FCN | THE FARMING COMMUNITY NETWORK

A report from:

The Farming Community Network (FCN)

Finding the Box-Top:
Addressing the human cost of bTB

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Foreword, Methodology & Acknowledgements

Foreword

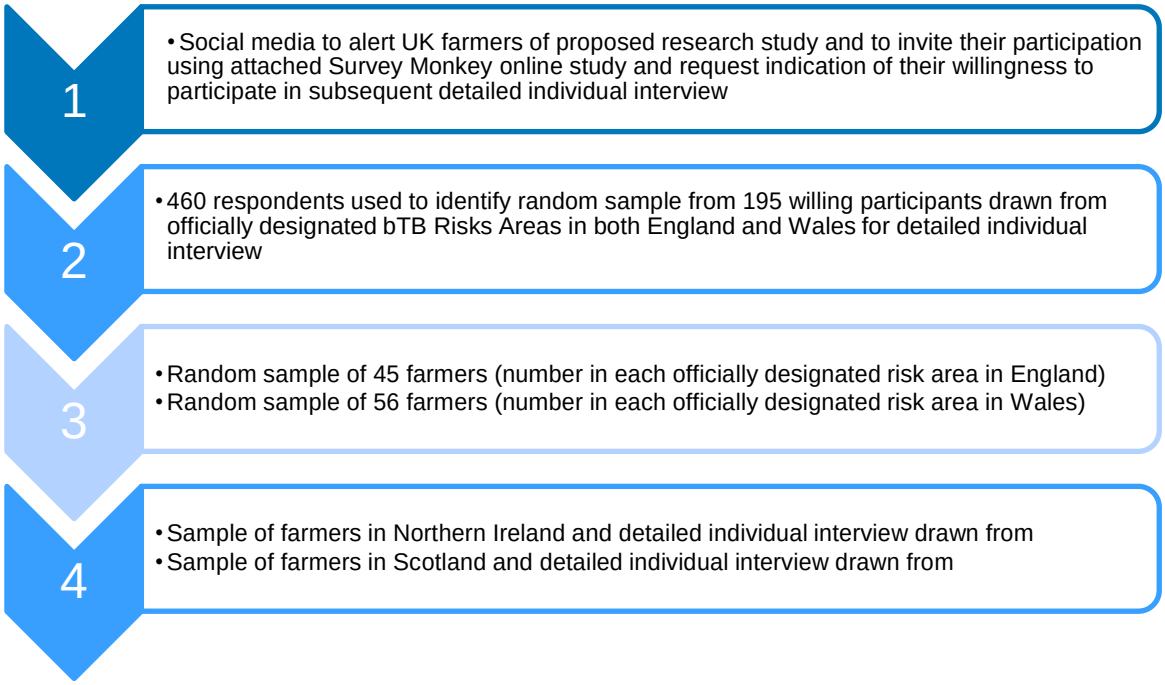
> …the worry is painful—it is hard, it is really hard. I couldn't sleep properly with the worry and anxiety…I felt helpless. One question is whether we bother carrying on with our business. There is no concern for the farmers concerned, no compassion for cows culled, only for the badgers.[1]

The mandate and ethos of The Farming Community Network (FCN) includes a long-term interest in the rural community and its health and wellbeing. This inscribes a commitment to listen, to understand farmers' issues and concerns and where appropriate to commission research to inform public policy.[2] In 2009, FCN released a research report addressing the serious impact of Bovine Tuberculosis (bTB) on the health and wellbeing of farm households and rural communities in the traditional bTB hotspots of South-West England and west Wales.[3] In 2023, FCN commissioned this current report on the impact of bTB on farmers throughout the UK. The aims were three-fold: listen to farmers' voices on the impact and concerns generated by bTB in an evolving policy context; increase awareness of such concerns; and identify any policies or other moves that could ease the pressure on farmers and support the goal of eliminating bTB.

Methodology

This report includes the key findings of research conducted by FCN over the last 18 months. The work draws on a wide range of source material including an extensive international research literature and the response to a national press release (15 June 2023) designed to alert the rural population and encourage feedback on the proposed study (Figure 1 and Appendix 1). This was accompanied by an online survey of UK farmers. In-depth interviews were also carried out with farmers in Northern Ireland, Scotland, England, and Wales (110 in different bTB Risk Areas) and with 10 other rural stakeholders, including members of the clergy, schoolteachers, and vets. These interviews were conducted online using Zoom and Microsoft Teams and in-person at agricultural shows, conferences and other public forums.

Figure 1: Schema of Methodology



Integral to the formal surveys and interviews, FCN staff and volunteers listened to representatives of all interests involved, including government officials, rural community leaders, bankers, and clergy to gain their insights on bTB, associated policies and controls and the impact of these on the rural community.

Throughout the study, speeches and articles in journals and farming press kept the rural sector and the public at large aware of its progress and encouraged on-going discussion. A website article posted on 3 August 2023 centred on an FCN volunteer who has direct experience of bTB on her family farm.[4] This further served to encourage farmers to complete and submit the online survey.

By the completion of the research for this report, it was clearly confirmed that while bTB is an infectious, contagious bacterial disease that primarily affects livestock, its impact and statutory control measures also pose an ongoing threat to farmers' own health and wellbeing and to that of the wider community.

Acknowledgements

A great many people contributed to this research. The initial stimulus came from Dr Jude McCann, CEO of The Farming Community Network, and Alex Phillimore, Head of Communications and Development for FCN. Both provided important input to the research design, in publicising the research and in conducting field surveys. They provided feedback and comments on drafts of the report and helped build links with stakeholders who may be expected to help disseminate and implement any recommendations. Assoc. Prof. Willie Smith (formerly of the Science Council of Canada and of the University of Auckland, New Zealand) was commissioned to prepare and write the final report.

The extensive, in-depth farm interviews were only possible thanks to a massive effort by FCN staff and volunteers who brought to the task their expertise in farming and understanding of farmers' wellbeing. A note of thanks is also extended to Linda Jones (National Manager, FCN Cymru) for assisting with Welsh translations of interviews and resources.

The patience and response of all farmers and other community members who responded to surveys and agreed to be interviewed is warmly acknowledged. Several other individuals in the UK, New Zealand and elsewhere provided information, support and advice. These include senior staff in the Department for Environment, Food & Rural Affairs (DEFRA) and in other authorities and agencies involved in bTB policies and controls across the United Kingdom.

Dr Paul Livingstone (retired), ex-manager of TB Research and Eradication for Operational Solutions for Primary Industries (OSPRI) in New Zealand provided a valuable perspective and deep insight and understanding of challenges involved in the eradication of Bovine Tuberculosis and in securing and maintaining farmers' support. Dr Christianne Glossop, former Chief Veterinary Officer for Wales, provided valuable guidance, understanding and significant useful comments on the penultimate draft of the report.

By the close of this study The Farming Community Network was convinced of the need to move beyond the symptoms expressed by farmers in association with bTB, to address their root cause. The report offers hope in the opportunities that could be achieved if the public sector, private business and farmers strengthen their joint relationship and work together as part of a new governance model to eradicate bTB and realise the full potential of the agricultural sector.

Executive Summary

This report examines the impact of bTB on farmers and the wider rural community. It updates and expands on the previous FCN report released in 2009. That report used evidence drawn from 68 farms located in the bTB hotspots of South-West England and west Wales. This current report examines the impact of bTB on farmers and other community members across the UK and includes the findings from in-depth interviews with 195 farmers.

The findings presented confirm the continued serious health impact of bTB, evidenced in significant financial costs, mental illness, physical injuries and damage to overall wellbeing. These impacts are identified as interdependent and felt among farmers, family members and others in the wider community.

Two features stand out. Firstly, many farmers believe the impact of the long-term physical, emotional and financial impact of bTB outweighs having to deal with the shorter-term impact of a disease outbreak; secondly, many farmers believe that health impacts are generated more by anticipation of statutory testing and the fear engendered in anticipation of an outbreak, than by the disease itself.

The health symptoms reported by farmers range from fear and depression, sleepless nights and persistent anger, to a deep sense of loss of control over their personal lives and their farm business. This can culminate in a sense of "worthlessness." For many farmers the impact of bTB puts a brake on business expansion and puts long-term development plans on hold.

The impact of bTB contributes to a disengagement of many farmers from the statutory policies designed to manage and eliminate Bovine Tuberculosis. This includes scepticism towards the science that underpins these controls and towards the capacity of these policies to ever meet the stated target of eliminating bTB. More often these policies are viewed by farmers as authoritarian interference in how they manage their land. There is a widespread view among farmers that the published data on progress towards control of bTB are both confusing and unreliable. Many also believe that the implementation of policies is not effectively linked to specified short or medium-term targets and that where targets are set but not met, accountability should be attached to those responsible. Again, farmers feel disempowered.

The impact of bTB among farmers is expressed in several different but related health, social and business indicators. What emerges is the need to go beyond measures designed to relieve individual symptoms to resolve their root cause.

At its core, the impact of bTB on farmers lies both in the nature of the disease, in current policy controls measures and in their implementation. Ongoing moves to implement the Bovine Tuberculosis Partnership for England offer recognition of this fact. The research findings presented in this current report support an extension of this concept to include governance responsibility for the design and implementation of policy, monitoring, data collection and related responsibilities. This would give farmers and the private sector much greater ownership in managing bTB and reduce the heavy costs and responsibility currently held by government alone. New Zealand is one country that has already established its own independent agency that has worked well both to control the spread of bTB and in achieving farmer 'buy-in.' It offers a model for the UK to build upon.

To address these research findings, it is recommended that a new agency, independent of government, is created for the management of TB in the agricultural sector.

Key Findings

1. The policy focus on bTB as a serious, contagious animal disease neglects the profound impact of the disease and the implementation of control measures on human health.

2. There is widespread disengagement of farmers from government policies to control the spread and achieve the elimination of bTB. Equally, there is only limited accountability or acknowledgement by farmers that they themselves can contribute to preventing TB from coming onto their farms by, for example, wise informed purchasing decisions and other biosecurity measures.

3. Farmers impacted by bTB pay a high price and remain sceptical as to the nature of the disease and the effectiveness of existing national policies and controls.

4. Farmers commonly view variations in policy control measures as applied in different risk areas and between national areas in the UK as a product of political influence rather than clinical needs.

5. Compulsory government control measures for bTB have generated a widespread sense of disempowerment among farmers.

6. The effectiveness of on-farm controls to limit the spread of bTB are not well understood or accepted by farmers.

Chapter 1
Bovine Tuberculosis:
The Challenge and the Promise

(Mae llai o straen oddi wrth y bygythiad o bTB na'r hyn sy'n tarddu o bolisïau a rheolaeth y llywodraeth. Dyma sail ein hansicrwydd. Maent yn anymarferol ac yn niweidiol i fywoliaethau a lles anifeiliaid ... anghofiwch am fuchesi ag achosion cronig o TB a gweithiwch gyda ni i ganiatáu i'n busnesau a'n bywoliaethau weithio er gwaethaf achosion cronig ... treuliwch amser yn esbonio i bobl ar lawr gwlad. Triniwch ni fel unigolion nid ystadegau.)

…the stress is less in the threat of bTB than in government policies and controls. These are the basis of our uncertainty. They are unworkable and damaging to livelihoods and animal welfare … forget about chronic breakdowns and work with us to allow our businesses and livelihoods to work despite a breakdown—spend time explaining to people on the ground. Treat us as individuals, not statistics.[5]

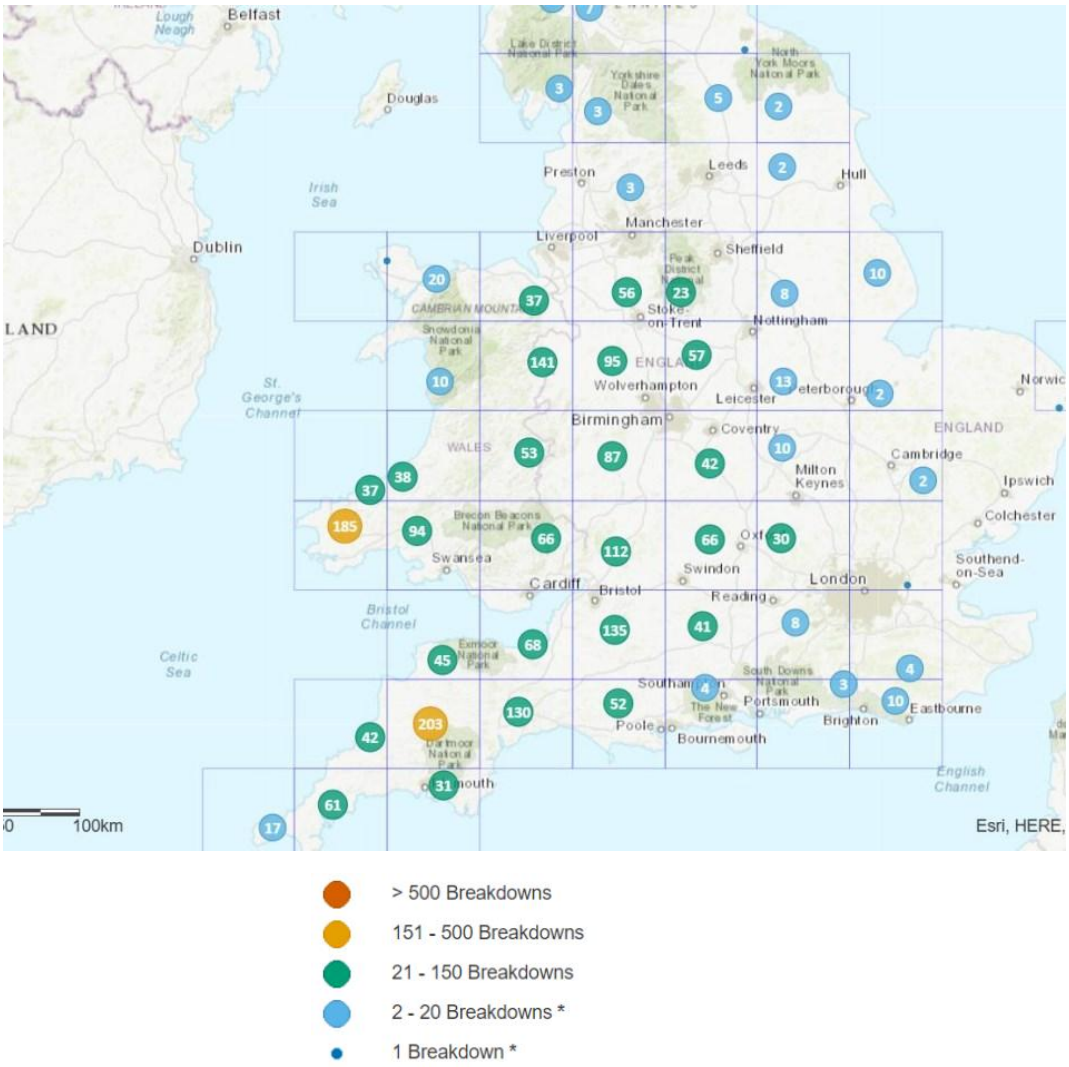
The Challenge

By the end of the 1960s the presence of TB in cattle in the UK had almost disappeared. By the mid-1970s all cattle herds in the UK had been cleared of the disease although not simultaneously. Herds in Cornwall and Gloucestershire, after being officially cleared, continued to have further confirmed outbreaks.[6] This high level of success was a product of science-based policies and procedures dating back to the early 1920s and to the development of the tubercular skin test that enabled the routine testing of cattle for TB. This level of success is now almost forgotten and rarely recalled.

Today the goal of government policy towards bTB remains elimination of the disease.[7] Current policies and their implementation, however, are widely contested. As this report documents, many farmers argue that these policies generate more stress and more damage to their health and wellbeing and to that of other rural residents than an outbreak of the disease itself. As a result, in the UK, because almost all milk for human consumption is now pasteurized - a process which kills all harmful bacteria - cases of people contracting TB (a zoonotic disease) are rare.[8] This challenges the established policy focus on bTB as an animal disease and suggests a need for greater recognition and action to address its impact on the suffering of the farmers and other stakeholders involved.

The current status and trends in levels of bTB infection in the United Kingdom present a complex picture that is difficult to describe (Figure 2). The criteria used to define bTB Risk Areas in England and Wales are not harmonised between the two nations and consequently are not directly comparable. The labels used (high/medium/edge/low) are qualitative descriptors of the relative differences in bTB incidence/risk/epidemiology/endemic cattle and wildlife infection within each country, not a common terminology or set of criteria applicable across all parts of the UK (Appendix 2). These apparent inconsistencies are compounded by variations in the measures used with respect to changes in the prevalence of the disease. (Northern Ireland has no officially designated bTB Risk Areas. Scotland is officially designated as TB-free).

Figure 2: Bovine TB Risk Map for England and Wales



Source: ibTB - Mapping bovine TB (bTB) in England and Wales, November 2024

The complexities, uncertainties, even 'messiness' encompassed in current bTB controls are in some part a result of increased scientific understanding of Bovine Tuberculosis that has led to its description as "the most difficult and intractable animal disease currently facing the UK and Ireland".[9] There is no simple or cost-effective quick fix. This provides at least some explanation for the many different (at times contradictory) voices raised in explaining the multiple characteristics of the disease compounded by the lack of certitude as to its physical symptoms. It is also a disease that has evolved and changed over time. To this extent there are parallels in the recent Covid 19 pandemic, its continued sporadic outbreaks, its areal spread, public uncertainty, distress and dissent over the controls imposed.[10]

The Promise

In a speech to the National TB Conference, in November 2023, the Chief Executive Officer of FCN outlined why we should support a TB-free future.[11] Much of the argument presented focused on the promise inherent in reversing the negative impact of bTB on the health and wellbeing of farmers. This need and hope embodies a strong moral argument, but one also grounded in hard fact.

Farmers are the backbone of the UK farm industry and are fundamental to its long-term success and growth. Farmers provide more than half the food we eat, employ almost half a million people, and are a major generator of export earnings. In this, livestock are a key component part. In 2023, UK red meat exports were worth £1.7 billion.

Farming's importance, however, extends well beyond its economic importance. Agriculture uses 70% of the UK's land and is a major contributor of public goods. Farmers and farming are part of our cultural heritage and guardians of much of our landscape. Farming also helps - and potentially could help more - to meet many of our most pressing environmental needs, including protecting biodiversity, supporting wildlife conservation, boosting water quality, protecting soil quality and helping to counter climate change. Full realisation of these contributions requires the eradication of bTB, and with that, the improved health and wellbeing of the farming community.[12]

Chapter 2
A Significant Aberration

…successful eradication schemes for Bovine Tuberculosis have been implemented in a number of European and other countries over the last 50 years. However, the islands of Britain and Ireland remain a significant aberration to this trend, with the recent exception of Scotland. Why have eradication schemes failed within these countries, while apparently similar programmes have been successful elsewhere?[13]

(Ni fydd TB yn cael ei ddileu oherwydd bod y lledaeniad yn afreolus)

…TB will not be eradicated because the spread is uncontrollable[14]

… policies are disastrous, unworkable, damaging to livelihoods, and detrimental to animal welfare[15]

…TB will soon be back in humans if it can't be controlled[16]

Against a background of successful TB eradication schemes in many European countries and elsewhere in the world, many UK farmers question the effectiveness of control policies and even the scientific basis of these policies. Bovine Tuberculosis has many different, complex dimensions and these vary regionally and over time. The history of Bovine Tuberculosis in the UK highlights the continued, repeated epidemiological uncertainty associated with the disease.[16] Elements of uncertainty remain today, spurring an ongoing debate among scientists as to how to better understand bTB, explain the aberrant status of the disease in the UK - including marked regional and national variations in levels of infection - and why efforts towards eradication of the disease have proven so challenging.

Issues around bTB have generated proposals for a new wide sweeping research agenda[17] that includes the value of adopting different perspectives in future work. Proposals include the need for regional field studies, large scale modelling and a comparative approach that contrasts landscape, ecological, animal husbandry and molecular epidemiological characteristics within Britain and Ireland, to those found in countries in continental Europe, including the heterogeneity of bTB diagnostic approaches, control programmes, different tuberculin potencies, as well as investigation of the different approaches used in bTB programmes across Europe. There is a need for greater research attention to better understand wildlife hosts (including badgers and their varied regional density), variations in stock density, stock movement (for trade, but also in association with farm fragmentation) variations and the evolution of such differences in the population genetics of the M. Bovis strain.

Further research into co-infection effects, and possible climate and environmental influences, including projected global climate change, would be valuable.

The evolving agenda includes the value of adopting new perspectives on bTB and the introduction of alternative framings of the disease which would "bring to the fore voices which may otherwise remain marginalised"[18] and recognise the "complex socioeconomic, sociocultural and political contingencies connecting farmers, vets, the state and the wider political economy of intensive livestock production systems."[19]

These ideas reaffirm the need for an interdisciplinary approach to bridge the divide between the natural and social sciences and point up the important human component in infectious disease outbreaks.[20]

Progress in the control of Bovine Tuberculosis and the high level of successful progress towards its eradication in the UK by the mid-1970s was a product of solid, evidence-based scientific research. Progress towards eradication unfortunately ultimately failed. The resultant persistence of bTB and spread among livestock in the UK is both disappointing and not easily explained.[21] This, however, provides no rationale to dismiss evidence-based scientific research as a central component in effective policy controls. The need to focus on scientific research and its findings is a recurrent theme among many commentators and farmers interviewed as part of this current work.[22]

Any expanded research agenda as outlined above identifies a need to reframe Bovine Tuberculosis in a broader context: one that encourages fresh insights and understanding of the disease, its evolution and change; addresses issues of spread and scale; and a broad range of other recognised variables. This includes the need to incorporate a greater 'human component' that builds on the existing body of social science research on bTB as widely referenced in this report and amounts to a trajectory built on past scientific research and policy success. It incorporates new understanding as part of the history of scientific progress, extending the role of social science in all aspects of the policy cycle, including policy implementation.

Chapter 3
The impact of bTB on the wellbeing and health of farmers, vets and other members of the rural community

… beyond words—still feel sick at the thought of testing[23]

… anguish and stress. Horrific interest rates eroded our ability to survive, yet that still pales with loss of our beautiful cows[24]

Farmers' Voices: The financial impact

Devastating …. Crippling
Almost finished us off
Severe impact on cashflow
Income stopped and debt mounted
Huge loss of income and production
Massive financial uncertainty
Cashflow a nightmare
Extra costs and no income
Made me feel worthless
Financial worry less than the impact on our wellbeing
Source: farmers/respondents across the UK

As farmers' responses reflect, the direct financial impact of an outbreak on their farm can hurt deeply, causing much anguish and pain, fear of bankruptcy and loss of the farm business. For many dairy farmers supplying liquid milk there may be an immediate cessation of sales and with that an abrupt stop in cash flow. While some farmers, including dairy farmers, acknowledge the financial cushion government compensation provides, many equally complain at what they view as the unfairness inherent in standardised compensation payments that take no account of individual circumstances and the specific characteristics of their farm enterprise. Farmers with pedigree breeding stock feature predominantly in this group. For most farmers, however, an outbreak quickly translates into a cash flow crisis and unplanned debts. For some this is addressed by family members obtaining off-farm work to help maintain the household income, for others by a reduction in the use of wage labour.

A repeated request voiced by those farmers interviewed is for greater access to face-to-face advice on how to respond and survive an outbreak and the associated income loss. Some farmers were uncertain where best to seek help. Where they approached their local bank for advice or assistance, however, they commonly recounted tales of warm understanding, good advice and practical help. For some farmers without well-established connections it took particular confidence to seek help.

While for many farmers loss of income seriously reduced on-farm development plans, some with ready access to finance took the opportunity to restructure their business and increase their long-term resilience. No farmer reported themselves or neighbours being forced out of business, although this undoubtedly occurs. What was repeatedly noted was the impact of income loss on their mental health and wellbeing. A similar impact was reported as characteristic in anticipation of testing among those who experienced an outbreak on their farm. Many farmers reported an overwhelming sense of loss at their lack of personal control over the disease. These frustrations, fears and uncertainties were often acknowledged as generating anger, resentment and a sore temptation to blame those they acknowledged as often innocent targets.

Farmers' Voices: The social and psychological impact on mental health

Stress, strain and depression - sleepless nights
Worry and stress before tests and fear of being shut-down
TB made son quit working on the farm
Stress from stigma of having outbreak
Helplessness and lack of energy
Constant worry and anger
Huge burden on whole family and no end in sight
Broke my marriage
Horrendous stress officials don't understand
On-going stress and physical strain for all the family
Worry, fear, depression and moody
Now I don't sleep well
We had to get counselling
Mentally it is hard, really hard on the whole family
Source: farmers/respondents across the UK

The direct financial impact of bTB is undoubtedly often severe and acute, if inherently variable, and shaped by the nature of an individual business concerned and ease of access to household cash reserves. The recurrent message from respondents, however, was that the greatest impact of TB on the farm household, whether from a new outbreak or in anticipation of testing, came from the uncertainty involved and the cumulative impact on their mental health and wellbeing. There is now much greater public discussion and open acknowledgement of mental health issues than there once was, although there may well continue to be some under-reporting. The extent and strength of the responses on this topic was surprising, although the pre-existing prevalence of mental health issues among rural communities is well-established.[25]

Depression, stress, sleepless nights, relationship break-ups, family tensions and suicidal thoughts were repeated themes. The stresses were often exacerbated by uncertainty, fear of

further disease outbreaks, or by the fear of continued financial losses. These conditions turned many farmers inwards, so that the stresses and strains extended among all family members. Outbursts of anger were often expressed unfairly against vets, bank staff and others in the rural community.

The wellbeing of farmers and the wider community

The financial, mental health and physical health symptoms generated by bTB are closely interrelated (Figure 3). Characteristic physical injuries were identified by farmers as a result of increased workloads, by necessarily taking on tasks previously delegated to younger staff. Pre-existing injuries were often exacerbated by such circumstances. The increase in the volume of work associated with bTB was in some instances also evident in blood pressure problems among many farmers which made them more vulnerable and their lives harder.

Compared to the financial impact of bTB and mental health effects, the physical health symptoms identified may seem relatively minor. This would be wrong and grossly unfair. Modern farming continues to require frequent, physically demanding tasks to keep the business afloat and care for stock. Inability to complete such tasks can severely damage the business and break a farmer's spirit.

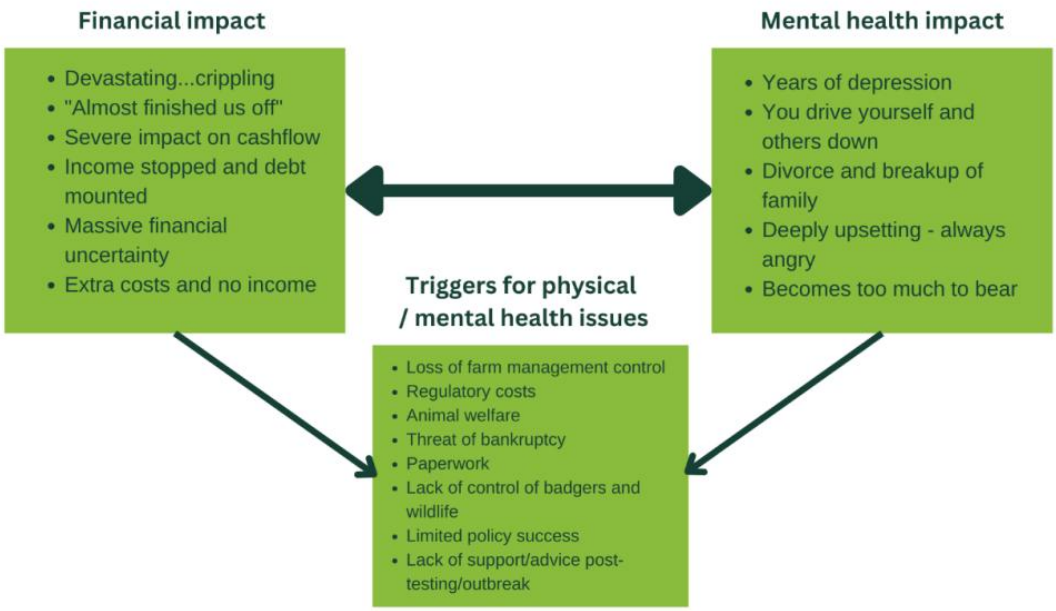
The impact of bTB on farmers as detailed above impacts all members of the farm household and farm employees. Interviews with other community members, including clergy, teachers and vets, confirmed that the impact of bTB on farmers frequently also has a significant impact on the wider community. This is vividly captured by a vicar[26] of several rural parishes in England (who also does chaplaincy work). In these roles she frequently speaks with farmers and other rural residents at farmers' markets, in local villages, or in church.

She knows of one local farm that was closed down due to a TB outbreak. While the farmer feels they can manage, their daughter who has special educational needs is very upset - a further illustration of how bTB often compounds existing vulnerabilities.

As the vicar accounts, "people in rural communities have an awareness of TB and its effects, even if they don't necessarily understand what it is like to have an outbreak. TB causes a lot of anxiety. Farmers are stoic and TB is seen as 'just one of those things". But it doesn't take the worry or stress away. People in rural areas don't always understand the challenges and want to protect foxes, badgers and the like", adding that, "if TB was spread by rats people wouldn't be opposed to a cull. Safe, controlled and targeted culls could make a difference".

There is a feeling among farmers that no progress is being made. TB for many is a constant worry, felt as outside their own control, and one more barrier preventing them from farming how they want to farm.[27]

Figure 3 — Farmers' Voices: the Interdependence of Symptoms and Health Conditions



(Teimlais bwysau iselder, a chafodd hyn effaith aruthrol ar fy mhartner a'i lles meddyliol.)

…I felt the weight of depression, and this had a massive impact on my partner and her mental wellbeing[28]

(Mae'r drefn brofi yn hynod o straen ar adnoddau dynol, a'r gwartheg.)

…The testing regime is extremely stressful on human resources, and on the cattle[29]

…The mental health and worry of TB outbreaks or the possibility of another is greater than the financial impact[30]

(Mae'n dod yn ormod i'w oddef ac heb unrhyw fantais.)

…[It's] becoming too much to bear and for no gain[31]

The wellbeing of veterinary professionals

> …I have suffered impacts on mental health from the stress and worry and sleepless nights prior to reading bTB tests and worrying about the results and cow losses and how they affect farm businesses and farmers. Also lots of worrying regarding the mental health of farmers who are down with bTB. I have close working relations and hate to see farmers stressed and depressed[32]

"Seeing the devastating impact of Bovine Tuberculosis week in, week out, is driving farm vets out of the profession".[33] This blunt perspective is explained as a result of the stress and strain faced by veterinarians due to the impact of bTB on farm practice. Conflict in work relationships, exposure to animal suffering, and high workloads are among other factors identified as impacting on the mental health and wellbeing of vets and in their retention in the profession.[34]

The interaction between veterinary professionals and farmers is pivotal in the rural community. With respect to bTB this includes their role in the testing of stock and implementation of associated policies, and commonly includes a social component in the provision of emotional support to farmers in difficult times.[35] Respondents were questioned as to their views on such interactions. At least 75 percent of the farmer respondents in each of the different bTB Risk Areas described them as either 'good' or 'very good' (Table 1). These findings were consistent across all bTB Risk Areas (including the responses of 13 farmers unable to identify the status of the Risk Area in which they live). Although mixed views were expressed, common epithets used by farmers to describe these interactions were positive, supportive, empathetic, and even excellent.

Table 1: Nature of interactions between vets and farmers

TB Risk Area	Value of interaction	Number of respondents	% respondents by risk category
High Risk	Very good	124	47%
High Risk	Good	97	37%
High Risk	Satisfactory	37	14%
High Risk	Poor	6	2%
High Risk	Very poor	1	0%

Medium Risk / Edge Areas	Very good	63	49%
Medium Risk / Edge Areas	Good	33	26%
Medium Risk / Edge Areas	Satisfactory	22	17%
Medium Risk / Edge Areas	Poor	8	6%
Medium Risk / Edge Areas	Very poor	2	2%
Low Risk	Very good	21	44%
Low Risk	Good	16	33%
Low Risk	Satisfactory	11	23%
Not sure	Very good	6	46%
Not sure	Good	5	38%
Not sure	Satisfactory	2	15%

Source: FCN Survey findings

Farmers noted that vets were "often struggling with their own mental health issues" and some vets were "visibly distressed" when conveying bad news, "even fighting back tears"[36]. Others stated that both the threat and inherent uncertainty prior to TB testing and the implications of potential control measures generated high levels of stress on all parties and that as farmers, this largely explained their difficulty in controlling their temper, too often resulting in angry outbursts which on reflection were an over-reaction, misplaced or wrong. As one farmer explained, "farmers aren't usually upset with the vet, but more with the situation."[37]

For the most part, negative views expressed by farmers towards vets were confined to those employed by government bodies or agencies. Interactions with these 'government vets' were often described as 'difficult' or 'poor'. Where these interactions were described as positive, this was frequently qualified as unexpected or surprising. Comments associated with 'government vets', whether negative or positive, were unrelated to the categorisation of the Risk Area involved. In farmers' minds their perception of 'government vets' was commonly associated with their identification as enforcers of official rules and policies, which farmers can dislike. Such perceptions in effect were largely predetermined stereotypical views, often dispelled through personal contact between farmer and vet. Farmers commonly acknowledged that such face-to-face communications generated mutual understanding and respect. The vets' own reflections on their interactions with farmers largely supported this view, emphasising the importance of the nature of the conversation and the need to listen.

It is also important to build understanding of the policies involved, and to recognise farmers' inherent dislike and distrust of rules and restrictions on how they manage their stock.

There is substantial evidence that stress is a major factor impacting on the health and wellbeing of veterinary professionals in farm practice.[38] As previously discussed, managing disease outbreaks in farm animals is stressful and impacts throughout the rural community where vets in farm practice commonly work and live. The impact of bTB is not the sole stress on vets, but undoubtedly in some circumstances may be the 'straw that breaks the camel's back'. Overall, however, both farmers and vets commonly state that they enjoy a high level of mutual friendship and respect.

Chapter 4

Conclusions and Findings

…it's all the small things together that add up[39]

Bovine Tuberculosis is a very complex, multifactorial and challenging global health problem that spreads primarily among cattle. It is commonly accepted as the United Kingdom's most intractable animal disease and responsible for the slaughter of upwards of 40,000 cattle each year.[40] Current statutory policies in place to eliminate bTB impose a heavy annual cost on taxpayers of £100 million and an additional estimated cost to farmers in England in the region of £75 million per year.[41] As this report confirms, Bovine Tuberculosis also impacts on the financial wellbeing and health of farmers, farm households and other members of the rural community. For some farmers the financial impact is crippling. Problems can get bigger quickly with a need to borrow more and more money until bankruptcy looms. For many of those farmers, business development stops and plans are put on hold. This is very hard for those concerned and has implications for the longer-term prosperity of the agricultural sector.

The expected arrival of strangers on the farm to test for TB and the threat of an outbreak decreases farmers' confidence and causes stress. This may result in bouts of worry and anger, sleepless nights, potentially serious mental health problems and a range of physical ills – aching bodies; injuries from increased work demands; and accidents due to exhaustion and efforts to manage livestock and maintain the farm business. These repercussions are exacerbated by the fact that in the UK a farm commonly combines both a business enterprise and a family home.

Much of the uncertainty and complexity associated with bTB and control measures are intrinsic to the nature of the disease, its expression in cattle and the evolution and changes in scientific understanding of the disease. The research behind this current report has identified a wide range of symptoms experienced by farmers in response. Any detailed list of these symptoms is long. Individual symptoms can be relieved through counselling, medical intervention, financial support and other aid and support. The crux of the problem, however,

is the need to identify and address the underlying cause of the symptoms displayed. This report has identified that often the primary cause of stress among farmers is regulation, compliance and inspection, and that for many farmers these outweigh the impact of a disease outbreak itself. This confirms earlier findings that the primary cause of stress among farming people is "the burden of bureaucracy and inspections and fear of being unfairly penalised for honest mistakes or small lapses with regard to obligations"[42], at the same time confirming the impact of managing animal disease outbreaks on farmers' mental health.[43]

This current report identifies a number of farmer's concerns that centre on existing control policies. These include a perception of government authorities as too often being insensitive, unbending or even uncaring. In some cases, such perceptions extend to vets. Specific complaints extend to existing levels of government compensation for culled cattle and the need for better alignment of compensation to the true value of stock, and a loud recurrent demand for the culling of badgers as transmitters of TB.

The varied bTB Risk Area categorisations within and between the different national jurisdictions of the UK are often criticised by farmers as an unwarranted result of political interference and without scientific merit. Certainly, as a basis for data collection and in their analysis, the results often generate confusion and misunderstanding of progress in controlling bTB. This breeds cynicism. Equally, farmers' efforts to increase their own on-farm controls and biosecurity measures seem limited, patchy and not necessarily based on the best advice. The net effect is an apparent perception that responsibility for bTB is that of government alone. Farmer 'buy-in' remains limited.

Several of the issues raised by farmers as detailed above and the nature of the judgements required are addressed in an earlier, broader, detailed report which reviewed the current bTB strategy in the UK. The report concludes that "current governance arrangements poorly serve bovine TB control. This same conclusion is reached in an audit report on eradicating Bovine TB in Northern Ireland.[44] Both reports conclude that existing control policies are inadequate to achieve disease eradication.

Such analyses are not a blanket condemnation of the various authorities involved. The strength and value of the TB Hub is identified as providing very good information, and the advantages of retaining the high-level policy making in DEFRA are fully acknowledged.[45] There is equally broad agreement among many of the farmers interviewed and other key farm groups on the need to continue with a policy focus based on scientific evidence.

There is a persuasive overlap, indeed coincidence, between official, high-level, critiques of existing bTB control policies and the root cause of the symptoms of bTB on farmers' health

and wellbeing as identified in this report. Farmers' disengagement from current bTB policies and their implementation ultimately rests on a lack of shared ownership; a lack of control. There is a need for a fuller engagement of farmers in policy development and implementation. The recent UK government initiative to establish the Bovine TB Partnership for England is directly aligned with this goal.[46] The Partnership draws its membership from many different members of the agricultural, veterinary and academic communities along with officials from DEFRA, the Animal and Plant Health Agency (APHA) and Natural England. It aims to encourage shared ownership, coordination and decision-making on England's bTB eradication strategy, including those factors associated with bTB that influence farmers' mental health. The Partnership is a significant step forward (although many respondents to this study seem unaware of the initiative) and could encourage farmers' fuller acknowledgement of their own capacity to help keep bTB off their farms through their own purchasing decisions and on-farm biosecurity measures.

New Zealand provides a unique model of an agency for the management of Bovine Tuberculosis. Operational Solutions for Primary Industries (known as OSPRI) is led by industry and operates as a partnership between primary industries and government. It is a not-for-profit limited company that aims to eradicate bTB from the country.[47] It has produced very good results in effective control of Bovine Tuberculosis, including control of the bushtail possum, an introduced species, that can transmit TB to cattle.

The New Zealand model is identified in the Strategy Review[48] as one to consider for the UK. Separation from government would ease collaboration with industry and other stakeholders, encourage shared ownership of the problem and provide a wraparound service, including a focus on the links between bTB controls and the mental health of farmers. The Strategy Review hedged on recommending the direct adoption of the New Zealand model. Instead it argued the need to identify and build on the strengths of that model to create a UK agency that meets the country's specific characteristics and circumstances. Such a UK agency could be constructed on the foundations provided by the existing Bovine Tuberculosis Partnership for England and tested initially in one of the UK nations. This agency would continue to work in concert with scientific centres and align its decisions with research evidence. It would reduce the existing financial burden on government and remove the existing pressures, as demonstrated in the evidence presented, which are so seriously impacting on farmers' health and wellbeing. It is the recommendation of this report that an agency, independent of government, be created for the management of TB in the agricultural sector.

Appendix 1:
Research Methodology and Sampling

A mixed methods approach was adopted for data collection using accepted procedures in qualitative research and established statistical concepts.

A preliminary stage also involved the use of social media to alert farmers across the whole of the UK to the planned research and its objectives and invited their participation. A survey sheet was attached, including identical questions both in English and Welsh. A total of 460 farmers completed and submitted the questionnaire in English and 17 in Welsh. Of the 477 respondents, 195 offered to participate in individual, in-depth, follow-up interviews. The data generated also allowed the development of a stratified random sample of farmers by bTB Risk Area. This was premised on the understanding that while the criteria used to define the Risk Areas in both countries differ, farmers' experience of bTB and the impact of the disease on farm households could reasonably be expected to be shaped in some part by the level of risk infection in an area. It remains true, however, that ultimately those farmers interviewed were self-identified.

Initial hopes of using the data from Survey Monkey to develop a random survey of farmers across the whole of the UK was thwarted by the fact that the descriptors of bTB Risk Areas are not standardised. They do not share a set of common criteria nor terminology and include qualitative criteria related to relative differences within each national unit. For example, the Risk Areas in Wales, although broadly similar to those in England from an epidemiological point of view, are not directly comparable. Moreover, Northern Ireland has no officially determined Risk Areas, nor has Scotland (officially designated as TB-free).

To address the lack of data harmonisation across all parts of the UK, the sample of farmers identified for in-depth interviews was necessarily treated separately for each national unit. A stratified random sample of 45 farmers in England willing to be interviewed was drawn from across the designated bTB High Risk, Low Risk and Edge areas. A separate stratified random sample of 56 farmers was identified for in-depth interview in the designated High, Low and Intermediate bTB Risk Areas in Wales.

Although Northern Ireland has no officially designated bTB Risk Areas, maps are available for the 11-year period from 1996-2006 of the cattle population, detected bTB infection levels, and relative bTB risk.[49] No maps using updated information were available, but using social media together with the available maps allowed the identification of eight farmers (and four community members) for in-depth interview across the range of bTB risk levels. In Scotland, the four farmers and five community members interviewed were identified from the core of three respondents to the initial Survey Monkey exercise using established 'snowball' sampling techniques.

Data constraints were further addressed in earlier chapters. Key characteristics of bTB in Wales, Northern Ireland and Scotland are included as individual 'snapshots'.

Appendix 2: Descriptors of bTB Risk Areas

The Welsh Government adopted its regional approach to the identification of Bovine Tuberculosis in October 2017. This was done independently from England and used slightly different epidemiological criteria and disease indicators. The Risk Areas in England had been set up four years earlier (in 2013). The English areas follow (old) county boundaries (except for the internal division of the Edge Area into annual and six-monthly surveillance testing sections). The Welsh areas do not conform to Welsh county/local authority boundaries and are an amalgamation of 59 spatial units (made of animal health parishes) that were newly developed specifically for that purpose, with each of these Welsh spatial units containing a similar (~200) number of cattle herds. In addition, the boundaries of the Risk Areas in England and Wales have slightly changed since they were first established, in response to an evolving disease picture and this in turn is not homogenous within each Risk Area. As a result the original descriptors used in 2013 or 2017 may not necessarily represent the current bTB situation—for example, the Low Risk TB Area in Wales has a higher herd incidence and prevalence of Bovine Tuberculosis, and represents a smaller proportion of the whole country and of the Welsh national cattle herd, than the Low TB Risk Area of England. In contrast the High TB Area of East Wales is more akin to the Edge Area of England. Even among the five bTB regions of Wales, the disease situation is not uniform across the two Intermediate bTB areas (Mid and North). In the former the prevalence of TB is relatively stable and has a lower herd incidence than in the worsening Intermediate TB Area (North) covering Northeast Wales. In fact, the northern Intermediate TB Risk Area has had a higher herd incidence rate and prevalence of bTB than the High TB Risk Area of East Wales.[50]

Snapshot — Northern Ireland

Agriculture is a fundamental component in the Northern Ireland economy, employing 3.2% of the country's workforce and contributing £351 million to the country's Gross Value Added. The value of livestock and livestock products sold to markets outside Northern Ireland is estimated at £1.5 billion (2015 data).[51] Eradicating TB is consequently important both to maintain the country's economic wellbeing as well as for reasons of animal health and welfare.

Northern Ireland, as with Wales, has a predominance of small farms. Three quarters of the 25,000 farms in Northern Ireland are classified as very small. Cattle farming is the main agricultural activity with almost 1.7 million cattle on just over 20,000 farms, half of which have fewer than 50 cattle. The size of individual farms and the associated scale of production impacts income levels, and low farm incomes allow little margin to respond to any adverse circumstance, including an outbreak of TB. Herd prevalence of bTB in is reported as 12.4% (2017 data). This is similar to Wales (12.5%) and below the overall average in England (20.4%). The comparable figure in the Republic of Ireland is 4.9%.[52] As noted elsewhere in this current report, the specifics of the eradication programme in each nation varies and as statistics are collected and differently presented, precise comparisons among the different nations are difficult.

The Northern Ireland Audit Office has a statutory authority to report to the Northern Ireland Assembly on the economic efficiency and effectiveness with which departments and other bodies use their resources and has reported on the eradication of bovine TB. Its findings recognise the serious nature of bTB, the complexity of the disease, including its many unknowns, and argues that both the effectiveness of control policies to eradicate bTB in Northern Ireland has been largely unsuccessful while imposing a high cost on farmers and other taxpayers and not resulting in a reduction in disease levels … but the herd incidence rate has stagnated at levels above 6% which is not what would be expected with an effective eradication programme in place.[53] By 2022, however, the TB notification rate in Northern Ireland was 3.5 per 100,000 compared to 2.2 in Wales and 7.7 in England.[54]

Such shifts as described have influenced policy change. Specifically, current bTB policies in Northern Ireland provide compensation to farmers at full market value for any cattle compulsorily removed for disease control purposes. The Department of Agriculture, Environment and Rural Affairs had as of 2018, twice attempted to amend this compensation regime on the basis that it offered little incentive to farmers to accept shared ownership of the disease. Reduced levels of compensation would also reduce the burden on taxpayers. On both occasions these proposals were rejected by the Northern Ireland Assembly's Agriculture, Environment and Rural Affairs

Committee subject to implementation of a more comprehensive and effective eradication plan. Public consultation on a further proposal to reduce the compensation rate closed in March 2024.[55]

Snapshot — Scotland

Scotland is unique among the nations of the UK by holding Officially Tuberculosis-Free (OTB) status since 2009. This was achieved by its fulfilment of the criteria set out in European Directive 64/432/EEC.[56] Maintaining this status is a government priority to protect the Scottish farm industry and its trading status.

Recognition as OTB is conditional on maintaining a low, stable incidence of TB below a very low threshold. This includes fewer than 1% of herds presenting evidence of having had bTB in the previous 6 years. The status of an individual herd may be suspended if the number of breakdowns exceeds certain levels. Official testing programmes are managed by the Scottish Government and include screening for the presence of infection, breakdown management and where there is any suspicion of infection. The nation has no designated bTB Risk Areas. Most of its rare outbreaks are linked to stock brought in from elsewhere in the UK or from The Republic of Ireland. Within Scotland itself, those parts most prone to bTB are in the south-west and north of the country.

Testing of cattle is legally required at a default interval of 48 months (every 4 years) but in certain circumstances may occur more frequently. Low risk herds may be exempt from this test regime. Reporting of suspicious clinical cases or identification of lesions at slaughterhouses or in post-mortem examinations result in investigations, restrictions where necessary and additional testing. Additional testing is also carried out in other specified circumstances.

Pre-movement and post-movement testing are legally required. This includes testing of all cattle over 42 days old brought in from areas of England and Wales and before they enter a Scottish herd. Pre-movement testing is also required of cattle coming from Northern Ireland and all non-OTB countries including the Republic of Ireland.[57]

Explanation for Scotland's continued, enviable OTB status is uncertain. A number of different hypotheses have been proposed including its relatively low number of badgers (and relative low density) compared to the rest of the UK (although other wildlife hosts exist including relatively large numbers of deer), the significantly low density of cattle across Scotland as a whole and its low proportion of dairy herds relative to the rest of the UK.[58]

The exceptionally low response of Scottish farmers (a total of 3) to the invitation to participate in this current report may well be reflective of the relative security they feel from bTB and their freedom from the much more intensive official testing and monitoring regimes found in other parts of the UK. It is also some measure of the benefits all UK farmers would obtain from a future bTB-free status.

Snapshot — Wales

Patterns of bTB infection in Wales are characterised as ever-changing.[59] Attached to this statement, the Rural Affairs Minister identified that "important, long-term trends show good progress". Between 2009 and December 2022, new TB incidents fell by 49% in Welsh herds while prevalence decreased by 32%. In some areas, 94.7% of herds were TB-free in some areas.

The data presented by the Minister were challenged by the Farmers' Union of Wales as "cherry-picking numbers to give a positive spin."[60] At least in part this is characteristic of a widespread concern among farmers across the UK concerning bTB data which are collected and presented differently in each of the devolved nations. The trends identified in this instance were also directly linked to significant variations in level of herd incidence across the Welsh TB risk areas, each of which has eradication targets set to meet the goal of eradicating TB in Wales by 2041.[61]

The impact, perceptions and response to bTB and scepticism about the effectiveness of policies to secure eradication are undoubtedly also influenced by the national importance of Welsh agriculture and the structure of the farm sector. Over 90% of the land in Wales is used for farming. Livestock-raising remains a key economic activity, generating 0.7% of the national economy in 2019. In the same year the comparable contribution in the UK was 0.5%. Farming also provides 4.7% of employment in Wales. The average for the UK is 1.42%.

The average size of farm in Wales is 48ha, smaller than in England (88ha) or Scotland (107ha). These characteristics of Welsh farming are related to the mountainous nature of the country, its wet climate which favours livestock farming and its history. In consequence, the Average Farm Business Income in Wales in 2020-2021 was £34,3000, the lowest among the nations of the UK. Similar to Northern Ireland (£34,402) it is below that in England (£51,900) and below the Scottish average of £39,912.[62]

While the flow of information, decisions and actions is undoubtedly much the same across the different nations of the UK, the relatively low incomes earned by Welsh (and Northern

Irish) farmers provide a lower financial margin to cushion farmers from the potential or actual impact of a bTB outbreak.

The Welsh Government has established a Bovine TB Technical Advisory Group chaired by Professor Glyn Hewison which met for the first time in April 2024. This group will meet quarterly to provide advice to Welsh Ministers. In addition, the Welsh Government has also established a Bovine TB Eradication Programme Board in August 2024. This Board will meet quarterly and provide strategic advice to the Cabinet Secretary for Climate Change and Rural Affairs. Early priorities for this Board will include considering the Technical Advisory Group's advice in relation to the six-yearly review of Wales' TB eradication targets and exploring how to improve communication and engagement with farmers and vets.

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