

BADGER TRUST SYMPOSIUM 2024.

TALK BY DICK SIBLEY, CATTLE VET FROM SW ENGLAND

CONTROL AND/OR ERADICATION OF BOVINE TB

(To contextualise, I've included an introduction to Dick from a Protect the Wild article from March 16 2024)

Dick Sibley is well known as arguably the foremost English 'coalface' veterinary worker on bovine tuberculosis management, in Devon and beyond. He qualified as a vet from Bristol University Veterinary School in 1977 and has been in veterinary practice ever since, and he runs West Ridge Veterinary Practice based in Witheridge, in Mid Devon.

His X/Twitter biography describes him as ***"Veterinary surgeon working with cattle and other farm animals, hoping to make their lives better & healthier so that they can make our lives better & healthier"***.

Dick is dedicated to the care of cattle, with particular expertise in the management of infectious diseases. He has an Honorary Fellowship, awarded for his work with BSE (*bovine spongiform encephalopathy*), Foot and Mouth disease and Tuberculosis. He is National Secretary and President of the British Cattle Veterinary Association. He has a range of awards; RABDF Princess Anne Dairy Award, the RASE Bledisloe Cup, Honorary Life Membership BCVA, and Dairy Industry Award 2006 for veterinary services to the cattle industry.

Until recently, he was also a member of the government's 'Bovine Tuberculosis Partnership'. Towards the end of February 2024 however, it was reported in the farming press that Dick Sibley and another member had been removed from the partnership, and a third quietly resigned. Although it was originally envisaged in 2021 that the partnership would produce useful summaries of their work and make them publicly available, **no insight into the thinking of the group has been forthcoming**. It has been a closed shop. For the public and

interested parties, there has been no insight at all, a huge disappointment considering its role and potential pivotal importance.

In short, **the BTB partnership has been a failure**. There are even gagging clauses on partnership members speaking publicly without approval.

Dick's veterinary practice tests 2,000 cattle a day and Dick wonders if there's a vested interest for vets in bTB.

THE TALK

The talk essentially explored why the current "test and cull" system of bTB control does not work.

INTRODUCTION

bTB has been with us for hundreds of thousands of years. However, in 2001, all bTB controls had been stopped. Owen Patterson, on being appointed DEFRA secretary in 2012, vowed that bTB would be eradicated by 2038, with the help of badger culling. The definition of eradication is:

99.8% of herds officially bTB free for 6 years.

Dick argues that TB free is an old definition and is effectively meaningless. bTB eradication as defined above is unachievable.

The key to bTB control is: a.) STOP ALL NEW INFECTIONS
 b.) CLEAR UP INFECTED HERDS

Farmers truly believe badger culling is effective and have always believed that new infections come from wildlife reservoirs. Dick says that large herd sizes, increasingly the norm, are a biosecurity risk as far as bTB is concerned.

bTB STATUS AND HERD INCIDENCE OF bTB: HOW THE FIGURES ARE BEING MASSAGED.

From 2015, bTB outbreaks have been on a downward trajectory due to better testing regimes but this has now stalled. Dick argues this is because bTB is a slow-burning disease which lies dormant in herds for several years.

Ridiculously, the law currently prevents vets from testing cattle for bTB in herds that are **officially bTB free (OTBF)**. Officially free status can be withdrawn if any

reactors in the herd are discovered to have lesions which are bTB -culture positive (**OTBFW**). Any herd with reactors with visible lesions which are NOT culture-positive gets **officially bTB free suspended (OTBFS)** status. However, studies show that **77% OF REACTORS WITH NON-CULTURE POSITIVE LESIONS** will go on subsequently to develop bTB, yet the **OTBFS statistics are excluded from the 56% reduction in herd incidence figures** used to justify the badger cull.

What this suggests – bTB outbreaks are no longer declining and the previous government have been disingenuous with the bTB incidence figures and the efficacy of the badger cull.

2020 - 28% of reactors had visible lesions

2022- 19% of reactors had visible lesions

Dick says bTB is INCREASING in his area – Somerset/Devon/Cornwall- with the number of infected animals in a herd INCREASING.

WHAT TYPE OF DISEASE IS bTB?

The general concensus is that it's a respiratory disease but Dick disputes this, believing it to be a MYCOBACTERIAL INFECTION with the organisms remaining dormant in cattle for years. He's observed that oral infections (wounds to the mouth) are more common than respiratory infections.

The infection remains latent until there's a concurrent disease (or diet change/starvation), and then the infection becomes OVERT.

WHAT TYPE OF TESTS ARE USED?

There are several types of tests available but they all work in different ways and find different things. Some also find "false positives".

1. SICCT (skin test) – low sensitivity but high specificity
2. GAMMA-INTERFERON – higher sensitivity but v. expensive £30 per test
3. IDEXX ELISA – antibody test; a modern, better test
4. ACTIPHAGE (PDB bio) – this test looks for organisms in cells, using viral phages to detect the presence of M bovis (mycobacterium bovis)in DNA
5. qPCR
6. ENFERPLEX – new, modern, better test

The SICCT test is most commonly deployed in the UK but it's not especially accurate and gets many false positives.

DICK ARGUES THERE SHOULD BE BETTER USE OF VALIDATED TESTS

1. SICCT – more robust use and with inconclusive reactors to be classified as reactors
2. INTERFERON-GAMMA – more extensive and repeated use, including all animals in the first round and high risk animals thereafter
3. Introduction of extensive use of IDEXX ELISA or ENFERPLEX: pick up infections missed by SICCT and GAMMA-INTERFERON and detect antibodies to M bovis.

CASE STUDY FARMS : GATCOMBE FARM AND HIGHER YATE FARM.

GATCOMBE FARM (Brian May's Farm)

NB There's a documentary about this farm coming out in the autumn this year. Gatcombe Farm has had a TB problem for over 10 years, with continuous 60 day testing with sporadic reactors. There are 1000 animals in total, with 340 adult dairy cows housed 24/7 all year round, 60 cows milked by robots and a high level of health and productivity.

A battery of tests are used – PCR, Actiphage and Idexx Elisa. ALL THE REACTOR COWS WERE FROM THE HERD KEPT INSIDE. 42 high risk cattle were tested for bTB, and the tests revealed:

- 13 "shedders" – faecal PCR positive
- 20 blood PCR positive
- 14 actiphage positive (presence of M bovis in DNA)
- 15 Elisa positive
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Interesting to note evidence bTB in faeces so slurry-spreading is definitely a biosecurity hazard.

HIGHER YATE FARM (owned by property developer and akin to very large smallholding)

The owner installed badger-proof fencing all the way round his farm and bought 90 cows. A month after he'd bought them, the original herd (from

which they came) had a bTB outbreak. He kept the cows for 4 years and, over that time, 41 had to be slaughtered as reactors. (DEFRA DID NOT VISIT THIS FARM).

The conclusion here is that most of these infections were VERTICAL – mother to calf.

GENERAL CONCLUSIONS

The epidemiology of bTB outbreaks varies (eg via slurry, vertical transmission etc) and is different for beef and dairy herds.

Using the current testing regime, culling is too late. The disease has moved on by the time the spreader has been identified.

Vertical transmission is a very important factor.

There's no hope of eradication of bTB using the current system of "test and cull".

Where now?

It will be IMPOSSIBLE to eradicate bTB under the current system. The tests are simply not sensitive enough to find the infected cattle and modern farming systems have created high risks of disease spread. Undisclosed reservoirs of infection continue to exist. VACCINATION WILL MINIMISE DISEASE BUT NOT ERADICATE IT.

Dick argues that, if eradication remains the objective, radical changes are needed to the control programme, including

- engagement of farmers and vets
- incentives and disincentives
- robust testing
- risk management
- targeted culling/segregation

It's an expensive aspiration, so who will pay?

Dick presented his aspiration hierarchy, explaining the industry will need a combination of aspiration, resources, will, benefits, application and delivery.

ASPIRATION HIERARCHY

Freedom from disease

Pathogen free

Certified for trading

Low prevalence

Minimal impact on health and productivity

Minimal risks/disease controlled

Tolerance of disease

Low priority for resource

Potential impacts on health and productivity

As the talk had overrun significantly at this stage, there was little time for questions or exploration of what the conclusion actually meant.

However, it's fairly easy to deduce that bTB eradication by 2038 is probably unachievable, extremely expensive and has cost the lives of 230,000+ innocent badgers. The fact that the farming community widely believes badgers are the primary spreaders of bTB, and have been encouraged in that belief by DEFRA, is outrageous to say the least.