# Badgers and Bovine Tuberculosis Authors: Carlos Martinez, Mike Burkhalter and Severin Forster Introduction

Great Britain is the only country in Europe where the bovine tuberculosis is still spreading fear. Bovine tuberculosis (TB) is an infectious disease which is fatal for cows. This infectious disease is feared because cows can also infect humans. Both farmers and government make badgers responsible for spreading this dangerous bacterium. As a result, people with a license are allowed to cull this protected animal to stop the spread of TB. Different sources are claiming that the culling is disproportionate, because it might endanger the existence of the badger but is not effective in stopping the spread of bovine tuberculosis. In our project, we wanted to find out if the culling of badgers is the most effective way to stop the spread of this infectious disease. As the UK government is clearly on the side of the farmers and the fight against the disease is very expensive, we expected the farmers and the government to make a lot of propaganda for the culling. As a reaction we expected the people to approve of the opinion of the government. Therefore, we phrased our research question: "Is it necessary to kill badgers to avoid the spreading of the bovine tuberculosis?"

#### **Methods**

To bring light into the dark we did to a lot of research and read a lot of newspaper articles. Thanks to Ms Waiblinger's help we were able to arrange a meeting with David Bowles, a member of the Royal Society for the Prevention of Cruelty against Animals RSPCA, the largest animal welfare charity in the UK. Even though we had already amassed a solid basis of knowledge, the interview with Mr Bowles was very elucidating. We learned things while talking to him, which we would not have been able to learn online. To perform our on-site research, we went to Queens Park golf course. It is a course that includes wooded areas. Mike's host mother told him that there might be a badger sett. But unfortunately, we weren't able to find one, even when we searched for it a second time. Therefore we weren't able to take pictures ourselves or draw any conclusions from the two expeditions. With the results of the survey, we have seen that the people were mainly against the culling of badgers and we could work even better with our information. At the end we were able to connect the different parts to a whole.

#### Results

The whole debate about badger culling is in progress since 2011. At the beginning, people thought that badgers are responsible for at least half of the bovine infections, by nose to nose contact with cattle. But research shows that close contact between badgers and cattle is rare, so the likelihood of direct transmission of the disease is low, but indirect transmission remains possible through the soil and dung. This calls into

question the very reason to cull badgers. Badger are responsible for only 6% of herd infections, scientific studies demonstrate.

A distance of 1.5 meters (cow to badger) is needed to spread TB, but badgers are never going closer to cattle than 10 meters. Around half of the TB cases are the result of transmission from cattle to cattle. Therefore, any policy to inhibit the spread of bovine tuberculosis needs to focus on cattle husbandry and welfare, controlling cattle movements and removing the potential for the disease to spread through the environment. No improvement is in sight as the UK government is planning to kill around 108'000 Badgers the next year (2019) to get a decline of 16 % of TB cases in cows.

## **Essay about our experiences**

As Carlos lived with a host mother who is a wildlife activist, we were able to get some great information which not everyone would have been able to get hold of. On the internet it was easy to find critical but not too biased texts about the whole situation. It took us a bit of an effort to extend our knowledge, but once we had made a start, it was easy to find a huge amount of information.

In David Bowles we had a fantastic interview partner who was perfectly able to answer our questions. But he told us very directly that he sees no improvement in the next 4 years. This statement was very disillusioning to us. We were shocked that there is nothing people can do against this massacre of badgers. He made this statement because of the way the British government and politics are working. Before the government was elected, it promised to fight against TB, and that is exactly what they are doing now. The RSPCA are fighting as hard as they can, but they are financed through charity, i.e. have limited funds. They are not receiving any money of the government.

As our survey revealed, most of the people are against the culling of the badgers but just a few people are actively fighting against this way of stopping the spreading of the TB. This result shows that a lot of people do not even know how to do something against this. We can't tell if it is because the RSPCA are not making propaganda or the government veils their brutal way to stop the spreading of the TB.

#### Interview with Mr David Bowles

What we asked him:

- Do you think killing the badgers is necessary?
- Against the TB something must be done.
- What is the most effective way to stop the spreading of the TB?
- There are some new studies which claim that the culling is not the most effective way to stop the TB, but why should be more of the badgers killed by the government?
- Are cows essential for the environment? Or is it because of the money the government is losing because of the sick cattle?

#### His answers:

1. The government spends 43 million £ every year for farmers. The RSPCA doesn't get any money from the government, their money comes from charity. He would be in favour of culling the badgers if it's the most effective way to stop the spread of TB, but 50% of the TB is spread by the cows themselves and just 5% by the badgers. If the government aims at killing 80% of the badgers, TB will reduce by 16%, so this method isn't very efficient. The farmers just need a scapegoat because they don't want that the spreading of TB is the fault of the cows and their own cattle husbandry practices. Also, the export of beef is difficult for United Kingdom and Ireland because of the TB.

Why isn't slaughtering the sick cows working? Or six months testing of the cattle if it is sick or not?

2. The test for TB is just about 70% effective so 3 out of 10 cows go back in the herd and spread the TB again if there is an investigation. Now there is a new and better test but it's very expensive and the government just pays for the cheaper one. Another problem is that the farmers are moving their cows around and spread the TB to other herds.

Are badgers essential for the environment?

3. He thinks every animal has a right to live. The population of badgers has risen because they have been protected for 26 years. They are hunted with dogs and a few years ago it was a real problem but now there are many badgers.

What is your opinion about the national farmers union?

4. National Farmer Union wants to kill the badgers. They convinced the farmers that the badgers are responsible for the TB, so they want to kill them.

Do you know a case in which a farmer had to kill much of his livestock?

5. In France they killed every cow in the farm if just one had TB. United Kingdom just kill the infected cows.

We read about a license to kill the badgers what do you know about that? 6. The badger is still protected, but they can be hunted with a license. First there were just 2 areas for hunting the badgers in the UK and this year there are 22 areas to hunt them. The government allowed to kill 43'000 badgers in these areas last year (2018).

Do you see a change or an end of the TB?

7. He thinks in the next 5 years there might be a change. Because of a better TB-test and vaccination for cows. They can't vaccinate the cows today because they won't be able to see a TB infection in the blood of the cow after the vaccination, i.e. they can't tell the difference between an infected and a vaccinated cow as both have antibodies against TB.

## Survey

We asked quite a few people at the Bournemouth Square if they would answer our three questions. Many of them were willing to respond, but some didn't know anything about the badger culling or the TB. In the end there were 27 left whom we could question.

## Are you for or against killing the badgers?

Most of the people questioned were against the culling, but there were some who were in favour the killing.

## Have you engaged yourself in the debate about the badger-problem?

Just some had acted in the past. They wrote letters in newspaper, financed animal protection organisations or the national farmers union, one of them even went to demonstrations.

## How would you solve the problem with the badgers?

There we heard a variety of answers, none the less the most common answer was that they have no idea how. But fortunately, there were also some others.

- The farmers should stop moving cows from one farm to another.
- The government should finance fences that separate badgers and cows.
- Cows and/or badgers should be vaccinated.
- Extend the badger-hunting areas.

#### Discussion

We wanted to know if it is necessary to cull the badgers and didn't know anything about the number of badgers with TB neither how the cows get infected. As Mr Bowles told us the badger is a very small problem of the disease in United Kingdom, we were surprised that they cause about 5% of the spreading because we all thought that the badger would be the main problem, but actually it isn't. We still think it is a bad thing to cull the badgers just because the farmers need a scapegoat.

For a next project like this one we would do our survey earlier to know about the popularity of the matter and the on-site research to connect more real-life things together. We learned to work individually and collect information as a group. With some points of our project we should have started earlier to go even deeper into the material but as a team we are very happy about our work and research we have done. Also, it would have been great if we had had the same timetable at school and would have had a place where we could work all together. For as we wanted to finish our presentation at school we were asked to leave because the school would be closing soon. This was just 10 minutes after the end of Mike's lesson so we had to make our presentation in Carlos' tiny room. None the less all of

us improved our language skills because of the interview, survey and other speaking and writing parts like the presentation of our project or the writing of the report. Especially the interview was very interesting because of the knowledge of Mr Bowles. We look back on this project with mixed feelings. On one hand it was good to improve our English and learn new things on the other hand there was a sense of pressure throughout the whole stay which made it difficult to really enjoy our stay.

#### Glossary

Badger = Dachs
Badger sett = Dachsbau
Bovine Tuberculosis = Rindertuberkulose
culling = ausmerzen
slaughtering = schlachten
livestock = Viehbestand
essential = notwendig
disease = Krankheit