

Defra Consultation on a Badger Control Policy

Submission by OneKind

OneKind (formerly Advocates for Animals) welcomes the opportunity to comment on the Government's proposed approach to badger control in England. We would like to state at the outset that we are equally concerned about the welfare of badgers and cattle. We believe that the Government's approach to tackling bovine TB must be science-based and must take full account of the welfare of both of these species.

Q1: Comments are invited on the options, costs and assumptions made in the Impact Assessment

In our view, the Impact Assessment fails to take proper account of the available scientific evidence. The results of the Randomised Badger Culling Trial (RBCT) and associated peer-reviewed papers are the only relevant source of independent scientific evidence based on a rigorous scientific trial. We are therefore surprised that Defra appears to have ignored key conclusions of this work in assessing the likely costs and benefits of the various options under consideration.

The Impact Assessment assumes that issuing licences to farmers and landowners to cull badgers (alone or in combination with vaccination) will yield benefits in terms of a reduction in cattle herd TB breakdowns. However, the Independent Scientific Group on Cattle TB (ISG), which conducted the RBCT, has made it clear that it considers that issuing licences to cull would be likely to make the problem of cattle TB worse rather than better (ISG, 2007):

“we consider it likely that licensing farmers (or their appointees) to cull badgers would not only fail to achieve a beneficial effect, but would entail a substantial risk of increasing the incidence of cattle TB and spreading the disease in space, whether licences were issued to individual farmers or to groups. This would have economic implications for Government, and could also have legal consequences”.

As a result, the Impact Assessment is based on an expectation of benefits from badger culling under licence that are unlikely to be realised in practice. Proper consideration of the scientific evidence, which indicates that an increase in the incidence and spread of cattle TB is a more likely outcome of issuing licences to cull, would clearly make this option less favourable than the other options under consideration.

The ISG (*Ibid.*) noted that there was *“considerable reluctance to accept and embrace scientific findings”* and considered it *“unfortunate that agricultural and veterinary leaders continue to believe, in spite of overwhelming scientific evidence to the contrary, that the main approach to cattle TB control must involve some form of badger population control.”* They expressed their hope *“that Defra will embrace new scientific findings, and communicate these to stakeholders in ways that encourage acceptance and participation.”*

We are dismayed that Defra has instead chosen to give in to pressure from misguided members of the farming industry and veterinary profession and propose a policy of culling badgers.

The current proposal appears to be based on the premise that a culling policy can be made to be cost-effective by placing the bulk of the financial burden of carrying out the culling onto

farmers rather than Government. Even with the incorporation of what we consider to be unrealistically optimistic expectations of beneficial effects of culling under licence, the Impact Assessment acknowledges that the monetary cost to farmers in culling areas would exceed the expected monetary benefits. This raises serious concerns regarding the ongoing compliance of farmers/landowners with licence criteria.

Even if culling could be carried out in such a way as to achieve an overall beneficial effect on cattle TB, analysis of the duration of effects following cessation of culling in the RBCT indicates that any benefits would not be maintained in the long term once culling is ended (Jenkins *et al*, 2010). Given that culling has been shown to increase both the prevalence and spatial extent of bovine TB infection within the remaining badger population (Woodroffe *et al*, 2006) we have serious concerns that a policy of culling could store up greater problems for the future as the badger population recovered, potentially creating a worse situation than existed before culling was undertaken.

Q2: Do you agree with the preferred option?

No, we are strongly opposed to option 6. This course of action is not supported by the available scientific evidence or by a realistic assessment of the likely costs and benefits. The ISG (2007) concludes:

“On the basis of our careful review of all currently available evidence, we conclude that badger culling is unlikely to contribute positively, or cost effectively, to the control of cattle TB in Britain”.

We are extremely disappointed that Defra has chosen to ignore the advice of independent scientific experts, whose findings and conclusions have been published in top quality peer-reviewed journals and are widely accepted within the scientific community.

Defra’s proposal appears to be based on the assumption that culling under licence by farmers/landowners could be carried out in such a way that the overall impact on cattle TB will be positive. The scientific evidence indicates that this is very unlikely to be possible and that, even if it were possible, it could only be achieved by largely eliminating badgers from vast swathes of the British countryside. The ISG (2007) states:

“We are unable to conceive of a system of culling, other than the systematic elimination, or virtual elimination, of badgers over very extensive areas, that would avoid the serious adverse consequences of perturbation. Given the logistical, economic, legal, environmental and welfare concerns associated with the methods that would need to be employed to attempt eradication on such scales, in addition to the likelihood of significant public opposition to such widespread culling... elimination of badgers across large areas does not represent a feasible control option.”

We consider that the virtual elimination of badgers over large areas of countryside would be completely unacceptable and we believe that this view is likely to be shared by a large majority of the British public. The strength of public feeling on this issue was demonstrated by the overwhelming majority (over 95%) of responses to Defra’s 2006 consultation that expressed opposition to a badger cull (Defra, 2006).

The proposed use of vaccination to mitigate the negative effects of perturbation caused by culling is untested and cannot be relied upon to prevent the potentially very serious adverse consequences of culling. The ISG considers that vaccination is likely to be more effective if used alone rather than in combination with culling (*Ibid.*):

“the RBCT finding that contact rates between badgers apparently increase, rather than decline, in response to culling suggests that, were a vaccine available for badgers [which it is now], its effectiveness at the population level would be undermined, rather than reinforced, by combining it with culling. General models of wildlife disease likewise predict that culling and vaccination are more likely to achieve control when deployed separately rather than in combination”.

This latter point is discussed further in our response to question 6.

Q3: Do you agree that this approach, of issuing licences to farmers/landowners, is the most appropriate way to operate a badger control policy?

No, we are strongly opposed to this approach. The scientific evidence indicates that issuing licences to farmers/landowners to cull badgers would be likely to make cattle TB worse rather than better. The ISG (2007) states:

*“It is almost certain that, for logistical reasons, culls would not be conducted simultaneously across areas, yet RBCT data suggest that simultaneous culling is vital. Most RBCT proactive culls were conducted in single operations across entire areas; this entailed deployment of over 500 traps, on average, on each initial cull. It is extremely unlikely that farmers (or contractors) could coordinate simultaneous operations on this scale, whatever the culling method used. This is cause for concern, because on the few occasions when RBCT proactive culls were conducted sequentially in smaller sectors, the culling-induced increase in *M. bovis* prevalence in badgers was significantly greater... Hence, sector-based culling conducted by farmers (or their contractors) would be expected to generate increases in *M. bovis* prevalence in badgers greater than those observed in the RBCT. This means that culling-induced increases in *M. bovis* infection in badgers could undermine beneficial effects for cattle to a greater extent than occurred in the RBCT”.*

And:

“A further demanding requirement would be the need to repeat culls regularly. RBCT findings show that badger culling reduced cattle TB only when it was repeated regularly: proactive culling had overall detrimental effects between the first and second culls, and became beneficial only after the third or fourth cull... Hence, any farmer-led operations would have to coordinate culling over large areas not once, but repeatedly over several years. This could inhibit or erode compliance, potentially causing detrimental effects. Eventual cessation of culling would be expected to prompt a return to original conditions of cattle TB risk.”

The ISG concludes (*Ibid.*):

“Culling badgers under licence not only could fail to achieve a beneficial effect, but could increase the incidence of cattle TB and increase the geographical spread of the disease, irrespective of whether licences were issued to individual farmers or to groups”.

Q4: Do you agree with the proposed licensing criteria for culling and vaccination?

No. As discussed in our response to question 3, the scientific evidence from the RBCT indicates that the detrimental effects of perturbation are likely to be worse if culling is not carried out simultaneously across the culling area and/or if culling is not repeated regularly for several years. We consider that the proposed licensing criteria fail to address these crucial issues.

The proposed licensing criteria fail to address the practical difficulty of conducting culls simultaneously. We consider that this is likely to be impossible to achieve if culling is carried out under licence by farmers/landowners and/or their appointees. Failing to cull simultaneously across the area would be expected to exacerbate the detrimental effects caused by perturbation.

The proposed licensing criteria include a requirement to cull annually for at least four years. However, it is unclear how such a requirement could be enforced. Whilst groups of farmers/landowners may commit to this requirement at the outset, their motivation to continue with annual culls is likely to be eroded once an initial reduction in badger numbers has been achieved and/or as it becomes apparent that the cull is costing them more money than it is saving them.

We are concerned that the primary method of addressing non-compliance with licensing criteria would be likely to make the situation worse. The consultation document states: *“licences will be revoked if at any time the criteria are not met”*. We fail to see how the problem of farmers/landowners stopping culling prematurely could be addressed by revoking licences (since this would also have the effect of stopping culling).

In addition, we consider that some of the licensing criteria are unrealistic, such as the requirement to demonstrate that *“where possible, the area will have boundaries or buffers to mitigate any possible negative effects in neighbouring areas caused by perturbation of badgers’ social groups and increased disease transmission”*. We consider that this is rarely likely to be possible in practice because there are few appropriate natural boundaries to badger movement in regions of England with high TB incidence (ISG, 2007).

We are also concerned that uptake of vaccination by farmers/landowners would be likely to be very limited under the current proposal because the proposed licensing criteria require only that the role of vaccination is *“fully considered”*.

Q5: Do you agree that the proposed methods of culling are effective and humane?

No. Whilst we strongly support the Government’s decision to rule out culling methods involving the use of gassing, snaring or oral poisons, we have concerns regarding the humaneness of the proposed culling methods.

Under the current proposals, shooting of free-ranging badgers is likely to be the most common method used (because it is the cheapest option). We are concerned that this may not be a humane method for the culling of badgers. The Game Conservancy Trust (GCT, 2006) states:

“the anatomy of the badger... is a marked departure from that of the deer or fox, and an appreciation of the differences would be essential to achieve a humane outcome in shooting this species. It is clear that a degree of specialist knowledge is required, and that an ignorant shooter could make a number of fundamental mistakes, with serious adverse consequences for the badger... The indistinct outline of the badger under a spotlight, and its variable height depending on whether it is in foraging or walking posture, would clearly require good judgement on the part of the shooter... The operator may also need to be aware that because of the anterior slant of the shoulder blades, the elbow travels somewhat further back than in deer or fox. Consequently, when the lower part of the fore-leg nearest the observer is in an upright position... the heart/lung target area will be obscured by a robust bony limb”.

Given that shooting is likely to take place mostly at night and may be carried out by farmers with no prior experience of shooting this species, we are concerned that the proportion of badgers wounded rather than killed outright may be unacceptably high and that follow-up with a second shot is likely to be difficult. The GCT states (*Ibid.*):

“In night-shooting, follow-up is clearly difficult, and it is important that the animal drops where it is shot.”

While we do not agree with any culling of badgers, if it were to go ahead we believe it would be essential for licence criteria to include a requirement for shooting to be carried out only by specialist trained operators, in order to ensure the necessary level of expertise and specialist knowledge to minimise the number of badgers wounded rather than killed.. The GCT concludes that shooting by professional operators is likely to be more appropriate than shooting by landowners and farmers (*Ibid.*):

“In view of the necessity for a centre-fire rifle and good quality telescopic sight, the requirement for a Fire-Arms Certificate, the specialist knowledge required for all use of centre-fire rifles, the extra knowledge required to adjust technique to badgers, the anti-social hours involved in night-shooting, and other specialist equipment required, shooting is a technique likely to be employed by professional operators rather than by landowners and farmers with other demands on their time. Because of the finite number of badgers on any one land-parcel, such specialists would probably need to operate on a roving basis among many different land-parcels.”

This again highlights the impracticality of culling simultaneously across the entire culling area. This is likely to exacerbate the detrimental effects caused by perturbation, as discussed in our response to question 3.

The use of cage-trapping followed by shooting would be expected to increase the likelihood of the animal being dispatched with a single shot. However, the animal must endure the stress of capture and detainment in the trap. In the RBCT, 12.5% of captured badgers sustained trap-related injuries (ISG, 2007). Over 30% of these injuries were serious, including damage to the teeth and jaws (*Ibid.*). Woodroffe *et al* (2005a) consider that such injuries could cause serious pain. Traps were set in the late afternoon and checked early the next morning, although in a minority of cases traps were not checked until after noon (*Ibid.*). The incidence of trap-related injuries was not observed to increase for those traps checked later in the day (*Ibid.*). Nevertheless, confinement in the trap is clearly likely to be very stressful and, if this method were employed, it would therefore be essential to ensure traps were checked early in the morning to minimise the time between capture and culling. However, we are concerned that such a requirement would be impossible to police if culling were carried out by large numbers of farmers and landowners or their appointees rather than being Government-led.

If culling were to go ahead, it would be essential to have an adequate closed season to minimise the suffering and death of dependent badger cubs following culling of lactating females. We welcome the inclusion in the proposal of a closed season during late winter/early spring. However, we are concerned that the dates for this have not been specified in the proposal. In the RBCT, the closed season operated from 1st February to 30th April. No lactating females were captured during January but a significant minority of adult female badgers captured during May were found to be actively lactating (Woodroffe *et al*, 2005b; ISG, 2007). We therefore believe that the closed season would need to be extended into May in order to minimise the risk of culling lactating females. Woodroffe *et al* (2005b) state:

“the data on timing of reproduction... suggest that shortening the closed season would lead to a marked increase in the number of cubs left to starve in the den. This suggests that reducing the length of the closed season would have serious welfare implications for badger cubs... Extending the season into May could reduce the number of actively lactating females culled, although it would be impossible to eliminate entirely the risk of missing dependent cubs.”

The comments in this section are offered merely for information and should not be taken as indicating a positive preference for any of the options discussed.

Q6: Do you agree with the proposed use of vaccination, particularly its focus on mitigating the perturbation effects of culling?

No, we believe that vaccination should be used on its own rather than in an attempt to mitigate the negative effects of perturbation caused by culling. The effectiveness of vaccination for this purpose has never been evaluated and it cannot be relied upon to prevent the potentially very serious adverse consequences of culling.

The scientific evidence indicates that culling would be expected to increase the prevalence of bovine TB infection in the remaining badger population (ISG, 2007):

“Culling profoundly altered the prevalence and distribution of M. bovis infection in badgers. Statistical analyses adjusting for variables such as age, sex, triplet, and various measures relating to the probability of detecting infection, revealed that prevalence rose on successive proactive culls... Overall, by the fourth cull the prevalence of infection was approximately double that recorded on the initial cull (odds ratio 1.92, 95% confidence interval 1.51-2.45) after adjusting for other factors”

The larger the proportion of infected badgers within the population, the longer it would take to build up herd immunity. The effectiveness of vaccination is therefore likely to be seriously undermined by using it in combination with culling. The authors of the Jenkins *et al* (2010) paper comment (EWRPAG, 2010):

“ we note that culling elevated the prevalence of M. bovis infection in badgers... This raises the possibility that vaccination might take longer to reduce the prevalence of infection in badgers if applied in the wake of culling, than if it were used in undisturbed badger populations.”

The ISG (2007) concludes:

“Badger culling combined with vaccination is likely to reduce any advantage gained by vaccination”.

Q7: Should anything further be done to encourage the use of vaccination?

Yes. We support option 3 or option 5, whereby vaccination would be used alone rather than in combination with culling to address bovine TB infection in the badger population. As discussed in our responses to questions 2 and 3, we consider that issuing licences to farmers/landowners to cull badgers carries an unacceptably high risk of causing an overall detrimental effect on cattle TB and that, in order for culling to be effective in having an overall beneficial effect on cattle TB, badgers would have to be virtually eliminated from vast swathes of the British countryside. In our view, both of these possibilities are completely unacceptable.

The use of vaccination without culling would avoid disrupting badger social groups and would therefore avoid the very serious risks associated with perturbation caused by culling. We are dismayed that Defra has decided to scale back proposed trials of badger vaccination. We urge Defra to reverse this decision and to consider expanding this in due course to a Government-led policy of badger vaccination throughout areas of high cattle TB incidence (option 3) in order to provide a safe and sustainable approach to achieving a long-term reduction in bovine TB incidence.

Alternatively, promoting widespread uptake of vaccination by farmers and landowners (option 5) could potentially make a significant contribution to reducing bovine TB incidence. The success of this approach would be dependent on Defra accepting the scientific evidence and engaging objectively with the farming and veterinary communities to promote greater understanding of the complex dynamics of this disease in cattle and badgers.

Clearly, application of stringent cattle-based control measures would also be essential in combination with any vaccination policy in order to work towards the eventual elimination of bovine TB. The ISG (2007) concludes:

“In contrast with the situation regarding badger culling, our data and modelling suggest that substantial reductions in cattle TB incidence could be achieved by improving cattle-based control measures.”

Q8: Do you agree with the proposed monitoring?

No. Given the large number of individual farmers, landowners and contractors that would be involved in the proposed cull, we are concerned that it would be impractical to provide monitoring on a sufficient scale to ensure that culling was carried out as humanely as possible.

Monitoring of the incidence of TB in cattle would be of limited value in assessing any positive or negative effects of the culling policy because of an absence of non-culled control areas for comparison.

References:

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