

Department for Environment, Food and Rural Affairs

Briefing Note

Bovine TB

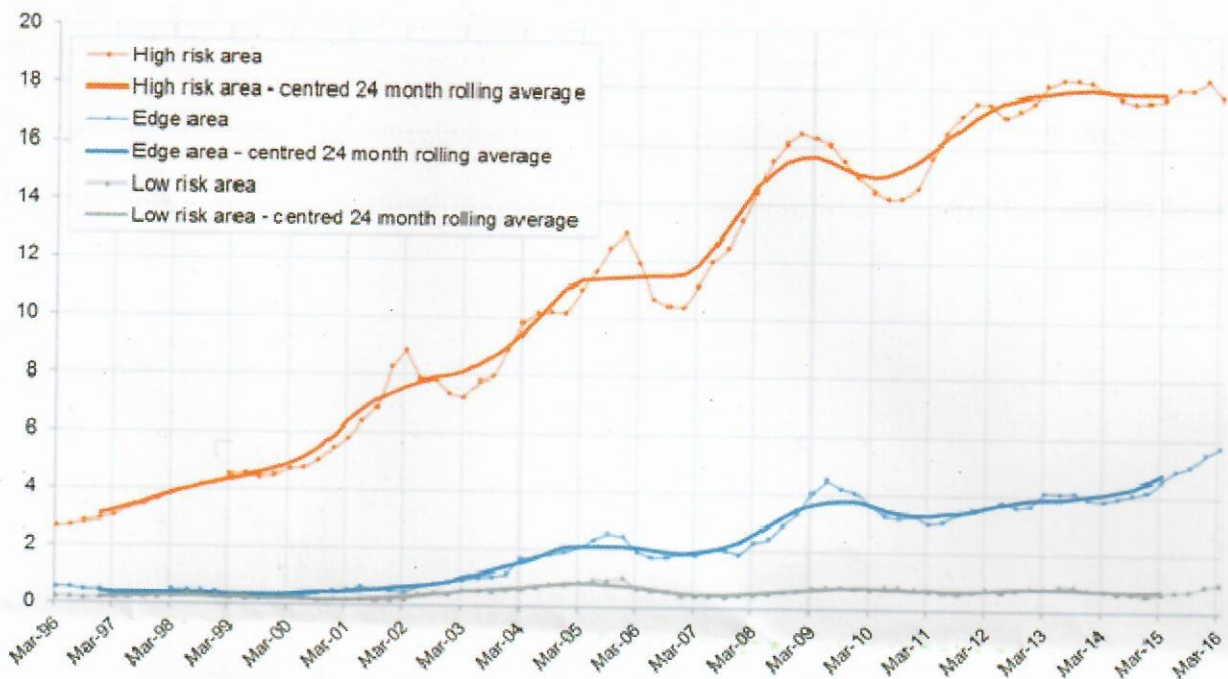
September 2016

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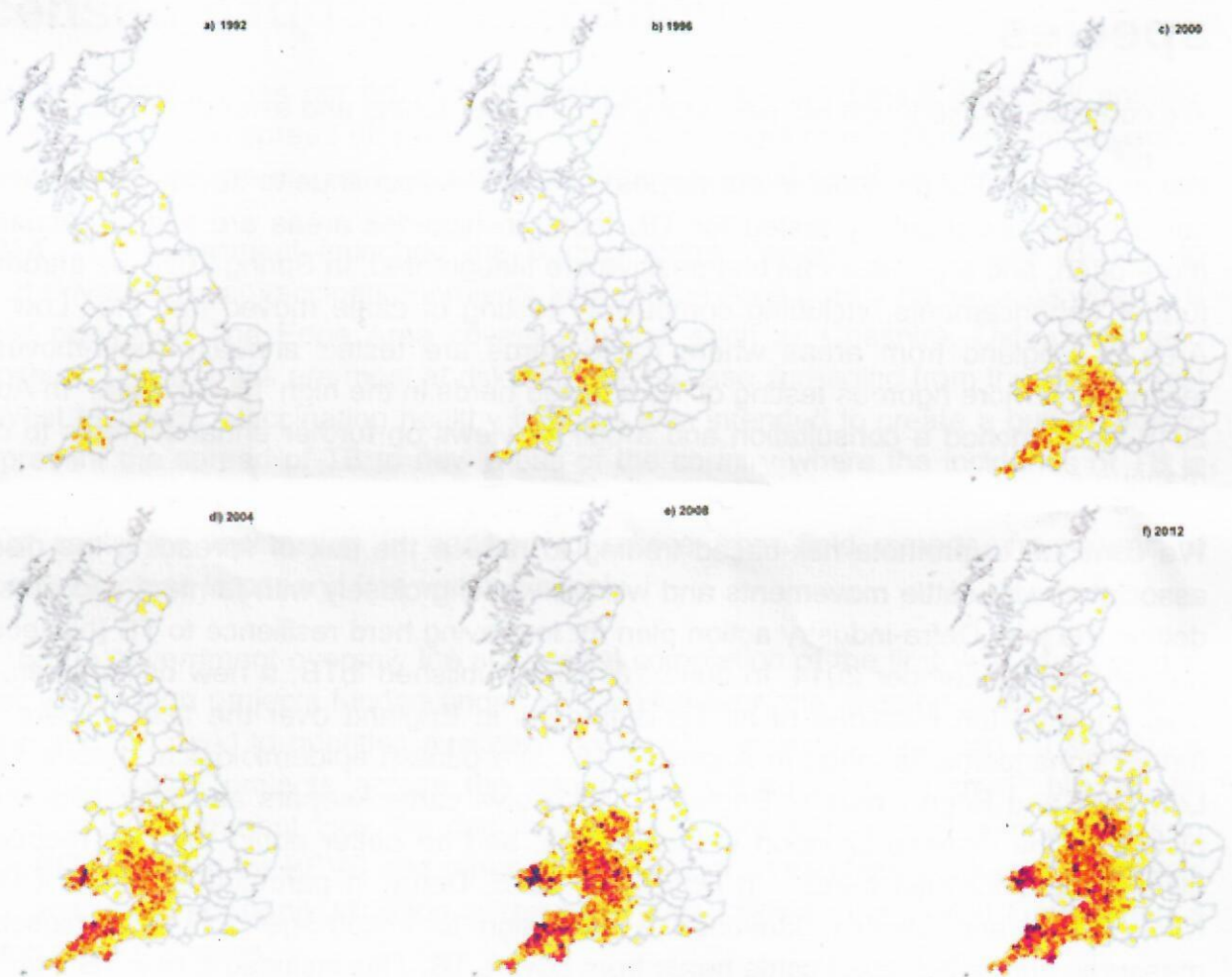
The scale of the problem

It is vital that we work to make England bovine TB-free; doing nothing is not an option. England has the highest herd incidence of bovine TB in the European Union, although there are marked regional differences across the country and 90% of all herd breakdowns are detected in the High Risk Area of the West of England. The Low Risk Area of the North and East of England is on track to achieve officially TB-free status by the end of 2019. Between 1996 and 2015 the annual number of cattle slaughtered to control bovine TB in England has increased nine-fold and the herd incidence has risen six-fold. The disease is threatening the future of our beef and dairy industries and based on current expenditure it will cost the taxpayer £1 billion over the next decade if we do not take rigorous action now.



New TB herd breakdowns per 100 herd-years at risk of infection during the year in the three TB risk areas of England

(Source: Monthly publication of National Statistics on the incidence and prevalence of tuberculosis in cattle in Great Britain: <https://www.gov.uk/government/statistics/incidence-of-tuberculosis-tb-in-cattle-in-great-britain>)



Density of TB infected cattle (test reactors and slaughterhouse cases per km² per year) found in GB between 1992 and 2012

Our comprehensive strategy to eradicate bovine TB

The Government is pursuing a comprehensive strategic approach, based on best international practice, supported by leading vets and endorsed by the Government's Chief Scientific Adviser (GCSA) Defra's Chief Scientific Adviser (CSA) and the Chief Veterinary Officer (CVO). Overseas experience shows that in order to eradicate the disease, the problem must be tackled in cattle and wildlife. Therefore, our approach includes tighter cattle testing and movement controls, improving biosecurity on farm and when trading, and badger control in areas where badgers are an important factor in spreading disease to cattle. This approach has worked in Australia which is now bovine TB-free, and in Ireland and New Zealand, where incidence has dramatically reduced.

Controls in cattle and non-bovine domestic species

We continue to take tough but necessary steps by tightening and extending cattle controls.

We are using all of the tools at our disposal and we will continue to develop new ones. All cattle herds are regularly tested for TB, those in high-risk areas are tested annually or more often, and any cattle that test positive are slaughtered. In Spring 2016 we introduced further enhancements, including compulsory testing of cattle moved into the Low Risk Area of England from areas where cattle herds are tested annually (post-movement testing) and more rigorous testing of TB affected herds in the high TB risk area. In August 2016 we launched a consultation and a call for views on further enhancements to cattle measures.

We continue to promote risk-based trading to reduce the risk of spreading the disease associated with cattle movements and we are working closely with farmers and others to deliver the joint Defra-industry action plan for improving herd resilience to TB (biosecurity) published in December 2014. In June 2015 we published ibTB, a new online interactive map showing the locations of all TB outbreaks in England over the last 5 years¹ with further enhancements made in August 2016. We publish epidemiological reports for the Low Risk and Edge Areas of England. These give cattle keepers and their vets a clear picture of the disease situation in local areas, and so better equip them to reduce the disease risks for their herds². In November 2015, Defra, in partnership with AHDB, the NFU, BCVA and Landex, launched a campaign to encourage uptake of biosecurity measures and help protect cattle herds from bovine TB. This included a new TB Hub³ with collectively agreed advice on actions that farmers can take to protect their herds. Other initiatives due to be launched during 2016/17 include an industry-led cattle health accreditation scheme for TB and training for vets to help them better advise their clients on TB biosecurity.

As a follow-up to our call for views in 2015, we launched a consultation in August 2016 on proposals to control TB in animals such as pigs, goats, and deer despite the fact that cases are few at present and the risk of transmission from those species to cattle is very low.

¹ www.ibtb.co.uk/

² www.gov.uk/government/collections/bovine-tb-surveillance-in-great-britain

³ www.tbhub.co.uk/

Licensed badger vaccination

Badger vaccination does not provide complete protection nor does it cure sick animals which will continue to spread disease. This is why our programme includes badger control in areas where badgers are an important factor in spreading disease to cattle.

In 2014, the government launched the Badger Edge Vaccination Scheme (BEVS) to support private badger vaccination projects in the Edge Area bordering the area where TB is most prevalent. The Edge Area covers counties such as Cheshire, Oxfordshire and Hampshire. These areas are most at risk from the disease spreading from the South West and West Midlands. Vaccinating healthy badgers was intended to create a buffer zone to help prevent the spread of TB to new areas of the country where the incidence of TB is currently low. The four-year package of support included a funding award of up to 50 per cent of costs for vaccinating in addition to advice from field experts, free loans of equipment such as traps, and free vaccine supply.

In 2015, the government oversaw the successful completion of the first year of six private badger vaccination projects funded under BEVS. However, the ongoing shortage of BCG vaccine and the need to prioritise available stocks for humans is impacting on supply for badger vaccination projects across the country. Following advice from Public Health England, the Government took the decision at the end of 2015 to suspend attempts to source BCG vaccine for BEVS and other private badger vaccination deployment projects in England until the supply situation is resolved. This followed the Welsh Government's decision to do the same.

Vaccine research

Our long-term research to develop an oral TB vaccine for badgers and an effective TB vaccine for cattle is ongoing.

Licensed badger control

Overseas experience shows that to eradicate the disease, the problem must be tackled in both cattle and in any significant wildlife or feral animal sources.

- Australia eradicated TB in 2002 through a 30-year programme of measures including culling of feral water buffalo.
- New Zealand is on the verge of achieving international TB-free status by cattle and deer controls combined with culling of brush-tailed possums. As a result, the number of infected cattle and deer herds in New Zealand has dropped from 1,700 in the mid-1990s to less than 100 now.

- The Republic of Ireland is making steady progress towards achieving TB-free status with herd incidence falling from 5.86% in 2004 to 3.37% in 2015 as a result of a comprehensive eradication programme. The current badger culling strategy involving up to 30 percent of agricultural land has been in place since 2004. In contrast, TB levels in Northern Ireland where there has been no badger culling policy have remained relatively static (around 6%) over the same period.

In addition to the Republic of Ireland, there are a number of other European countries which are tackling TB in wildlife. For example, France is culling badgers in TB hotspots and it and several other countries are culling wild deer or wild boar to eradicate TB. Additionally in many European countries populations of wildlife species which could potentially act as sources of TB are routinely managed by hunting programmes. For example Germany removes over 60,000 badgers annually via hunting.

There is broad scientific consensus that badgers are implicated in the spread of TB in cattle in parts of England.

TB was first found in English badgers in 1971. In 1974 badgers were removed from a severely infected cattle farm with the result that there were no herd TB outbreaks there for five years. Between 1975 and 1978 the Ministry of Agriculture, Fisheries and Food funded work that demonstrated conclusively that there is a link between TB in badgers and cattle. Subsequent work in Ireland has reaffirmed that finding.

The Krebs Review observed that between 1975 and 1979 when gassing was used to remove badgers, cattle TB incidence in the South-West fell from 1.65% to 0.4%, a 75% reduction. Subsequently, in the late 1970s and early 1980s, more widespread badger removal was carried out in three areas. In Thornbury, Gloucestershire, cattle TB incidence fell from 5.6% in the ten years before badger removal to 0.45% in the fifteen years afterwards, a reduction of 90%. In Steeple Leaze, Dorset, there were no herd TB outbreaks for seven years after badgers were removed. In Hartland, Devon, cattle TB incidence dropped from 15% in 1984 to just 4% in 1985, a reduction of more than two thirds.

Following concerns that those exercises lacked rigorous scientific 'controls' the government commissioned the Randomised Badger Culling Trial (RBCT). Despite the challenge of the Foot and Mouth Disease outbreak, the RBCT showed that in the four years after proactive badger removal there was a significant reduction in cattle TB incidence relative to control areas. The greatest relative reduction seen was 54% in the eighteen months after proactive badger removal operations, when the full benefits began to appear. The RBCT confirmed what the previous exercises had shown.

Professor Charles Godfray's independent review of the science published in 2013⁴, which brought together leading UK experts, concluded that TB spreads within and between

⁴ Godfray, H.C.J., Donnelly, C.A., Kao, R.R., Macdonald, D.W., McDonald, R.A., Petrokofsky, G., Wood, J.L.N., Woodroffe, R., Young, D.B., McLean, A.R. (2013) A restatement of the natural science evidence base relevant to the control of bovine tuberculosis in Great Britain. *Proc R Soc B* 280: 20131634. <http://dx.doi.org/10.1098/rspb.2013.1634>

populations of badgers and cattle and that spread from badgers to cattle is an important cause of herd breakdowns in high-incidence areas. The RBCT research provides compelling scientific evidence that proactive, large-scale, sustained badger removal in areas of England with a high incidence of TB in cattle has a net beneficial effect in terms of reducing the level of TB in cattle relative to similar areas where badgers are not removed. This is why badger control in those areas of England where badgers are an important factor in spreading disease to cattle is a vital part of any bovine TB eradication strategy.

The CVO's advice is that industry-led badger control can deliver the level of effectiveness required to be confident of achieving disease control benefits. The CVO has also advised that the humaneness of controlled shooting is comparable with the range of outcomes reported when other culling activities, currently accepted by society, have been assessed, such as deer shooting. As part of our strategy the Government wants to see badger control over a wider number of areas. This is in line with the CVO's advice on what is needed to realise disease control benefits at regional level.

Defra-funded Zoological Society of London and Imperial College London research published in 2016 provides further evidence that badgers and cattle contribute to the spread of TB in areas where the disease is rife. It does not provide evidence against the effectiveness of badger control. Our strategy does not presume that direct contact between badgers and cattle is the most important route of TB spread between the two species and the new research does not provide evidence against the effectiveness of badger control. Biosecurity guidance promoted by Defra addresses all forms of TB spread and focuses on indirect contact between badgers and cattle in particular, as this type of contact has previously been identified as significant. This new research confirms this. We also have statutory controls in place to address any risks from manure from infected cattle and pasture grazed by such animals.

Further information on what the Government is doing to control the risk of bovine TB from badgers can be found at:

www.gov.uk/government/collections/bovine-tb-controlling-the-risk-of-bovine-tb-from-badgers



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