

Rural Development Sub-committee

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Evidence submitted by RSPCA Cymru to the Committee's inquiry into TB in Wales.

Introduction

1. RSPCA Cymru welcomes the opportunity to submit written evidence to the Assembly's Rural Development Sub-committee. The RSPCA has a long history of involvement with the issue and has been a member of the Wales TB Action Group from its inception. 2. In 2005 the Government published its strategic framework for the sustainable control of bovine tuberculosis (bTB) within Great Britain.[1] Amongst other things this stated the commitment 'to ensuring its policies on bTB are recognised as being soundly based on scientific evidence' (paragraph 4.5.1) The RSPCA believes that the publication of the final report of the Independent Scientific Group (ISG) on Cattle TB presents a test of that commitment. 3. In relation to wildlife controls the strategic framework stated that in developing policy decisions on badger management or other wildlife controls consideration would be given to five points. All points were considered equally important. (paragraph 4.3.4)

Efficacy: policy must take account of the costs (including welfare costs) and benefits.

Conservation: policy must take account of wildlife conservation objectives.

Welfare: policy will take account of legislation protecting the welfare of badgers, and any necessary culling would be carried out with due regard to welfare considerations.

Wider society: policy must take into account the views of wider society on bTB controls and wildlife culling in particular.

Overall approach: any wildlife management policy must form part of a holistic approach to bTB that balances cattle and wildlife controls.

The ISG Final Report

4. Whilst having prime responsibility for the design and analysis of the randomised badger culling trial it is important to recognise that the ISG's terms of reference directed it to consider the problem of cattle TB more widely than simply the delivery of findings from the trial. (paragraph 1.14) The RSPCA welcomed the breadth of the ISG's approach to the issue from the outset. 5. In addition to the culling trial, an extensive programme of research has been undertaken by a variety of organisations. This has also clearly informed the ISG's final report along with the results of other work. Their final report should therefore be considered from the broad perspective. 6. The RSPCA believes that the science underlying the badger culling trial is sound. Throughout the trial the various elements of it have been subject to independent auditing and scrutiny. The key results from it have been published in eminent scientific journals, after independent peer review, and the data made available for scrutiny. 7. The culling trial was often referred to as 'the Krebs trials' after the Professor who chaired the Review Group which recommended such a scientific experiment in 1997. It is therefore relevant to note what, now, Lord Krebs said in the light of the ISG report. Speaking in a recent parliamentary debate on bovine tuberculosis he said

"... we now know from reading the report of the independent scientific group that culling is not a viable policy option. There is no wriggle room. ..."[2]

8. The Committee will doubtless be aware of the key finding of the trial that reactive badger culling was associated with a roughly 20% increase in cattle TB incidence whilst proactive culling was associated with an estimated 23% reduction in cattle TB inside the proactive areas but a 25% increase on neighbouring land. (paragraphs 6-9 on page 19 & 20) 9. These findings highlight the importance of badger ecology and behaviour in TB epidemiology and the need for an ecological perspective on disease control. However, such ecological aspects are not unique to bTB control but, eventually, had a bearing on the approach to the control of rabies on the Continent and also Classical Swine Fever. [3] During the Foot and Mouth Disease epidemic in 2001 the official government veterinary advice regarding deer and suspected FMD was "Take no action against deer. Attempts to cull are likely to increase the risk that disease will spread, not diminish it." [4] 10. The social disruption caused by culling profoundly altered the pattern of badger distribution and behaviour. This has been referred to as perturbation. In addition to the bait marking work undertaken in the trial a separate analysis of genetic signatures of badger populations revealed medium- and long-distance (>5km) movement following culling.[5] It is important to recognise that, probably as a result, bTB prevalence in badgers rose substantially. After the fourth cull it was approximately double that recorded on the initial cull.(paragraph 4.26) Culling also affected the spatial distribution of infection within the badger population with infection becoming less localised.(paragraph 4.29) 11. Such findings are supported by other recently published scientific work. E.g., Vicente and others [6] "Demonstrated the importance of social structure in the dynamics of disease transmission and provided evidence that a stable social structure mitigates against new incident cases of disease. And the review of studies by Macdonald and others"." supported the perturbation hypothesis as the mechanism to explain the failure of badger control. [7] 12. As the ISG point out, their findings contrast with the conventional view of culling as a tool for controlling disease transmission by reducing contact rates among hosts. (paragraph 4.49) It is therefore important to understand the basis for this conclusion since it appears that, in some of the general calls for action to be taken against badgers, its significance has not been understood or recognised. 13. The RSPCA would draw the Committee's attention to the report's discussion about badger management options in chapter 10. In this the ISG evaluate various other culling approaches that have been suggested apart from the options trialled. Thus, for example, culling in areas with boundaries impermeable to badgers to limit inward migration, improved culling efficiency and the selective culling of infected badgers. The RSPCA believes that the analysis and argument presented in their discussion is robust and self-explanatory. 14. It is apparent that only substantial physical boundaries prevent the movement of badgers. In 1975 an area of 105km² around Thornbury in Gloucestershire was chosen as an experimental clearance area for gassing badgers with hydrogen cyanide because it was thought the geographical boundaries chosen would hinder recolonization. In this case the boundaries were the Severn estuary, the M5, the M4 and the Little Avon river. Despite whatever

inhibition such features might have provided, regassing of setts was required on 515 occasions during the seven years of the experiment.[8] 15. The four areas chosen in Ireland for a badger removal study were chosen, in part, because of natural geographical boundaries. Where natural barriers were absent 'buffer areas' were created. However, despite this and the lower density of badgers compared to many areas of England and Wales, there was evidence of inward migration of badgers after the resident badger population had been substantially reduced. The most plausible explanation for the increasing variation of strain types of the "M.bovis" bacterium observed in the badgers as the study progressed was that the disruption caused by the regular culling resulted in extraterritorial movements.[9] 16. TB affected areas with suitable geographic boundaries will be few in number and the above examples illustrate that, even then, inward migration may continue to be a factor. Thus, we believe such an approach is of little relevance to a general policy for bTB control. 17. The cage-trapping method of badger control used in the trial took account of animal welfare considerations. Cage trapping had in fact been the method used by government badger control teams since 1981. Some critics have argued that, contrary to the evidence presented by the ISG, a more efficient control method would have avoided the perturbation effect. The RSPCA believes that this is not the case. Firstly, trapping efficacy was higher than is frequently quoted. A recently published study estimated that during the initial proactive culls trapping efficacy was between 71 and 85 per cent in seven of the areas and between 35 and 46 per cent in the other three. In two of the latter the initial operations were affected by harsh weather. However, of course, all the proactive treatment areas were subject to further culls which are likely to have further reduced populations. In addition, the authors state that modelling work by the Central Science Laboratory indicated that improving culling efficiency from 80 to 100 per cent would result in only a small improvement in the cattle situation and therefore the authors concluded that 'It therefore does not follow that increasing the efficiency of badger culling would result in much greater reductions in cattle TB...'[10] 18. Leaving aside the question of the actual culling efficiency, the fact remains that, even assuming a theoretical culling rate of 100%, the removal of badgers from an area, results in social disruption of those badgers in the surrounding area with the associated increased risk of transmission. 19. Some have argued for selective culling of infected badgers. This is perhaps understandable but ignores a number of key issues;- identification of the diseased animals, the practicalities of their removal and the consequences of disrupting the population and encouraging immigration. These are considered in the ISG report (paragraphs 10.39 -10.42). The situation was summed up by Ben Bradshaw, then Minister of State, in a debate on the dairy industry in the House of Commons. "...One of the other myths that a number of people still repeat and that it is worth exploding while we are on the subject is that it would be possible to have a cull of sick badgers. That is not possible. One cannot tell whether a live badger has TB. One can tell only through a blood test. Any badger cull would have to include healthy badgers, as well as sick badgers." [11] 20. The trial results suggest that with intensive, and repeated, culling over large areas of the order of 300 square kilometres in size the beneficial effects of culling might outweigh the negative effects. (Fig 5.4) We have not seen comparable figures for Wales but it is estimated that up to 25,000 square kilometres of England are considered high incidence areas. [12] In this context such a scenario would therefore have a limited bearing on the disease situation, even aside from all the practical, logistical and welfare problems of such badger culling and the role of cattle to cattle transmission. 21. The RSPCA does not believe that the virtual eradication of badgers from much of Western Britain is a desirable, feasible or even legal policy option or one that would be compatible with the Government's strategic framework. We therefore accept, for the reasons outlined in the report, the ISG's first key conclusion that although badgers are clearly a source of cattle TB that badger culling can make no meaningful contribution to cattle TB control in Britain. 22. We therefore turn to the ISG's second key conclusion that weaknesses in the cattle testing regimes mean that cattle themselves contribute significantly to the persistence and spread of disease and that the rising incidence of disease can be reversed, and geographical spread contained, by the rigid application of cattle-based measures alone. 23. In this context we think it interesting to note that, in their policy document produced last year in response to the Defra consultation on badger culling, the Royal Society, (the national academy of science of the UK and the Commonwealth) stated "Thus ... we believe there is clear scientific support for measures to reduce cattle-cattle transmission, improve biosecurity (e.g. decrease badger to cattle contact) and improve diagnostics. Investment in any of these, along with research on vaccines, is likely to do good and is unlikely to do harm." This was in contrast to the situation regarding badger culling, which they considered "much less clear cut". [13] 24 As the ISG report acknowledges, there has already been some tightening of TB control measures in cattle. For example, pre-movement testing has been introduced and increased use of the gamma interferon test is being implemented. The ISG state that their recommendations regarding cattle control were intended to reinforce the recent changes and were not intended to be prescriptive but to highlight areas for consideration.(paragraph 10.63) 25. Paralleling the evidence provided in the ISG report, a review of the literature undertaken by Defra concluded that that there is a body of scientific evidence supporting the need for pre-movement tuberculin testing as a tool for reducing the risk of translocating TB to low incidence areas (and also to assist with the early detection of TB in high incidence areas).[14] Implementation in Wales is an aspect that the TB Action Group has been involved in. 26. The RSPCA welcomes the fact that since October 2006 greater use has been made of gamma interferon (g-INF) in testing cattle. In extending its use the government estimated that 45,000-50,000 a year would be undertaken. The table below relates to the use of the test for the first seven months of the year and is extracted from the latest statistics.[15] Implementation in Wales is an aspect that the TB Action Group has been closely involved with.

Type of test		Wales	GB total
Parallel testing	No. of animals sampled	1,375	20,664
	No. of samples positive to g-IFN test	252	1,609
	% of samples positive to g-IFN	18.3%	7.8%

Serial testing	No. of animals sampled	45	51
	No. of samples positive to g-INF test	3	3
	% of samples positive to g-IFN test	6.7%	5.9%

28. The ISG comment that "Field data on the most appropriate use of the INF test to support a range of policy options are limited". (paragraph 10.79) Hopefully, information now arising out of the greater use of gamma interferon should enable such an examination as well as an assessment of possible constraints and cost-benefit analyses. A review of its implementation in Wales and possible additional usage was envisaged by the TB Action Group.

Implementation of the EPC Committee's recommendations

29. Recommendation 1: That the Welsh Assembly Government takes immediate action to tackle Bovine TB in Wales, as outlined in para. 3.8 of this report. Wales' approach to tackling TB should be holistic and pragmatic involving all aspects associated with the spread of the disease. Measures should be developed in partnership with all stakeholder groups and based on current scientific knowledge". 30. RSPCA Cymru, as part of the TB Action Group is aware of, and is largely supportive of, the initiatives contained in this recommendation and in their different stages of implementation. 31. Recommendation 2: That the Welsh Assembly Government establishes an 'Intensive Treatment Area' (ITA) within a hotspot area in Wales that has experienced prolonged problems with TB, incorporating the points set out in

para. 3.12 of this report. This should be funded by the Welsh Assembly Government.

32. The Society welcomes the innovative approach of the ITAs. They will help to provide a depth of information in Wales that to date has been lacking. For example, the last study of badger populations in Wales was the mid-1990s, and it is valuable to get more up to date information in this area. 33. The biosecurity ITA is particularly valuable, in that it will help to identify best biosecurity practice to farmers as identified previously in the Independent Husbandry Report and other publications. The development of a biosecurity scoring tool to evaluate on-farm practices and indicate areas for improvement should prove particularly useful as will the use of private veterinary surgeons. 34. One of the veterinary surgeons involved in the TB Action Group presented a detailed account of the biosecurity ITA to the second annual TB conference for Great Britain held in London in May 2007.[17] This was well received. The initial observations were encouraging e.g. increasing awareness of biosecurity and participants changing practice to decrease risk. A detailed evaluation report is due in 2008. 35. The wildlife ITA has not been developed in terms of possible policies to look at the wildlife vectors involved in the disease. The TB Action Group has not met for a considerable period of time and hence these issues have not been pursued. 36. There was a proposed trip to Ireland in April 2007 to see how they addressed this issue, but it was postponed. However, we now have more robust information to inform policy since the reporting back of the Independent Scientific Group (ISG), and this must be taken into consideration before developing the wildlife ITA any further. This would be compatible with the terms of reference of the TB Action Group, i.e. that any approach to controlling the disease in both cattle and wildlife be balanced and based on the available science. 37. One of the recommendations was that the news of progress of the ITAs should be made to the TB Action Group, but this has not been possible for the reasons given above. Along with colleagues from the farming industry, the TB Action Group must be reinstated in order for this important work to continue. 38. Recommendation 3: That the Welsh Assembly Government incrementally rolls-out intensive treatment to other areas of Wales if, following evaluation, it proves useful in controlling TB. Sharing of costs of funding between the farming industry and the Welsh Assembly Government should be considered. 39. Since the change in Ministers, the work of the TB Action Group has been in abeyance and therefore any progression with the ITAs has also been on hold. It would therefore be premature to discuss rolling out the ITA concept to other areas of Wales. 40. Recommendation 4: That the Welsh Assembly Government establishes a Wales TB Action Group to deliver short-term measures to tackle TB in cattle and to investigate longer term measures, as outlined in paragraph. 3.16 of this report. Membership of the Action Group should be small and made up of those able to implement decisions, but representative of stakeholders. The Wales TB Action Group should be accountable to the Minister, but with a specific remit for Action. Regular reports should be made to the Minister and publicised to all stakeholders. 41. The TB Action Group does exist and its membership is small and represents farming, wildlife and animal welfare interests. Some of the areas which it has addressed other than those already mentioned have been the provision of laboratory facilities in Wales to process the gamma interferon tests and cattle valuations. 42. Recommendation 5: That longer term and larger scale investigations, such as vaccine development and trials, continue to be undertaken at UK level. 43. RSPCA Cymru fully supports the development of an effective vaccine and would hope that the long term work which has been undertaken to date would start to yield results in the not too distant future.

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