

Briefing

Bovine TB and vaccination

The Wildlife Trusts are very conscious of the hardship that bovine TB (bTB) causes in the farming community and the need to find the right mechanisms to control the disease. Our involvement with this issue over a long period of time has led us to the firm conclusion that vaccination, biosecurity measures and accurate testing procedures are the most effective means of controlling bTB.

Vaccination has the potential to reduce bTB without the negative impacts of perturbation arising from a badger cull. Since 1998, the Government has invested £30 million in developing TB vaccines for cattle and badgers. The current status of vaccine development is as follows:

- **Injectable badger vaccine** available since March 2010;
- **Cattle vaccine** expected by the end of 2012 but changes to EU legislation required to permit its use;
- **Oral badger vaccine** predicted to be available in 2015.

Vaccination of cattle would clearly have the potential to reduce the prevalence, incidence and spread of bTB. Badger vaccination has been proven to significantly reduce the progression and severity of TB infection in badgers. The injectable badger vaccine is being used by the Gloucestershire Wildlife Trust, The National Trust and as part of a Government funded trial in Gloucestershire. The effectiveness of badger vaccination in reducing TB in cattle has not yet been tested.

The Wildlife Trusts urge the Government to pursue the following as a matter of priority:

- Support landowners to use the injectable badger vaccine;
- Secure change to EU legislation to permit a cattle vaccine;
- Continue to develop an oral vaccine for badgers.

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Key facts and quotes

- **61% of the 59,540 respondents to Defra's consultation on tackling bovine TB supported vaccination and opposed a badger cull**
Defra, July 2011
- **Vaccination reduced TB infection in wild badgers by 74%**
Royal Society (Proceedings B), November 2010
- **Gloucestershire Wildlife Trust vaccinated 38 badgers on seven nature reserves in 2011**
Gloucestershire Wildlife Trust, September 2011

'The vaccination of cattle against bTB is likely to play a crucial role in achieving the ultimate goal of eradicating the disease'

Royal College of Veterinary Surgeons, December 2010

Questions and answers

What are the potential benefits of badger vaccination?

Vaccination targets the prevalence of the disease, rather than the badger population, and avoids the negative impacts of perturbation arising from a badger cull. A reduction in the prevalence and severity of the disease in badgers will reduce the potential for TB transmission to cattle. Vaccinating the majority of badgers within a social group could achieve 'herd immunity'. According to Defra's Food and Environment Research Agency, "the stable structure of badger groups, with limited mixing of individuals between groups, lends itself to the generation of this 'herd immunity' through vaccination".

How could use of the injectable badger vaccine be promoted?

The Gloucestershire Wildlife Trust (GWT) has carried out a programme of badger vaccination on seven of its nature reserves in summer 2011. This programme will be continued for the next four years. GWT's initial conclusions from the programme are:

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

There are 47 individual Wildlife Trusts covering the whole of the UK and the Isle of Man and Alderney. All are working for an environment rich in wildlife for everyone. We have more than 810,000 members including 150,000 members of our junior branch Wildlife Watch. Our vision is to create A Living Landscape and secure Living Seas. We manage around 2,300 nature reserves and every year we advise thousands of landowners and organisations on how to manage their land for wildlife. We also run marine conservation projects around the UK, collecting vital data on the state of our seas and celebrating our amazing marine wildlife. Every year we work with thousands of schools and our nature reserves and visitor centres receive millions of visitors. 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.

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What are the potential benefits of cattle vaccination?

The BCG cattle vaccine could impact on the incidence and prevalence of bTB within a few years of vaccine implementation and be cost effective. Blanket vaccination would deliver the greatest benefits, but would also involve significant costs. A targeted approach is therefore likely to be the most cost-effective.

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

Although cattle are routinely vaccinated against other diseases, there is an EU ban on using TB vaccines (Directive 78/52/EEC). There is also a ban on trading cattle in the EU that test negative to the tuberculin skin test (Directive 64/432/EEC). As the BCG cattle vaccine interferes with the tuberculin skin test, Defra is also developing a Differentiate Infected from Vaccinated Animals (DIVA) test. Defra has suggested that 2015 is the earliest that changes to EU legislation to permit use of the vaccine could be achieved. However, the ongoing consultation on a new EU Animal Health Law is one potential opportunity.

What are next generation cattle vaccines?

There is potential to develop next generation cattle vaccines that would not interfere with the tuberculin skin test. Defra estimates that their availability is many years away.

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