



List of BVA's Recommendations for the Control and Surveillance of *bovine Tuberculosis (bTB)*

Disease Surveillance and Control

- Increased surveillance and controls for *bTB* are proposed, based on a regional approach within the UK cattle and wildlife populations.
- Control and surveillance measures are detailed in the attached strategy document and vary depending on the prevalence of *bTB* within the local populations. (This document should be read in conjunction with this list of recommendations, as well as the supporting document attached.)
- The 3 regional categories proposed are: High Prevalence Areas, *bTB* 'free' areas and Emergent Areas.
- These three categories require different approaches for the successful control of *bTB* by applying the principles of disease control outlined below, and should be applied to cattle, badgers and other wildlife species populations.
- Increased efforts should be made to control *bTB* in hotspot areas.
- *bTB* should be notifiable in all species, and BVA supports Defra's intention to make this the case.

(See the attached strategy and supporting documents for a detailed breakdown of controls by region and a definition of the regional categories above).

Cattle Surveillance and Control

- It is imperative for traditional control measures, defined by European legislation, to be implemented effectively. It is also believed that additional measures should be taken, if necessary, to control the disease in the UK.
- BVA recommends that a series of measures should be implemented to help control the spread of *bTB* within the cattle population. The measures will vary according to the prevalence of *bTB* within the region (See strategy document for detailed breakdown by region). These measures include:
 - Changing tuberculin testing intervals of herds on lower risk or *bTB* 'free' areas from 4 yearly to biennially, and from 3 and 2 yearly to annually (with the completion of a Regulatory Impact Assessment).
 - The isolation and speedy removal of reactors, within 10 working days.
 - The removal of inconclusive reactors (IRs) by applying the EC Directive requirement to remove cattle after the second successive IR result in the interests of due diligence.
 - Backwards and forwards tracing exercises should be completed with appropriate skin *bTB* testing arranged and completed within 30 days of the identification of infection.
 - Further development of the Cattle Tracing System and the British Cattle Movement Service should also be undertaken to facilitate robust tracing.
 - Maintenance of the current meat inspection protocols and the addition of similar surveillance for carcasses not entering the human food chain.
 - Movement restrictions on cattle identified as 'high risk', which should be subject to either a total ban on movement or to a severely restricted range of options for movement. Appropriate restrictions include the following:
 - Movements from/to restricted herds should be banned with exemptions applied as current recent policy allows, namely; direct to slaughter, movement to other approved or restricted units,

- particularly for calf rearers/finishers, restocking of restricted herds with clean cattle in the interests of farm viability.
- The restriction of herds overdue or refusing to carry out the Single Intradermal Comparative Cervical Test (SICCT).
- Pre-movement testing of high risk cattle to reduce the risk of translocation of *bTB*.
- Post-movement testing of high risk cattle attempting to identify those animals translocating disease as early as possible.
- Herd health plans should include the development of farm specific biosecurity plans designed by the farm's veterinary surgeon to reduce the risk of disease introduction. These plans should address the risks of animals from multiple sources and areas mixing and should identify the potential for infection that exists from, for example, livestock markets, mixed contract rearing, mixed batch over wintering, and common grazing.

Badger Surveillance and Control

- *bTB* should be controlled within the badger population in the UK and Defra is encouraged to develop policies now in advance of the results of the Randomised Badger Culling Trial (RBCT).
- BVA supports a targeted humane culling policy aimed to eradicate *bTB* where sufficient evidence exists to classify a sett or social group as infected.
- It is recommended that a long-term strategy for control should include both culling and vaccination.
- In order to achieve a healthy badger population free of *bTB* first principles of disease control state that wherever the disease is identified it should be removed to reduce the possibility of further infection. Specific surveillance and control measures are recommended, depending on the prevalence of *bTB* within a region (see strategy document for detailed breakdown on controls by region). These measures include:
 - The removal of infected badgers.
 - The removal of animals in close contact with infected animals due to the high risk of infection.
 - The maintenance of *bTB* 'free' populations.
 - Surveillance to enable appropriate decision-making in the holistic control of *bTB*.
 - Extension of the Road Traffic Accident (RTA) survey (and examination of other badger carcasses) to emergent areas and *bTB* 'free' areas in an attempt to estimate the level of infection in the population.
- Badger Removal Orders (BROs), issued under the current legislation, should be granted after consideration of evidence by an expert panel for the need for such removal. This will involve:
 - The utilisation of the most appropriate culling method judged by an expert panel, assigned to assess the need for the individual BRO application.
 - The enactment of BROs by the employment of specifically trained and competent persons to supervise all Orders.
 - The appropriate collection of epidemiological material for further analysis.
 - An attempt to estimate the level of infection in the badger population, based on the figures of recent trials and other data available, such as RTA data.

Other Wildlife Species Surveillance and Control

- Formalisation of a system of surveillance in deer and the development of a culling policy.
- BVA would like to see further studies undertaken to understand what role, if any, other species play in the transmission of the disease.

Diagnostics

With regard to the use and development of effective diagnostics, BVA recommends that:

- Tuberculin testing should continue to be undertaken by veterinary surgeons.
- When the SICCT is used on farm it should be accompanied by a full education package regarding the pros and cons of its use to ensure the limitations are understood by both the veterinary surgeon and the farmer. This is particularly relevant for pre- and post-movement testing.
- *Mycobacterium bovis* isolates should be further identified by spoligotyping and the information used in any epidemiological investigation of the pattern of *bTB* infection.
- The Gamma Interferon Test should be used on farms suffering repeated SICCT failure in *bTB* 'free' areas, and more extensively on farms in emergent areas to halt the spread of disease.
- Circulating antibody ELISA tests should be used in the *bTB* surveillance system applied to badger populations.
- Badgers reacting positively to the circulating antibody ELISA test should be removed and subject to post-mortem examination for further epidemiological evidence. Should there be a high incidence of positive ELISA tests over time, epidemiological assessment should be made of the need to remove social groups of badgers due to the high risk of infection. Badgers testing negative should, before release, be vaccinated and micro-chipped for future identification.
- The Gamma Interferon Test should be further validated by investigating the potential role of different antigens to increase the specificity.
- Further validation work should be done on the Polymerase Chain Reaction (PCR) test.

Vaccination

With regard to the development of effective vaccines, BVA recommends that:

- Further vaccine development work should be encouraged.
- Research should urgently be undertaken into the development of specific cattle *bTB* vaccines that both protect against infection, and are 'marked' in some way to differentiate vaccinated from infected animals.
- A further large-scale trial should be carried out to investigate ring vaccination of badgers testing negative to infection around a culled area.

Scientific Evidence/ Research

Three specific areas of research should be progressed immediately:

- Vaccination research – as detailed above.
- Cattle diagnostics – as detailed above (specifically work on various gamma-interferon antigens to improve the specificity of the blood test in cattle).
- Badger diagnostics – as detailed above (specifically work on diagnostic tools to address badger infection and work on the badger side blood tests (e.g. the augmented/modified Brock test).

Scientific Advice

BVA supports the creation of the National Advisory Body for *bTB* and recommends that veterinary practitioners and scientists be employed to aid in the preparation of practical risk-based independent advice.

Note: BVA has produced this policy document in view of the current circumstances and knowledge available (October 2005). It will be revised in light of new developments as they arise.