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BOVINE TB – SPECIAL EDITION - SUMMER 2009

Llywodraeth Cynulliad Cymru
Welsh Assembly Government

Chief Vet warns: Disease picture will get worse before it gets better

WALES' Chief Veterinary Officer has warned that there is no 'quick fix' to stamping out bovine TB in Wales.

Christianne Glossop said that over 12,000 cattle were slaughtered in Wales last year because of bovine TB. From January up to the end of May 2009 more than 6,000 cattle have already been removed from farms and slaughtered as a result of the disease, so the increase is continuing.

"More and more breakdowns and reactors have been found in high incidence areas and new breakdowns are being found in new areas, partly from routine testing and slaughter house surveillance, but also as a result of Pre-Movement Testing. The cost of compensation paid to farmers has risen from £1.8m in 2000/01 to £15.9m in 2007/08 and could exceed £80m by 2014 if nothing more is done to combat TB in Wales.

"The disease picture will continue to get worse for a while, but it is no surprise that we find more disease as we look harder for it. People might wonder why this is so when we have been working on an eradication programme since April 2008, but it takes time to get our measures in place and to show their benefit. In Australia TB eradication took 22 years. It is a long term process."

Dr Glossop spoke of her concern at the 'heart breaking' effect the disease is having on farming families, but stressed that there are no easy answers to this complicated problem.

"That is why we need a comprehensive package of measures to tackle the disease on all fronts. So far, we have focussed our efforts on raising the game in our fight against TB across the whole of Wales. This includes improving the way that TB breakdowns are dealt with, and also working with farmers to increase biosecurity standards as a means of protecting against introduction of disease. Another key activity is our TB Health Check Wales, which will see all cattle herds tested by the end of 2009."

She said some people think that dealing with badgers alone will solve the problem. "It won't – it really is not as simple as that. There are parts of Wales with very little TB; there are parts of Wales with very few badgers and places where there is no evidence of transmission of infection between cattle and badgers.

"But we have parts of Wales, such as north Pembrokeshire, where we have endemic, deep seated disease. We have been testing and removing cattle for years and we keep getting infection back into the herds. In those circumstances we believe there is good evidence that badgers are part of the problem."

Health Check Wales is locating new breakdowns quicker

THE Chief Vet described how Wales is raising its game in the fight against bovine TB.

"If you need to fight a battle you have to understand where the enemy is, the size of the enemy, and how it behaves.

"In this case our enemy is neither cattle nor badgers – our enemy is the bacterium that causes bovine TB - *Mycobacterium bovis*. If we want to know where the enemy is then we have got to go looking for it, and that is what TB Health Check Wales is all about."

Dr Glossop said more disease is being found through this process – some in herds that would not normally have been tested for several years. This is disappointing but not surprising. In addition, excellent progress is being made to reduce the number of overdue tests. The figure was 711 when the TB Health Check Wales started and has now been reduced down to double figures.

Dr Glossop said that officials are currently developing a strategy for dealing with the disease picture at the end of TB Health Check Wales. "We are working on how to keep the clean areas clean; in the new emerging areas we are working on how to stamp it out quickly, while in the TB endemic areas we are working on how to make sure our policies will really start to remove infections as quickly and efficiently as possible."

She said that three newly-formed Regional TB Eradication Delivery Boards are playing an important role in the strategy for managing disease at local levels.

Turning to the proposed Intensive Action Pilot Area (IAPA) in north Pembrokeshire, Dr Glossop said that this is an area where there is a close association between infection in cattle and badgers. She said that the IAPA is not a scientific trial, but a treatment area.

"We are going to be applying rigid cattle measures to protect the area from infection arising through cattle movements."

She said that the reservoir of infection in badgers would be dealt with through a government led cull using contractors.

"Meetings with farmers and vets as well as survey work, which is taking place this summer, will help define the exact boundary of the area and to establish where the badger setts are."

"Before the culling of badgers in this area can start there are a number of important pieces of the jigsaw to be put in place. This includes the need for new legislation. Also, appropriate contractors must be appointed. Dr Glossop stressed, "This has to be carefully co-ordinated and carried out in a consistent and effective way."

PLANS OF ACTION

A NUMBER of other measures are planned during the coming months as part of the TB Eradication Programme.

They include:

- A review of the TB compensation arrangements following the recent consultation to make sure they are fair to the farmer and taxpayer
- A review of the use of the Gamma Interferon test
- A review of Pre-Movement Testing and exemptions
- A look at other species susceptible to TB, including goats and camelids in order to develop a strategy to deal with infection in those animals
- Streamlining the process to remove infected animals from farms quickly working in close collaboration with vets, valuers and slaughterhouses
- A review of Parish Testing Intervals – developing a strategy for cattle testing following the TB Health Check Wales.

Measures all farmers should take to keep livestock disease free

GOOD biosecurity is vital for keeping livestock disease-free. It also helps to improve farm efficiency, protect neighbouring farms and the countryside.

There are a series of common sense, precautionary measures that farmers can take to improve biosecurity on their holding. There is a cumulative benefit from implementing measures to reduce the risk of direct and indirect transmission of bovine TB.

Keep your livestock away from neighbouring livestock:

- Ensure perimeter boundaries and gateways are well maintained and sufficient to avoid nose to nose contact, and avoid sharing water troughs.

Know where bought-in animals have come from:

- Farm to farm movement of infected livestock is the most effective means by which animal diseases such as TB can be spread.
- Seek animal health advice from your vet when you are planning to purchase livestock.
- Always know the origins of bought-in stock. Although the herd may be TB free, it may be located in an endemic area.
- Ask for dates and appropriate evidence of previous TB tests for all bought-in stock.
- Make sure that incoming stock are Pre-Movement Tested if coming from high risk areas.
- Be aware of the disease risk from hired or shared animals, including hired bulls.
- Where possible, breed your own replacements and/or use Artificial Insemination (AI).

Keep bought-in and returning stock separate from the other livestock:

- Have appropriate isolation facilities for bought-in stock, as well as cattle that are diagnosed as TB reactors or inconclusive reactors. When using a paddock/field for this purpose, ensure that no contact can be made with neighbouring livestock.

A CHALLENGING TIME FOR EVERYONE

TONY Edwards, the recently appointed Director of Animal Health Wales says he is pleased to be part of the Welsh Assembly Government's programme to eradicate bovine TB.

He said that it this is a challenging opportunity for Animal Health and its staff, and also private vets and the farming industry.

Animal Health is responsible for delivering Welsh Assembly Government policies on the ground, including implementation of HCW, which will see all herds in Wales tested by the end of 2009. One of the first things that Animal Health has been doing is to reduce the number of overdue TB tests.

Mr Edwards said, "We are receiving excellent support from the great majority of farmers in Wales for the HCW and also in removing overdue tests. We are coming across a small number of cattle keepers who do not wish to co-operate with TB testing however.

"Although the number of cattle that they keep is relatively small, they may be infected and can act as a source of bovine TB for other herds and wildlife in the area, so it is essential that they co-operate with testing.

"We are talking about a hard core of 10-12 cattle keepers, and we have already had to get tough with them.

Keep wildlife out of farm buildings:

- Badgers are known to regularly visit farm buildings to feed, and in doing so, they can contaminate unprotected food sources.
- Make your farmyard less attractive to wildlife, particularly badgers, by taking practical measures to stop them from gaining access to feed stores, silage clamps and feeding troughs.

Know where badger setts and latrines are on your farm:

- Where possible, keep your livestock away from high risk areas.
- Feeding at pasture increases the risk of contamination; avoid feeding concentrates on the ground and clean out troughs regularly.
- Aim to make salt and mineral blocks inaccessible to badgers.

Understand legislative requirements:

- If you have cattle you **must** adhere to routine surveillance testing, Pre-Movement Testing and livestock movement regulations.
- Adhere to isolation procedures for any TB reactor and inconclusive animals and adhere to any statutory notice regarding cleansing and disinfecting after removal of these animals.
- Dispose of fallen stock properly.

Keep your farm tidy:

- Keep farm access routes, parking areas, yards, feeding and storage areas clean and tidy.
- Have pressure washers, brushes, hoses and disinfectant available and make sure that visitors use them.
- Thoroughly clean and disinfect any farm machinery and equipment if sharing with a neighbouring farm, and insist contractors do the same.

All general good practice helps to reduce the risk of animal diseases including bovine TB:

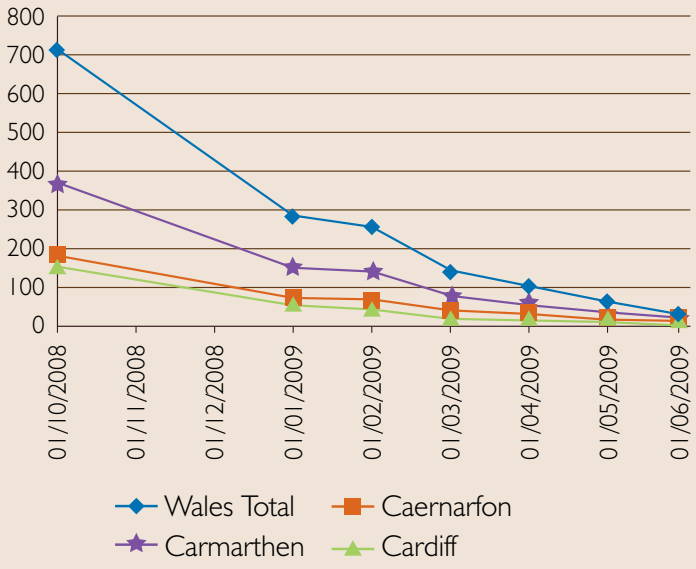
- Provide good ventilation in livestock housing and do not overcrowd your animals.
- Provide livestock with a balanced diet.
- Keep livestock away from freshly spread slurry and dispose of bedding so that livestock cannot gain access to it.
- Ask your vet to formulate a health plan for your herd.
- Ensure identification and record keeping are accurate and up to date.

We issued them each with a warning and when they still refused to co-operate we took our own equipment on to their farms in order to carry out the tests. We have the power to charge farmers for this – and we have every intention of doing so. It is important to emphasise that no cattle keeper is exempt from HCW."

Mr Edwards said that 9,264 herd tests have been completed as part of the HCW to the end of May against a predicted demand of 8,722. This has resulted in the identification of 37 reactor herds and 204 inconclusive reactor herds. Some of these herds would not have been identified for another four years without HCW so we are finding and removing disease earlier as part of this initiative.

Animal Health is also playing a key role in other aspects of the Wales TB Eradication programme, including chairing the three Regional TB Eradication Boards, which are developing a programme of actions for tackling aspects of the disease at local level.

This graph shows progress in reducing the number of Pre HCW overdue tests



Reports from the three Regional TB Eradication Delivery Boards

THREE Regional TB Eradication Delivery Boards were established last September to ensure that the delivery of policy is specific to regional and local conditions and that it is implemented effectively. They all meet on a regular basis.

Caernarfon

As the majority of the area covered by the Caernarfon Board is free of TB, discussions so far have revolved around measures to keep it clear. A proposal, subsequently approved by the TB Programme Board, involves the setting up of a Biosecurity Intensive Treatment Area (ITA) in the Wrexham and Overton area.

The Board has considered and taken on the lessons learnt from the original Biosecurity ITA in west Wales. A training date has been arranged for the private vets within the ITA and a meeting will then be held to discuss the biosecurity assessments with the farmers involved. Farmers in that area can then request a free visit funded by the Welsh Assembly Government from their own private vet to assess the biosecurity situation on their farm and seek advice on any improvements.

Carmarthen

Carmarthen Animal Health Division remove approximately 1,000 cattle per month as a result of TB. Local veterinary practices have been asked to complete a proforma when reactors are disclosed and provide herd owners/keepers with a checklist to minimise delay in the valuation and slaughter of reactor animals.

Other details discussed have included the isolation of reactor animals and the disposal of their milk. The Board also provided suggestions on the overdue testing protocol drawn up by the enforcement team. This has included the use of contractors and Animal Health equipment where necessary.

With the Intensive Action Pilot Area (IAPA) of north Pembrokeshire situated in the Carmarthen Division the Board has been discussing the consultation that has been taking place linked to the IAPA.

Cardiff

A 'Target TB Test Timeline' document was created by the Cardiff Board and adopted across Wales to be used by local vets on farm when explaining the reactor removal process to new breakdown herds. This is designed to help farmers know what to expect and when during a TB breakdown. It is hoped that this will aid understanding and communication during such a difficult time.

One of the main focuses is on the enhancement of communication between Animal Health, the Welsh Assembly Government, local veterinarians, and farmers. A successful meeting was recently held for local vets to improve communication. The secretariat of the board has also been out visiting local veterinary practices to discuss testing and other TB-related issues.

Intensive Action Pilot Area update

WHILE the incidence of bovine TB continues to rise at an unsustainable pace, the industry understandably is keen to see urgent action to tackle all sources of infection.

Rural Affairs Minister Elin Jones has announced that an Intensive Action Pilot Area (IAPA) should be established in north Pembrokeshire, which would tackle the disease in wildlife as well as implement additional cattle measures.

The Minister also said that the Welsh Assembly Government would seek the necessary legislative powers needed to manage and deliver a cull of badgers.

To this end, a consultation under the Animal Health Act 1981 is currently taking place.

Alongside this, the Welsh Assembly Government is working with local vets and farmers to define the boundaries of the area and to start work on assessing additional cattle measures.

When the Minister announced in March her intention to introduce measures within an IAPA she also made a commitment to publishing further information on the proposals. This information can now be found on the Welsh Assembly Government website www.wales.gov.uk/bovinetb.

The web page contains the 32 page document that summarises the considerations made in the development of a control strategy for cattle and badgers as part of an IAPA.

AN EXPLANATION OF THE TWO TESTS FOR TB

This is a short guide to the science behind the skin test and the Gamma Interferon test which are used to detect bovine TB in cattle. The tuberculin 'skin test' is the primary bovine TB test used throughout Europe. Since 2006 the Gamma Interferon test has been used alongside the skin test to identify more infected animals sooner.

The skin test

When an animal has been infected, its immune system is primed to respond to future infectious challenges by producing antibodies. In many cases, these can be detected in a blood sample enabling a diagnosis to be made at an early stage. *Mycobacterium bovis (M bovis)* behaves in a different way however, and antibodies are only found later as the disease progresses. This is not ideal as it does not enable identification and removal of infected animals before they have a chance to spread disease. For this reason, the TB skin test is designed to test a different aspect of the immune response called "cell-mediated immunity". If an animal is already fighting TB then tuberculin, the protein found on the surface of *M bovis* is recognised by that animal's immune system as a potential threat.

In order to quantify the level of this response, a measured dose of bovine tuberculin is carefully injected into the skin of the animal's neck, alongside a dose of avian tuberculin (which acts as a test control). Examination three days later will reveal whether the animal has responded by developing a lump or inflammation (oedema) at either of the injection sites.

Depending on the nature and extent of any such reactions, the animal is diagnosed as a reactor, an inconclusive reactor, or as having tested negative. The ongoing test history in the herd (for example whether reactors were found at the previous test, or whether post mortem examination reveals advanced signs of disease) influences how the test is interpreted, to maximise the accuracy of diagnosis. Using this test, only 1 out of 1,000 reactors is wrongly diagnosed (as a false positive).

The Gamma Interferon test

The Gamma Interferon test works in a similar way to the skin test, by assessing the animal's cell-mediated immune response, but is carried out on a blood sample in the laboratory instead of in the animal itself. A high level of Gamma Interferon in the blood sample after is it exposed to tuberculin is interpreted as a positive response, indicating that the animal is infected with *M bovis*.

It is generally thought to be more sensitive than the skin test, and also can detect infection at an earlier stage. It is put to best use alongside the skin test in herds of high disease prevalence to help identification and removal of infected cattle at an earlier stage.

This test has further potential to clear up infection more rapidly, and a review of its increased application is currently underway.

Both these tests can detect infected cattle before any physical changes caused by the disease, or before the growth of bacteria makes it posible to see visible lesions or culture it from tissue samples.

Camelids, goats and deer are all susceptible to TB

TB can affect animals other than cattle as demonstrated by the recent incidents of bovine TB in alpacas and llamas (camelids) and other non-bovines. These incidents have highlighted the absence of an effective disease surveillance and control policy for managing and preventing the disease in other species.

There is evidence that the disease can spread rapidly within and between camelid herds, therefore, causing concern about the transmission to other animals that are susceptible to the disease.

In 2008, the Welsh Assembly Government consulted with the camelid industry and other stakeholders on proposals to ensure that we have an effective disease surveillance and control framework for bovine TB in camelids.

Specific powers have already been granted in Wales for inspectors to enter land and to obtain a warrant for the purpose of testing for the disease. The Order applies to cattle, sheep and goats and all other ruminating animals (including camelids) and swine.

The next step will be to prepare an Action Plan to take forward the objectives set out in the consultation document relating to TB testing of camelids and other surveillance and control arrangements. The Assembly Government will continue to consult fully with representatives of the camelid industry in order to ensure that what is proposed is practical and proportionate.

Goats

REPORTS of bovine TB in goats have been very rare in the UK since the introduction of a mandatory TB testing and slaughter policy for cattle in the 1950s.

However, a severe outbreak occurred last year in a herd of Golden Guernsey goats in Carmarthenshire. The strain of *Mycobacterium bovis* which affected the goats was later shown to be the same strain which is found in both cattle and wildlife in the area.

This outbreak highlights the importance of considering the risk of the introduction of bovine TB (as well as other diseases) when moving or buying-in animals. Herd owners should always know the origins of animals they are buying-in; although the herd may be TB free, it may be located in an endemic area.

It is good practice to have your goats tested for TB, particularly if you are in a known area of high infection amongst cattle, are buying in new goats or regularly attending shows with your animals.

As with cattle, goats often show no signs of being infected until the disease has progressed to a considerable extent. In severely affected animals, a chronic cough is usually seen, which is unresponsive to treatment. This may be accompanied by loss of weight and diarrhoea, while dairy animals may also show a reduction in milk yield. If you are unsure of any of the symptoms, please contact your vet.

Deer

Bovine TB in deer is a notifiable disease and suspicion of TB in any deer, whether farmed, park or wild must be notified to the Animal Health Divisional Veterinary Manager (DVM).

In 2007 the Welsh Assembly Government commissioned the Deer Initiative to undertake a study to assess the presence of bovine TB in wild deer in Wales in addition to providing information on population density and distribution. The report, published on the Assembly Government's bovine TB website www.wales.gov.uk/bovinetb, found that of the 128 samples provided to the Veterinary Laboratories Agency (VLA) for analysis, four tested positive for *Mycobacterium bovis (M. bovis)* and one tested positive to *M. avium*.

The survey indicated the presence of bovine TB within the fallow deer population in Wales, particularly in locations of high population density, but at a low risk of onward transmission. There is a need for continued surveillance so proposals to repeat the survey in 2009-10 on private estates in Wales have recently been agreed.

Local vets have an important role to play

VETERINARY surgeons from practices across Wales are playing an important role in the TB Eradication Programme.

Many of the bovine TB tests are being carried out on behalf of the Welsh Assembly Government by local vets, who are well known to their farmers. One of them, Bob Stevenson, a vet in Usk, said, "A possible difficulty is that, because bovine TB is a notifiable disease and is seen to be statutory, the visit by a vet wearing an Official Veterinarian (OV) hat, representing government, can sometimes be viewed by the farmer in a different light.

"I think that it is most important that OVs adopt a similar approach to TB testing as they would when called out to deal with other common infectious diseases in cattle such as BVD (Bovine Viral Diarrhoea) or Johne's Disease.

"Many farmers, even in so called TB hot spot areas, assume that their animals will not become infected, though their next door neighbours' cows may have been. It can be a real shock, therefore, when the vet reveals that a skin test has produced a positive result.

"This is the time when the vet should adopt his normal 'practising vet' approach. He/she must find time to sit down with the farmer and explain the situation fully. The stages that will occur following the discovery of a reactor or inconclusive reactor can perhaps best be addressed by reference to the various stages on a projected 'time line'.

"From the submission of the test charts through the valuation of any reactor animals to removal of the animals are all crucial stages. An important further discussion is often needed when results of the carcase examination and further tests become available. Such terms as 'lesion negative/positive' and 'culture negative/positive' require full explanation.

"I also consider the OV to be the necessary link between the Animal Health Divisional Offices case vet and the farmer. If all three are not 'in the loop', then misunderstanding can result.

"At this very difficult time for farmers and their families the vet can provide invaluable support by going the extra mile and explaining the situation in detail," said Mr Stevenson.

CHECK CATTLE BEFORE MOVING THEM

IF farmers are moving cattle from one parcel of land to another they need to check whether they need to be Pre-Movement Tested. The rules can appear confusing because they vary depending on circumstances and Parish Testing Interval. For example, farmers do need to Pre-Movement Test animals to linked holdings, but do not need to Pre-Movement Test to land under a Sole Occupany Authority.

Breaking the rules on animal movements and overdue tests (overdue by more than three months) can result in a reduction to your Single Farm Payment and other land management schemes.

Before any movements farmers should check with their local Animal Health Office to confirm if they are required to complete a Pre Movement Test.

A leaflet on Pre-Movement Testing rules is available from the Welsh Assembly Government. Farmers can download it from www.wales.gov.uk/bovinetb, collect a copy from the Assembly Government stand at the Royal Welsh Show or from Assembly Government or Animal Health Divisional Offices.

The scale of the problem in Wales

THE Welsh Assembly Government has committed £27.7m over three years to support the TB Eradication Programme in Wales. The priority is to find the disease fast, stop it spreading, stamp it out and keep it out.

By the 1980's bovine TB had almost been eradicated, but since 1999 the number of cattle slaughtered due to bovine TB in Wales in each year has increased dramatically from 669 in 1997 to 12,043 in 2008. This was an increase of 52% on 2007 (7,913), compared with a 30.5% increase between 2006 (6,065) and 2007.

Of the total number of cattle slaughtered in 2008 68% were located in west Wales and 12.5% in east Wales, in the old county of Gwent.

On 31 March 2009, 1,363 farms were under TB restrictions. The compensation cost has increased from £1.3m in 1999-2000, to £25.34m in 2008-09.

- If compensation was to average 28% annually for the next five years as it has in the previous five years, the compensation for 2013/ 2014 would be £80.5m.
- Between January 2005 and December 2008, a total of £56,700,000 was paid in compensation in Wales, of which 58% - £33 million – was for cattle slaughtered in west Wales, in the areas covering the old county of Dyfed.

On top of this is the cost of the testing regime and ongoing breakdown management, as well as the impact on individual farmers and the industry as a whole.

Bovine TB 1980

Bovine TB 2008

Red dots show new TB breakdowns found in this year

Useful bovine TB contacts

DISCOVERING a TB breakdown on a holding can prove extremely stressful for farming families. Help and support, however, is at hand to help you through this difficult period. If anyone has any questions or concerns about bovine TB please contact your private vet.

Alternatively try the:
Animal Health Helpline: 0845 6028752

Or your local Animal Health Office -
Caernarfon: 01286 674144;
Carmarthen: 01267 245400;
Cardiff: 02920 768500.

Further information is available online at:
Welsh Assembly Government: www.wales.gov.uk/bovinetb
Animal Health: www.defra.gov.uk/animalhealth
Defra: www.defra.gov.uk/animalh/tb
Further advice can be obtained from BovineTB@Wales.gsi.gov.uk

Support is also readily available through Farm Crisis Network: 0845 367 9990. Open daily 7am – 11pm

Royal Agricultural Benevolent Institution: 01865 727 888. Open Mon – Thurs 9am – 5pm, Fri 8.30am – 4.30pm. 24-hour answer machine. **Rural Stress Helpline:** 0845 094 8286. Open weekdays 9am – 5pm.

Samaritans: 08457 909 090 or local numbers.
Rural Support Wales: www.ruralsupportwales.org.uk

Farming Connect: 08456 000 813 or www.farmingconnect.co.uk