BRITISH VETERINARY ASSOCIATION

PREPARING FOR A NEW GB STRATEGY ON BOVINE TUBERCULOSIS

Submission by the British Veterinary Association (BVA)

INTRODUCTION

1. The BVA is pleased to respond to the DEFRA consultation on the proposals for a new GB strategy on bovine TB. We believe that the current prevalence of bovine TB, an infection that has a significant impact on the health, welfare and productivity of cattle and is a potential threat to public health, is unacceptable. Effective action is required in both the short and longer term.

2. The number of herds affected by bovine TB has been increasing year on year for a number of years. The extent of those parts of the country described as “hotspot” areas is growing and the disease is continuing to spread to areas which have been free from bovine TB for decades. The movement of cattle to restock farms which were slaughtered out during the 2001 FMD epidemic appears to have introduced infection to previously disease-free areas and the diminution of testing during the epidemic allowed further spread within already infected areas. It is the BVA’s strong view that this deteriorating situation must be tackled as a matter of urgency.

QUESTIONS FOR CONSIDERATION

3. The questions posed in this consultation document are somewhat constrictive and leading, however we will examine them in the order in which they are raised.

Preparing for a new TB Strategy: a new approach

Q1: Bearing in mind we are looking at what we might achieve in terms of bovine TB controls in the next 10 years, do you agree that the most realistic target has to be to contain and progressively reduce spread, incidence and economic costs of the disease and to continue to develop the science base to inform future strategy?

Q2: In defining what we hope to achieve in terms of bovine TB disease control, to what extent should this be regionally differentiated to reflect the distribution of the disease?

4. The BVA believes that the most important action that can be taken in the short term is to stop the deterioration of the current situation and prevent the spread of bovine TB to new areas. It is our strong view that the TB strategy needs to be taken forward on two key fronts as follows with distinct strategies formulated for:

(a) TB “hotspot” areas where the disease is already endemic; and

(b) areas that are currently free of the disease.

5. However disappointing it may be that eradication has been replaced by “contain and progressively reduce spread, incidence and economic cost” the BVA accepts that eradication is not a realistic short-term objective although we are convinced that more rigorous application of existing techniques can reverse the current trend.
6. Maintaining “clean” areas as non-infected must be an essential aim of the strategy. Immediate action is required, as the BVA believes that there is a danger that neither DEFRA nor industry is adequately aware of the urgency of this issue.

Q3: How should the interests of wider society, and the principles of sustainability be recognised in a 10 year vision for bovine TB?

7. Effective meat inspection and pasteurization procedures in the UK have reduced the threat posed to human health. There is currently very little evidence of infection with Mycobacterium bovis acquired indigenously by the human population in this country - although this was not always the case. The presence of a zoonotic infection within a food producing species represents a potential risk to the safety of food and those who handle animals. Any risk is of course increased when the prevalence of infection in cattle increases and therefore the control of TB is an activity for the common good.

Rationale for Government Intervention

Q4: Does Government need to intervene in the control of bovine TB and if so why, and to what extent?

8. The BVA believes that it would be wholly inappropriate for Government not to intervene in the control of bovine TB and as the competent authority Government is required to intervene to satisfy the EU directive. Government and industry may address matters that are outwith the scope of the directive but Government must take the lead.

Balancing costs, benefits and risks

Q5: Who are the main beneficiaries of current bovine TB controls and how should costs be shared between these beneficiaries?

Q6: What contribution should the farming industry make to reduce the risks to their herds of bovine TB?

9. The main beneficiaries of current bovine TB controls are:

   (a) the primary producer;
   (b) the Treasury;
   (c) the agri-food industry; and
   (d) the general public.

10. There are a minority of farmers who appear to have taken little heed of advice on biosecurity during restocking in the wake of the FMD epidemic of 2001; despite this and in the light of public health, animal health and welfare and environmental considerations the BVA believes that the majority of the funding for TB control measures should continue to come from the public purse. It could however be argued that pre and post movement testing facilitates the trade in cattle and therefore could be justified as a cost to be borne by the farmer.

11. The farming industry’s contribution to reducing the risks to their herd of bovine TB should be a firm commitment to biosecurity measures in order to prevent infection from wildlife and from incoming stock. The farming industry should accept that the
movement of animals still poses the greatest risk in terms of the spread of disease and they must be willing to cease these practices where necessary. However, in the absence of hard evidence to the contrary individual farmers may have a case for the humane, controlled removal of badgers where setts are known to be infected i.e. where there is hard evidence of infection in badgers. Badgers are not known for their willingness to conform to biosecurity measures.

**Development of future policies**

Q. 7: Do you agree that, in the light of current evidence, policies should be developed (including badger culling) that seek to control transmission of bovine TB between badgers and cattle?

12. The BVA would support the development of effective, evidence-based policies and strategies to control and better understand the transmission of bovine TB between badgers and cattle. The potential of the badger in the spread and maintenance of TB within an area must be recognised and catered for in the policy. If TB is permitted to be introduced into “clean” areas it is probable that the badger will become infected and the disease remain endemic. Policies developed must eliminate or minimise such spread.

13. Any new strategy or policy needs a strong scientific base and it is the BVA’s view that research should be funded and completed as quickly as possible. We need improved diagnostic tests, particularly for individual animals; an effective vaccine to protect cattle or badgers and a better understanding of the transmission of infection in cattle and other species, and between species. The survey of badgers killed in road traffic accidents should be implemented nationwide, and wildlife should be surveyed when a breakdown is confirmed in a previously free area.

14. However, some evidence strongly suggests the badger may be a reservoir of infection for cattle. The TB control policy must take this into account in relation to those areas currently free of TB.

Q. 8: Should we consider introducing, in conjunction with badger control/management, better controls on the disease in cattle using, for example, the gamma interferon test?

15. In the absence of an alternative simpler and more effective test the present system of SICTT testing should continue. The use of recombinant antigens in the gamma interferon test may increase the sensitivity and specificity. However, some evidence suggests that controlling the disease in cattle without control measures in wildlife vectors may, in some circumstances, have a nugatory effect.

Q. 9: Under what circumstances would a badger culling or management policy be acceptable?

16. The debate over the apparent 27% increase in the number of cases of bovine TB in reactive cull trial areas has caused the trial to be suspended in these areas. The findings appear to suggest that culling of badgers according to the protocol used in the Kreb’s trial is associated with an increase in the spread of TB in these areas and under these circumstances. However, badgers are not the only wildlife species susceptible to bovine TB and the BVA would like to see further studies undertaken to understand what role, if any, other species play in the transmission of the disease. Eradication would benefit the health and welfare of wild animals as well as cattle albeit that this may necessitate the destruction of wildlife in certain areas. Badger culling might not be an acceptable option as far as the general public is concerned.
and a badger management policy might be the preferred option. Culling could only be acceptable if it was proven beyond all doubt that there was no alternative action to control TB in cattle.

Q. 10: How would badger management be organised, monitored and evaluated and who should pay?

17. DEFRA either has or has access to the necessary expertise to organise, monitor and evaluate badger management and the Treasury should foot the bill.

Q. 11: If proactive badger culling is not shown in the Randomised Badger Culling Trial (RBCT) to be effective, what other action should be taken to control the spread of bovine TB in cattle?

18. Bearing in mind the considerable amount of evidence for the badger’s potential as a reservoir of infection for cattle, this question appears rather hypothetical. If it is shown not to be effective then DEFRA and BVA will need to review TB pathogenesis and epidemiology with considerable urgency.

19. Action should include any measures that are already in place and in addition:

(a) improved biosecurity and movement control;

(b) pre-post movement testing including the use of the gamma interferon ELISA; and

(c) measures to minimize contact between cattle and badgers.

What role could vaccines play?

Q. 12: On the basis of scientific evidence to date, how should government focus research efforts on vaccines?

20. There is no doubt that an effective vaccine to protect cattle and wildlife is required, however, the following constraints apply:

(a) the EU may impose constraints on cattle TB vaccines;

(b) by the time an effective vaccine is developed the disease situation is likely to have changed considerably; and

(c) expertise in vaccine production needs to be sought at an early stage in the consideration of a TB strategy.

Improved diagnostics

Q. 13: How should the gamma interferon diagnostic test for cattle be used or developed in GB - to reduce the time herds spend under restriction by increasing the number of animals taken as reactors, to deal rapidly with herd breakdowns outside existing TB hotspot areas and/or to distinguish between vaccinated and infected animals?

21. The gamma interferon diagnostic test should be used for the first two reasons given above in Q. 13. However, BVA would like to add that:
(a) the gamma interferon ELISA may be used as an effective adjunct to the SICTT;

(b) the gamma interferon ELISA cannot currently be used to discriminate between TB vaccinated and TB infected animals. Hypothetically, if the vaccine were to contain antigens shared with M bovis then there would be no discriminatory power within the IFN-g assay. Using unique antigens present in M bovis, which were not present in the vaccine, would enhance the discriminatory power of the IFN-g assay. For example, the BCG vaccine would act in this way. However, if the vaccine does not share antigens then the IFN-g could be used with antigens present only in the challenge. Concerns would remain regarding the recognition of vaccinated animals that subsequently became exposed/infected. These animals would present with a vaccine profile and an M bovis profile but it would not be clear whether they were diseased. Clearly this is a matter for further research;

(c) BVA does not see the gamma interferon test as one to be used in “clean” herds due to its poor specificity;

(d) consideration should be given to reducing the 3 tests on an inconclusive animal to 2 tests, the shorter the period that a potential reactor is on the farm the better;

(e) the 4 year testing programme may only be adequate on farms that are;
   (i) known to have a long history of absence of infection; or
   (ii) in areas free of disease and badgers; or
   (iii) where cattle or other animals potentially able to transmit TB are not brought in,

   if such farms now exist after the FMD outbreak; and

(f) furthermore, the buying in of cattle should be controlled.

**Effective partnership and governance of a new TB strategy**

Q. 14: What could “effective partnerships” mean in relation to bovine TB and what contribution could your organisation make to this?

Q. 15: What should be the governance arrangements for a new TB strategy?

Q. 16: Should the remit of the TB Forum be recast, for example, to have a focus on communicating results of the research programme as recommended by EFRAC?

22. The BVA believes that progress towards the control and eventual eradication of bovine TB can only be achieved by a coordinated approach involving all stakeholders. The Association supports the TB Forum in its efforts to bring together all interest groups to consider new control measures but we would like to see its remit strengthened to include eradication of TB as the long term goal. However, the BVA would like to be directly involved in the development of policies for the eradication of TB not just consulted and asked to comment on DEFRA’s plans.
**Surveillance testing**

Q. 17: Are the five measures proposed to improve surveillance testing and make the system more transparent appropriate or should they be changed?

23. The BVA is encouraged by the measures as proposed but would like to add that:

   (a) in some cases the TB test is the only time the veterinary surgeon will visit a farm and see the whole herd and the BVA would like to see the TB test becoming part of a programme of on-farm surveillance. This would allow for a more appropriate use of veterinary time and skills in providing advice and introducing control strategies to prevent, as well as detect, disease and other welfare problems;

   (b) slaughterhouse surveillance by individuals trained in recognising TB lesions, especially of OTMS cattle which do not enter the food chain, must be persevered with; and

   (c) gamma-interferon testing of inconclusive reactors should be carried out in the first place, this would not be costly and would speed the identification of infected animals.

**Pre and post movement testing**

Q. 18: What are your views on DEFRA’s proposal to reduce the risk of spreading TB from high to low incidence areas by requiring pre-movement testing of all cattle moving from 1 - 2 year testing herds to other herds?

Q. 19: What are your views on the advice that farmers should themselves apply post-movement testing in order to minimize the risk of transfer of the disease from high to low incidence areas?

Q. 20: What are your views on all the other options presented by DEFRA?

24. The BVA believes that the role of quantitative modelling methods, already available to DEFRA, should be assessed for use at a national and a local level when evaluating the risk of spreading TB from high to low incidence areas.

25. It is the BVA’s view that herd testing frequency and scope should be arranged on a parish basis in strict accordance with Directive 64/432. It is essential that steps be taken to prevent the introduction of TB to areas that are currently free of infection. Given that the limitations of the TB test for an individual animal (rather than as a herd test) does not give sufficient assurance, the BVA believes that a complete ban on movement from high to low risk areas is required.

26. Where and if movement is permitted the gamma interferon test, due to its increased sensitivity over the skin test, may have application in assessing whether cattle may be moved from an infected to an uninfected area. An animal with a negative result to this test is much less likely to be infected. Due to difficulties with the specificity of the test it needs to be made clear that a positive result does not necessarily indicate an infected farm, in order not to dissuade farmers from availing themselves of the test. If used, it should be made clear to farmers using the test that a farm with a positive result to the test is not necessarily an infected farm, and that an animal with a negative result is less likely to be infected, not that there is a guarantee that the animal is free of infection. DEFRA may be well advised to provide LVIs with further
information on this test, and where the information is provided, LVIs may be in a position to help DEFRA in explaining the situation to farmers in plain English.

27. When a herd breakdown does occur in a previously free area, rigorous action must be taken to prevent a focus of infection being established. The Cattle Tracing System should be further developed to produce backward and forward tracing lists and limit the opportunity for further spread. Additional measures which should be implemented include isolation and health monitoring protocols for cattle moving between farms, the designation of high and low risk areas, which should be based on sound scientific criteria, and controls which either prevent cattle being moved from the former to the latter or permit only movement of cattle which have tested clear prior to movement. Strain typing of isolates should be introduced as part of the epidemiological investigation of infected herds. Such controls should be used in the short to medium term whilst further scientific studies to identify new and better control methods are completed.

Dealing with emerging hotspots

Q. 21 How effective do you thin k the new proposals for early detection and prevention of developing TB hotspots will be?

28. The BVA is somewhat encouraged by the proposals for early prevention and detection of TB which appear to be logical. However, we would encourage the use of the gamma interferon test from the outset. We cannot afford to wait for trial results to be made available, the danger being that during the waiting period control will be lost over TB.

CONCLUSION

29. The BVA accepts that TB eradication is a long-term objective, unlikely to be achieved in the medium term but must remain the objective of any control programme. In the meantime it is our view that efficient and effective action is required to control the spread of the disease. We recommend that two separate strategies be developed in order that progress is moved forward on two clear fronts:

(a) “hotspot” or high risk areas: incidence of TB to be reduced in the short-term, eradicated in the long-term, and not to be exported to areas traditionally free of disease; and

(b) low risk areas: TB not to be imported from high-risk areas, by the movement either of cattle or of other animals known to be involved in the epidemiology of bovine TB, and farmers to be incentivised in some way to keep their areas clean.

We recommend that a ban be imposed on the movement of cattle and the deliberate movement of all animals known to transmit bovine TB from high-risk areas. The high-risk areas should be defined on a scientific basis using programmes already available to DEFRA, with input from local veterinary surgeons.

30. We consider that DEFRA should run a communications programme educating farmers into understanding that whilst the badger & bovine are equally important in the local spread of TB, they also must recognize for their own benefit:

(a) the limitations of the skin test, even when applied at the herd as opposed to the individual animal level; and
(b) that TB spread to new areas will come about mainly via cattle as badgers only travel a few kilometres.

31. We consider that interpretation of the TB test is an act of diagnosis requiring professional judgment and therefore should continue to be viewed as an act of veterinary surgery. The time of testing is often the only time that the veterinary surgeon visits the farm and sees the whole herd. This gives him/her an ideal opportunity for early detection of disease and other welfare problems and to advise on the implementation of control strategies – we should not wait until there is a problem but be prepared.

32. The BVA notes that the complexity of this response only serves to underline the fact that the control of tuberculosis in cattle and badgers is a complex issue, subject to a variety of local influences as well as national policies. Therefore, the BVA believes that effective control of the disease will only be achieved through local empowerment of teams of DEFRA employees and private veterinary surgeons working together, with national coordination.

NOTE

The British Veterinary Association (BVA) is the national representative body for the veterinary profession in the United Kingdom and represents over 10,000 members. Our chief interest is to protect and promote the interests of the veterinary profession in this country and we therefore take a keen interest in all issues affecting the veterinary profession, be they animal health, animal welfare, public health or employment concerns.