

Briefing

Bovine TB: A vaccination strategy for badgers and cattle

The Wildlife Trusts are calling on the Government to develop a strategy for the deployment of the currently available BadgerBCG vaccine, and for a potential cattle vaccine when available, as part of its plans to combat bovine TB (bTB).

A scientific research study by Dr Mark Chambers et al (November 2010) found that ‘the advent of the first licensed BCG vaccine for use in wildlife could provide a new and important component of a comprehensive programme of bovine TB control for cattle’.

However, the Government has not prioritised deployment of the BadgerBCG vaccine with a piecemeal approach and minimal effort to market and support use of the vaccine. The Wildlife Trusts have therefore taken a lead with the Gloucestershire Wildlife Trust being the first NGO to vaccinate badgers last year. A further eleven Wildlife Trusts, along with several other organisations, now either have vaccination programmes in place or are currently developing them.

A more coordinated approach to badger vaccination would help to increase use of the vaccine by allowing information to be shared more effectively. It could also help to reduce costs to landowners.

- **We urge the Government to develop a clear strategy for deployment of the injectable BadgerBCG vaccine and to continue development of an oral badger vaccine.**

It is also clear that the development of a vaccine for cattle could play a significant part in tackling bTB. However, EU regulations currently prevent deployment.

- **We urge the Government to push for changes to allow the cattle vaccine to be deployed. Only then will we be able to get on top of this disease in an effective way.**

Contact: Paul Wilkinson, Head of Living Landscape
Phone: 01636 670071
Email: pwilkinson@wildlifetrusts.org



Key quotes and facts

‘Our field study provides, to our knowledge, the first evidence for a beneficial effect of BCG on Mycobacterium bovis infection in free-living badgers’

Dr Mark Chambers et al
Royal Society (Proceedings B),
November 2010

‘Vaccination in an area could reduce the disease level in the local badger population and thus the risk to local cattle from badger-to-cattle transmission. In addition, vaccination is highly unlikely to have negative effects’

Key conclusions from the meeting of scientific experts,
Defra, April 2011

‘If field vaccination using injectable Badger BCG is to be more widely deployed a free advisory service would make the uptake of the technique easier, more efficient and potentially cheaper’

Gloucestershire Wildlife Trust,
October 2011

Questions and answers

What are the potential benefits of badger vaccination?

Vaccination targets the prevalence and severity of the disease rather than the badger population. In a clinical field study, BCG vaccination of free-living badgers reduced the incidence of positive serological test results by 73.8 per cent. A reduction in the prevalence and severity of the disease in badgers could reduce the degree of TB transmission to cattle.

How could use of the injectable badger vaccine be promoted?

The Gloucestershire Wildlife Trust initiated a five-year programme of badger vaccination in 2011. The outcomes from the first year, including costs, are available in a published report at: www.wildlifetrusts.org/badgers-and-bovineTB. Gloucestershire Wildlife Trust's initial conclusions are:

- A central co-ordination and advisory service could facilitate and increase the private deployment of the BadgerBCG vaccine;
- There is considerable potential for reducing costs through combining operations with adjacent areas. Capital items, such as fridges and traps, would be more cost-effective if shared across vaccination programmes.

What are the potential benefits of cattle vaccination?

Vaccination of cattle against bovine TB, used in conjunction with existing TB control measures, could have benefits in reducing the prevalence, incidence and spread of TB in the cattle population and could also reduce the severity of a herd breakdown regardless of whether infection is introduced by wildlife or cattle. Small-scale field studies have been carried out recently in Ethiopia and Mexico and, depending on the parameters selected, the protective effect of vaccination was between 56% and 68%.

What changes are needed to EU legislation to allow a cattle vaccine?

Vaccination of cattle against TB is currently prohibited by EU legislation, in place principally because BCG vaccination of cattle can interfere with the tuberculin skin test. The current development of a new EU Animal Health Law provides an opportunity to change the current legislation which would allow TB vaccination of cattle and use of a test to differentiate infected from vaccinated animals (so-called "DIVA" test) to be used as a trade test.

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There are 47 individual Wildlife Trusts covering the whole of the UK. All are working for an environment rich in wildlife for everyone. They manage more than 90,000 hectares of land in the UK and provide around 5,000 days of land management advice to others every year. We have more than 800,000 members including 150,000 members of our junior branch Wildlife Watch. Our vision is to create A Living Landscape and secure Living Seas. Each Wildlife Trust is working within its local communities to inspire people about the future of their area: their own Living Landscapes and Living Seas.

The Wildlife Trusts, The Kiln, Waterside, Mather Road, Newark, Nottinghamshire NG24 1WT Tel (01636) 677711 Fax (01636) 670001 Email info@wildlifetrusts.org Royal Society of Wildlife Trusts Registered Charity no. 207238 Printed on recycled paper.