

The Pembrokeshire Project aims to tackle deep-seated levels of infection in parts of Pembrokeshire, where bovine Tuberculosis (bTB) incidence and prevalence have worsened against the overall improving national backdrop. The project aims to facilitate collaborative working between vets and farmers and empowers local informed decision making and leadership in disease control. At the heart of the project is collaboration between a proactive vet and a proactive farmer working together to tackle bTB at a local level. The project is funded by Welsh Government and delivered by Iechyd Da and the Sêr Cymru Centre of Excellence for bovine TB (CBTB) at Aberystwyth University to integrate research and development with practical veterinary work to support and strengthen bTB control. The project gives freedom from external control or influence by:

1. Using data analysis from existing bTB skin test results to identify high risk animals.
2. Voluntary culling of high risk animals.
3. Enhanced biosecurity on farms

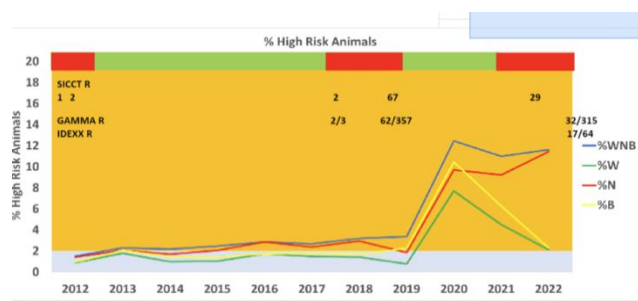
How are we doing this?

1. Training of veterinary surgeons and farmers to improve knowledge of bTB.
2. Use a general risk assessment biosecurity scoring tool with bTB addition.
3. Data analysis of existing and historical bTB skin test results to identify high risk animals.
4. Analyse concurrent infections on the farm (e.g. Johne's).
5. Survey farmers and vets to improve social science knowledge surrounding bTB.
6. Discuss badger ecology and improve biosecurity from wildlife on farm.
7. Identify further research requirements as need is demonstrated within the project.

Multiple veterinary surgeons from six practices have been selected to receive enhanced bTB training. These practices have selected 15 farms to carry out enhanced biosecurity visits and work with additional measures during the two year project. The essential components of the project are described below and will be discussed.

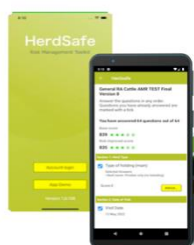
Data Analysis, research and Science – CBTB, Aberystwyth University

1. Advice and training in line with the latest research findings and understanding of bTB.
2. Data analysis on concurrent infections including BVD and Johne's.
3. Discussions and advice around badger ecology including up to date badger data for the immediate area around each study farm.
4. Providing samples for current research into bTB to help understand the underlying mechanisms of persistence of *Mycobacterium bovis* infection on farms.



The HERDSA application – Iechyd Da

1. Each farm has a biosecurity visit at the beginning of the project, and receives a weighted risk score for each biosecurity risk.
2. A total risk score is given to each farm. A bespoke report is produced outlining a few agreed actions to carry out, and the expected change in risk score.
3. The vet uses the app to demonstrate the effect of proposed biosecurity farming practices on the weighted risk scores.
4. A new total risk improved score and star rating is then be produced.
5. The app will be used at subsequent visits to assess changes made on farm and to monitor progress.



Data analysis – MV Diagnostics

1. The Wales Enferplex pilot needed a way to select high risk animals for additional testing. MV diagnostics created an algorithm using testing results and a risk score was generated for each animal on the holding. The analysis also gives a chronological picture over time of what happens on the farm with regards to residual disease.
2. “Risk rate” uses historical SICCT data from herds and individuals, along with more sensitive interpretation of the results to identify high risk animals. The analysis occurs over time to see when and how often

individual animals are identified as high risk of being infected with *M. bovis*. The data is counted and a traffic light system is allocated to the individuals in the herd. Red – high risk, Amber and Green. Red animals are advised to be voluntarily culled.

3. Animals that are identified as high risk can be culled at a time convenient to the farmer – e.g. at the end of lactation, when barren, often these high risk animals also have concurrent disease. Vets analyse the spreadsheet with the farmers.

Behavioural science – Aberystwyth University

1. This project provides a unique opportunity to influence farmer behaviours in a positive manner around bTB control and learn from them for wider implementation and to inform policy.
2. Behaviour change science uses a systematic approach to understand the underlying mechanisms that would drive behaviour change.
3. The project is performing a range of interventions aimed at empowering both farmers and vets.
4. The integration of social and natural sciences will enable us to monitor and understand the successes and challenges of the project and improve the way the understanding and use of risk is communicated and used to empower vets and farmers to identify and reduce the risk of residual on farm infection.

Leading the project is Brendan Griffin, Fenton Vets and Iechyd da and Bev Hopkins from the Centre of Excellence for Bovine TB at Aberystwyth University.