

BADGERS

AND

BOVINE TB

FACTSHEET

DO BADGERS PASS TB ON TO CATTLE?

Yes. Scientists now agree that there is no doubt whatsoever that badgers pass TB on to cattle, and that in many areas infected badgers are a major barrier to controlling TB. Even groups that oppose culling badgers to control TB admit that badgers pass the disease on to cattle.

WHAT ARE THE RATES OF TB IN BADGERS COMPARED WITH THE RATES IN CATTLE?

During routine cattle testing in 2008, around 0.75% of Welsh cattle (1 in every 133) were found to be infected with TB. In the old county of Dyfed the rate was 0.92% (1 in every 108)¹. In areas where TB is known to be a problem, cattle are tested every 12 months. In cattle herds that have a TB problem, animals are tested every 60 days and animal movements are effectively frozen.

Badgers are not tested for TB, except in rare circumstances. However, in 2006 the Welsh Assembly Government tested around 450 badgers that had been found dead in Wales. Most of these had been found on roads, having been hit by cars.

The results showed that 13.3% of badgers (around 1 in every 8) were infected with TB. In some areas of southern Wales as many as 1 in 4 badgers were

¹ <http://www.defra.gov.uk/animalh/tb/stats/08/dec08wales.pdf>

found to be infected. In Pembrokeshire, the rate of badger infection was found to be 15% (around 1 in 7).

Throughout Wales the rate of TB is therefore estimated to be around eighteen times higher in badgers than it is in cattle.

During 2006, a survey of badger populations conducted by the Central Science Laboratory² found the average number of badgers per square kilometre on open pasture in Pembrokeshire to be 4.8. Given a rate of infection of 15%, the number of infected badgers per square kilometre of open pasture in Pembrokeshire is estimated to be 0.72. This represents 1.86 infected badgers per square mile of open pasture.

The average number of cattle per square kilometre in Pembrokeshire is between 80 and 111 per square kilometre³. The cattle TB prevalence in Dyfed is around 0.92%, suggesting that the average number of infected cattle per square kilometre in Pembrokeshire is between 0.73 and 1. This is between 1.89 and 2.65 infected cattle per square mile.

AREN'T CATTLE MOVEMENTS THE MAIN REASON FOR THE SPREAD OF BOVINE TB?

In 2005 a scientific article published in *Nature* confirmed what farmers have always known and accepted – that moving cattle from areas where TB is a problem to areas where it is not a problem risks introducing the disease to disease free herds⁴.

However, the article did not explain the causes of TB in high risk areas, where 85% to 90% of TB incidences actually occur, and an editorial in the journal clarified this, stating that the “...*study is equivocal on the animals’ role in the epidemiology of the disease in British cattle. To better understand the*

² <http://wales.gov.uk/topics/environmentcountryside/ahw/disease/bovinetuberculosis/bovinetbinwales/badgerdensities/?lang=en>

³ <http://www.defra.gov.uk/animalh/diseases/vetsurveillance/reports/pdf/dist-cattle-gb010405.pdf>

⁴ Gilbert et al., Cattle movements and bovine tuberculosis in Great Britain, *Nature*, 435, 491 (2005) May

role of badgers we need to turn to experimental studies, such as the ‘Four Counties’ trial in Ireland, the results from which were published earlier this year...By the end of the study period the chances of a confirmed BTB case in a herd in the [badger] removal areas had fallen by between 62% and 95% relative to the reference areas”

In 2007, cattle movement data was analysed in order to study the spread of TB in Great Britain. The study indicated that cattle movements are likely to be responsible for just 16 per cent of bTB herd outbreaks, and that “*High-risk spread is probably the result of cattle–badger–BTB interaction*”⁵

WHAT ABOUT THE HIGH NUMBER OF CATTLE MOVEMENTS THAT TAKE PLACE EACH YEAR?

Groups such as the Badger Trust and VIVA have claimed that there are 14 million cattle movements every year, and blame these for the spread of TB.

This figure has been confirmed by the British Cattle Movement Service as being untrue⁶. The actual number of cattle moved on to farms every year is around 2.7 million.

Cattle movements are also subject to strict controls; all animals moving from a high-risk TB area must be tested for TB before moving, and farms where TB has been found are closed down and prevented from moving animals except to abattoirs, and must undergo TB testing every 60 days.

Movements from farms that are overdue for routine TB tests are frozen, and can be subject to fines under *Cross Compliance Regulations*.

By comparison, TB infected badgers can visit as many as six farms in a single night.

⁵ Green, et al., Estimates for local and movement-based transmission of bovine tuberculosis in British cattle. Proceedings of the Royal Society B(2008)

⁶ http://bovinetb.blogspot.com/2007_01_01_archive.html

WHY NOT CONCENTRATE ON MORE CATTLE RESTRICTIONS?

The tuberculin skin test, which is the standard test for TB in cattle, was previously used in the UK to reduce TB incidences in cattle from 40% to 0.06%, and continues to be used successfully in countries that do not have TB infected wildlife.

Over the past decade, a raft of extra measures to control TB in cattle have been introduced by the Welsh Assembly Government, including tightening up movement restrictions, introducing compulsory pre-movement TB testing of cattle, and gamma interferon blood testing.

In spite of these, the number of cattle slaughtered as a result of TB has risen from 1,046 in 1998, to 12,043 in 2008 – an increase of more than 1050%. Between 2007 and 2008 the number of cattle slaughtered rose by 52%, and the disease prevalence increased by more than 30%.

Given the massive prevalence of the disease in badgers (13.3%), it is clear that tackling the disease in cattle while ignoring it in badgers will not work.

DIDN'T THE ENGLISH BADGER CULLING TRIALS SHOW THAT REDUCING BADGER NUMBERS HAD NO IMPACT ON CATTLE TB?

No. Analyses of data collected during the English culling trials demonstrated that reducing badger numbers by around 80% reduced incidences of TB in cattle by an average of 23% during the culling period. However, on farms bordering the culling areas, TB had actually increased by a similar amount, due to changes in badger behaviour.

Since the initial study results were published, further work has shown that, in the years following the cull, cattle TB had reduced by more than half (54%), and

incidences on farms bordering the culling areas had fallen by 23%⁷.

The work has therefore shown that reducing badger numbers can have a significant positive impact on rates of TB, a result which is in line with the results of the Irish Four Counties badger culling trials, which succeeded in reducing the chances of a confirmed BTB case in herds by between 62% and 95%⁸.

THE WELSH ASSEMBLY GOVERNMENT INTENDS TO CULL BADGERS AND INTRODUCE EVEN STRICTER CATTLE CONTROLS IN NORTH PEMBROKESHIRE. HOW WILL THEY TELL WHICH OF THESE HAS BEEN EFFECTIVE?

It is now well established that controlling badger numbers in the manner proposed by the Welsh Assembly Government can reduce incidences of TB in cattle by at least 50%, and similar controls applied to wildlife all over the world have also been successful in reducing TB incidences.

There is also solid scientific evidence showing that cattle controls, when applied in the absence of a wildlife reservoir, reduce TB incidences.

We therefore know that both policies are effective, and that a combination of both will accelerate the eradication of TB from the area.

DO BADGERS SUFFER WHEN THEY GET TB?

An RSPCA factsheet describes the symptoms of TB in badgers as *"wheeziness and loss of weight and*

condition"⁹. However, the truth is that TB represents an horrific welfare problem for Welsh wildlife, causing extreme suffering. Medical and veterinary opinions describe death caused by TB as prolonged and agonising.

WILL BADGERS BE EXTERMINATED FROM PEMBROKESHIRE UNDER THE WELSH ASSEMBLY'S PLANS?

No. The badger cull is only intended to take place in north Pembrokeshire, and, given the experience in the English culling trials, is unlikely to result in the complete eradication of badgers from the area.

Between 1985 and 1997 the badger population in Britain is estimated to have increased by approximately 70%, and there is little doubt that badgers have continued to increase in numbers since the mid 1990s. All interested groups, including the Badger Trust, agree that the badger is nowhere near being an endangered species in the UK.

WHAT IMPACT WILL BADGER REMOVAL HAVE ON LOCAL ECOLOGY

The most significant impact of badger removal is likely to be an increase in hedgehog numbers. Hedgehogs were recently added to the UK's Biodiversity Action Plan, due to their rapidly falling numbers, which many have attributed to the explosion in badger numbers.

In describing the impact that rising badger numbers have had on hedgehog populations (through badgers preying on hedgehogs), Dr Pat Morris, one of the world's leading experts on hedgehogs, wrote that *"The implications for hedgehog survival are serious"*¹⁰.

Badgers and Bovine TB Factsheet, Produced by the Farmers' Union of Wales, April 2009

⁷ Jenkins et al., The effects of annual widespread badger culls on cattle tuberculosis following the cessation of culling, Int J Infect Dis., 12, 5, 455 (2008)

⁸ Griffin et al., The impact of badger removal on the control of tuberculosis in cattle herds in Ireland, Preventive Veterinary Medicine, 67, 4, 237 (2005)

⁹ <http://bovinetb.blogspot.com/2006/02/slight-wheeziness.html>

¹⁰ The New Hedgehog Book, Pat Morris, Whittet Books, (2006) ISBN 1873580711 (2006)