



An Roinn Talmhaíochta,  
Bia agus Mara  
Department of Agriculture,  
Food and the Marine

# Ireland's Bovine TB Eradication Programme

## 2018 Overview





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**IRELAND'S BOVINE TB  
ERADICATION PROGRAMME  
2018 OVERVIEW**





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## Executive Summary

Ireland's Bovine TB (bTB) Eradication Scheme started in 1954. At that point, approximately 80% of cattle herds in Ireland (herd prevalence<sup>1</sup>) and 17% of the approximately 4.5m cattle (22% of cows) in the country were infected with bTB. Bovine TB affected farm productivity, cattle pined and died of bTB and many were totally or partly condemned at slaughter as unfit for human consumption because of bTB. People, especially farmers and those who worked with cattle or cattle carcasses or drank raw milk, particularly among young children, were at risk of getting bTB from cattle. Bovine TB in cattle therefore was affecting the advancement of Irish farming and human health. Before the Eradication Scheme was established debates on what should be done about the problem of bTB had taken place in multiple fora including the Dail, the Seanad and the Irish Red Cross Society. Since then milk pasteurisation and routine meat inspection has reduced the impact on human health to negligible levels and dramatic strides have been taken by all stakeholders – farmers, Private Veterinary Practitioners (PVPs), research partners, the European Commission and the Department of Agriculture, Food and the Marine (DAFM) in reducing the level of infection in cattle herds. In 2017 4.89% of cattle herds in Ireland (herd prevalence) were infected with bTB.

In 2017, the bTB Eradication Programme cost €84 million. The Exchequer contributed a net €42 million, EU co-funding provided €10 million and the remaining €32 million was paid by farmers through the cost of the annual herd bTB test and disease levies. While this expenditure represents a significant investment in animal health, it also represents a drain on scarce financial resources that could be better directed at initiatives that grow the broader agri-food sector. Bovine TB levels and the complexity of the Eradication

Programme have evolved since the 1950s. However, if we use expenditure in 2017 as a 'standard' year, total expenditure on the bTB Programme in today's prices would amount to over €5.5 billion. Minister Creed has publicly stated the ambition to eradicate bTB by 2030 and by this time another €1 billion will have been spent if current trends continue.

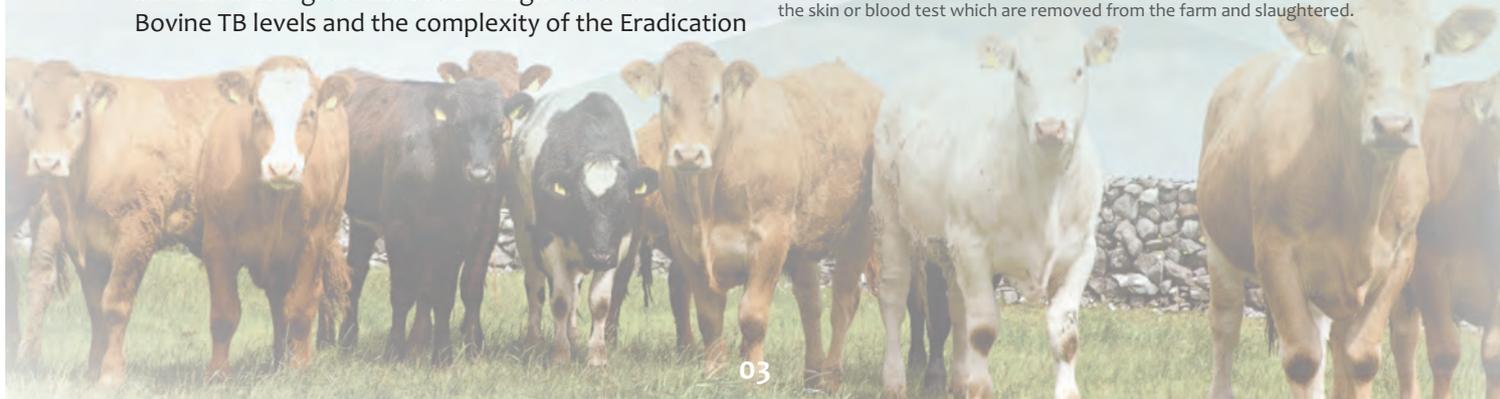
Accessing export markets has always been a major driver behind Ireland's bTB eradication programme. At first, it was to support access to the UK market. Later, it was (and is) a fundamental requirement to guarantee access to the European Single Market.

Now, as Ireland seeks to achieve export targets as set out in FoodWise 2025, managing a robust bTB eradication programme is a critical factor in gaining access to important 3rd country markets.

This document outlines the current bTB Eradication Programme in Ireland. It details the measures in place to support the farming community in finding, confining and eradicating instances of bTB. The Programme is under constant review by DAFM and amendments are made when appropriate.

In this vein, a bTB Forum with all stakeholders will be established in 2018, and a Strategy with the objective of achieving eradication by 2030 will be developed and agreed subject to Government approval.

<sup>1</sup> Herd prevalence is the number of herds experiencing a bTB breakdown in a given period of time. Herd incidence is the number of herds experiencing a new bTB breakdown in a given period of time. Reactors are animals positive to the skin or blood test which are removed from the farm and slaughtered.





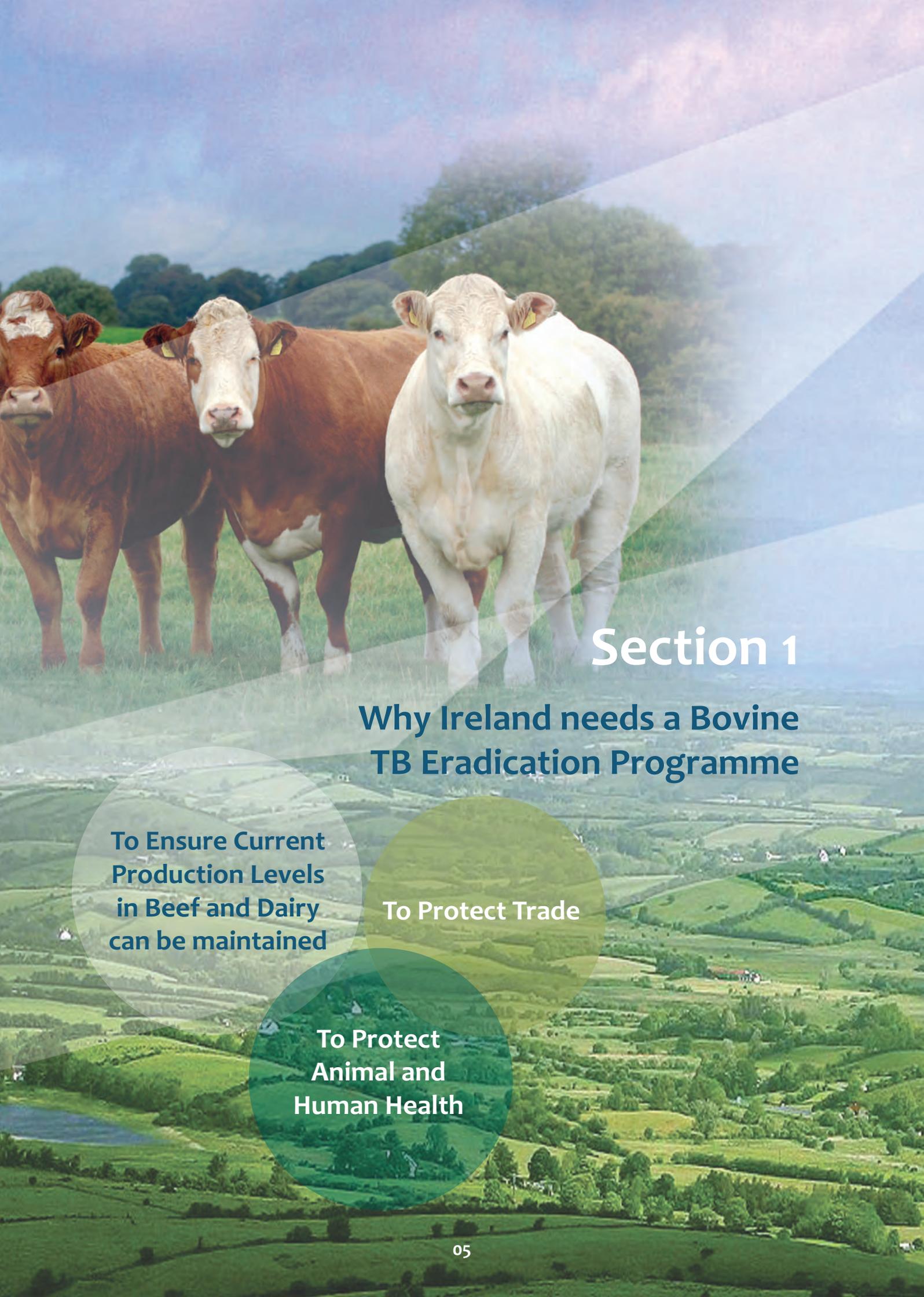
## What is Bovine TB?

Bovine Tuberculosis is a chronic, highly infectious disease of cattle caused by a bacterium called *Mycobacterium bovis* (*M.bovis*). The bacterium can cause disease in other domestic or wild animals and also in humans.

Cattle can become infected by:

- Breathing air contaminated by already infected animals;
- Consuming contaminated food or water;
- Movement of infected animals into a previously clear herd;
- Contact with other infected animals e.g. across fences or at shared watering points;
- Inter-farm sharing of machinery (cattle trailers, muck/slurry spreaders, etc.) or farm facilities (cattle crushes);
- The use of dirty lorries to transport animals;
- Wildlife, especially badgers, infected with *Mycobacterium bovis* may be a significant factor in the persistence of bTB in certain areas.





# Section 1

## Why Ireland needs a Bovine TB Eradication Programme

To Ensure Current Production Levels in Beef and Dairy can be maintained

To Protect Trade

To Protect Animal and Human Health



## Section 1:

# Why Ireland needs a Bovine TB Eradication Programme



**Figure 1: Piner Cow**

Bovine TB in cattle is a disease which, in the main, takes months to years to advance to a clinical stage. In the clinical stage cattle become riddled with lesions, mostly in the lungs, but also elsewhere in the body. Thankfully cattle rarely get to advance to this stage of disease nowadays but before the commencement of the bTB Eradication Scheme it was common for cows to become “piners” and for affected cows to have hardening of the udder due to bTB, bTB mastitis or to be condemned as unfit for human consumption after slaughter in the abattoir. Back then bTB reached these advanced and very infectious stages regularly with 80% of cattle herds and 17% of cattle affected. Trade with the UK was under serious threat in the early fifties with the UK inspecting all cattle arriving and those showing signs of bTB likely to be returned to their origin. Cattle production was being constrained and intensification of the dairy industry was under threat with such a high level of cows (22%) affected. Many people continued to contract bTB from cattle: some from direct contact but many more from consumption of bTB infected milk. Many families had members suffering from TB in 1952, and even feeling socially stigmatised because of TB, with the recorded rate of TB notifications in people in Ireland at 230/100,000 population.

This all led to a bTB Eradication Scheme commencing in Ireland in 1954. In the first 10 years of the scheme, some 800,000 bTB reactors were slaughtered from a cattle population of around 5 million. Fast forward to 2017 and the situation has improved dramatically. Bovine TB in humans, due to infection from cattle, is extremely rare in Ireland due to all the measures implemented including milk pasteurisation, veterinary inspection of cattle at slaughter and the success of the bTB eradication scheme. In 2016 published figures on the incidence of *Mycobacterium bovis* (*M.bovis*) in humans show there were 3 cases in 2016 (not all cases relate to Irish born people and all cases might not be caused by infection from cattle as other species can be infected with and spread *M.bovis*). In 2017, 4.89% of cattle herds (prevalence) were infected with bTB and some 17,266 reactor cattle were removed out of a population of 6.5 million. This represents just 0.003% of the Irish cattle population as compared with 17% pre the bTB Eradication Scheme. The Irish farming landscape has changed dramatically also with the number of herds dwindling from approximately 250,000 in 1954 to approximately 114,000 by the end of 2017. However, cattle numbers have increased over time to the current level of 6.5 million.

Figures 2-4 provide an insight into developments in bTB trends in recent decades. While much progress has been achieved, further efforts are required to regain positive momentum in reducing the levels of bTB.



## Section 1: Why Ireland needs a Bovine TB Eradication Programme



Figure 2: Number of Reactors 2008 - 2017



Figure 3: Herd Prevalence 2008 to 2017

- Prevalence
- 5 Year Rolling Prevalence
- Linear (5 Year Rolling Prevalence)



## Section 1: Why Ireland needs a Bovine TB Eradication Programme



Figure 4: Herd Incidence 2008 to 2017

● Annual Herd Incidence  
● 5 Year moving average herd Incidence  
— Linear (5 Year Rolling Incidence)

*European Union law lays down requirements regarding the prevention and control of transmissible diseases in animals including those that can cause disease in humans.*

The general objective of EU law in these areas is to contribute to a high level of health for humans and animals along the food chain, a high level of protection and information for consumers and a high level of protection of the environment, while favouring competitiveness and the creation of jobs.

Under European Law governing intra Community trade on bovine animals, those being exported for breeding and production, must come from herds that are officially tuberculosis free (OTF) and if over 6 weeks of age must have reacted negatively to a bTB test in the previous 30 days among other requirements. This is to ensure that such animals are not a source of contagious or infectious disease. Annually, Ireland exports some

125,000 live cattle to other EU countries, worth about €50 million. To protect this trade and the countries to which we are exporting we need to have a bTB Eradication Programme.

*Increasing sanitary requirements to access trade in new markets*

Countries outside the EU with which we trade (known as 3rd Countries) may also have requirements in relation to the control of bTB, over and above the controls required under EU law. This has been evident in recent trade negotiations where some 3rd countries have explicitly provided in our trade agreements that they will not accept meat from bTB infected herds. We need access to markets to mitigate the risks of Brexit and continue to support the livelihood and incomes of Ireland's farming community and agri-food sector.

## Section 2

# The 3 Key Principles of the Irish Bovine TB Eradication Programme

The 3 Key Principles of the Irish Bovine TB Eradication Programme are:

Find the disease

Confine the disease

Eradicate the disease



## Section 2:

# The 3 Key Principles of the Irish Bovine TB Eradication Programme

### Section 2.1: How is bovine TB found?

*All herds are identified for the purpose of disease control:*

In 1954 individual herd registration commenced, based on the herd as the epidemiological unit, i.e., all the animals in the herd regardless of ownership. Each single unique herd is allocated a herd number for the purpose of general disease control. A herd is considered to be any number of animals that are held, kept or handled in such a manner that they share the same likelihood of exposure to infectious disease agents and that the control of the spread of infectious disease from the unit can be facilitated.

*Movements of all animals are identified and monitored:*

One of the aims of the Animal Identification and Movement System (AIM) is to guarantee the safety of beef and beef products by the operation of an effective animal identification and tracing system. The bovine system has four elements: tagging, bovine passport, on-farm bovine herd registers and a computerised database. All animals are tagged within 7 days of birth with a set of unique tags and registered within 21 days of tagging. A passport is generated for the animal detailing, tag number, date of birth, gender, breed, dam no, sire breed, herd of origin. All movements during the animals' lifetime are notified to the AIM system ensuring full traceability. This world-class system allows us to identify the animals in a herd that are eligible for testing and also to trace the movements of animals associated with a disease breakdown.

*Ante and post mortem surveillance is carried out at slaughter plants:*

The Veterinary Public Health Inspection Service (VPHIS) of DAFM in conjunction with, and under service contract to the Food Safety Authority of Ireland (FSAI) is responsible for ensuring food safety in slaughtering premises, cutting premises, cold stores, meat and meat products premises, and poultry slaughtering establishments. All cattle presented for slaughter in the State undergo ante-mortem and post-mortem inspection under the control and supervision of the Veterinary Inspector in charge of the 32 EU approved plants in which cattle are slaughtered, or, in the case of abattoirs, under the control and supervision of the Veterinary Staff of the various Local Authorities. All suspect bTB lesions detected at slaughter are submitted for laboratory examination to the Central Veterinary Research Laboratory (CVRL) and pending determination of the presence of bTB the herds from which the animals were supplied are restricted. Meat with suspect bTB lesions is not allowed go for human consumption

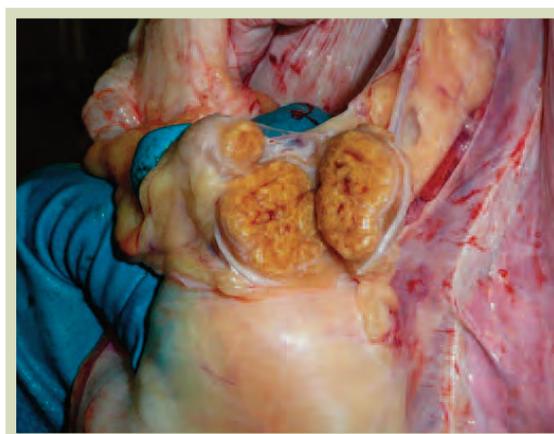


Figure 5: Suspect bTB lesions



## Section 2:

# The 3 Key Principles of the Irish Bovine TB Eradication Programme

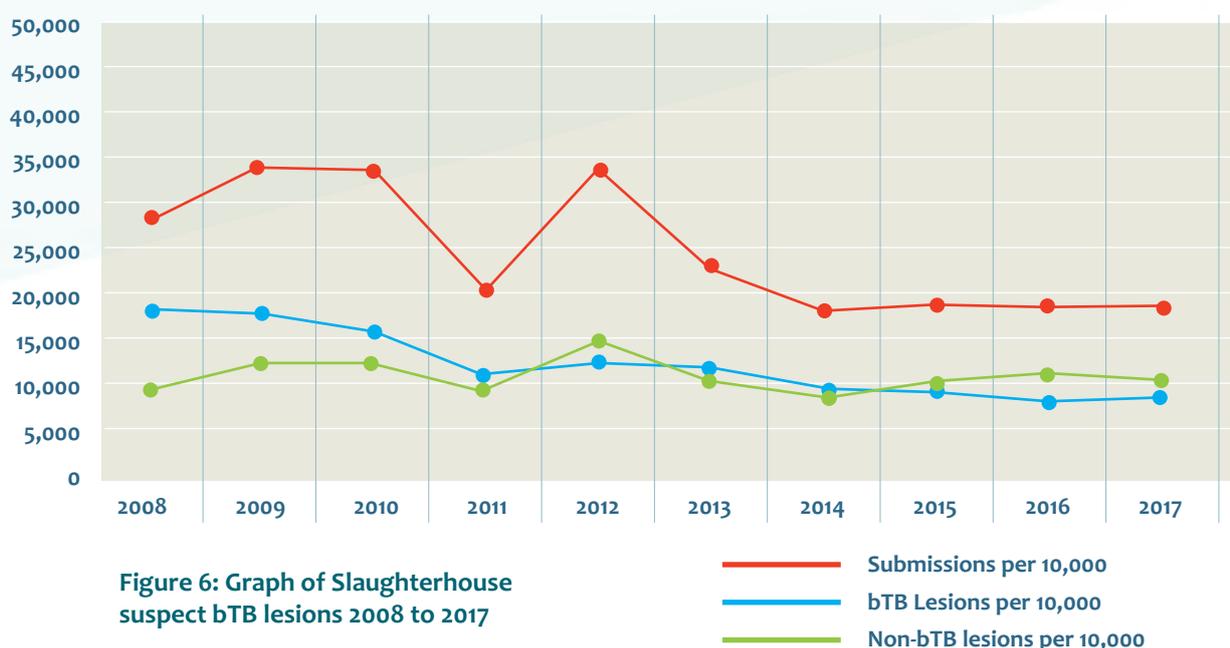


Figure 6: Graph of Slaughterhouse suspect bTB lesions 2008 to 2017

The graph above shows the number of suspect lesions found in every 10,000 animals slaughtered from bTB negative herds (- Submissions per 10,000); The number of those lesions that tested positive for bTB per 10,000; and the number of those lesions that tested negative for bTB per 10,000 animals slaughtered.

*All animals in the country are tested for bTB at least once a year (with the exception of calves under the age of 6 weeks born on the holding):*

Under EU and national rules relating to bTB testing, all animals on the holding, with the exception of calves under six weeks old which were born in the holding, must be subjected to routine tuberculin testing at yearly intervals. Only animals that are within 12 months of a clear test and come from a herd that is clear of bTB may move freely on the open market. These rules are implemented through the annual testing programme for bTB. The test used for this purpose is the Single Intradermal Comparative Tuberculin Test (SICTT), or more commonly known as the skin test.

The purpose of the skin test is to identify cattle that have been exposed to bTB by injecting them in the skin in the middle of the neck, with small amounts of purified protein from the bTB bacteria. If the cattle have already met bTB their immune system will launch a response, like an allergic reaction, to the injection causing thickening of the skin which can also cause a visible lump to form on the animal's skin. Cattle may also have been exposed to other closely related bacteria which would cause a similar reaction. To ensure that only cattle which are infected with bTB are identified as reactor, cattle are also injected with a small amount of protein from the avian TB bacteria. If the bTB skin thickening reaches a certain level and is greater than the avian TB skin thickening, these animals are deemed to be infected with bTB and are therefore removed as reactor animals. The level of skin thickening required for an animal to be deemed reactor is adjusted slightly depending on the bTB risk in a herd.



## Section 2:

# The 3 Key Principles of the Irish Bovine TB Eradication Programme

Research shows that the SICTT will correctly identify approximately 80% of infected cattle as having bTB (i.e. sensitivity of 80%). The probability of an uninfected animal being negative to the SICTT is at least 99.95% (i.e. specificity) and the probability of an uninfected animal being incorrectly diagnosed by the SICTT as having bTB is extremely low (estimate 1 in 5,000). In herds where underlying risks of infection are higher (e.g. where their neighbour has a bTB breakdown), more regular testing is undertaken to enhance the likelihood of correctly identifying bTB infected animals as soon as possible to limit further spread.



**Figure 7: On-farm bTB skin testing cattle**

*Geographic Information System (GIS) is used to identify parcels of land and the herds using them:*

The 'Herdfinder' programme incorporating mapping data as submitted by farmers to support claims for payment under EU funded support schemes is used to rapidly locate and identify herds that may be, or may have been, at risk of exposure to bTB.

*Computerised systems are used to manage the testing of animals:*

The Animal Health Computer System (AHCS) is a system that has been developed to support various animal health and welfare activities. A major function of AHCS is the management of the bTB Eradication Programme. Under AHCS, the scheduling of tests is managed and bTB results are recorded. This information, combined with data available on other DAFM computer systems,

including the AIM system provides a comprehensive picture of a bovine's history from birth to death.

Another important feature of the AHCS is the categorisation of cattle herds according to their disease risk and this dictates how these herds are managed in the event of a disease breakdown. During a disease breakdown, herds are classified as having either a High Risk or Low Risk status. High Risk herds are defined as herds that have had two or more bTB infected animals over the duration of a restriction. Low Risk herds are herds experiencing a breakdown that is not classified High Risk.

Consequential/Supplementary testing is carried out in diseased herds outside of the normal annual frequency of testing for disease free herds. Once a herd remains clear after completing all the required tests its risk classification is set at Default, i.e., at the least risk of having further reactors.

*Veterinary Laboratory Services (VLS) carries out diagnostic testing and research:*

The VLS comprises the Central Veterinary Research Laboratory (CVRL) and the Regional Veterinary Laboratory (RVL) at Backweston in Co. Kildare, the Brucellosis Laboratory, Cork and five RVLs located in Athlone, Cork, Kilkenny, Limerick and Sligo. The Bacteriology Division of the VLS provides a number of services to the bTB Eradication Programme, including:

- Laboratory examination of diagnostic samples, including those submitted from the slaughterhouse surveillance programme;
- Tests on the strength of the Tuberculin used in bTB testing;
- DNA 'fingerprinting'/strain typing of *M.bovis* isolates;
- Evaluation of new methods for the identification and strain typing of *M.bovis*; and
- Serological tests to aid diagnosis in problem herds.



## Section 2:

# The 3 Key Principles of the Irish Bovine TB Eradication Programme

*Other laboratory services are additionally contracted to provide specific support services to the bovine TB Eradication Programme including:*

- Conducting gamma interferon blood tests on cattle from infected herds;
- Primary tissue collection from badgers for submission to the CVRL for culture;
- Routine and developmental work on bTB blood tests;
- Evaluation of new serological tests to aid bTB diagnosis; and
- Support for badger vaccine development and deployment.

*Cattle that had moved to and from herds that have disease are traced:*

Cattle that have been identified as at a high-risk of infection with bTB and that have moved out of recently restricted herds currently experiencing a high-risk breakdown or to which multiple cases have been back-traced are traced forward to their current location and tested. Likewise trace back is completed in respect of introduced animals that fail the skin test or confirm with bTB on slaughter. The herd from which they originated is identified and may be subject to test.

### Section 2.2: How is bovine TB confined?

*The movement of animals into and out of herds that have bovine TB is restricted:*

Where animals react positively to the SICCT, they are termed “reactors”, and the herd in which they are located is restricted, i.e. the reactors are slaughtered and no cattle are allowed to move into or out of the herd until the remaining animals in the herd have all passed at least two consecutive skin tests. Animals in such herds may only move under permit to an EU approved slaughtering premises.

Restricted herds are prevented from selling animals on the open market by movement controls in place on the AIM system which prevents them moving cattle either farm to farm, through a mart or for export. AIM also restricts the movement of animals that have not been tested in the last 12 months. This prevents the spread of disease to other herds by controlling movement out of infected herds and restricts the spread of disease in the herd itself by limiting movement of animals into the herd. In special circumstances (usually animal welfare considerations), permits are granted to allow farmers to move cattle into restricted herds.

*Each diseased herd must pass at least two tests before the restriction is lifted:*

A herd is de-restricted only if:

- All the cattle are free from clinical signs of bTB;
- Cleansing and disinfection of the premises and utensils has been completed; and
- All animals on the holding, with the exception of calves less than 6 weeks of age born on the holding, have reacted negatively to at least two consecutive tuberculin tests, the first no less than 60 days and the second no less than 4 months and no greater than 12 months after the removal of the last positive reactor.

These measures ensure compliance with EU legislation and prevent the spread of the disease by ensuring all remaining cattle have tested negative to bTB tests. Herds where only one positive animal is disclosed following a skin test or laboratory analysis may be de-restricted following one clear test if bTB is unlikely and not confirmed in the laboratory.



## Section 2:

# The 3 Key Principles of the Irish Bovine TB Eradication Programme

### *Herd neighbouring the diseased herd are tested:*

Following the disclosure of reactors in a herd and the subsequent categorisation of the breakdown as high-risk, notifications are issued to all neighbouring ('contiguous') herds bordering the land parcel where the reactors were located and/or where they are likely to have become infected. Then, a contiguous testing programme is undertaken in those herds on a 4-monthly cycle until infection is no longer detected in the breakdown herd. The contiguous herds, if not tested already in the previous four months, are restricted from moving animals out pending the completion of the first test in the cycle. The restriction on these herds is lifted once the herd passes the test. This ensures that all efforts are made so disease in the neighbourhood is identified and prevented from spreading further.

### *Inconclusive reactors, which pass a retest at 42 days, are restricted to the herd for life:*

An inconclusive reactor is an animal that has shown a reaction to the bTB skin test that is not negative but neither is the reaction strong enough to be considered a true positive. Therefore, the animal's status is in doubt and it needs to be retested or examined at post mortem and samples sent for laboratory analysis to confirm or otherwise the presence of bTB. Where a decision is made to retest the inconclusive reactor and it tests clear, it is confined to the herd for life and may only move to slaughter or to a feedlot for fattening prior to slaughter. Research has shown that such animals are at higher risk of being shown to be infected at a later stage than their test negative companions. This protective policy ensures that these animals do not move to other herds where their inconclusive reactor history isn't known and therefore increase the risk of those herds having a bTB breakdown.

### *Source herds of animals that disclose lesions at slaughter are tested:*

Where lesions are disclosed at slaughter in cattle coming from a herd that is classified as bTB free, this may be an indication of previously undiagnosed bTB in that herd. These lesions are submitted to the CVRL for analysis to confirm whether or not the lesions are due to bTB. The herd from which the animal was supplied is restricted pending the outcome of the laboratory analysis. The herd may carry out an immediate herd test which, if clear, would allow it to continue to purchase in animals but not to sell other than direct to slaughter. The herd is either derestricted if the laboratory result is negative or remains restricted pending two further clear skin tests if the laboratory result is positive. This policy prevents the movement of animals from herds that may be infected with bTB.

### *Certain herds are placed on a more frequent testing cycle in the first 18 months after a restriction has been lifted:*

Following the lifting of a restriction on a herd that experienced a high-risk breakdown, the herd is placed on a post de-restriction testing cycle because they are at a higher risk of experiencing a future breakdown. These herds must be tested at least 3 times in the following 18 months. The first test is scheduled for completion between 3 and 8 months after the lifting of the original restriction and the herd is restricted at the 3-month mark until the first test has taken place. This is to prevent movement out of these high-risk herds of animals that are at a greater risk of becoming reactors and spreading disease. The restriction does not apply to moving in animals or movement out of calves less than 6 weeks of age born on the holding, although such calves are not eligible for export.



## Section 2: The 3 Key Principles of the Irish Bovine TB Eradication Programme

### *Quality control checks on bovine TB tests are carried out:*

Consistent application of the test in compliance with national and international requirements is critical to the success of the bTB Eradication Programme and to providing security to importing countries. It also provides security to bTB-free holdings in Ireland who do not want to introduce animals with bTB into their herds. In Ireland, supervision and quality checks on bTB tests conducted by PVPs and Whole Time Temporary Veterinary Inspectors (WTVIs) consist of on the spot supervisory checks and administrative checks by DAFM officials. Quality control checks are also carried out on the tuberculin which is used, and the syringes used to inject the tuberculin.

### *Farmers are advised on appropriate bio-security measures to help protect their herd from disease:*

Farmers are reminded, on an annual basis, via the test notification letters that they need to be aware of the necessity to adopt good biosecurity practices to avoid the entry to and the spread of disease on their holdings. In particular they are reminded to:

- Maintain the security of boundary fences;
- Ensure there is no contact between cattle in their herd and other cattle;
- Isolate cattle entering their holding either from another holding or on return from a mart or show, etc.;
- Isolate sick animals;
- Provide disinfection footbaths and overalls for personnel visiting their holding;
- Provide clean drinking water for all animals;
- Secure feedstores to prevent access by livestock, wildlife or vermin;
- Fence off access to badger setts and latrines in pasture land;
- Provide secure, clean feeding troughs not accessible to wildlife; and
- Control rodents.

In addition, advice on appropriate bio-security measures is provided to farmers via direct advice from the Regional Veterinary Office (RVO), through leaflets, publicity, Animal Health Ireland (AHI) etc. A notice is issued to all herds experiencing a bTB breakdown and a Veterinary Inspector will inform the farmer what is to be dis-infected and what disinfectant should be used. DAFM publish a list of disinfectants approved for use in bTB infected herds. Checks are carried out to ensure that appropriate cleansing and disinfection has taken place and payment of compensation is conditional on the cleansing and disinfection being carried out. A Veterinary Inspector (VI) may also require that animals are confined or excluded from certain parts of a holding for a particular period.

### *All animals intended for intra-community trade are subject to 30 day pre-movement tests:*

30 day pre-movement bTB testing is carried out on all eligible bovines exported to the EU. Links between AIM and AHCS ensure that only eligible animals from bTB free herds meeting all criteria as specified in the EU legislation will be issued with Animal Health Certificates for export.





## Section 2:

# The 3 Key Principles of the Irish Bovine TB Eradication Programme

### Section 2.3: How is eradication of bovine TB achieved?

#### *Removal and slaughter of reactors is provided for:*

Animals identified as reactors are removed by licensed hauliers contracted and paid by DAFM. The reactors are removed to EU approved slaughtering plants selected by DAFM on the basis of a weekly tendering arrangement. The slaughtering plant pays the salvage price of the reactors directly to the farmer. DAFM supervises the hauliers who transport the reactors and monitors prices paid by the slaughtering plants.

#### *A valuation service is provided to determine the market value of the animals:*

Reactor animals are assigned a market value by independent valuers as if they were not affected by bTB based on prevailing market prices at the time. DAFM pay the farmer the difference between the independently assigned market value and the salvage value paid by the slaughtering plant. There is an appeals process to deal with disputes over market values assigned.

#### *Income supports are paid in addition to the value of the animals slaughtered:*

An Income Supplement Scheme is available to farmers where the number of animals removed as reactors reaches a certain threshold along with other qualifying criteria. The purpose of the scheme is to partially offset the loss of income arising from the removal of the reactors.

A Hardship Scheme is available in the period November to April to support farmers in a restriction during the winter period where they are unable to sell

stock other than to slaughter and as a result incur extra feed bills to maintain the stock on farm. Payment is made for a maximum of 4 months and the amount payable is fixed.

A Depopulation Grant is payable when a decision is made to fully depopulate a herd when other eradication methods have failed to resolve the disease problem in a herd. Certain conditions apply including a prohibition on re-stocking for a number of months.

#### *On-farm checks are carried out to ensure compliance with eradication requirements and investigations into the source of the disease:*

A herd experiencing a bTB breakdown is visited by DAFM personnel on a risk basis to carry out quality control checks on the bTB testing and to ensure that farmers are complying with the requirements of the scheme including isolation of reactors and withholding of milk from reactor animals. In high risk breakdowns, a VI will carry out an epidemiological investigation into the likely source of the disease using all available tools and information.

#### *Research is used to inform policy:*

The bTB Eradication Programme is informed by available, relevant scientific knowledge. Analysis of the programme data is continuing in conjunction with our scientific partners, which includes the Centre for Veterinary Epidemiology and Risk Analysis (CVERA) at UCD and other institutions carrying out research funded by DAFM.



## Section 2:

# The 3 Key Principles of the Irish Bovine TB Eradication Programme

*Badgers are removed where they are implicated in a disease breakdown:*

Where badgers are implicated in a disease breakdown, they are culled under license from the National Parks and Wildlife Service (NPWS). This is to prevent further overspill of the disease between badgers and cattle and vice versa. Badgers are a protected species under the Berne Convention and therefore local badger populations are maintained at a sustainable level in accordance with the Convention. In 2018, DAFM announced the roll out of vaccination of individual badgers with the BCG vaccine, as an alternative to culling, in areas where badgers have already been culled for the previous three years. In time, vaccination will replace culling, but a small number of badgers will continue to be culled where they are implicated in serious breakdowns.



**Figure 8: Badger.**

*Additional blood tests are used as an adjunct to the bovine TB skin test:*

The gamma interferon blood test is used as:

- A quality control to assess whether the number of reactors disclosed through skin testing is in line with expectations. This assessment will help clarify whether there are likely to be further reactor animals in the herd which have not yet been identified or whether some of the animals disclosed as reactors may not actually be infected with bTB.
- A tool to identify further infected animals which may have tested negative to the skin test. The blood test has a higher sensitivity than the SICCT and can identify animals at an earlier stage in the disease cycle before they will react to the skin test. Removing animals positive to the blood test ensures that the disease is stopped as early as possible, thereby preventing further spread within the herd and beyond and reducing the period of restriction on the herd and associated costs.

*Herds are depopulated where the level of disease in the herd warrants such action:*

Where the level of infection in a herd is such that, despite standard and repeated skin testing, the use of blood and other additional tests, investigations and strategic removal of individual animals fails to halt the spread of bTB within the herd serious consideration is given to depopulating the herd. As a general rule, cases where more than 30% of the herd are reactors, may lead to depopulation and it must be considered where 50% of the herd are reactors. Once depopulation has been completed the holding must be cleansed and disinfected and not re-stocked for a minimum of four months.



## Section 3:

# Who are the key players in the Irish Bovine TB Eradication Programme?

### *Farmers*

Farmers make a significant contribution to the eradication of bTB by complying with the bTB programme requirements and movement controls, by ensuring that their cattle can be and are properly tested by providing appropriate testing facilities and help while the test is being performed, by paying for the annual round test worth approximately €25 million and also through the payment of levies on milk delivered to creameries and on animals slaughtered/exported to the tune of approximately €7m each year. Farmers also play a critical role in mitigating the risk of transmission of the disease through appropriate bio-security and cleansing and disinfection measures

### *The Department of Agriculture Food and the Marine (DAFM)*

The policy, initiation, control and implementation of the bTB Eradication Programme is the responsibility of the Minister for Agriculture, Food and the Marine and supported by the ERAD (Eradication of Animal Disease) Division within DAFM. In consultation with ERAD, the programme is implemented through 16 RVOs throughout the country. The RVOs are operated and managed by two Area Management Teams (AMTs) whose main function is to ensure delivery of the programme and verification of effective controls. The VLS provides diagnostic and research services critical to the operation of the eradication programme.

### *Private Veterinary Practitioners (PVPs)*

Bovine TB testing is, in general, performed by authorised PVPs, according to the terms and conditions set out by DAFM for bTB testing in compliance with requirements under EU law. PVPs play an important role in providing professional advice to farmers on animal health issues and specifically in relation to bTB and biosecurity.

### *Marts/Export Points/Slaughterhouses*

AIM is live at marts, export points and slaughterhouses. Through linkage to AHCS, AIM provides real time information before sale/slaughter on animal status, bTB test data and movement/export eligibility, information including an animal's compliance with identification, animal health requirements and eligibility for sale/slaughter. AHCS is live at all but the smaller slaughterhouses. This ensures prompt recording of detection of suspect bTB lesions ensuring prompt restriction of the supplying herds pending the results of laboratory analysis.

### *Milk processors*

Milk from animals showing a positive or inconclusive reaction to the bTB test must not be used for consumption. Milk from clear animals in reactor herds can be used in the manufacture of milk products but must first undergo a heat treatment equivalent to pasteurisation. DAFM notifies milk purchasers of the restriction and de-restriction of herds because of bTB and it is a legal requirement that farmers do not supply and that processors do not collect milk from animals showing a positive or inconclusive reaction to the bTB test.



## Section 3: Who are the key players in the Irish Bovine TB Eradication Programme?

### *Research community*

A number of research agencies are contracted by DAFM to carry out research to enhance current policies and assist in the development of future policies to further the eradication of bTB.

### *The European Union*

The European Union through its Standing Committee on Plants, Animals, Food and Feed (SCOPAFF), oversees the operation of bTB eradication programmes within EU Member States. Programmes are submitted to the Commission for appraisal by other EU experts and if approved may qualify for co-funding on certain costs. Ireland's bTB Eradication Programme has been approved every year since 2009 and each year since approximately 10 to 12 million euro has been received in co-funding. The EU through its bTB Task Force of international experts also provides advice on bTB eradication. Ireland's bTB Eradication Programme is subject to audit by the EU Commission itself, the European Court of Auditors and the Food and Veterinary Office of the Commission now known as SANTE F.





## Section 4: The future:

*Ireland's objective is to achieve Official Tuberculosis Free (OTF) Status by 2030*

Under EU legislation, OTF status can only be attained when less than 0.1% of the herds in the country are infected with bTB. Currently the programme costs farmers, the Exchequer and the EU in the region of €84m per annum. Current controls and policy will not achieve the 2030 target. We need to do more.

*How can OTF status by 2030 be achieved?*

The Minister for Agriculture, Food and the Marine, Michael Creed TD sought and received Government approval for a commitment to support the eradication of bTB from the national herd by 2030. In order to do this, approval was also received to establish a Stakeholder Forum tasked with developing proposals for consideration by the Minister that can achieve eradication by 2030, and the Terms of Reference for such a Forum. Minister Creed intends to finalise a bTB 2030 Eradication Strategy following careful analysis of the proposals from the Forum.



## Legislation

*Animal Health and Welfare Act 2013, No. 15 of 2013*

*Animal Health and Welfare (Bovine Tuberculosis)  
Regulations 2015 (SI. No. 58 of 2015)*

*EU Directive 64/432 on intra-community trade in bovine  
animals and swine*

*EU Directive 77/391 of 17 May 1977 introducing  
Community measures for the eradication of brucellosis,  
tuberculosis and leucosis in cattle*

*EU Directive 78/52 of 13 December 1977 establishing the  
Community criteria for national plans for the  
accelerated eradication of brucellosis, tuberculosis and  
enzootic leukosis in cattle*

*EU Regulation 882/2004 of 29 April 2004 on official  
controls performed to ensure the verification of  
compliance with feed and food law, animal health and  
animal welfare rules*

*EU Regulation 652/2014 of 15 May 2014 laying down  
provisions for the management of expenditure relating  
to the food chain, animal health and animal welfare, and  
relating to plant health and plant reproductive material*



## Acronyms:

<b>AHCS</b>	Animal Health Computer System
<b>AIM</b>	Animal Identification and Movement System
<b>AMTS</b>	Area Management Teams
<b>BCG</b>	Bacillus Calmette Guerin
<b>bTB</b>	Bovine Tuberculosis
<b>CVRL</b>	Central Veterinary Research Laboratory
<b>DAFM</b>	Department of Agriculture, Food and the Marine
<b>ERAD</b>	Eradication of Animal Disease Division
<b>EU</b>	European Union
<b>FSAI</b>	Food Safety Authority of Ireland
<b>FVO</b>	Food and Veterinary Office (EU)
<b>Herdfinder</b>	GIS Farm parcel mapping system
<b>LAVS</b>	Local Authority Veterinary Services
<b>NPWS</b>	National Parks and Wildlife Service
<b>OTF</b>	Officially Tuberculosis Free
<b>PVP</b>	Private Veterinary Practitioner
<b>RVO</b>	Regional Veterinary Office
<b>SICTT</b>	Single Intradermal Comparative Tuberculin Test
<b>TB</b>	Tuberculosis
<b>UCD</b>	University College Dublin
<b>VI</b>	Veterinary Inspector
<b>VLS</b>	Veterinary Laboratory Service
<b>VPHIS</b>	Veterinary Public Health Inspection Service
<b>WTVI</b>	Wholetime Temporary Veterinary Inspectors



**An Roinn Talmhaíochta,  
Bia agus Mara**  
Department of Agriculture,  
Food and the Marine

