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BOVINE TB – SPECIAL EDITION SUMMER 2010



Worldwide best practice applied to eradicate bovine TB

WALES will make use of best practices across the world in its efforts to stamp out bovine TB, its Chief Vet has stressed.

Dr Christianne Glossop, reflecting on Wales' £27.7m TB eradication campaign – now in its third year – says lessons can be learned from countries such as Australia which has eradicated TB, and New Zealand which is successfully fighting the disease.

"I am pleased with the progress that we are making. The programme is very complicated and there are endless frustrations along the way, but we must hold on to the fact that eradication is possible.



Christianne Glossop ... pleased with the progress being made with the eradication programme

"They did it in Australia and it took over 20 years. In New Zealand, where they have a wildlife reservoir of infection in possums, they are making excellent progress with their comprehensive programme and the number of herds of cattle and deer testing positive for TB has now dropped below 100 for the first time.

"We are determined to make use of new information, advice and best practice from anywhere in the world and

we are very happy with the links we have formed with New Zealand. I am delighted that members of their Animal Health Board are coming over to the Royal Welsh Show this year and our farmers and vets will have an opportunity to meet them. They can help us understand what the journey will look like – the highs and lows of TB eradication."

Dr Glossop said that they always knew the eradication programme in Wales would be a long-term one. "I do understand people who get impatient, but if you are going to build a house which is going to stand for a long time you have to make sure that you put the right foundations in place – and this is what we have been doing in these early years of our programme.

"We have delivered TB Health Check Wales, embarked on an annual test of cattle herds for 2010, and set up our Regional Eradication Delivery Boards. We are improving the management of TB breakdowns and raising standards of biosecurity; working with farmers; getting to know the essential players and keeping up with the technology – all key components of the programme."

It took Australia 27 years to be TB free

AUSTRALIAN cattle are now TB free, but even in the absence of a wildlife reservoir it took 27 years to eradicate the disease.



Professor Glyn Hewinson, Head of the TB Research Group at the Veterinary Laboratories Agency in Weybridge made the observation when he addressed the annual meeting of the Farmers Union of Wales.

He said that among strict measures undertaken in Australia, movement restrictions on infected herds were only removed following four clear tests over 24 months.

"It may well be that our children will benefit from the TB eradication programme here, not us."

Prof. Hewinson said that an ideal test is one which identifies infected animals before they become infectious and spread the disease.

Recent insights into bovine TB pathogenesis has shown that:

- Animals may be infectious before clinical signs or lesions are apparent
- Animals with no visible lesions can be infectious but animals with visible lesions are more likely to be infectious
- Infection can be established by inhalation of a single infectious particle containing five bacteria
- Cattle with confirmed bovine TB can be missed by the tuberculin skin test.

He said that the gamma interferon test is more sensitive than the skin test and is more likely to detect animals before they become infectious. "It is used where it is known there is TB in the herd. Combining both tests is more sensitive than either test alone."

Prof Hewinson said there is no true 'gold standard' for confirming the infection status of cattle. "We can detect immune response within three weeks of infection, so a positive animal may not always have visible lesions.

"In a herd with a high incidence there will be more cattle becoming infected, earlier infection, more animals in latent period, more false negatives and more infected cattle.

"Sensitivity can be as low as 66.5 per cent, thus leaving one third of cows undisclosed in these herds. Yes, skin test negative animals may be infected with TB," he added.

Discussions under way on best use of vaccine

THE Welsh Assembly Government is actively involved in discussions with experts on best use of a newly available BCG vaccine that can be injected into badgers.

Chief Vet Christianne Glossop has stressed, however, that the vaccine granted Limited Marketing Authorisation can only be used as a preventative measure and will not protect badgers that are already infected with bovine TB and may continue to spread disease until they die.

Dr Glossop said, "We have always recognised that vaccination must form part of our thinking as we look to eradicate TB from the Welsh cattle herd. There are all kinds of complications however which mean that we are not even

close to vaccinating cattle, but we are keeping an active interest in the development of a cattle vaccine.

"As far as vaccination of badgers is concerned, a project to deploy the newly licensed vaccine to badgers is being set up in England. Badgers will be cage-trapped and injected with the vaccine for a period of five years.

"We are on the project board for the Badger Vaccination Deployment Project and will be keeping a close eye on it to see how it develops. The project hasn't started yet and only time will tell whether it can make a difference."

The Chief Vet said that vaccine is a good way to provide protection to animals that are not infected. "It cannot, however, cure an infected animal, and we also need to realise that no vaccine is 100 per cent effective in uninfected animals.

"There are a number of options for vaccine deployment, including protecting badgers in areas of low TB incidence from infection, or establishing some kind of buffer zone between areas of high and low TB incidence. It is very early days when it comes to thinking about how vaccine will be of value, but now it is available it is certainly worth careful consideration."

How New Zealand has tackled bovine TB

by Dr Paul Livingstone, New Zealand Animal Health Board Technical Manager



EVER since cattle were introduced to New Zealand by the early settlers in the 19th Century, herds have been infected with bovine tuberculosis.

The introductions of a test and slaughter programme in the 1960s brought about

a significant reduction in the number of infected herds, but in 1972 TB-infected possums were identified as the source of infection for cattle and deer in a localised area.

Possums, a nocturnal marsupial, were introduced from Australia for the fur industry in the 1830s and have become a major conservation pest, competing with native birds for food, eating native birds' eggs and chicks and destroying native vegetation.

Since then tuberculous possums have been found to be acting as vectors of TB to cattle and farmed deer as well as other wild and domestic animals in defined areas covering 40 per cent of the New Zealand land area. These areas are known as Vector Risk Areas (VRAs). Since 1972, New Zealand's TB control programme has relied increasingly on control of possums in VRAs as well as testing and movement control restrictions for cattle and deer.

Initially, both the TB and possum control programmes were funded and run by the Ministry of Agriculture. However, this programme was at the behest of politicians and failed to control possums or TB in cattle. In 1989 farmers brought about a major change to the way that the TB programme was organised. A quasi Government organisation called the Animal Health Board (AHB) was established to manage the programme. Farmers and industry were the major stakeholders and fully funded the disease control programme and 40% of the possum control programme. In June 1994 the number of infected cattle and deer herds peaked at 1,694. Since then, largely as a result of intensive possum control, assisted by intensive test and slaughter and movement control for cattle and deer, the number of infected herds has reduced by 94%. At the end of April 2010, there were 98 infected cattle and deer herds.

* Dr Livingstone and John Dalzell, Chairman of the New Zealand Animal Health Board, will be at the Royal Welsh Show.

Farmers work with vets to keep TB at bay

PEDIGREE Simmental breeders Nick and Nadia Gwynne count themselves amongst the lucky cattle farmers in Pembrokeshire ... they have never had a TB outbreak.

The couple, are, however, far from blasé and are keen to work closely with their vet, Dr Sarah Wheeler, to ensure that they take every possible precaution to minimise the risks of introducing the disease onto their 320 acre organic farm at Rhosddu, Crymch.

There has been a breakdown on a nearby farm and Nick says the fact that roads and a stream separate the vast majority of their field boundaries from neighbours could be one reason why the disease has been kept off their holding.

"I did see some badgers close to our cattle last autumn but, touch wood, all our TB tests to date have been negative", he said.

"Sarah has been around the farm buildings and advised us on measures we should take to stop badgers entering the cattle shed and feed store. We have always kept the big double doors to the cattle shed open for ventilation, but following her advice we will be making alterations to the doors so that bottom parts are kept continuously closed. We will install a small door for our own access."

Nadia said that as part of new biosecurity measures in the pilot area of North Pembrokeshire their 180 cattle now have to be routinely tested every six months. "We can turn this into an advantage when we want to sell cattle, as prospective buyers will know that the herd has been regularly tested." She added that whilst she did not like to see badgers being killed she was willing to co-operate with the cull "because it is a necessity."

Dr Sarah Wheeler, from the Market Hall Veterinary Group in St Clears, said that along with fellow vets from the practice she has inspected more than 70 farms in the pilot area to assess the robustness of current biosecurity measures and to work with farmers on improvements to reduce their TB risks. "Without exception the cattle keepers have been keen to work with us and, after our visits, we produced a tailored action plan for them with suggestions for biosecurity improvements that we believe are achievable.

"On most farms, as at Rhosddu, we found a need for action to keep badgers out of feed stores. We have also been offering advice to farmers who buy cattle in. These animals may have been Pre Movement Tested but this is no guarantee that they are not infected, as they may be in the early stages of infection," she said.



Vet Sarah Wheeler indicates to Nadia and Nick Gwynne the height to which the doors need to be adjusted to prevent badger access.

Enhanced cattle control measures in pilot area

STRICT new cattle control measures have been in force since May 1 in the Intensive Action Pilot Area of North Pembrokeshire.

Within this area 42 per cent of cattle owners have had at least one case of TB in their herd since 2003.

The enhanced cattle measures include:

- Testing cattle herds every six months
- All breakdowns, whether or not 'confirmed' post-mortem, require a clear test, 60 days after a positive test, followed by a further clear test after a further 60 days, before Officially TB Free Status is regained and movement restrictions removed
- All breakdowns will be subject to tracing, which may generate additional testing for associated cattle herds
- Restricting cattle movements within and outside the area. All British Cattle Movement Service (BCMS) linkages and Sole Occupancy Authorities (SOAs)



between holdings inside and outside the pilot area have been cancelled, requiring farmers to report all movements to BCMS and comply with Pre Movement testing requirements

- Greater use of gamma interferon testing.

Cattle farmers have also received visits from their private vets to discuss biosecurity arrangements on their farms to reduce risk of TB getting into and spreading in their herds. This is a five year project, funded by the Welsh Assembly Government and progress will be reviewed annually.

Sticker plan for clear tested cattle

TWELVE month testing intervals and Pre Movement Testing are two vital tools in the fight to eradicate bovine TB in Wales.

It does involve some extra work and cost for farmers, particularly those holdings that were previously in the 48 month testing regime – mostly in North Wales. But with the Welsh Assembly Government making a concerted effort to rid Wales of this insidious disease, farmers must play their part.

With this in mind the North Wales TB Eradication board successfully applied to the TB Eradication Programme Board for funding for a pilot scheme to supply farmers with stickers to place on the cattle passport of clear tested animals.

The pilot scheme will enable the farmer/buyer to identify if an individual animal has had a clear TB test

within 60 days of being sold. Once the test has been completed the vet will hand over one sticker for each animal tested. It will be the farmer's responsibility to sign and write the date of day one of the TB test on the sticker and place it on the back page of the passport. Local Authorities will carry out random checks at markets to ensure that the system is not abused.

The BCMS is willing for the sticker to be placed on the passport as long as it does not cover any vital information.

Although Pre Movement Testing is a legal requirement in Wales the sticker scheme is voluntary, but it will be of great help to most farmers who are either selling or buying cattle, and as most cattle are traded through auction marts it will be of benefit to auctioneers as well.

Regional Boards develop their own action plans

THE three Regional TB Eradication Delivery Boards which include farmers and vets have development action plans specific to their region.

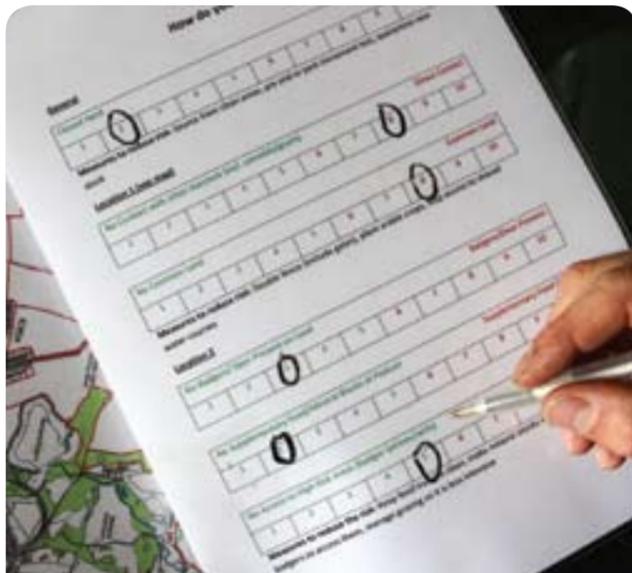
The Carmarthen Board is proposing research in South West Wales on the additional costs and consequential losses to the farming business and other related business as a result of bovine TB.

It is also working on plans for best practice seminars in late summer/early autumn for farmers outside the pilot area of South West Wales. The aim will be to promote best practice, increase awareness of biosecurity on farms and enhance the industry's scientific knowledge of bovine TB.

Health Check Wales testing has shown that large areas of North Wales are relatively clear of TB and the emphasis of the Caernarfon Board has been to keep the disease out of the clear areas. The Biosecurity Intensive Treatment Area in Wrexham has been a success with a large number of farms heeding advice from their vets to improve their biosecurity measures. Farms will be re-visited and scored again.

The Board is also looking at areas that could be targeted to make them 'Officially TB Free'. These include Ynys Môn/ Llyn Peninsula, where the disease incidence is low.

The Caernarfon Board is piloting a scheme whereby TB test date stickers are made available to clear testing cattle (especially at Pre Movement Testing).



The scoring sheet used on a best practice event on a Gower farm

The Cardiff Board has developed and promoted the use of the reactor removal 'Time-Line' to vets and farmers. This has cemented a better understanding of the crucial part played by all parties in ensuring the rapid removal of infected reactor cattle.

Successful best practice days have been held on a dairy farm and a beef farm on the Gower on the theme 'TB-Keep It Out'. There has also been a meeting with the graziers of common land on the Gower setting out a programme for a 'Keeping TB off the Common' event.

The days are based around a practical farm walk and focus on all the available methods to keep bovine TB from being introduced into the herd. The risks of bringing in TB are evaluated using a simplified biosecurity scoring sheet that the participants were encouraged to take home and use on their own farms.



Milwyn Layton of Kittle Hill Farm (with walking stick) leads a group of neighbouring farmers around his farm to look for signs of badger activity as part of the 'TB – Keep it out' initiative

Programme aims to eradicate TB in non-bovines

THE Welsh Assembly Government's TB Eradication Programme will address ways of eradicating TB in non-bovine species.

Following an initial consultation in 2008 on a framework for preventing and managing incidents of TB in camelids (llamas, alpacas, vicunas and guanacos) the Assembly Government has decided to widen the scope of proposed new or enhanced controls on non-bovines to include goats and deer.

A consultation document will shortly be published setting out the measures that the Assembly Government intends to put in place, together with the necessary draft legislation. These measures are likely to include proposals to introduce a statutory compensation scheme for non-bovine animals removed as TB reactors. The consultation document will be sent to interested parties and will also be published on the Welsh Assembly Government website.

Farmers' guide to cattle movements

THESE rules apply to all cattle keepers in Wales (with the exception of farmers in the Pilot area in North Pembrokeshire) Please note: All movements are subject to a six day standstill unless you have a Sole Occupancy Authority or qualify under the exemptions. All cattle movements, must be recorded in the herd register. Pilot area cattle keepers should refer to the guidance received in June on the additional cattle controls in the pilot area.

Scenario	Am I required to Pre Movement Test cattle before moving between holdings?	Am I eligible for a Sole Occupancy Authority (SOA)?	Am I required to notify movements to BCMS?	Am I eligible for a BCMS link holding?
Main holding & subsidiary land (rented or owned) with different holding numbers (CPH)	Yes, however if you have a Sole Occupancy Authority (SOA), you are exempt from Pre Movement Testing.	Yes, providing you meet all the eligibility criteria.	Yes. Movements must be reported to BCMS within three days, unless you have a BCMS link. If you have a SOA, you must continue to tell BCMS within three calendar days.	Yes
Cattle to/ from rented land which is adjoining your main holding				
Cattle to/ from rented housing for winter tack				
Cattle turned out to common land	Cattle are exempt from Pre Movement Testing	No	Yes. Movements must be reported to BCMS within three days, unless you have a BCMS link.	Yes
Cattle going to a show	Cattle moving to shows that last more than 24 hours and/or where cattle are housed must be Pre Movement Tested.	Not eligible	Yes. Movements must be reported to BCMS within three days, unless you have a BCMS link.	No
Main holding & subsidiary land sharing the same holding number (CPH)	Not required	Not required	Not applicable	Not applicable

If you require further guidance, contact the Farm Liaison Service at your Divisional Office.

New method for calculating compensation levels

Compensation for cattle removed in Wales as a result of TB will be calculated in accordance with the Tuberculosis (Wales) Order 2010.

The Order, which came into force on 25 May 2010, provides for a reduction in value for farmers who do not comply with their legal obligations; who disregard Veterinary Improvement Notices or who have overdue tests. Infected animals are valued before they are slaughtered and the cattle keeper receives 100 per cent of the value of the animals as calculated in accordance with the new Order. Where a breach has occurred, the value of the animal is reduced.

The Order provides a new method of calculating the level of compensation given. The value of an animal slaughtered will be calculated using the following formula:

$$A \times B = C$$

Where:

A is the market value of the animal

B is the figure provided in the Schedule of the Tuberculosis (Wales) Order 2010 by which value is calculated in cases of poor practice and breaches of obligation with

regards Veterinary Improvement Notices; breaches of obligations (illegal activities); and, overdue testing.

C is the value of the animal for the purposes of the Order (i.e. the payment of compensation in respect of that animal).

There is an appeals process for figure B but not figure A set out in the Order.

1) Overdue tests

Compensation will be based on cattle keepers complying with the required timings for bovine TB testing. The following reductions would only apply to cattle that were associated with an overdue TB test.

Delay from date of test notice	B the amount by which A will be multiplied
60 – 90 days	0.75
90 – 180 days	0.5
180 days plus	0.05

The date of the testing notice is considered as being day 0

Where a test is overdue due to reasons outside the control of cattle keepers certain mitigating factors may be taken into account.

2) Breach of obligations

This measure will be triggered by confirmation of non-compliance and not reliant on formal prosecution of cattle keepers. The reduction would then apply for any tests proving positive and taking place up to six months from the date that the Welsh Ministers became aware of the breach or to the next due whole herd test whenever that may take place.

The following legislation is currently relevant to bovine TB:

- EU Directive 64/432
- The Animal Health Act 1981
- The Tuberculosis (Wales) Order 2010

Where the Welsh Ministers are satisfied, beyond reasonable doubt, that the keeper of a bovine animal has committed an offence under section 73 of the Animal Health Act one occasion, 'B' is 0.5; and on more than one occasion, 'B' is 0.05.

3) Veterinary Improvement Notices

From later this year if farmers fail to follow Veterinary Improvement Notice advice their level of compensation will be reduced. Farmers will be contacted before this change is implemented.

Simple measures can make a big difference

PURCHASING new livestock increases the risk of introducing bovine TB and other diseases onto farms, but even in 'closed' herds animals can make contact with with stock on neighbouring land, adding to the threat.

Fences between farms must be stock-proof. If your cattle stray onto a neighbour's farm then they would be restricted under the six-day standstill rules (20 days in the case of pigs) – and, of course, vice versa.

Even if fences prevent stock mixing there may still be opportunities for contact. Diseases, including bovine TB, can be spread between farms if nose-to-nose contact is possible on shared boundaries. A double boundary fence – 3m or more apart – is preferable to a single fence and should always be considered.

An expensive permanent fence does not necessarily always have to be the only option – a temporary electric fence can just as easily form a suitable barrier.

Where boundaries are considered wide enough to keep stock apart, it is worth checking for any weak points. Where contact could occur between animals on neighbouring farms – gates, troughs and other gaps can have temporary barriers erected to prevent opportunities for contact and possible disease spread.

If stock has access to ponds or streams from which to drink then there is a risk of contamination and waterborne diseases spreading downstream to/from other farms.

Wherever possible prevent access to watercourses and provide piped water to troughs instead.

In many cases farmers will already work in collaboration with their neighbours to plan their grazing management. If one farm is planning to graze particular pastures then the neighbouring farm may be able to keep adjoining land stock-free.

Similarly, if stock have access to common land, it is preferable, where possible, to plan grazing with other farmers to minimise the mixing of stock.

Payments need to be fair to farmer and taxpayer

CATTLE are valued for TB compensation purposes on the basis of their market value in accordance with the tuberculosis (Wales) Order 2010.

In October 2007, the Welsh Assembly Government appointed three Monitor Valuers to address concerns that farmers were being overcompensated for TB reactor cattle. This followed a report published by the National Audit Office in 2003 which concluded that TB compensation was at least 50 per cent (and up to 100%) higher than underlying market prices for similar commercial and pedigree animals.

Since the appointment of the Monitor Valuers justification thresholds have been introduced with any valuations above the thresholds requiring an automatic justification to be submitted by the valuer concerned to the Monitor Valuers,

including a photograph and/or video footage of the animal together with production records and where appropriate a breeding history.

The thresholds were reduced in 2009 to £4,000 for pedigree cattle and £1,800 for commercial cattle in order to reflect market trends, and following discussions with representatives of the Valuer Associations. Other valuations not meeting these thresholds may also be called in by the Monitor Valuers for justification.

Average payments for pedigree cattle have reduced from a peak of £5,000 in 2006 to just under £3,000 in April 2010. While the measures that have been put in place appear to be having an effect, it is essential that the Welsh Assembly Government continues with the work to address over-compensation in order to ensure that TB compensation is fair to both farmers and taxpayers.



Health Check Wales – a major success story

WALES' Chief Veterinary Officer Christianne Glossop says that annual testing of all cattle herds as part of Health Check Wales (HCW) over a 15 month period has been a major success story in the fight against bovine TB and helped to provide the most accurate disease picture ever in Wales.

"The results of HCW, which are being published soon, will give us a really good indication of the current disease picture and will help us to understand where we are going, how long it is likely to take and what the key milestones are. HCW has involved a huge amount of extra effort on the part of private vets, Animal Health staff and farmers in Wales.

"This is a long term strategy. We are not going to see benefits overnight, but testing cattle more frequently is very important in our fight against TB."

Dr Glossop said one of the additional benefits of HCW was to get rid of the 711 pre HCW overdue tests. "This was important for the farmers involved because they were under TB restrictions, and it was important for us because if any herds had TB then we found out more quickly.

"Another benefit was that every person with cattle in Wales had a visit from a vet and had the opportunity to discuss TB and understand it better."



The reports being published on HCW will include one from Animal Health on how the work progressed, while another will focus on veterinary capacity.

The reports will include recommendations for the longer term testing arrangements in Wales.

In the meantime, results on disease incidence (particularly in areas of North Wales) have allowed Rural Affairs Minister Elin Jones to conclude that a policy of annual TB testing should continue as the default policy position until evidence shows that levels of bovine TB are reducing.

Some other lessons learned include:

- The value of increased testing, identifying disease at an earlier stage in areas considered to be clear
- The importance of co-operation and support of private vets (Official Veterinarians)
- The value of increasing veterinary capacity within Animal Health when needed by using detached duty staff
- The importance of co-ordinated enforcement in driving down failures by keepers to comply with their obligations, for example with regards to overdue testing.

Useful bovine TB contacts

SHOULD you have any questions or concerns about bovine TB please contact: **Your private vet**

Alternatively try the: Animal Health Helpline: 0844 8844600

Or your local Animal Health Office: Carmarthen 01267 245 400 Caernafon 01286 674 144

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