option to be used in carefully selected areas where badgers are regarded as a significant contributor to the persistent presence of bTB. We also support the vaccination of badgers where this can be used at the edge of endemic bTB areas to mitigate the spread of the disease into low risk areas. Consequently, we have previously welcomed the Badger Edge Vaccination Scheme and strongly support any further research into the efficacy of vaccine programmes.
6. The government's response to the bTB strategy review "Next steps for the strategy for achieving bovine tuberculosis free status for England" sets out the plans for the next five years including:

"The government envisages that the current intensive [badger] culling policy would begin to be phased out in the next few years, gradually replaced by government-supported badger vaccination and surveillance."
7. This indicates that for some time there will be both a policy of badger culling and a badger vaccination programme in operation in the Edge Area of England. These different badger control methods will co-exist, and protocols will need to be designed and implemented to allow for this to happen effectively.
8. The development of clear protocols can have the additional benefit of engendering buy-in from all stakeholders who are involved in badger control programmes. The appropriate

application of a protocol supports consistent and fair decision-making and as such we support the government's decision to develop this proposal.

Delivery of adjacent vaccination and culling

9. In order to manage the deployment of both vaccination and culling it is proposed that badgers within active vaccination sites in the Edge area are protected from adjacent culling through the use of no-cull zones surrounding the vaccination sites. We support the principle of protecting vaccinated badgers from culling on value for money grounds as any overlap in controls represents a duplication of effort. We also recognise the political incentive.
10. The proposals represent an opportunity to develop a strategy which, if successful, could be reasonably rolled out to other areas of England. In testing this approach, the current vaccination activity in the Edge Area must not be compromised. Consideration should also be given to a flexible approach where local geography and epidemiology means that concentric circles may not be the best fit.

Cage-trapping zones

11. A cage-trapping only zone for culling around a vaccination area, which allows vaccinated badgers to be identified and released, is the preferred option as it ensures that badger control interventions of some kind can go ahead throughout the Edge Area. However, we recognise that this option would require additional resource to implement, including a workable method of permanently identifying vaccinated badgers such that they are readily identifiable if trapped.
12. We welcome APHA efforts to evaluate methods of marking badgers and appreciate that finding an approach which is both effective and long-lasting, as well as being practical from a health and safety point of view is not without its challenges. Identification methods which are easily recognisable for years rather than months would be preferable, although the evidence-base is currently lacking on the efficacy of the vaccine beyond year one.

No-cull zones

13. The designation of no-cull zones surrounding vaccination areas has the potential to create large parts of the Edge Area where no badger controls are undertaken even where epidemiological data might indicate a need. As such it is essential that no-cull zones are designated according to strict criteria based on the best available evidence, and that ongoing monitoring is incorporated.

Proposed minimum criteria for no-cull zones

14. The proposed minimum criteria for no-cull zones around vaccination areas as set out in the consultation document are currently lacking in sufficient detail for us to comment fully.
15. We support the principle that there should be a sustained vaccination effort over a meaningful area before a no-cull zone could be considered. We recognise that, in contrast to culling, there is no minimum area size below which vaccination increases disease spread and sites are generally licensed for vaccination providing there is potential for at least one badger to be vaccinated. As such, we agree that the existence of a vaccination area should not, on its own, be sufficient reason for an adjacent no-cull zone, not least because it could result in vaccination licensing across a vast number of small sites with the primary purpose of disrupting future culling activity.
16. The rationale of setting a "sufficient number" at a comparable level to the minimum number that would need to be removed during a licensed culling operation (eg. 2.7 badgers per km² or 70% of the population) is not without its challenges. The fluctuations in population density

may be expected to be equalise over a 150km² + cull zone. In a much smaller area the presence of natural barriers to sett-building may reduce the population in that locality, and conversely particularly favourable local conditions might increase the population. Furthermore, although cull companies do usually achieve the minimum cull numbers dictated by the cull license, they are also using free shooting to achieve that target. In 2019 in the 11 new areas 19,806 badgers were killed, 13,439 by free shooting and 6,367 (32%) in cages. In Derbyshire the vaccination programme has achieved 637 vaccinations across 110km² over four years¹, and the APHA Badger Vaccine Deployment Project has achieved variable results year on year, with year one seeing the lowest number vaccinated². On that basis it does not seem entirely realistic to require cage-trapping and vaccination of a minimum of 2.7 badgers per km² in a year before a no-cull zone is considered.

17. As such, we support the proposal that, where the initial guideline of 70% is not considered appropriate, Natural England will set the minimum sufficient number for each site taking into account any extenuating local factors (for example, low badger density due to the type of land). We also support the suggestion that performance in previous seasons should be used as a predictor of future performance, providing an additional evidence base on which Natural England can base decisions around minimum sufficient numbers. There is some evidence to suggest that a vaccination rate of approximately one third of a social group can achieve significantly reduced risks to unvaccinated cubs, which should also form part of the evidence-base informing minimum vaccination numbers³.
18. We understand that for operational reasons only sites licensed for vaccination by the end of the previous cull season will be considered for no-cull zones in order to avoid overlap and confusion with spring applications for new cull zones, and in order ensure that an adequate number of vaccinations have been achieved.

Size of the no-cull zone

19. Under the proposal, no-cull zones, where applied, would have a maximum width of 2km and a minimum width of 200m, with the precise size determined such that the overall area of the no-cull zone is equal to the size of the vaccination area concerned.
20. We broadly support the proposed minimum width of 200m recognising that this reflects the findings from the RBCCT where the 200m zone just inside accessible land adjacent to uncultured areas saw a large increase in trap rates, the experience in the margins applied to current cull zones, and the experience of non-participatory areas within cull zones.
21. As the width of a no-cull zone increases the land subject to no badger control also increases. Although badgers can range further than 2km, this is not the norm and we consider that a maximum width of 2km is difficult to justify. In this scenario badgers in a sett in the middle of the no-cull band with a roaming radius of 1km (2km range overall) might never come into contact with an area where badger control (either vaccination or culling) is being implemented. This would potentially leave an infected badger population as a source of infection in the area, representing an unacceptable risk to cattle.

¹ <https://www.derbyshirewildlifetrust.org.uk/badger-vaccination>

² [Badger Vaccine Deployment Project Final Lessons Learned Report](#), March 2015

³ BCG Vaccination Reduces Risk of Tuberculosis Infection in Vaccinated Badgers and Unvaccinated Badger Cubs, Carter et al, Dec 2012, <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0049833> and Quantification of Mycobacterium bovis transmission in a badger vaccine field trial, Aznar et al, April 2017, <http://www.bovinetb.info/docs/quantification-of-mycobacterium-bovis-transmission-in-a-badger-vaccine-field-trial.pdf>

22. While we recognise the rational of proportionate no-cull zone widths to avoid a proliferation of small vaccination areas surrounded by larger no-cull areas, this is problematic in that the roaming behaviour of badgers will be the same regardless of vaccination area size.
23. On balance we suggest a minimum width of 200m and a maximum width of 400m, regardless of vaccination site area. This approach will increase the likelihood of badgers in the no-cull zone being drawn either into a cull zone, or a vaccination zone, and reduce the likelihood of an infected population acting as a source of infection for cattle in the area, whilst also keeping the risk of culling vaccinated badgers as an acceptably low level. The impact of the application of the proposed minimum and maximum widths should be kept under review such that an evidence based can be built to inform future policy adjustments. We recognise that a narrower no-cull zone will increase the likelihood of vaccinated badgers ranging into cull areas and for this reason we suggest that consideration could be given to an outer cage-trap area, subject to a workable means of marking vaccinated badgers, up to a range of 2km.

Communicating locations to cull companies and vaccination groups

24. Although we recognise the need to release details of no-cull zones to cull companies we have some concerns about how the detail of vaccination sites will be protected from leaks. There is some evidence to suggest that those choosing to vaccinate on their land are at risk of being targeted by those who favour culling and we would urge Defra to take all steps necessary to ensure that anyone vaccinating on their land feels comfortable requesting a no-cull zone without the risk of persecution. For adjacent vaccination and culling to work as a long-term strategy the safety and security of all parties involved must be paramount.