

A close-up photograph of a cow's face, showing its eyes and the texture of its fur. The cow has a white face with some black markings around its eyes. The background is slightly blurred, showing other parts of the cow and possibly other cows in the background.

Research Briefing **Brexit implications for Bovine TB in Wales**

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National Assembly for Wales
Research Service

The National Assembly for Wales is the democratically elected body that represents the interests of Wales and its people, makes laws for Wales, agrees Welsh taxes and holds the Welsh Government to account.

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1. Introduction

The National Assembly for Wales has established a fellowship scheme to enable academics at a senior career level (post-PhD) to spend time working with Assembly staff on a specific research project in areas of mutual benefit to the academic and the National Assembly.

Dr Gareth Enticott, a Reader in the School of Geography and Planning, Cardiff University has undertaken a fellowship involving primary and secondary research on Bovine TB (Bovine Tuberculosis) in Wales, in his capacity as an employee of Cardiff University. The project has examined: the social aspects of Bovine TB disease management in Wales; models of risk based trading and the governance approaches used successfully in New Zealand and Australia and their applicability to Wales.

The outputs from this research are presented in this Research Service publication, and another entitled “Bovine TB in Wales: governance and risk”. Together, they are intended to support Assembly Members from all political parties to be better informed about Bovine TB.

2. Methodology

This research briefing draws on the following primary and secondary data collected during the fellowship:

Primary data

A total of 21 biographical interviews with vets working in Wales.

Secondary data

A British Veterinary Association (BVA) survey of overseas qualified vets working in the UK. This survey was conducted in 2017 by the Institute of Employment Studies (IES). For this briefing, the IES provided survey responses for those vets living and/or working in Wales for analysis. The Royal College of Veterinary Surgeons (RCVS) provided data from their register of practising veterinary surgeons. For this report, the RCVS provided data on the country of qualification for vets living and/or working in Wales in 2007 and 2017. The Animal and Plant Health Agency (APHA) provided Bovine TB testing data in Wales between 1997-2017.

Previous research data

Primary data from previous research conducted by the author has also been included in the report. This includes ethnographic (participant observation) research of TB testing and interviews with vets and policy makers. References are provided to indicate when this research has been used

3. Tackling Bovine TB in Wales

Due to its significant impact on animal welfare, farmer welfare and farm business viability, tackling Bovine TB is a priority for the agriculture industry in Wales. The Welsh Government **estimates** that for long standing Bovine TB breakdowns, some of which have seen herds under restrictions for 16 years or more, the cost of testing the herds and compensation for cattle slaughtered is, on average, £179,000 per herd.

Bovine TB and its effects

Bovine TB is an infectious and chronic disease caused by *Mycobacterium bovis* (*M. bovis*) and usually affects the lungs and lymph nodes of cattle. In most cases infected cattle are able to transmit the

disease before they show any symptoms, which may be many months after they are infected. Controlling Bovine TB therefore depends on detecting and eliminating infected cattle as early as possible. While cattle and badgers are the principle hosts of the disease in the UK, camelids, deer, goats and domestic animals are also susceptible.

The **latest Bovine TB statistics for Wales** show that in the 12 months to August 2017, 9,808 cattle were slaughtered as a result of the disease, a 2% increase on the previous 12 months. In the same period, there were 762 new herd incidents (compared to 707 in the previous 12 months, an 8% increase). The Welsh Government **report** that the number of new TB incidents is down by 40% since 2009, the lowest level in 12 years.

Policies and strategies adopted by the Welsh Government

The Welsh Government has to date adopted a **Bovine TB Eradication Programme** made up of a number of different elements. These include: annual testing of cattle herds; a wide range of cattle control measures such as pre-movement testing; movement restrictions on infected herds; slaughtering infected animals; and piloting badger vaccination in an **Intensive Action Area** (suspended early due to problems with the global supply of the vaccine).

In 2011 the Welsh Government passed ***The Badger (Control Order) (Wales) 2011***. This order gave the Welsh Government powers to undertake, if it so wished, a badger cull within the Intensive Action Area. However, this order was subsequently **revoked in 2012** by John Griffiths, the then Minister for Environment and Sustainable Development, following his decision to pursue a badger vaccination policy instead. If the Welsh Government wishes in future to pursue a cull in the Intensive Action Area or in other parts of Wales, it will need to secure support for a new order through the Assembly. To inform policy, the Welsh Government is also undertaking a dead badger survey to better understand the level of the disease in the badger population in Wales and the relationship between TB infection in badgers and cattle.

Refreshed Welsh Government Programme

In October 2016 the Welsh Government launched a **consultation** 'A Refreshed TB Eradication Strategy' (closed January 2017). A key change is the introduction of a regionalised approach based on Bovine TB incidence. This sees Wales split into three geographical Bovine TB incidence categories - high, intermediate and low Bovine TB areas. The consultation advised that for each of these areas different measures would be used in a targeted approach. The range of measures proposed in the consultation included:

- surveillance testing of cattle herds (annually and six monthly – depending on area);
- pre-movement testing;
- movement restrictions on infected herds;
- strengthened biosecurity on farms;
- voluntary risk-based trading (moving to mandatory if necessary);
- slaughtering infected animals;
- reducing compensation amounts; and
 - badger vaccination when vaccine becomes available and, under certain circumstances, the removal of infected badgers on chronic breakdown farms to break the badger to cattle transmission route.

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Following the consultation a [Summary of Responses](#) was published on February 2017. The then Cabinet Secretary for Environment and Rural Affairs, now Energy, Planning and Rural Affairs, Lesley Griffiths, made a Bovine TB [oral statement on 20 June 2017](#).

A refreshed TB Eradication Programme and the associated delivery plan have now been published and are available on the Welsh Government's [website](#). A [FAQs document \(PDF 501KB\)](#) provides further details on many of the new arrangements. The refreshed Bovine TB Eradication Programme commenced on 1 October 2017. On 3 October 2017 the Cabinet Secretary made a further Bovine TB [statement in Plenary](#) on the programme. A [written statement](#) was issued on 12 December 2017 setting out a national eradication target for Wales to be Officially TB Free (OTF) between 2036 and 2041.

National Assembly for Wales inquiry

In 2017, the Climate Change, Environment and Rural Affairs Committee undertook an inquiry to understand the scientific evidence and wider issues around addressing Bovine TB. It published its [inquiry report](#) in May 2017. A Research Service [In Brief blog](#) provides an overview of the report. In summary, the report states that in light of the evidence heard, the Committee endorsed the Welsh Government's proposed refreshed approach, set within a new regionalised framework. The programme is intended to be comprehensive addressing all aspects of disease transmission, underpinned by a wide range of targeted measures.

The Committee received a [response from the Cabinet Secretary](#) on 17 May 2017. Ten of the twelve recommendations were accepted and two accepted in principle.

4. Bovine TB testing in Wales

Bovine TB tests

Bovine TB testing identifies new outbreaks of disease and is used to calculate disease prevalence for Wales and its three regions. There are two cattle testing methods used in Wales to detect an immune response to *M. bovis*:

- the skin test (Single Intradermal Comparative Cervical Tuberculin (SICCT)). This involves injecting bovine and avian tuberculin and comparing the size of skin reaction after 72 hours.
- the gamma interferon blood test, which is used on herds that have Bovine TB.

In addition, tests may be deployed in different ways:

- routine whole herd tests in which the SICCT is used as the primary surveillance method to detect Bovine TB reactors; or
- short interval tests (either SICCT or gamma interferon) which are conducted following the discovery of a reactor during the whole herd test.

Bovine TB testing is funded by the Welsh Government, with the exception of pre- and post-movement tests that farmers must pay for.

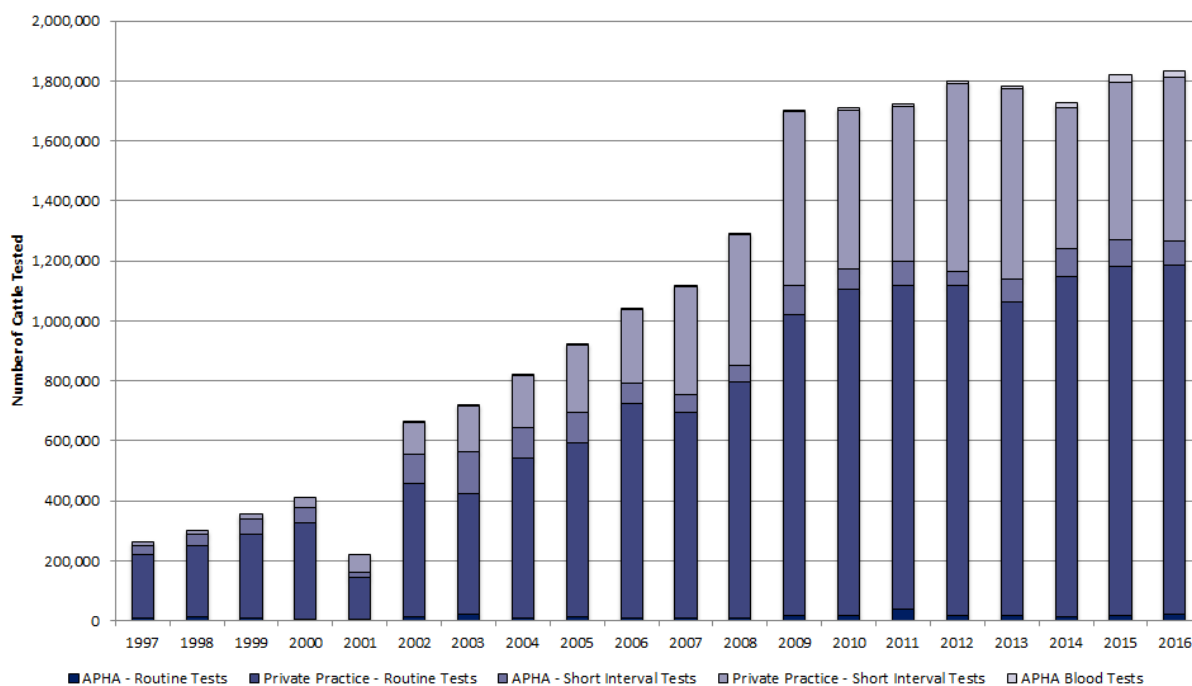
Organisation of Bovine TB testing in Wales

Since 2009, routine Bovine TB tests have been conducted on Welsh cattle farms at least once a year. Where cattle react to the test, these reactors are slaughtered, and further tests (known as short interval tests) must be passed before the farm can be declared 'officially TB free'.

Historically, testing has been conducted by veterinary surgeons working either for government agencies (e.g. APHA) and private vets (known as 'Official Veterinarians') who would test herds on their client's behalf. Animal Health Officers (i.e. technicians or 'lay testers') working within APHA can also conduct TB tests.

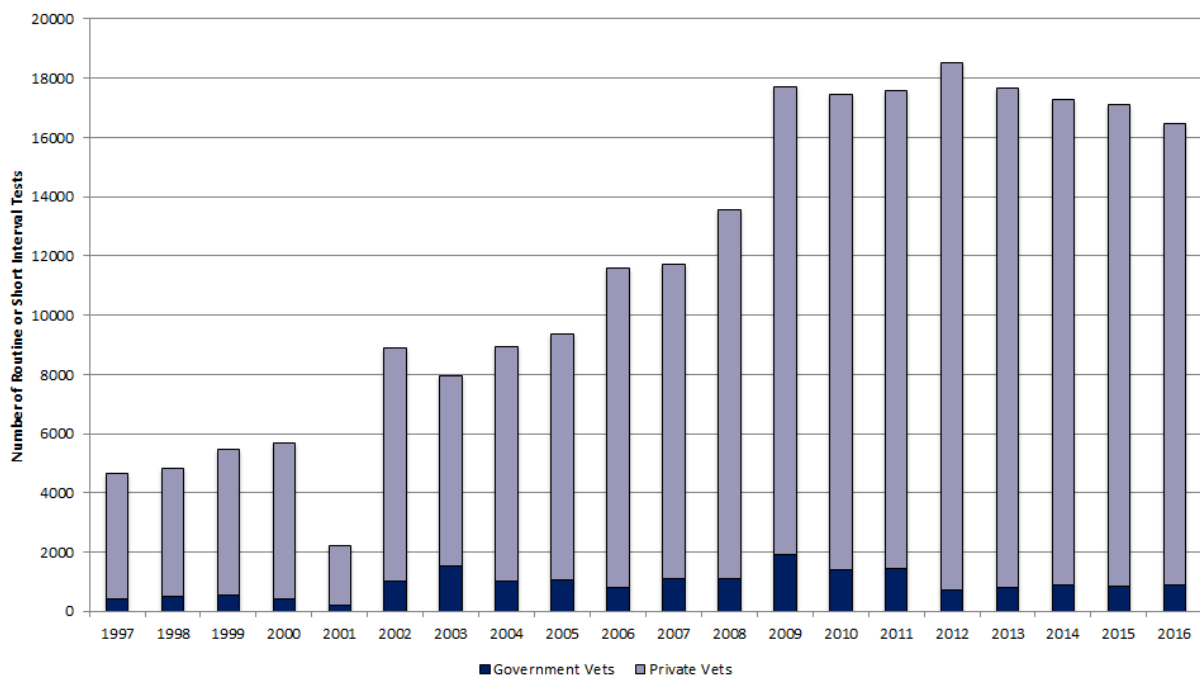
Following changes to the way Bovine TB testing is procured by the Welsh Government in 2014, testing is organised by two companies in north (Menter a Busnes) and south (Iechyd Da) Wales. The majority of testing is conducted by private vets on behalf of these companies. Government vets working for the APHA conduct a limited amount of Bovine TB testing. Figures 1 and 2 show the number of cattle tested and number of herd tests conducted in Wales between 1997-2016. Herd tests conducted by Welsh Government vets currently account for approximately 4-5% of all tests, a reduction from 8-11% in the 2000s. Some changes in testing volume are a result of Welsh Government policy, for example, in 2001 the outbreak of Foot and Mouth Disease led to a suspension of Bovine TB testing, and in 2008, annual Bovine TB testing was introduced throughout Wales.

Types of Whole Herd Bovine TB Test by Type of Tester Wales 1997-2016



APHA Bovine TB Testing Dataset

Number of Routine or Short Interval Tests conducted by Government or Private Vets in Wales 1997-2016



APHA Bovine TB Testing Dataset

Challenges facing Bovine TB testing in Wales

Based on ethnographic (participant observation) research and interviews with public and private vets, four main challenges have been identified that face the practice of Bovine TB testing in Wales: quality; hazards; motivation; and reliance and resilience. These are set out below.

Quality

In order to conduct Bovine TB tests, vets must complete an online training package and pass a supervised test. Concerns have been raised about the quality of TB testing between vets. A [review in 2006 \(PDF 316KB\)](#) by DNV Consulting on behalf of Defra and the Welsh Government, revealed a wide variation in the application of the testing protocol by local Veterinary Inspectors in England and Wales. Previous research by the Fellow into Bovine TB testing data also revealed variations in the detection rates between different vets. For example, [research](#) has found female vets find more Bovine TB reactors than male vets; and other [research](#) identified that vets working for Government find more TB reactors than private vets. One factor found to affect the delivery of tests is the conflict of interest where vets test their own clients' herds. [Social research](#) has also linked variations in quality of informal training and learning within individual veterinary practices, leading to vets making their own epidemiological judgements and interpretations of Bovine TB test results.

Hazards

Another factor that has been found to affect the quality of tests is the standard of handling facilities on farms. During the test, cattle are restrained using a crush that holds the livestock in place. This can potentially lead to injuries to farm workers and vets when attempting to encourage cattle into the crush. Injuries can also occur when the vet is handling cattle inside the crush in order to perform the test. Different breeds of cattle can be more or less hazardous to test. The quality of handling facilities can also vary significantly between farms.

Motivation

Interviews revealed that TB testing is considered by vets to be the least interesting of all veterinary work. In the past, newly qualified graduates would have been expected to conduct a significant amount of TB testing. However, the physical and emotional toll of frequent testing on new vets leads many to question their future in the veterinary profession; avoid seeking work in areas with a high incidence of TB; and/or seek work outside of the UK. This is highlighted by a quote from a recently qualified vet:

TB testing I found really demoralizing. You were just constantly condemning cattle. Every single bloody day. After being the vet for these farmers for 5 years, they were not clients, they're friends and I felt that nothing was done about it. I was thinking I don't want this for another 10 years. It's not what I signed up for.

Reliance and Resilience

The increase in Bovine TB testing since 1997 (see Figures 1 and 2) has led to veterinary practices in Wales deriving increasing amounts of their total revenue from TB testing. Whilst TB testing can help subsidise additional veterinary staff, reliance on it can pose dangers to the resilience of rural veterinary practices and alternative testing arrangements. Since 2014, payments for TB testing have decreased. An increasing trend has been to employ dedicated TB testers.

5. Bovine TB and Brexit

In its scrutiny of the Welsh Government draft budget 2018-2019 report, the Climate Change, Environment and Rural Affairs Committee highlights that the European Commission currently contributes 15% of the budget for the eradication programme in Wales. Beyond these immediate financial implications, the UK's decision to leave the EU poses significant challenges and opportunities for Bovine TB testing.

Potential impacts

The EU's Mutual Recognition of Professional Qualifications (MRPQ) Directive 2005 allows qualified veterinary surgeons to work in Wales without passing any additional examinations or language competency tests. The European Association of Establishments for Veterinary Education (EAEVE) also establishes standards and accreditation for veterinary schools. However, the MRPQ takes priority, even where veterinary schools in the EU fail to meet EAEVE standards, the RCVS is bound to register vets qualifying at those schools. For non-EU vets seeking to work in the UK, their veterinary degree must be recognised by the RCVS. These countries include USA, Canada, South Africa, Australia and New Zealand. Vets from non-recognised countries must sit and pass the RCVS Statutory Examination for Membership, and reach Level 7 of the International English Language Testing System (IELTS) before applying to sit this exam. The BVA in its 2017 Brexit report (PDF 2.64MB) argues for the need to maintain the MRPQ through a transitional period, as well as adding vets to the Shortage Occupation List to mitigate any impact to the veterinary workforce.

Potential impacts to the veterinary workforce

In Wales and the UK as a whole, a significant proportion of the veterinary workforce is comprised of vets qualifying from veterinary schools outside the UK. Key workforce statistics include:

- 48% of all new registered veterinary surgeons in the UK qualified in countries in the EU/EEA;
- 8.4% qualified in third countries (e.g. New Zealand and Australia) (RCVS, 2017);

- 24.6% of all vets in the UK qualified in EU/EEA countries and a further 6.7% from other countries (RCVS, 2017); and
- In public health roles (e.g. abattoir inspection), 90-95% of all vets are from overseas (BVA, 2017).

The proportion of overseas vets in other EU countries is significantly lower than the UK, for example, Ireland (10%), France (9%), Netherlands (5%), and Italy (1%) (FVE, 2015).

In Wales there are 1373 practising vets registered with the RCVS (RCVS, 2017). Since 2007, there have been significant changes to the veterinary workforce in Wales. Most notably:

- the total number of vets in Wales has risen by 44% (from 815 in 2007);
- the proportion of Overseas Qualified Vets (OQVs) has risen from 19% in 2007 to 26% in 2017;
- the number of OQVs in Wales has almost doubled from 151 in 2007 to 300 in 2017;
- 44% of all new vets in Wales between 2007-17 came from overseas; and
- the most common country of origin for vets in Wales has been Spain (Spain has also provided the most new vets in Wales).

Overseas Vets and Bovine TB testing in Wales

In Wales, 80% of the APHA's veterinary labour force is from overseas. Employment records from the two Bovine TB testing organisations in Wales indicate that in 2017, 252 vets were registered to conduct tests based in 37 practices in the south Wales region. In the north Wales region 165 vets are registered to conduct Bovine TB tests. Of these 417 vets, 14% (59) are OQVs: 17% in south Wales (43) and 11% (16) in north Wales. Currently, it is difficult to establish from the APHA's Bovine TB testing database the volume of TB testing conducted by overseas vets in comparison with UK qualified vets.

Potential impacts of Brexit for the veterinary labour force in Wales

Research conducted with overseas vets working in Wales and the UK suggests a number of reasons for coming to work and staying in the UK. These include:

- the challenge of finding suitable work in their home countries that allows the development of veterinary skills, with an acceptable work-life balance;
- escaping from family pressures, and perceived intolerant social environments; and
- having an 'adventure' to learn English, and/or building on travel experiences at University (such as through the EU's Erasmus Programme).

Frequently, veterinary migration is unplanned and happens by chance, with settling in the UK not an initial ambition. Whilst many overseas vets end up working in public health roles, migration is not motivated by a career in public health but vets may become experts in this field after staying in the UK for several years. Staying in the UK initially, however, can be a result of good social support mechanisms to help vets deal with challenging working environments and a new social environment. Starting a family and becoming part of the local community are other reasons why vets remain in the UK.

Following the EU referendum, the BVA commissioned the Institute for Employment Studies to **survey** all overseas vets working in the UK, to gauge their reactions to the decision to leave the EU. Responses from those vets working and/or living in Wales show that the result of the Brexit referendum has affected them in the following ways:

- 85% are saddened by the result of the referendum;
- 75% plan to stay in Wales;
- 60% feel less welcome;
- 24% feel pessimistic about their future; and
- 18% actively are looking to leave the UK.

Vets working in government roles (such as abattoir inspection or Bovine TB management) reported different work experiences following the Brexit referendum, than those working in private practice. These include:

- 31% report feeling more stressed at work;
- 37% report experiences of prejudice at work;
- 37% are considering moving home; and
- 48% report lower job security.

Primary research by the Fellow has identified that some vets, particularly those with no family ties to Wales, are making plans to leave. However, a common attitude amongst vets is to 'wait and see' in the belief that the food system in Wales could not function without them.

Challenges and opportunities

Setting language requirements

Leaving the EU will allow the UK to set its own standards for vets seeking to work in the UK. One complaint within the farming industry has been the language skills of some overseas vets. Whilst it is so far unclear what leaving the EU means for regulating the veterinary profession, one option is to impose language tests for all vets seeking work in the UK.

Developing new Bovine TB testing arrangements

Leaving the EU also provides an opportunity to consider broader employment reforms relating to Bovine TB. This could include allowing 'lay testers' or technicians to conduct tests rather than vets. A recent **consultation** by the RCVS revealed high levels of support for using veterinary nurses to conduct Bovine TB tests. Technicians are used in other countries (e.g. New Zealand) to conduct Bovine TB tests, and are currently used within the APHA to a limited extent. A range of views exist within the veterinary profession about the role of technicians in conducting tests. Whilst using technicians may address issues such as work satisfaction, it may also negatively impact upon the provision of veterinary services in rural Wales.

Key questions

Research conducted for this fellowship suggests a number of key questions:

- 01.** What plans exist to monitor number of overseas vets working in Wales, particularly those conducting Bovine TB related functions?

Leaving the EU has the potential to affect the provision of all veterinary services in Wales, but particularly those related to disease control and public health roles. Effective monitoring of the number and activities of overseas vets (such as the volume of testing by overseas vets) will be vital to ensuring the continued delivery of the Bovine TB Eradication Programme in Wales.

02. What options exist for helping to retain UK vets in rural Wales?

Bovine TB can have a negative impact upon the quality of the veterinary workforce in Wales. Bovine TB testing is associated with low veterinary morale amongst young vets, a reluctance to seek employment in areas of high Bovine TB incidence, and exit from the profession in the UK. In other countries, governments have implemented schemes to attract veterinary graduates to rural areas (such as writing off student debt). Similar schemes could play a role in Wales.

03. What is the role for technicians in Bovine TB testing?

One way to reduce the disenfranchisement with Bovine TB testing is to allow technicians to conduct the tests. However, potentially this could affect the wider provision of veterinary services in Wales. To contribute to this debate, evidence is required of the potential social and economic benefits arising from these changes in Wales.

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