

UKIP policy on control of Bovine TB

By Stuart Agnew MEP

UKIP's policy on the control of Bovine TB is to follow the advice of veterinary scientists. To date, this advice is that unless the reservoir of disease is tackled in the wildlife population, then we are unlikely to ever get on top of it. We therefore support the principle of culling badgers as part of a package of measures to take account of the disease in both wildlife and farmed animals.

UKIP supports a science-first approach and does not believe that the badger requires any special treatment compared to any other non-endangered mammal. We favour a strict biosecurity-based approach, with pre-and post-movement testing controls, and notification requirements for bovine and non-bovine reactors. The local wildlife manager network should be utilised all year round and empowered to search for, track, locate and humanely dispatch the old, sick and disease carrying badgers, which have been driven away from badger sets and territory by dominant younger badgers, towards farms and livestock, and otherwise act as extreme vectors of bovine TB.

In the advanced stages of this very serious disease these badgers carry as much as one and a half million bacilli in a tea spoon full of urine and are the proven carriers of TB in 90% of cattle infections. TB is endemic to the badger population, so that the steps described above present the best and most economical means of ensuring that that the UK brings this disease under control in the shortest possible time and at the lowest cost. Wildlife managers would also be required to use the BSG test to identify infected sets and apply an approved method of in-situ euthanasia.

The policy itself could be described as the least bad that is on offer, but the situation is so serious in terms of cattle welfare, badger welfare and financial cost to the taxpayer that waiting for breakthroughs in technology is not an option. I do fully understand how distasteful, unpleasant and upsetting this policy is to a great number of people, but delay will only result in even more diseased badgers living on farms in a highly distressed and infectious state. Note that we have no problem with badgers, only diseased badgers.

I have attempted to outline below the present situation to support the general statement above.

Financial cost

In the twelve months to December 2017, the UK Government slaughtered 33,238 cattle in England, 273 in Scotland and 10,053 in Wales that had reacted positively to a TB test. This represented an 14% increase in England, 1% in Wales and 46% in Scotland. The full financial implications of this are not readily available. However, we know that, for the financial year 2009/10, the cost of slaughtering 25,208 cattle in England totaled £109 million, of which £30.7 million was direct compensation and the remainder testing costs, etc. The total sum paid for disease compensation payments in the UK in 2016 was £20m¹. The average cost of a TB outbreak on a farm was

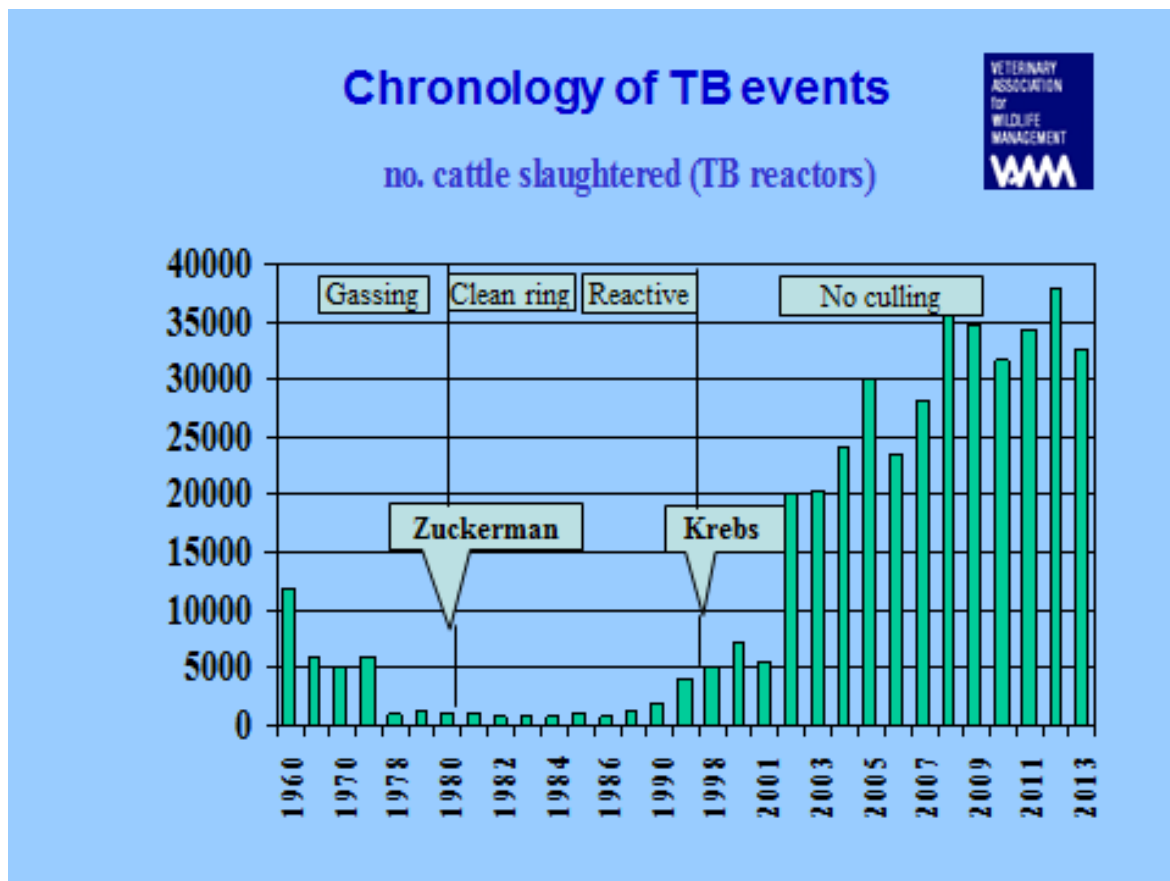
¹ <https://www.gov.uk/government/statistics/agriculture-in-the-united-kingdom-2016>

estimated in 2012 to be £34,000, of which £20,000 was in compensation payments from the taxpayer and £14,000 in costs to the farmer².

The farmer uses the compensation to restock with clean cattle. At some stage, further contact with badgers will occur. Biosecurity measures to reduce the likelihood of badgers coming into contact with cattle can be useful but are not always practical. They can also result in badgers slowly starving to death and are likely to be breached by badgers' natural tendency to burrow. Re-infection will take place despite biosecurity measures and more cattle will react positively at the next routine test.

Incidence of bTB

About 10-15 years ago, a survey was carried out to establish the degree of TB infection in badgers killed on the road. The figure was in excess of 20% and would likely be higher if the same survey was carried out today, as the disease has progressed considerably in the cattle population since then, despite regular testing and slaughter, as the graph below indicates.



We acknowledge the improvements that continue to be made in veterinary scientific understanding of how bTB is passed between badgers and cattle, and between cattle to cattle. Improvements to the testing regime to mirror that in Scotland, requiring strict pre and post-movement testing, is arguably necessary as a control

measure. The costs involved in these efforts may be substantial but pale into comparison compared to the substantial emotional and financial cost of bTB outbreaks on our livestock farms.

Control strategies

The relative costs and implications of the three core potential strategies to tackle bTB are set out below, namely:

- 1) Medicinal cure
- 2) Vaccination: - a) badgers b) cattle
- 3) Controlling wildlife

The effectiveness of these options is as follows:

1) Medicinal Cure

There is no medicinal cure.

2) Vaccination

a) Vaccination of Badgers

Vaccination of badgers can be done in two ways, an oral intake or an injection.

- Oral intake. The great difficulty here is ensuring that the badger consumes enough of the vaccine in a treated bait to be effective, but not to take too much so as to actually contract the disease. Vaccines must be kept cool prior to use, this is not possible where baits are left out in the open in ambient temperatures. The vaccinated bait will also almost certainly be consumed by other species and their reaction to this is unknown. As there is no way of controlling the food intake of wild animals, this method is impractical.

- Physical injection. The badger needs to be captured. Once this is achieved it is possible to inject the correct dose. There are, however, a number of other problems:

a) The BCG vaccine that is available has a poor success rate. Only 50-70% of clean badgers will benefit from a vaccination. Even if all the badgers in a given area were vaccinated, there would be enough vaccination failures to ensure the continuation of a vulnerable population.

b) For a vaccination strategy to work, a very high percentage (possibly 95%) of clean animals need to have received it, so that flock or herd immunity is achieved. Badgers live underground and are nocturnal. It is not possible to know how many are in a given area and, therefore, it is impossible to know what percentage of the total any vaccination campaign has reached. A significant percentage of badgers will simply refuse to enter a trap, irrespective of the quality of inducements.

c) Giving a vaccination to an animal that is already infected will not stop the disease in that animal, or prevent it spreading infection to other badgers.

d) In order to try to counteract the above difficulties it is suggested that every badger is vaccinated every year for five years in the hope that the great majority will get done at least once. The cost is estimated at £17 (vaccine) per badger, per injection, but the vaccination program in Wales has now ended due to a global shortage of the vaccine³. In May 2015, the report on the third year of the Welsh bTB vaccination programme confirmed that 1,316 badgers had been vaccinated at a total cost of £929,540, or approximately £706 per badger.⁴

The total number of UK badgers is not known, but an estimate of 700,000 can be justified. There is a distinct possibility of spending a very large sum of money over a five-year period and still having a population of badgers infected with the disease, whilst at the same time compensating farmers for on-going positive reactors in their cattle.

e) It is too soon to know if the regular trapping and handling of badgers for vaccination will result in perturbation (the stress-induced instinct to disperse to other locations). Badgers are highly territorial and disrupting their natural zoning could easily result in the unnecessary dispersal of diseased animals. If this did occur, it would increase the logistical difficulties of vaccination, and risk spreading the disease further afield.

f) The regular handling of badgers in traps poses a risk to the operators of contacting TB themselves. Zoonosis is discussed below.

TB exposes badgers to most unpleasant and painful symptoms. There are ever-increasing numbers of these animals in real distress on farms for which vaccination offers no relief at all. If this is added to the fear and stress of a wild animal being repeatedly trapped and handled, we arrive at a point where this policy could be harder to defend on welfare grounds than culling.

b) Vaccination of Cattle

There is an argument that supports the vaccination of cattle against TB, so that badgers are left out of the equation entirely. If a reliable vaccine existed this would seem a sensible solution. Unfortunately, such a vaccine has not yet been developed. Trials with African cattle only produce a 50% success rate.

Therefore, cattle vaccinated successfully, unsuccessfully or whilst incubating the disease will all prove 'positive' when tested. This makes it impossible to monitor the disease until advanced symptoms become obvious, by which time the animal will have possibly infected others.

An intense effort is underway to find a satisfactory cattle vaccine, but no one knows when this eureka moment will occur. It is certainly not imminent.

There is an argument that suggests that it is only EU legislation that is preventing a reliable TB test (which can discriminate between vaccinated and infected animals) from being used.

³ <http://www.tfreeengland.co.uk/latest-news/vaccination/>

⁴ <http://gov.wales/docs/drah/publications/150518-bovine-tb-iaa-report-3-en.pdf>

Unfortunately, NO TEST YET DEvised IS PERFECT. This is not an overwhelming obstacle as long as wildlife is clear of the disease. Regular cattle testing will statistically and ultimately find all infected animals, despite a small percentage of 'false negative' tests, as long as 'positives' are slaughtered before they can incubate the disease to the extent of infecting others, and as long as testing is frequent enough to identify the 'false negatives' as 'positives' the next time round. In this scenario a 50% success rate through vaccination could help reduce the incidence of the disease, although the financial cost of such a poor 'hit rate' would be difficult to justify. Slaughter without any vaccination proved very successful in the 1960s when there was no reservoir of the disease in wildlife.

The situation is quite different where wildlife is carrying TB and can infect cattle if the vaccination failed to protect half of them. If testing is less than perfect in this situation then there will, in effect, be a never ending supply of 'false negatives' and a never-ending cost of vaccines and slaughter.

The Comparative Skin Test (SICCT) is the European validated test, as is used worldwide as the primary herd screening test for Bovine TB. This is also supplemented by extensive use of the Gamma Interferon blood test. Both tests can be rated/scored for 'sensitivity' and 'specificity':

- Sensitivity: is the measurement of success in identifying infected animals.
- Specificity: is the measurement of success in identifying uninfected animals.

SICCT scores 60-95% for sensitivity and up to 99% for specificity.
GI scores 87-94% for sensitivity and up to 87 - 98% for specificity.

For example:

If we had 100 infected cattle, only 60 might test positive, leaving 40 false negatives and a test sensitivity rating of 60%.

If we had 100 clean animals, 99 could test negative, but a false positive would remain.

Improving sensitivity tends to reduce specificity and vice versa. There is no perfect test at the moment. Research and innovation in alternative testing techniques, for example those based on the DNA of bTB, which can identify the source of infection, is to be welcomed.

The final point that must be made about cattle vaccination is that under this regime 20% of badgers will continue to suffer the most painful and unpleasant symptoms of TB with no hope of any relief, unless dispatched by a farmer.

In our 'hot spot' TB areas, the causes of disease spreading to new clean farms are attributed 50% each to cattle movements and badger infection. Many other countries in the absence of a wildlife infection have eradicated TB using the existing tests and slaughter. Scotland is a good example. However, in England and Wales, if we wish to remove TB from cattle and humans, we must also remove it from wildlife.

3) Culling

Badgers have been protected for some years and during that time the population has increased steadily, new areas are hosting badgers, and this is in spite of the premature death and/or disability sustained by badgers suffering from TB. This increase in population is also despite the 55,000 killed on the roads each year. Therefore, there is scope to cull a large number of badgers, without putting the overall population into a long-term decline.

The heavier the culling, the less the likelihood of residual infection and the sooner vaccinated badgers from clean areas can be introduced in small numbers to regenerate the population. At the same time, of course, cattle must be kept clear of infection.

Cull rates must eliminate at least 70% of the resident badger population in order to be successful, but it is not necessary to eliminate all badgers from an area to eliminate TB. Due to the highly territorial nature of badgers, at a low population density, the disease is far less likely to travel between badgers and badgers will have enough of a food supply around them without recourse to approaching farmyards and pastures rich in earthworms. At the same time, the latrine areas of the badgers will be smaller and less likely to be stumbled across by cattle. The ideal solution for any farm is to have a resident population of healthy badgers to keep out other, potentially diseased, badgers. Population pressure on badger setts inevitably stresses these interactions.

Culling of wildlife is practiced on a regular basis on farms to protect crops, livestock or human health. Species in this category include foxes, deer, hares (less so now as raptors are taking increasing numbers of leverets), rabbits, rats, mice, pigeons, rooks and crows. It is the activities of farmers that allow these species to rapidly increase in the first place by making more food easily available.

Badgers are no exception to this. The practice of making maize silage on livestock farms has transformed the ability of badgers to thrive throughout the winter, where previously the aim was mere survival. The easy availability of this material means that badger sows are more likely to go to full term in pregnancy, give birth to strong viable young and lactate in sufficient quantity to feed all of them. Controlling badger numbers would have additional benefits for the protection of the vulnerable species on which they prey, including reptiles, ground nesting birds, bees and hedgehogs.

There is a very good example of the effectiveness of culling badgers to control TB and that is in Ireland. The taxpayers of this small country were having to compensate for the slaughter of 40,000 cattle a year at the peak before badger culling was introduced. This has since dropped to 17,000. It is estimated that the policy has saved on average 9,137 cattle per year since 2010⁵.

A proposed but not yet official method for culling badgers is gassing. The most humane method is the use of CO₂. It is one of the heaviest of the greenhouse gasses, which means it would drop down into the bottom of deep sets and put the badgers to sleep painlessly. If they do not get a strong enough dose they completely recover.

⁵ <http://www.bovinetb.info/ireland.php>

It is also safe and easy to use by licenced wildlife managers, who are dealing with foxes at their earth's legally and in most cases they would know the location of the badger sets. These specialists are already part regulated and supervised by the National Working Terrier Federation and would be able to cover the whole country.

Zoonosis

It is not generally appreciated that humans can contract TB from wildlife and cattle. Between 1994 and 2006 there were 440 cases of Bovine TB recorded in humans. Only 10% of these individuals were not born in the UK.

Getting Involved

Some of the people who write to me, unhappy about badger culling, are motivated to join the 'cull saboteurs,' as a way of physically 'doing something about it'. I believe effort in that direction is misplaced. However, there is a way of physically getting involved which could be really useful, and that is to help vaccinate badgers on the 'edge' of the infected parts of the country. All these badgers will be free of TB and once vaccinated will create a firewall to prevent spread further North and East. Although the vaccine only costs about £17, the high cost of the exercise is the labour element, so volunteers can be a real help.

Allowing large numbers of badgers to die a slow, painful death from TB is doing them no favours at all. Let's cull this disease out of the infected areas as quickly as we can, give farmers their lives back and save the taxpayer a pile of money.