

Briefing 975

Bovine TB – The Badger Vaccine Deployment Project

Summary

Defra is funding a project to vaccinate badgers against bovine TB in six areas of England with high TB incidence in cattle, starting in summer 2010. This is part of a programme dedicated to developing TB vaccines for badgers and cattle, an important long-term policy option for reducing the risk of bovine TB in Great Britain.

This paper is summarised from the booklet about the project which is at http://www.fera.defra.gov.uk/wildlife/ecologyManagement/bvdp/documents/bvdp_Booklet.pdf

Why a badger vaccine deployment project?

The project aims to assess the practicality of using the badger vaccine and to support the long-term goal of a practical oral badger vaccine. By developing an understanding of how best to practically deploy vaccines, including how best to work with all stakeholders to deliver a vaccination programme and an understanding of training needs, we aim to build confidence in the principle and practicalities of vaccination.

The project is not a scientific trial of how well the vaccine works in badgers, BCG has already been shown to have a protective effect. This will potentially reduce the risk of transmission from badgers to cattle and we will be examining cattle disease trends using cattle TB data. However, no vaccine is 100% effective, so vaccination will need to be one of a range of tools to control TB in cattle.

The Catchment Areas

Six catchment areas of around 75,000 acres have been selected based on high historic TB incidence. Within each area, badgers on up to 25,000 acres of cattle land will be vaccinated.

The six catchment areas are:

- Staffordshire – centred on Eccleshall, north west of Stafford
- Herefordshire/Worcestershire – east of Tenbury Wells, north of Bromyard
- Gloucestershire – Cotswold north east of Cheltenham, south west of Broadway
- Gloucestershire – north west of Stroud, south west of Gloucester, Lower Severn Valley
- Devon – west of Tiverton
- Devon – south east of Tiverton, northeast of Exeter

Targeting vaccination

Defra and Fera (The Food and Environment Research Agency) will be inviting farmers in the six areas to participate. We want to target vaccination at badgers that might interact with cattle. Our approach is

therefore not to 'blanket vaccinate' the whole of the catchment areas but, instead, to target cattle farms and their immediate surroundings.

How trapping and vaccination will be delivered

We aim to vaccinate as many badgers as possible that access participating farms. It is not necessary to trap and vaccinate every badger to provide protection because it is difficult to maintain a chain of infection when large numbers of a population are immune. The stable social structure of badger groups helps.

An outline of the vaccination process is provided below:

- Participants will be signed up during autumn-winter 2009/10 and 2010/11
- Participating cattle land and neighbouring land will be surveyed during winter
- Trapping and vaccination of badgers will take place during summer and autumn to make sure that cubs are vaccinated as soon as possible after birth.
- The traps will be placed at either the badger setts or on badger runs as close as possible to inaccessible setts
- The traps will be baited, but not set, for up to ten nights, for the badgers to get used to going into them
- Trapping and vaccination will take place over about two nights for each sett – this should be an adequate trapping time, as enough traps will be set to trap all the badgers from the sett; however, trapping could be carried out over more nights if necessary
- This trapping and vaccination process will be repeated annually, for five years, to enable newly born cubs to be vaccinated

Success will be dependent on getting the necessary level of contractors and participants signed up. If this isn't achieved within the second year, the phasing-in approach will continue into 2012.

It will take a number of years for reduction in disease levels in badgers to translate into an impact on cattle disease. The vaccine does not 'cure' already infected badgers – these need to die off naturally for the infection risk to cattle from badgers to be reduced. Given that badgers commonly reach three to five years of age, it may take five years or more for a level of immunity to be reached in the badger population that will translate into a reduction in cattle herd breakdowns.

Getting involved in the project

Contractors

Fera will train contractors to carry out vaccination. The catchment area around Stroud and half the area around Cheltenham will be vaccinated as part of a training programme. Vaccination for the other areas will be carried out by contractors recruited through an EU tender process, run by Fera. By phasing in vaccination over two years, this will allow time to train contractors to carry out vaccination in the six areas.

Anyone trapping and vaccinating badgers will need to be licensed under the Wildlife and Countryside Act 1981 and the Protection of Badgers Act 1992.

Farmers

Farmers are not being asked to vaccinate badgers themselves – but are asked to grant access to their land. Taking part in the project is voluntary and the project is designed to learn lessons each year so farmers will be able to review their involvement if any circumstances change. However, participants will be encouraged to take part for the full five years to maximise their chances of seeing benefits.

The application and signing-up of participants in the catchment areas is being carried out by Fera. Farmers wishing to participate will need to meet the following criteria:

- Your land should fall primarily within one of the catchment areas
- You need to manage cattle or land adjacent to cattle land

- Your cattle herd must be on annual routine TB testing
- Your cattle herd must be up-to-date with TB testing when surveying of your land for badger setts is due to start

Farms may be prioritised based on their location:

- Farms with all land parcels within a catchment area will be given priority over fragmented farms with land inside and outside of the catchment area
- Farms that are contiguous to each other, which creates a cluster of vaccinated farms, will also be given priority.

To register an interest in participating, please contact Fera – see contact details below.

Outside the deployment areas

The injectable BCG vaccine for badgers is expected to be licensed in 2010. Once licensed, the vaccine will be available for purchase and use, by suitably trained and licensed personnel, outside the Defra-funded deployment areas. If landowners outside of the project catchment areas wish to use the vaccine, they will have to source and pay for licensed contractors to vaccinate badgers on their land. How this will work in practice is still being developed, but if you are outside the project areas and are interested in using the vaccine contact Fera.

Vaccinating badgers – more harm than good?

Will trapping badgers make them more susceptible to infection or exacerbate disease in already infected badgers?

Evidence from long term live-trapping studies where badgers are trapped, transported, anaesthetised, sampled and released suggests that any stress caused by the process does not exacerbate disease.

Will vaccinated badgers excrete BCG, and potentially sensitise cattle to the skin test?

There is no evidence that BCG is shed from vaccinated badgers and so it would, therefore, not be expected to compromise the use of the tuberculin skin test in cattle.

Does cage trapping and vaccination cause perturbation?

Trapping and vaccinating badgers is very unlikely to cause perturbation because badgers are not being removed from their social group. Removal of badgers, for example by culling, appears to lead to increased ranging by remaining badgers, and a breakdown of the normally stable pattern of badger social group territoriality.

For more information about the Badger Vaccine Deployment Project, including to register your interest in participating, please contact Fera. Online at www.defra.gov.uk/fera/bvdp

Alan Spedding, 10 February 2010

RuSource briefings provide concise information on current farming and rural issues for rural professionals. They are circulated weekly by email and produced by Alan Spedding in association with the Arthur Rank Centre, the national focus for the rural church. Previous briefings can be accessed on the Arthur Rank Centre website at http://www.arthurrankcentre.org.uk/projects/rusource_briefings/index.html

RuSource is a voluntary project partly supported by donations and sponsorship.

© Alan Spedding 2010. This briefing may be reproduced or transmitted in its entirety free of charge. Where extracts are used, their source must be acknowledged. RuSource briefings may not be reproduced in any publication or offered for sale without the prior permission of the copyright holder.

If you would like to be put on the list for regular briefings or have any other queries about the service contact alan.spedding@btopenworld.com.