Queries brought up during the consultation process

Regionalisation

1. Will markets in the High TB Areas be able to sell cattle from low and intermediate areas as they do now?

Yes. There will be no restrictions on where markets source their cattle from. The TB area markets are located in will not affect the controls on the basis that they have to adhere to biosecurity standards, under the Animal Gatherings Order, which reduce the risk of disease spreading locally.

2. How do keepers manage when they have land in different TB areas, particularly movement between?

The general principle is that all the land is within 10 miles it will all be in the same CPH (assuming the farmer has decided to have the land under one CPH) and all of that CPH will be in the same TB area (even where this may currently cross area boundaries). Any land outside the ten miles will be under a different CPH and the relevant controls for movements between those CPHs will apply, including if they are indifferent areas.

3. Is the extra 6 monthly test paid for by WG?

This is to be decided.

4. Cattle moving from a high area to intermediate or low area will need Post movement testing. Does this mean no PrMT whilst in high area is not necessary, or both, and what timescale?

Both are necessary. The PrMT will help prevent the disease spreading and the PoMT will help identify diseased animals at the earliest opportunity before the disease has gone on to infect others. The PoMT has to be carried out 60 to 120 days after the animals arrive on the holding.

5. In the high area, how long after the clearing test can PrMT take place to allow movements? This seems contradictory, it can't be a clearing test which allows a herd to come off restrictions if a PrMT is required afterwards.

60 days from the date of injection (day one of the test). The herd would be classified as TB-free and therefore free from restrictions, for example it would be able to purchase animals.

6. The consultation sets out that 'cattle moving in to the area will require a PoMT if from a higher or similar, but geographically distinct, disease

area'. Can you please define 'geographically distinct'?

The PoMT is only required for moves from a higher disease area (see the table below):

Move to	Move from	PrMT?	PoMT?
Low (Wales)	Low (Wales)	No	No
Low (Wales)	Intermediate (Wales)	Yes	Yes
Low (Wales)	High (Wales)	Yes	Yes
Low (Wales)	Low (England)	No	No
Low (Wales)	Edge (England)	Yes	Yes
Low (Wales)	High (England)	Yes	Yes
Low (Wales)	Scotland	No	No
Intermediate (Wales)	Low (Wales)	No	No
Intermediate (Wales)	Intermediate (Wales)	Yes	No
Intermediate (Wales)	High (Wales)	Yes	Yes
Intermediate (Wales)	Low (England)	No	No
Intermediate (Wales)	Edge (England)	Yes	No
Intermediate (Wales)	High (England)	Yes	Yes
Intermediate (Wales)	Scotland	No	No
High (Wales)	Low (Wales)	No	No
High (Wales)	Intermediate (Wales)	Yes	No
High (Wales)	High (Wales)	Yes	No
High (Wales)	Low (England)	No	No
High (Wales)	Edge (England)	Yes	No
High (Wales)	High (England)	Yes	No
High (Wales)	Scotland	No	No

Please note that PoMT in the low TB area will be required from August 2017 whereas PoMT in the intermediate TB areas will be required from August 2018.

7. What assessment has been done to estimate the number of additional tests if herds are tested at 6 monthly intervals? Will there be veterinary capacity to undertake additional testing?

This will be subject to assessment following consideration of the consultation responses on this issue.

8. Can cattle from the low TB area move to intermediate and high areas without a pre-movement test?

Yes cattle can move from the Low TB Area to an Intermediate or High TB Area without a Pre-Movement Test.

9. Will markets be treated as "neutral" in terms of the post-movement testing rules?

Yes, the PoMT rules apply to the location of the herd the animal moves from and to, including if this is via a market.

10. Are there geographical or biosecurity boundaries in place between the high and low area in north Wales?

The border is the start of Snowdonia National Park. Comparing the spatial units (see q14) either side of the border, herd density is more than 50% lower in the low area and there is a lower proportion of dairy herds.

11. How will farms on the border be treated?

As is currently the case, the CPH will be either in Wales or England and the appropriate rules will apply.

12. In the High TB Area you say that you will gamma testing in the majority of breakdowns or on an ad hoc basis. How will you decide between farms and how will you explain this to farmers?

Every cattle keeper suffering a TB breakdown will be visited by an APHA vet soon after the breakdown starts. Throughout the period when the herd is restricted an APHA vet will work closely with the herd owner to implement appropriate measures to address the disease risk. Each herd owner will also have the opportunity of an advisory Cymorth TB visit from his/her own private veterinary surgeon. The use of gamma testing will reflect the individual circumstances of each outbreak and will be clearly explained to the herd owner by APHA.

13. The boundary between the south of the low TB area and the intermediate area seems entirely arbitrary. Farmers will be confused about the requirements. Is there really that much more TB in south Powys that the boundary line couldn't be drawn along the county boundary with Ceredigion?

The areas are an amalgamation of spatial units, made up of parishes, which were created using a similar approach for creating statistical units for the UK censuses. The spatial units are compatible with the CPH system and contain a similar number of herds. This approach is it is not affected by local authority boundary changes and is flexible to change to match the disease situation.

14. Rather than have arbitrary risk level boundaries would it be possible to use the Cymorth visit/biosecurity framework to designate each farm a risk level similar to the Johnes risk levels which would then predetermine PrMT requirements?

The Cattle Health Certification Standards (CHeCS) health scheme for TB was launched in November. The industry recognised TB health scheme indicates the TB status of participating herds based on added biosecurity measures and the number of years since the last herd breakdown. The scheme

complements our proposed regional approach by focusing on risk at the herd level.

15. How will the borders be defined? What are the implications of having businesses that straddle the borders?

See question 2.

16. For each region, what is the time-line to achieve a 'TB-free' status?

Timelines for eradication in each TB Area have not yet been established, but further work is being done to develop targets for eradication.

17. In a post–Brexit world, does the regionalised approach have any impact (positive or detrimental) on the ability of the UK to enter into trade negotiations for agricultural produce?

It is not believed that taking a regionalised approach to TB eradication in Wales will have any impact on the ability of the UK to enter into trade negotiations.

18. What is the cost difference between the measures required to comply with the necessary controls in the Low TB area compared to those required in the High TB instance area? What impact will this have on efficiency of businesses in these regions?

The financial impact of the changes will be included in the Regulatory Impact Assessment for the Tuberculosis (Wales) (Amendment) Order 2017.

19. What analysis has been undertaken to understand the impact of prices at point of sale based on regional TB status? We have heard of feedback from colleagues in England in response to the introduction of 'clean' and 'dirty' regions that this has led to depressed prices at market.

We are not proposing that the area the animal moved from is provided at the point of sale. Instead we are encouraging vendors to share TB information of their herd.

20. Is a regional approach open to legal challenge? Is the different treatment of farmers in different areas legally 'fair' and 'just'?

The approach reflects the regional variations in the epidemiology of the disease and is commonly used in other countries and for other diseases to protect those populations that are at risk from those populations that pose a greater risk.

21. How and when might the geographical zones be altered and how much notice will be given?

The disease situation of the areas, and the spatial units that make up them, will be reviewed annually.

22. What is the point in implementing such stringent regulations in Welsh farms on the border, if those neighbouring farms in England are not having similar measures applied to them?

We work closely with Defra on developing common and proportionate TB control measures in cattle that will increase the probability that we both achieve our goal of eradicating TB. For example, Defra has recently asked for views on proposals for six-monthly surveillance testing in its high risk area, which is consistent with our proposal.

23. How will trade with England be affected?

The Secretary of State for Defra has agreed to remove the requirement for post-movement testing for animals that move from our low TB area to the low risk area of England.

24. How will the classifications for the areas be reviewed and how often? What can individual herd owner do about it?

See question 21. Farmers can contribute by doing all they can to protect their herd from TB from the possible sources relevant in their local area and encouraging others to do the same.

25. Will the parishes on the boundaries of the areas be the only ones considered to be reduced if the level of breakdowns reduces?

The disease situation will be reviewed at the spatial unit level.

26. What are the chances of a herd in Pembrokeshire or west Carmarthenshire for example, considering itself an intermediate or low risk, even if it never had a reactor?

The CHeCS TB health scheme (see question 14) will particularly benefit farmers within the high TB areas who may have not recently had or ever had the disease and who would like their low-risk status to be recognised.

27. How will markets work? Will markets in the low area be able to take in stock from a higher risk area?

See question 9.

28. How will the new proposals be rolled out across the country and implemented?

This will be set out in due course as part of the refreshed TB Eradication Programme. It is, however, unlikely that all changes will be made at one time.

29. Clarification required for the Intermediate Table heading 'keep it out' 'some of the PrMT exemptions will be removed so all animals moving into the area have a PrMT? Should this be from higher or similar but geographically separate areas?

Please see table at Q.6

30. Is there a duty on the vendor or auctioneer to declare an animal's history when sold from different risk areas.

Through informed purchasing we are encouraging vendors to provide TB information at the point of sale and some livestock markets have upgraded their facilities to allow TB information to be prominently displayed.

TB test and restrictions

31. Is the PrMT still valid for 60 days?

Animals must be moved within 60 days of a clear PrMT.

32. Is it possible that a PrMT in the low TB area could be valid for greater than 60 days?

There is no PrMT required in Low TB Area.

33. To what degree is the skin test sound and 100% proven? Is anybody working on a more accurate TB testing system?

The skin test is used as the main screening test. It detects an immune response to TB and can identify infection before cattle show any signs of illness. After identifying infection in a herd a stricter interpretation of the next test result is used. This increases the test's ability to identify any remaining infected cattle. The majority of infected herds have to have at least two clear tests before movement restrictions are lifted. This reduces the risk of infected animals remaining undetected within a herd. Whilst the gamma test is an important tool, skin testing alone has demonstrated it is capable of eliminating disease in the majority of herds. The skin test has been effective in clearing infection from parts of the UK where TB infection in wildlife is not a significant problem and has been used in Scotland to achieve TB free status.

34. Do all the cattle which react to the skin test turn out to have TB?

The skin test has a very high specificity, meaning that very few uninfected animals test positive. For example, at standard interpretation it has a specificity of 99.98%, which equates to 1 false positive result per 5,000

uninfected animals tested.

35. During the skin test should each animal be injected using the same syringe?

TB testing is undertaken use a pair of syringes, one of which is dedicated to injecting avian tuberculin and the other to injecting bovine tuberculin. A sterile needle must be used for injecting each tuberculin. To meet this requirement there is a standard protocol for decontaminating needles which a tester must follow.

36. Why aren't restrictions lifted when an animal reacts to the skin test but no lesions are found at post mortem?

A common misconception with the skin test is that it incorrectly identifies healthy animals as being infected because lesions are not often found at the post mortem inspection. Both tests detect an immune response to TB which means they can identify infection before cattle show any signs of illness and so it is to be expected that they can detect animals before the disease has progressed to the stage where lesions are visible. The skin test has a very high specificity (99.98%) which means that it identifies very few animals as false positive and it is for this reason that only it is used to lift restrictions.

37. Why can't the PrMT be carried out at severe interpretation?

Only the skin test at standard interpretation is used to restrict a herd.

38. It is unclear if the PrMT exemption for calves under 42 days will still apply?

Where PrMT remains a requirement calves under 42 days will continue to be exempt

39. You say that the disease is being brought in through undetected cattle, how do you know this?

Through molecular epidemiology – analysis of genotyping and movement records, as well as individual case review of breakdowns using local field epidemiological knowledge.

40. Why do you want to PrMT as well as PoMT test, surely the test is more accurate than you are suggesting?

Despite the controls we have in place (including PrMT) it is not possible to fully eliminate the risk of TB spreading through cattle movements. Some of the reasons for this are:

- the sensitivity of the skin test is around 80%, which mean only 80 out of 100 infected animals are likely to test positive at standard interpretation of the test
- cattle can become infected after being tested and before they are moved
- cattle may be at a very early stage of infection when tested and too soon for the test to detect disease
- poor quality of testing
- if the animal is infected with another disease it can interfere with the test
- TB is disseminated widely in the animal, which then mounts a different immune response which results in it not be identified as a positive by the test.

The PoMT will provide an opportunity to identify infected animals that may have moved undetected at the earliest opportunity before the disease has gone on to infect others.

41. How much will increasing the sensitivity by making this policy change inadvertently affect the specificity of the test? It would surely reduce it and therefore we would no longer be able to quote the skin test as 99.9%.

We increase test sensitivity in infected herds because the risk of taking out low numbers of false-positives is outweighed by the need to identify and remove all infected cattle. In these instances a test-positive animal is more likely to be infected. The specificity of the test at severe interpretation is 99.91%.

42. If a reactor is found at a Post-Movement Test, how will tracings be undertaken?

If a reactor is identified at the PoMT and the herd of origin had recently had a clear test then there would normally be no further testing required. If there had been no recent herd test the herd of origin would be required to do a check test.

43. How often have you had further TB problems in the cattle sold after the clearing test?

The current proportion of closed breakdowns in Wales that recur within two years is 27.5%. However, this varies across the regions:

• Low: 0%

Intermediate (mid): 14%Intermediate (north): 25%

High (west): 29%High (east): 34%

In the low and intermediate areas there is an area of overlap between factors driving the disease i.e. cattle movements. We have demonstrated this through molecular epidemiology – analysis of genotyping and movement records, as well as individual case review of breakdowns using local field epidemiological knowledge. This matches the findings of the Independent Scientific Group on Cattle TB which found that a number of undiagnosed TB-infected cattle remain following tuberculin testing, leading to the re-infection within herds and the spread of disease to neighbouring herds and outwards to the rest of the country.

44. Sometimes vets go to farms to do tracing tests and find the animal has already had 1 or more TB tests on the new farm. Do you check a herds TB testing history before issuing Tracing instructions?

Yes. During the tracing investigation the team will view the testing history of each animal. This assists in establishing whether an animal requires an immediate or 120 day test. The team will also find out whether a whole herd test is due and synchronise trace animals with the herd test (where windows allow). If the holding has trace animals from separate TB breakdowns, whose 120 day dates are within a month of one another, these animals will be combined into one trace test (where dates allow).

45. Explanation required in layman terms for why anomalies of positive skin tests and absence of lesions at slaughter occur?

See question 36.

46. Full explanations and advice that it is not possible to be sure that herds are actually free of disease even when they are classified at OTF, and more importantly the reasons why this is the case.

Despite repeated testing, test sensitivity remains an issue in some herds because of their size and/or because they are split over multiple locations. In these herds infected cattle can remain undetected even after restrictions are lifted.

47. Clearing test not being used as a pre-movement test. Where is the evidence to show that these farms have sold infected stock?

See question 43.

48. If animals are unable to be sold following the clearing test and also not able to be tested for 60 days then this effectively prolongs their restrictions for another 60 days. Presumably, apart from calves under 42 days old that were not tested/alive at the clearing test?

See question 5.

49. Will OTFW herds which disclose IRs mean they would still require 2 clear tests?

Yes. All OTFW herds in Wales now require 2 clear Short Interval tests to enable release from TB restrictions.

50. Are Inconclusive Reactors (IRs) generated because of incorrect application of the needle/the same needle used for each animal?

The vast majority of IRs are likely to be true IRs generated through the correct application of the test. It is very unlikely that a reaction to avian or bovine tuberculin will be caused by infection introduced at the time of tuberculin injection. However, it is possible that an insufficient dose of tuberculin, a subcutaneous injection of tuberculin, or poor skin thickness measurement may occasionally lead to the generation of IRs, rather than reactor animals. This is why it is important that the skin test is carried out in good testing facilities allowing adequate animal restraint and is carried out following standard testing protocols in an unhurried manner.

51. Will six monthly testing be done by private vets or government vets? Can they cope with the extra workload? Farmers cannot be penalised for overdue testing that is out of their control.

This is to be decided. The consultation only covers the concept of 6 monthly testing in the High TB Areas and high risk herds in the Intermediate and Low TB Areas.

52. Is the Welsh Government recording undetected bTB when beef cattle are slaughtered?

Slaughterhouse cases are recorded in the TB statistics.

53. How will the farmer know when they need a PoMT?

Farmers will be required to check the location the animal came from.

Wildlife

54. How will badgers be monitored to assess their relevance to a TB breakdown?

We can demonstrate that badgers are infected and share the same strain of M.bovis as cattle and therefore it is probable that disease is being transmitted between species. We are currently working with vets / badger ecologists and wildlife groups to develop a set of criteria that would need to be met to demonstrate that badgers are contributing to long tern herd breakdowns.

55. How are you going to prove badger involvement and they are contributing to the problem?

We will use the criteria referred to in Q58.

56. Are you proposing culling? If so are you proposing ring vaccination if BCG is available again?

We have ruled out an English style cull, there will be limited culling of infected badgers/ groups of badger on persistent breakdown farms. The role of vaccination will be considered once vaccine becomes available again.

57. Could temporarily installed cameras be offered to quantify whether badgers are entering housing units?

Camera surveillance will be offered to long standing breakdown herds where badgers are thought to be contributing to the persistence of the disease.

58. What do you plan to do in order to prove that badgers are contributing to the problem?

We can demonstrate that badgers are infected and share the same strain of M.bovis as cattle and therefore it is probable that disease is being transmitted between species. We are currently working with vets / badger ecologists and wildlife groups to develop a set of criteria that would need to be met to demonstrate that badgers are contributing to long tern herd breakdowns.

59. How will badger vaccination be encouraged in the intermediate areas?

The role of vaccination will be considered once vaccine becomes available again.

60. Will the Badger Found Dead Survey continue as part of regionalised approach?

We are currently considering option for continuing our surveillance of disease in badgers though this may be restricted to a more targeted approach around chronic breakdown herds in the High Risk Areas.

61. Is there a correlation between infected badgers found and TB breakdowns in Wales?

Yes, analysis of the molecular types of *M. bovis* in badgers from the 2005/06 Badger Found Dead Survey were found to be common with *M. bovis in* cattle in the area. The survey report concluded that tuberculosis in badgers in Wales is closely associated with the disease in cattle, indicative of transmission of infection between the two species.

62. How can anyone guarantee that vaccine can be administered annually for a period of 9 years (to ensure 4 successive generations are clean) to a wild animal population?

The role of vaccination will be considered once vaccine becomes available again.

63. How long does bovine TB infect a sett for?

Research undertaken in the Republic of Ireland by Young, Gormley and Wellington in 2004 demonstrated that Mycobacterium bovis is capable of persisting in the farm environment outside of its hosts. Survival time is influenced by climatic factors. In relation to survival in/or around a badger sett, the study detected M.bovis genes in soil around badger setts 21 months after possible contamination.

64. Is allowing badger infected with TB causing unnecessary suffering?

No. Evidence shows that TB is not a major cause of death in badgers. Being killed while crossing highways would appear to be the greatest risk for the premature death of adult badgers. TB infected badgers can live with TB for many years and generally do not show any sign of infection. None of the badgers trapped in the IAA showed any indication of suffering as a result of advanced stage tuberculosis.

65. How is the development of the oral badger vaccine progressing?

An oral badger vaccine may be a more practical solution, however, it is still at the research stage.

66. How long have the badgers in your survey been dead? Does this time frame affect the TB identification? How long does the TB live in a dead animal? Does the type of death affect the test outcome?

How long have the badgers in your survey been dead? It is not possible to know exactly how long badgers have been dead. Dead badgers are only collected if considered to be in suitable condition. They are refrigerated on receipt at the post mortem examination centre and examined as soon as possible and always within 4 days of receipt.

Does the time frame affect the TB identification? The time between death and post mortem examination and the ambient and storage conditions, particularly temperature, is likely to affect the proportion of culture positive badgers. Decomposition of the carcase will destroy Mycobacterium bovis (TB). In the previous all-Wales found dead study 2005-06, the proportion of culture positive carcases was lowest on a Monday, often after being stored refrigerated over the weekend, but the difference in proportion of culture positive carcases by post mortem day was not statistically significant.

How long does TB survive in a carcase? The survival of TB in a carcase varies depending on the conditions. A UK study has shown survival of TB in badger carcases from a few days to several weeks, depending on the conditions, with no TB recovered after 4 weeks. Similar findings were made in New Zealand in brushtail possums with survival of TB in carcases on grassland varying from 3 days in summer and over 27 days in winter.

Does the type of death affect the test outcome? As long as it is possible to identify and collect a full range of tissues for testing, the type of death is not likely to affect the test outcome. It is not likely that a full range of tissues will be identified or collected from flattened carcases so these carcases are excluded from the study.

67. How will badger vaccination in the Intermediate TB Areas be deployed and under what circumstances, where and who would lead this?

The role of vaccination will be considered once vaccine becomes available again.

68. Farmers need to be informed about the conclusions drawn from the previous work in the IAA?

An annual report is published which compares the trends in indicators of TB within the IAA compare to other areas in Wales in the 5 years prior to the IAA being established and the subsequent 6 years.

69. Why does it take so long for badgers to be tested for TB?

The post mortem examination methods used are similar to the standard protocol used in several other studies but an extended culture time of 12 weeks is used to improve the sensitivity of culture.

70. How will appropriate interventions to break transmission routes of disease between cattle and wildlife be carried out and who will have responsibility?

There are a number of interventions or combinations that can be carried from actions to reduce or prevent contact between the two species, to the removal of infected cattle and/or badgers. Responsibility for undertaking these interventions can rest with either Government or the farmer depending on the action required.

71. You say that 5,500 doses of vaccine has been administered, does that mean that 5,500 different badgers were vaccinated in 4 years.

No, vaccine will have been administered to a proportion of badgers on more than one occasion, but as the badgers were not individually identified this cannot be quantified.

Funding the Programme

72. Where is the funding coming from? Additional funds or transfer of funds from other sources/schemes?

There will be no increase to the TB Eradication Programme budget which will mean work will need to be prioritised on the basis of value for money and phased in as budgets and resources allow.

73. Does the £150m spent on compensation include the market value that is realised by WG when animals are sold?

Yes, Welsh Government receives the salvage value, based on the value of any meat that can be salvaged from animals slaughtered due to TB. The £150m spend on compensation covers a 10 year period. In addition to the cost of TB compensation, Welsh Government also pays for the haulage and slaughter of animals removed from farm, and also pays valuers fees.

74. How much does WG receive in salvage?

The amount of salvage that the Welsh Government received depends on the number of animals slaughtered, and the amount of meat that is salvageable. Please see the table below that details the amount of salvage receipts that the Welsh Government received for the past 5 financial years.

Year	Salvage
2011/12	-£1,539,000
2012/13	-£2,020,000
2013/14	-£1,462,000
2014/15	-£2,521,000
2015/16	-£2,846,000

75. Who will be responsible for paying for Post-Movement Testing?

Like the PrMT the PoMT would be paid for privately.

76. What is the cost of vaccinating badgers?

The relevant expenditure is contained in the link below.

http://gov.wales/topics/environmentcountryside/ahw/disease/bovinetuberculosis/intensive-action-area/badger-vaccination-iaa

77. What are the admin costs for this programme?

Administration costs are funded from programme delivery spend that includes policy making and delivery. It is therefore not possible to differentiate between administration and admin costs.

78. What was the cost of the Badger vaccination programme and how much improvement did the areas see?

The relevant expenditure and benefits are contained in the link below. http://gov.wales/topics/environmentcountryside/ahw/disease/bovinetuberculos is/intensive-action-area/badger-vaccination-iaa

Informed Purchasing

79. Does Carmarthen market show the disease history of herds?

Carmarthen was not one of the markets that applied to receive grant funding to update its facilities so that TB information can be displayed. We welcome an application from Carmarthen when the informed purchasing grant window reopens.

80. Risk based trading- is a farmer not entitled to client confidentiality under Data Protection laws?

Any potential Data Protection impacts will be taken in to account in deciding whether to make risk-based trading mandatory.

81. How did the grant for markets work?

We established the grant to help livestock markets upgrade their facilities to allow TB information to be prominently displayed. Ten applications successfully received funding of up to 50% of the cost (up to a maximum of £2,500) of equipment, such as display boards/screens, and any new or update to back-office software. As part of the grant conditions, markets are required to ask for and, when provided, display the following three pieces of information:

- date of the animal's last pre-movement test
- date of the seller's last routine herd test
- date the herd achieved Officially TB Free (OTF) status.

TB Statistics

82. If numbers of cattle have fallen, would you not expect the number of TB cases to have fallen proportionately?

The decrease in new incidents far exceeds the fall in herds and cattle, both over the short-term and the long-term. It is not the case that we are only seeing fewer incidents as a consequence of there being fewer herds. For example, in the 12 months to November 2016 there was a 0.3% fall in herds and a 19% fall in incidents.

83. Do Figs 1 and 2 only encompass infected cattle or do they include inconclusives and cattle that test positive but are not infected?

The charts cover all breakdowns, with and without post-mortem confirmation of disease, and all animals slaughtered for TB control, i.e. including Inconclusive Reactors. The tests used to identify infected animals have a high level of specificity, meaning that for animals testing positive, it is likely that all but a tiny minority are truly infected.

84. Why is the disease picture so bad in Wales compared to England, Scotland & Ireland and why is Britain not working together as one to deal with the disease?

The incidence and prevalence of TB varies greatly across the UK, between and within its constituent countries. TB levels are historically very low in Scotland and across large parts of North and East England. There is also substantial variation in TB levels across Wales, partly reflecting differences in geography, farming practices and herd sizes.

Incidence is best measured by the number of new incidents per 100 herd years at risk (because it is not affected by differences in testing frequencies between regions or changes in testing over time). On this basis, TB incidence in Wales is 32% lower than in England (6.9 and 10.1 incidents per 100 years at risk respectively). Herd prevalence – disease restricted herds as a proportion of all herds – is 11% lower in Wales than in England (4.9% and 5.5% respectively). This follows long-term falls in disease levels in Wales. (Defra National Statistics to September 2016, the latest period for which incidence data are available).

The Welsh Government works closely with Defra, Scotland and Northern Ireland to share knowledge and best practice. Although there are some differences in TB policy across the UK, the commonalities are much more significant – protecting low incidence areas, targeting high incidence areas to reduce disease levels and preventing spread wherever endemic disease arises.

85. New incidents may have fallen, but what about the number of holdings under restrictions?

Herd prevalence – the proportion of herds under restrictions because of a TB incident – fell by 10% in the latest 12 months, from 5.4% in November 2015 to 4.8% in November 2016.

86. What proportion of all cattle slaughtered actually had TB and in what areas?

It is not possible to know the proportion of animals slaughtered for TB control that were truly infected. However, the standard skin test has a specificity of 99.98% - i.e. it produces 1 false positive reactor for every 5,000 uninfected animals tested – meaning that in practice, animals with positive reactions to the skin test may be considered highly likely to be infected. The interferongamma (IFN-y) test has a lower specificity, around 96.5%, meaning that more false positives are identified. The gamma test is used much less frequently than the skin test and only in herds with open TB breakdowns.

87. Are statistics going back to 2008-9 relevant? Why did it take until 2012 to publish a strategic framework for TB eradication?

Our TB Eradication Programme began in 2008 and so it is an appropriate starting point to look at disease trends. Though we monitor a range of TB indicators on monthly and quarterly bases, they may be volatile over short periods so it is important to consider short-term changes in the context of long-term trends.

Even as far back as the 1930s measures have been in place to deal with TB in cattle in Great Britain. Particularly since 2008 when a formal TB Eradication Programme structure was established in Wales, measures have progressively been strengthened and extended. Following a programme review and a change of Government a strategic framework for TB eradication was published which consolidated the ongoing measures and set out longer term objectives covering the 4 year lifespan of the framework.

TB Compensation

88. Will farmers be compensated for the financial impact of these changes on their business?

Compensation is only paid for animals slaughtered because of TB.

89. 'Encouraged to explore insurance to cover values over £5000' - Have you looked into this possibility? It is not an option.

We have been informed that although this is an immature market for providers, some insurance is available to cover any value which is in excess

of £5,000. Owners of high value cattle should contact insurance companies to discuss potential cover.

Cattle Vaccination

90. When will a cattle vaccine be available?

To use any cattle vaccine, we must be able to show the difference between cattle that have been vaccinated and those that are infected. We have been working on a test for this (a DIVA test) for a number of years, and our focus now is to assess the specificity of this test to see how often it generates false positive results. Further work on developing a cattle vaccine will depend on the results of this assessment. A very optimistic assessment estimates that vaccine could be available by 2023.

Slurry

91. Are procedures to negate the risk posed by slurry carried out and inspected?

Cattle keepers on restricted holdings are offered advice on storage and spreading best practice and legislation allows for a notice to be served on a keeper to require him/ her not to remove manure, slurry or other animal waste from the premises except under the authority of a licence issued by an inspector. Routine inspections are not carried out.

Cymorth TB

92. What is Cymorth TB?

The aim of *Cymorth TB* is to provide support and advice to farmers whose cattle have TB. This is to:

- minimise the impact of the disease on their farm
- prevent the disease from spreading

The Veterinary Programme - Private vets play a pivotal role in ensuring the health and welfare of animals in Wales. Through *Cymorth TB* we are seeking to enhance the role for private vets in the management of TB. The veterinary programme allows farmers and herd keepers affected by TB access to a specialist visit by a specifically trained private vet.

The programme is managed by the Animal and Plant Health Agency (APHA) and delivered by private vets subcontracted to the two Welsh Veterinary Delivery Partners. Farmers are offered access to the programme in the form of a voucher which will be provided to them by APHA.

Other *Cymorth TB* programmes – The Welsh Government has developed other *Cymorth TB* programmes providing additional personal, wellbeing support for cattle keepers, contracting with the Farming Community Network, and farming businesses during TB breakdowns.

Inconclusive Reactors

93. If an animal gives an Inconclusive Reactor result on the home holding, but is restricted to the herd for life, would it be possible for it to be moved to summer grazing or other land away from the holding which we own?

Yes.

94. If animals are inconclusive, aren't they a risk to other animals on the farm and shouldn't they be slaughtered?

Papers from Ireland have identified that transient first time IRs in OTF herds are likely to be a higher risk than clear testing animals. However, IRs in herds in higher risk TB areas, or in persistent breakdowns, are more likely to become reactors subsequently than IRs in lower risk TB areas. The policy is aimed at spreading the financial risk between animal keeper and Government in low and intermediate TB areas and in those areas the farmer is encouraged to privately slaughter these animals early to reduce the risk to their herd. The policy prevents the animal being sold on to other herds and increasing the risk of spreading the disease more widely.

95. How will IRs that are compelled to remain on the holding be dealt with if the farmer wishes to cease farming?

The only option for those animals will be slaughter

96. Further clarification needs to be provided with regards to how IRs being at standard or severe are interpreted as there is crossover on the interpretation chart where an animal can be an IR at both standard and severe?

An IR animal read at severe would get a second test and an animal being read at standard would be slaughtered.

97. Will restrictions of herds with only IRs disclosed at a test have their status withdrawn completely or only suspended?

Herds that only disclose IRs will have their TB free status suspended or if isolated properly only those IRs will be suspended

98. How with restricting IRs work in practice and be enforced and will farmers be able to voluntarily cull these animals from their herds?

A process will need to be developed with BCMS for identifying when these animals have been moved to any location that isn't to slaughter and for stamping the passports to confirm that only movements to slaughter are allowed. Once an illegal movement has been identified:

- enforcement by LAs will be by normal means;
- a new notice will need to be served on the animal moved, to restrict further movement from it's new location.

Yes, farmers will be encouraged to privately slaughter these animals

99. How are farmers suppose to restrict IRs to the herd for life? Removal of passport? Would these animals be compensated for if they test positive at a later test?

Stamping the passport would provide the relevant information for the life of the animal i.e. "can only be moved directly or indirectly to slaughter via a slaughter market".

100. There are many incidences of IR cattle that have absolutely no skin reaction when they are retested, how is that explained?

The Single Intradermal Comparative Cervical Tuberculin Test (SICCT) entails the simultaneous injection of both bovine and avian tuberculins side-by-side into the skin of the neck. The interpretation of the SICCT test is based on the observation that M. bovis-infected cattle tend to show a greater response to bovine tuberculin than to avian tuberculin, whereas infections with other mycobacteria promote the reverse relationship.

Based on our understanding of the SICTT, and of diagnostic tests more generally, a transient inconclusive reactor (TIR), i.e. one which goes clear at the next skin test could be either:

- A non-infected animal returning a suspect result, often following exposure to environmental mycobacteria or infection with other mycobacteria, e.g. M. avium subsp. Paratuberculosis; or
- An M. bovis infected animal returning a suspect, rather than a positive result, due to a broad range of factors that relate to the animal, such as coinfection with or exposure to other mycobacteria, the tuberculin and/or the method of administration.

Biosecurity

101. How would biosecurity improvements work in practice when fields are not truly biosecure?

Biosecurity is about reducing the opportunities of a disease entering a herd. There are common sense, precautionary measures that cattle farmers can take to reduce the risk of TB spreading to their herd. Research has shown that badgers frequently visit farm buildings and come into close contact with housed cattle. There are a number of effective precautions that can be taken to prevent badgers accessing cattle housing and feed stores. Research suggests that TB is not passed on by direct contact with badgers at pasture and so measures should focus on indirect spread by preventing cattle access to badger setts and latrines as well preventing badgers accessing feed and water troughs.

102. Do you wish the UK livestock industry to move towards an intensive factory farmed approach to ensure biosecurity?

Biosecurity is about reducing the opportunities of a disease entering a herd. There are common sense, precautionary measures that cattle farmers can take to reduce the risk of TB spreading to their herd. Research has shown that badgers frequently visit farm buildings and come into close contact with housed cattle. There are a number of effective precautions that can be taken to prevent badgers accessing cattle housing and feed stores. Research suggests that TB is not passed on by direct contact with badgers at pasture and so measures should focus on indirect spread by preventing cattle access to badger setts and latrines as well preventing badgers accessing feed and water troughs.

103. What are the differences between Biosecurity Improvement Notice/Veterinary Improvement Notice?

Veterinary Requirement Notice (formally a Veterinary Improvement Notice (VIN)):

A Veterinary Requirement Notice requires a farmer to take specific actions to prevent the spread of TB.

Biosecurity Improvement Notice:

A Biosecurity Improvement Notice will state where biosecurity should be improved for the purpose of preventing the spread of TB but will allow the farmer to decide how to meet the objective(s) set out in the notice. Comprehensive guidance on biosecurity standards will be provided to the farmer in conjunction with the Biosecurity Improvement Notice at their first DRF visit and, if they have not done so already, they will be encouraged to have a Cymorth TB visit. This will help the farmer identify at an early stage any possible biosecurity weaknesses on the farm and allow them to familiarise themselves with the level of biosecurity that is required

<u>Other</u>

104. Are cattle naturally immune to TB?

GB and Irish studies have shown that significant genetic variation for susceptibility to confirmed M. bovis infection exists among GB and Irish Holstein-Friesian dairy cows. As such some cattle may be more or less resistant to infection than others.

TB Advantage is a genetic index that was published by AHDB Dairy in January 2016, to help some dairy farmers make informed decisions to breed cows which have an improved resistance to bovine tuberculosis (bTB).

The index follows research into the genetics of bTB, undertaken jointly by the University of Edinburgh, Roslin Institute and Scotland's Rural College (SRUC), and which was supported by the Welsh Government and Defra. It may be that after further work it will be possible to extend the index to include other dairy and beef breeds.

Breeding cattle with a reduced susceptibility to bTB is a long-term approach to disease control and is just part of a suite of measure that need to be taken to eradicate bovine TB. It is still important that cattle keepers continue to take measures to **protect cattle against bTB**, irrespective of the genetic index of the bulls used by their herds.

105. Why does meat from TB cattle go back into the human food chain if there is a risk to human health?

Food Standards Agency controls stop meat that is unfit for human consumption from entering the food chain. In 2013 the European Food Safety Authority published a review of the TB risks posed by eating meat and meat products and concluded that the risk of anyone catching bovine TB through eating meat is 'negligible'. When people do contract bovine TB, it is usually through drinking unpasteurised milk or through prolonged contact with an infected animal. This view is supported by the Advisory Committee on the Microbiological Safety of Food (ACMSF), the independent panel of experts that advises the Food Standards Agency in this area, following its own risk assessment in 2010.

106. Why were farmers not fully informed of this consultation?

It would have cost approximately £7,000 to write to each and every individual farmer in Wales to notify them about the consultation. The consultation was circulated to key stakeholders including the farming unions and publicised through press releases.

Misconceptions:

1. Frustrated by the length of time TB has been accepted as a major industry and public problem yet virtually no progress has been made.

Significant progress has been made since the TB eradication programme was established in 2008. In 2008 there were 1,198 new incidents in Wales and in the 12 months to November 2016 there were 689, a fall of 42%. The trend in animals slaughtered has also fallen from 11,400 in 2008 to 9,954 in the latest year. This is despite a recent rise which is largely attributable to changes in testing.

2. Currently deer are being culled across Wales and are not being tested

Deer are susceptible to Mycobacterium bovis (M. bovis) infection but the risk of infection and of them passing infection to cattle, wildlife and humans is generally considered to be low. Since autumn 2014, Welsh Government has been promoting the surveillance for TB in wild deer culled by stalkers. Training in sampling techniques and the provision of sampling kits has been made available through the Deer Initiative Scheme. To date, 994 samples suitable for testing have been received with 17 testing positive for M.bovis, 972 negative with 5 results pending.

3. Last year England had a reduction in the number of cattle slaughtered as a result of bovine TB, Wales had an increase.

In 2015 there was a 6% increase in the number of animals slaughtered for TB control in England, and in the latest 12 month period (to October 2016) there was an 8% increase. In Wales, the increases were 27% in 2015 and 33% in the year to October 2016, however this is largely attributable to increases in our strategic use of the gamma-test, which has a high sensitivity and discloses more cases per breakdown than the standard skin test. Gamma-testing is used to help clear infection in recurrent and persistent breakdowns, and also to prevent disease from establishing in low incidence areas.

4. There is a perception that in removing the PrMT requirement in the low TB area may deter buyers in England from coming to the sales as they perceive a greater risk in buying untested cattle even if from a low TB area.

The logic of the low TB area is that buyers will understand that these herds represent a lower risk of infection and that measures the Welsh Government is currently putting into place are designed to keep infection out. This should work in the same way as it does in Scotland and the low risk area of England work

5. You admit that the badger is responsible for TB.

TB can affect all mammals, including badgers. There has been evidence of a link between TB in badgers and cattle and it has been proven experimentally that badgers can transmit bovine TB to cattle. It is accepted that badgers may be the cause of disease in some herds, however the greatest risk of infection comes from cattle-to-cattle transmission.

6. Cutting compensation and capping payments would be suggesting that Welsh Government feels that farmers have been overpaid whilst they themselves have always appointed professional valuers.

Despite the measures we have introduced, our valuations for some categories of cattle remain substantially higher than the average market value. For example, our average compensation payments are 60% higher when compared to payments for comparable animals in England. It is important that we deal with any overvaluation that may be occurring because it increases the cost to the taxpayer and can offer little incentive for some farmers to prevent TB. To better deal with overvaluations we will review our compensation system and examine the systems used in other countries. In the mean time reducing the cap to £5,000 to make sure the compensation system is financially sustainable.

7. As far back as the 1970s MAFF identified the largest reservoir of bovine TB was in deer, followed by farm cats, then badgers, weasels, wood mice and hedgehogs.

A study undertaken in 2007 (Delahay et al) to survey for prevalence in other wild mammals and assess the relative risk to cattle, examined the carcasses of 4,715 mammals collected across the South West of England. Although infection was confirmed in a number of species most presented a relatively low risk. Higher values and uncertainty associated with deer and suggest that deer should be considered as potential, although probably localised, sources of infection for cattle.

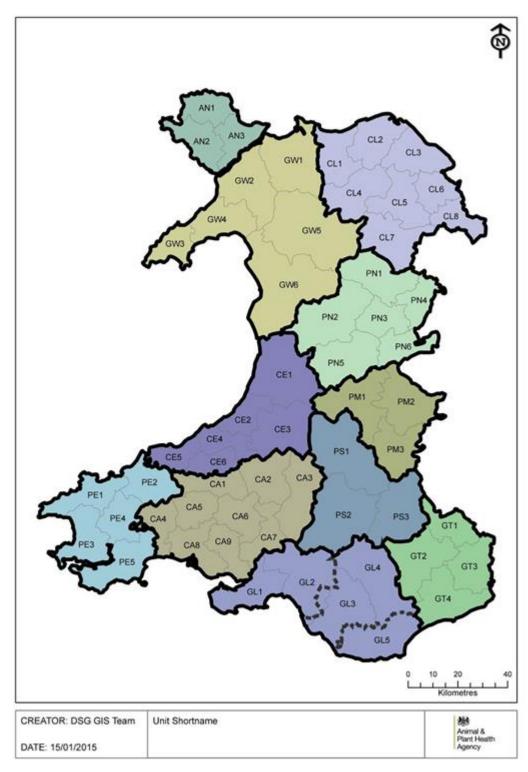
Since Autumn 2014, Welsh Government has been promoting the surveillance for bTB in wild deer culled by stalkers. Training in sampling techniques and the provision of sampling kits has been made available through the Deer Initiative Scheme. To date, 994 samples suitable for testing have been received with 17 testing positive for M.bovis, 972 negative with 5 results pending.

8. Hedgehogs and Ground nesting birds wiped out by actions of badgers!!!!!

Studies indicate that badger predation is one of the main causes of hedgehog mortality and that badger density correlates negatively with hedgehog abundance, but not total eradication.

9. There is no scientific basis for the regional boundaries!!!!!

The areas are an amalgamation of spatial units which were created using a similar approach used for creating statistical units for the UK Censuses. The spatial units are made up of parishes and are therefore compatible with the CPH system. This approach is it is not affected by local authority boundary changes and is flexible to change to match the local disease situation.



10. A common misconception is the skin test incorrectly identifies healthy animals as being infected because lesions are not often found at the post mortem inspection.

The test has a very high specificity (99.98%) which means that it identifies very few animals as false positives. Both tests detect an immune response to TB which means they can identify infection before cattle show any signs of illness and so it is to be expected that they can detect infected animals before the disease has progressed to the stage where lesions are visible.

11. Many respondents were critical of biosecurity measures at pasture as it is impractical to keep cattle and badgers apart

Biosecurity measures are not aiming at to keeping the two species apart but rather to limiting the opportunities for the disease to spread.

12. Some farmers and vets were under the impression that the purpose of the Cymorth TB was to establish if there was badger activity on farms

The purpose of the Cymorth TB visit is to advise on all potential sources of infection and the practical actions the farmer can take to protect their herd.

13. There was a misconception that nothing was being done to learn from farms, especially in the high TB areas, that never have TB.

This has been done as part of the epidemiology project and the outcomes were included in the consultation document when referring to how dairy and beef herds trend to be affected differently.

14. Some respondents commented that the number of badgers had increased substantially which is contributing to an increase in TB.

A survey of badger density (main setts) found there has been little change in the estimated number of badger social groups in Wales¹. The number of badgers per social group is highly variable and so it is not possible to estimate the total number of badgers.

15. Some suggested, in terms of capturing badgers for testing/vaccination, that badgers would become trap-shy.

This was not our experience in the Intensive Action Area where we had a high recapture rate.

16. There was some concern about having different controls and policies in Wales and England with suggestions that there needed to be a consistency, however, there are already differences in approaches between the two countries.

We will continue to work closely with Defra to ensure, where possible, a consistent approach is taken as well as taking the most appropriate approach for eradication in Wales.

17. Orange markets represent no risk to the spread of TB.

Moving an animal from a herd with a known TB problem is always a disease risk. The risk of TB being spread increases significantly when restricted animals are gathered from different farms. This is why we only allow cattle to move from restricted herds under limited circumstances such as straight to slaughter or to an Approved Finishing Unit (AFU).

18. BVA/BCVA said that the disease drivers in the two intermediate areas are different.

Both intermediate areas have a medium level of disease with around 2% of herds under restrictions. In both areas there is an overlap between factors driving the disease and the evidence shows that movement of cattle into the areas from neighbouring higher TB areas is one of the primary drivers.

19. A leaflet should be developed with photos of biosecurity measures that can be used at Cymorth TB visits.

Cymorth TB do provide leaflets and there is also biosecurity guidance available on the TB Hub listing measures to be taken on farm, as well as a 'Protect your herd' leaflet which is available on the Welsh Government website

20. A risk level system should be set-up to allow purchasers choose between animals coming from a well run and careful producer to those from one with less stringent controls. This should be linked to the geographical location.

This system already exists - the CHeCS TB Health Scheme which was launched in November.

21. FUW Gwent claim the figures used in the report are inaccurate and manipulated i.e. TB incidents.

The figures are available publicly and published on a monthly basis by Defra.

22. Many people have commented that the word 'risk' has been used for the regions.

This is not the case, they are called TB areas.

23. Defra are vaccinating badgers as a PR stunt to silence the public.

We are unable to comment on Defra policies

24. Without the PrMT farmers will not be able to sell cattle

The logic of the low TB area is that buyers will understand that these herds represent a lower risk of infection and that measures the Welsh Government is currently putting into place are designed to keep infection out. This should work in the same way as it does in Scotland and the low risk area of England. Any farmer can carry out a voluntary PrMT.

25. Badger culling policy is highly successful in England.

Defra has published a second report of the incidence of bovine tuberculosis in cattle in the areas of Somerset and Gloucestershire exposed to two years of industry-led badger culling.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/548714/tb-badger-control-second-year-analysis.pdf

There were no statistically significant differences observed in incidence rate between both the combined cull intervention areas and their combined comparison areas. However this is not surprising as it is estimated that it will take at least three years from the start of culling, to observe statistically significant differences in the incidence of OTF-W herd breakdowns and that this increases to four years if only two intervention areas are licenced (Donnelly et al 2015).

26. A Badger cull will wipe out TB in 3 years and cost less than other measures.

Analysis from the Randomised Badger Culling Trials conducted between 1998 and 2005, showed that proactive culling did result in an overall beneficial effect on confirmed TB cattle breakdowns, but did not 'wipe out' the disease. The Independent Scientific Group which oversaw the trial concluded 'The overall benefits of proactive culling were modest and were realised only after coordinated and sustained effort'.

27. The number of Badgers in Wales has increased over the last 10 years.

A badger sett survey was conducted across England and Wales between 2011 and 2013. The results were compared to previous surveys undertaken in the 1980s and 1990s. The results indicated that the number of setts in Wales had remained fairly constant in comparison with the previous surveys.

28. The Badger vaccination programme delivered no benefit at all.

There was no intention to measure the effect that badger vaccination alone may have on cattle herd breakdowns within the IAA. Instead, the Welsh Government publish an annual report that measures the effect of the **combined suite of measures** applied in the IAA. Figures for up to April 2016 show that there was a fall in the number of new herd breakdowns from 85 in 2008/09 to 37 during 2015/16. The proportion of herds under restrictions fell from 28% to 19% over the same period.

29. High and intermediate areas will only be able to buy in PrMT cattle.

There is no impact as to where you can source cattle.

30. Simple read sheet or flown chart of what happens during a breakdown is needed.

Information on dealing with TB in your herd is available in the link below https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/488945/AG-TBYHW-03.pdf

31. Significant delay in the gamma blood test procedure

The samples have to arrive at the laboratory by 9:00am the day after collection and sampling has to be arranged so that currently the samples reach the laboratory on a Monday, Tuesday or Wednesday.

There is a defined laboratory capacity of throughput per day and sampling has to be arranged around availability on any given day, which means careful planning of advanced gamma testing has to be carried out by APHA Field staff, meaning larger numbers of samples to be collected from any given herd are more likely to take longer to arrange than low numbers.

The target for completion is 60 days and the aim would be to ensure it is completed before, or at the next, skin TB test.

32. PoMT will be required for movements within Intermediate and High areas

The PoMT is only required when the animal moves from a higher disease area.

33. Testing has been going on for years and the disease is getting worse.

Significant progress has been made since the TB eradication programme was established in 2008. For example, the trend in new incidents has fallen by 42% and continues to fall. Key to this is has been maintaining a substantial testing effort throughout Wales and targeting high-incidence areas for

additional surveillance.

34. Insurance is not an option for cattle in Wales.

We have been informed that although this is an immature market for providers, some insurance is available to cover any value which is in excess of £5,000. Owners of high value cattle should contact insurance companies to discuss potential cover.

35. Australian programme concentrated on removal of wildlife like in New Zealand.

The Australian eradication campaign relied heavily on test and slaughter with surveillance for the disease in abattoirs with trace-back to property of origin an essential component. In the more hostile environment of northern Australia, novel strategies were developed to maximize musters and remove 'at risk' animals. Australia did not have a wildlife host for M. bovis (apart from buffalo, which were included in the campaign).

36. Regionalisation classes some farmers across the border as Welsh.

As is currently the case, the CPH will be either in Wales or England and the appropriate rules will apply.

37. Farmers do not know which farms have TB around them.

Information on TB breakdowns is available in the link below www.ibtb.co.uk

38. Reduction in TB is a direct result of less farms in business.

The decrease in new incidents far exceeds the fall in herds and cattle, both over the short-term and the long-term. It is not the case that we are only seeing fewer incidents as a consequence of there being fewer herds. For example, in the 12 months to October 2016 there was a 0.4% fall in herds and a 21% fall in incidents.

39. The regionalisation proposals will mean that farmers in High areas will not be able to sell to the Low areas.

There will be no restrictions on animals moving between the different areas. The farmers within the high TB areas, who may have not recently had or ever had the disease, can demonstrate their low-risk status through the CHeCS TB health scheme or by sharing this information at the point of sale.

40. In Montgomery 75% of badgers found in the Badger found dead survey were infected.

Provisional figures taken from the recent survey indicate that 13% of the badgers submitted from North Powys were positive for M.bovis.

41. There has a 50% reduction in TB in the last 10 years due to culling in Ireland.

Any reduction realised has to be attributed to the whole range of measures applied in Ireland. The culling of badgers was limited to 30% of the agricultural land.

42. All the evidence points to badgers being the problem and yet nothing is done about them.

Evidence suggests that cattle-to-cattle transmission is responsible for most infection rather than badgers. Badger activity in chronic breakdown herds is being investigated and may result in badgers or groups of badger being culled.

43. The badger found dead survey concentrated on road kill alone.

People were encouraged to report sightings of all dead badgers and obviously we could only collect carcases we had been informed of. Some carcases were collected from farmland but most dead badgers collected were victims of road traffic accidents.