

Farm Level bovine TB Reports – how they can help you and your vet

Animal & Plant Health Agency (APHA) is making more data available to farmers in England and Wales to help tackle bovine TB



Standardised bTB reports for individual farms are produced by APHA using TB breakdown and cattle movement data

The reports are made available to farmers with new TB breakdowns in the Edge and High Risk Areas of England and in Wales, to help them understand the TB risks to their herd and take action to reduce these risks. Reports are posted out a few weeks after the start of a TB breakdown. **It is strongly recommended that farmers share these reports with their private vet**

The reports help affected farmers and their private vets understand:

- The level of TB risk to the herd
- The impact of previous TB breakdowns on the herd (if applicable)
- The pattern of cattle movements and its potential effect on the herd's TB risk
- The reasons for the pattern of TB breakdowns in the herd (if applicable)



Animal &
Plant Health
Agency

Introduction:

Farm Level bTB Report

CPH **xx/xxx/xxxx**

This document summarises bovine TB (bTb) information pertaining to your herd held by Animal & Plant Health Agency (APHA), Rural Payments Agency (RPA) and the Cattle Tracing System (CTS), as of the extraction date given below. You are encouraged to share this with your private veterinarian and seek their advice to help you understand the following:

- the level of bTB risk to your herd;
- the impact any bTb incident has had on your herd in the past;
- the impact and effect of patterns of cattle movement on your herd;
- the reasons for the pattern of bTB incidence in your herd, or its absence; and,
- the level of risk posed by any bTb infection detected in the local area.

The first part of the document details information APHA and RPA hold including any bTB breakdowns, should your herd have been affected with a TB Breakdown in the past. The second part of the document contains CTS information on the movements of cattle on to your holding in the past five years.

Included on the final page is a map of your current holding based on the information RPA holds on your business. This depicts the recent (2011 to 2015) genotypes of the *Mycobacterium bovis* causing breakdowns around the land your business occupies.

Please contact the relevant organisation if you believe any of the information is inaccurate.

Any new bTB breakdown in your herd is likely to be the result of one or more of the following four factors:

- **Infection from wildlife sources.** If your holding is in the High Risk Area (HRA) of England or in a high TB incidence area of the Edge, badgers in the locality are highly likely to be infected with bTB and can transmit the infection into your cattle unless you are taking precautions to prevent this, or badger culling operations have been carried out in the area. Deer can also in some circumstances be a cause of bTB breakdowns but as they

The **first part** of the report describes the herd type & size, and any TB breakdowns that have occurred on the holding over the last 10 years, along with the causative strain of the TB bacterium (*Mycobacterium bovis*) identified in the laboratory (if the culture results were positive).

Part 1: Your herd and its bTB history

bTB Extraction Date: **DD-MMM-YYYY**

The first table simply shows how your herd is depicted in our database, giving it CPH and CPHH numbers, herd type and herd size reported at the last bTB test, if applicable (below).

CPH,
herd type
& size



Herd Information			
CPH	CPHH	Herd Type	Herd Size
xx/xxxx/xxxx	xx/xxxx/xxxx/xx	{Code}	{Number}

Herd Genotype Homeranges		
CPHH		
xxxxxxxxxxxx	e.g. 10:8	e.g. 17:8

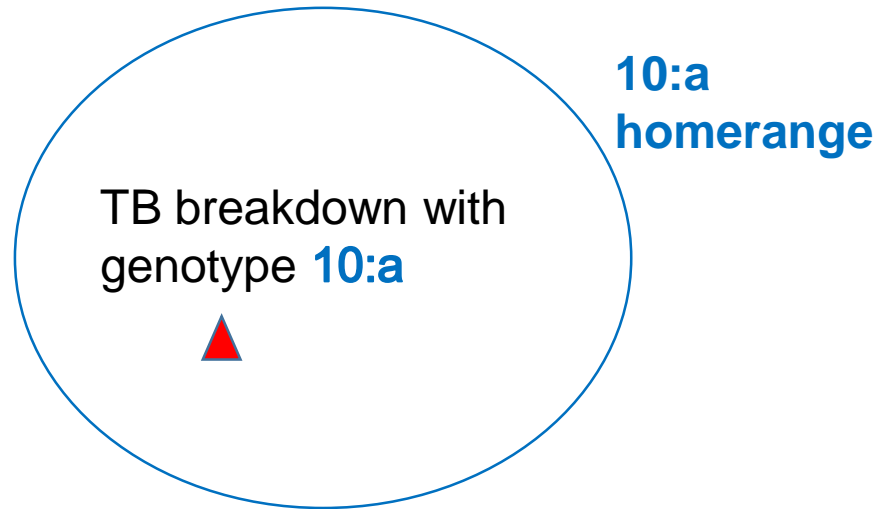


Genotype (strain)
of *M. bovis*
identified on the
holding in the past

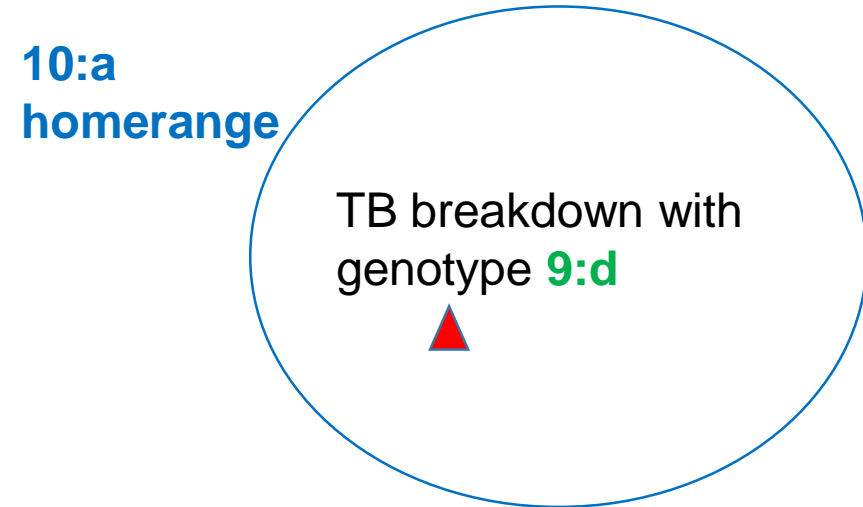
Herd size has been consistently and positively associated with the probability of a bTB incident or breakdown; the number of contacts and hence the probability of transmission increases with the number of animals in an epidemiological group. The performance of the skin test also increases with size of group tested. For example in 2013 as in previous years, herds of 300 cattle or more had the highest proportion (76%) of new confirmed breakdowns.

There is a distinct diversity of *M.bovis* in GB, and specific genotypes of the bacterium are geographically localised. The concept of 'homeranges' has been developed to define these areas. A 5km square is considered to be part of a genotype homerange if there have been three different breakdowns of that genotype, in at least two holdings, within a 5 year period. Each 5km square is then given a 10km buffer to generate a homerange map. The homerange genotype is the genotype that is most likely to occur in a particular area if the transmission route is local cattle movements, or contiguous contact with infected cattle or badgers. Different genotypes' homeranges do overlap in some areas.

Each genotype (strain) of *M. bovis* has its own 'homerange', which is the geographical area in which it is commonly found.



If the genotype of a TB breakdown is the homerange genotype, then the transmission route is most likely to be due to local cattle movements, contact with infected neighbouring cattle, or indirect/direct contact with infected badgers



If the genotype of a TB breakdown is not the homerange genotype (so called 'out of homerange'), then the transmission route is most likely to be due to longer range movements of TB-infected cattle.

The genotype of *M. bovis* (if found) can help identify the most likely source of the TB breakdown. By identifying the source of infection, measures can be put in place to reduce the risk of introduction of TB. Visit the **TB hub** to find out more about the Five-Point Plan and how you can help protect your herd against TB.

Infection from purchased cattle

Take the time to investigate the TB history of the herd and area that you are buying from. Before buying cattle, check **ibTB**, an online interactive map showing the location of TB breakdown herds over the last five years. Ask the seller about the TB history of the herd and the last herd TB test. Isolate incoming cattle from the rest of the herd and consider post-movement testing

Infection from infected badgers

Make sure that your on-farm biosecurity is up to scratch. Visit the **TB hub** for practical advice on reducing direct and indirect contact between cattle and badgers. Farmers in the Edge Area and HRA can contact the **TB Advisory Service** for bespoke advice on TB biosecurity



TBhub
The home of UK TB information

Infection from neighbouring cattle

Make sure that your boundaries at pasture are secure and sufficient to prevent any nose-to-nose contact with neighbouring cattle. Avoid common grazing of cattle

- Duration in days of the breakdown
- Start and end date
- Number of animals skin tested during the breakdown
- Number of animals interferon-gamma blood tested (if applicable) during the breakdown
- Test type that revealed the breakdown (disclosing test)
- Total number of test reactors found during the breakdown
- Total number of animals removed (i.e. reactors plus any inconclusive reactors, direct contacts and slaughterhouse cases)
- Genotype of *M. bovis* isolated from the animals taken during the breakdown

Information about TB breakdowns that have occurred on the holding over the last 10 years

The second table below shows all the bTB breakdowns (if any) your herd has suffered in the past 10 years. The disclosing test is the test type that revealed the initial breakdown. "Total taken" refers to all reactors, inconclusive reactors (IRs), dangerous contacts (DCs) and slaughterhouse cases that were taken out of the herd during a breakdown. The "Genotype" column shows the specific genetic strain of *M. bovis* responsible for the breakdown, if known.

Breakdown history is an important predictor of your risk of having bTB in your farm in future. The proportion of Officially TB Free – Withdrawn (OTF-W) breakdowns that have a history of bTB in HRAs has continued to increase – for example from 44% in 2006 up to 58% in 2013. Below is a table showing your bTB breakdown history in chronological order by herd.

The "Animals taken for bTB control purposes" table summarises the animals that were taken from your herd for bTB control purposes during each breakdown. This information will help to assess the impact the breakdowns have had, and consider whether there are particularly 'at risk' groups or animals within your herd, as ear tag numbers and age are included. "Reason" in this table shows the reason for which the particular animal was taken.

N.B. the IFN test is the interferon-gamma test



bTB Breakdown and Reactor History											
Herd	Duration (Days)	Start Date	End Date	Skin Tests	IFN Tests	Disclosing Test	Reactors	Total Taken	IRs Taken	DCs Taken	Genotypes

Animals taken for bTB control purposes

R = Reactor
 SL = Slaughterhouse case
 DC = Dangerous Contact
 IR = Inconclusive Reactor

Further details are provided for each animal taken for TB control purposes:

- Slaughter date
- Animal ear tag number
- Age
- Reason for slaughter



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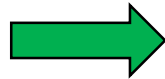
bTB Breakdown and Reactor History											
Herd	Duration (Days)	Start Date	End Date	Skin Tests	IFN Tests	Disclosing Test	Reactors	Total Taken	IRs Taken	DCs Taken	Genotypes

Animals taken for bTB control purposes
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R - Reactor
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 DC - Dangerous Contact
 IR - Inconclusive Reactor

Information about all of the TB skin tests that have been carried out on the holding over the past five years.

- Test date
- Test type
- Number of cattle tested
- Result (clear/not clear)
- Numbers of inconclusive reactors and reactors



Testing History for the last 5 Years

The table below, "Test history", is a comprehensive list of all the bTB tests that have been carried out in your herd in the past five years.

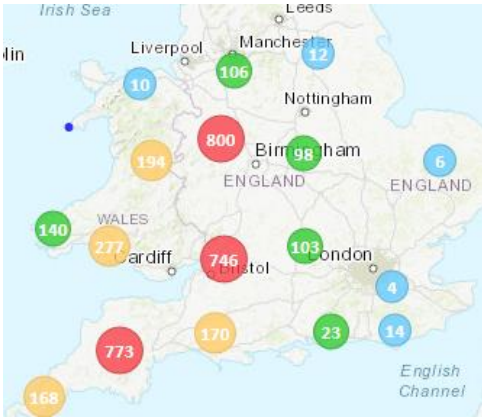
Test History							
CPHH	Test Date	Test Type	Number of Cattle Tested	Result	IRs for Retest	Animals taken as reactors	Taken
xx/xxx/xxxx/xx							
xx/xxx/xxxx/xx	DD-MMM-YYYY	(Code)	Number	Clear/IR/R			

The second part of the report contains information from the Cattle Tracing System (CTS) about the movements of cattle on to the holding in the past five years

This information will help assess the likelihood of introducing TB into the herd by buying in undetected infected cattle

Before purchasing cattle, check **ibTB** to investigate the TB history of the herd and area that you are buying from

The table shows how many cattle coming into the herd originated from each county listed, and the routine testing frequency of herds in that county



Part 2: Cattle movements into your herd in the past five years

Movement Data Extraction Date: *DD-MMM-YYYY*

This part of the document gives you detailed information of cattle that have moved into your herd in the past five years from the extraction date.

The first table, "Movement from County/PTI", shows how many cattle coming into your herd originated from each county listed. In brackets, after each county name, is the surveillance testing interval of the parish at the time of purchase (note: two and three-yearly testing intervals no longer operate), giving a crude indication of bTB risk: annually and two-yearly tested counties are/were high risk counties; three and four-yearly tested counties are/were low risk counties. Some counties may appear more than once, as you have purchased stock originating from them when the county had a different testing interval.

Research shows that herds buying in from high incidence areas are more likely to experience a bTB breakdown. This data shows you how many higher risk movements into your herd have taken place in the past five years.

N.B. movements of imported cattle are included but with no testing frequency or risk category.

Movement from County/PTI	2014
GLOUCESTERSHIRE (Yearly)	(Number)

The table shows the number of movements of cattle onto the holding coming from holdings that had a TB breakdown in the three years before the movement



Movements from CPH with a Breakdown (OTF-S or OTF-W) in 3 Years prior to the movement

Below is a list of the number of movements of cattle on to your farm, coming from premises that had had a bTB breakdown (confirmed or unconfirmed) in the three years before the movement. Herds that have had a breakdown recently are more likely to harbour infected animals than those that have not had breakdowns for many years.

Year	Number of Movements
YYYY	(Number)

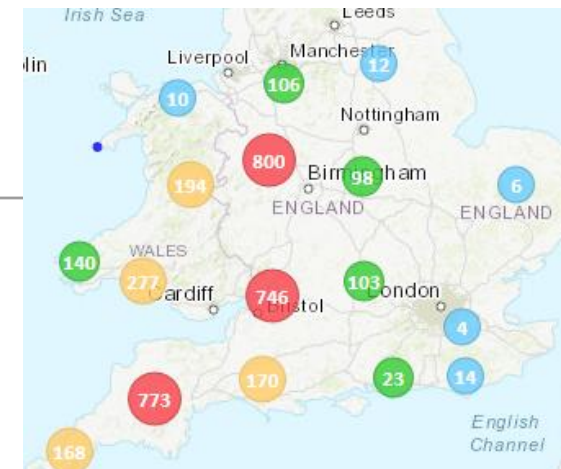
Animal Movements by Age Range

This table demonstrates the type of cattle that you bring into your herd and may help you to identify bTB risk, particularly if you can identify the groups where reactor animals were found. For example, the question should be asked whether Reactors were associated with groups that primarily receive purchased stock?

Purchased cattle may increase the risk of bringing bTB into your herd, particularly if they originate from the High Risk Area and/or from a herd with a previous history of bTB. Breeding stock are the riskiest class of animals you can purchased, because they are likely to spend a long period on your farm and have close contact with other cattle, for example the stock bull or suckler calves.

Year	< 42 Days	42 Days to 15 Months	15 to 30 Months	30 to 60 Months	Over 60 Months
YYYY	Number	Number	Number	Number	Number

CPH-xxxxxxxx

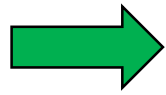


This information can be used to assess the risk of introducing TB into the herd by buying in cattle. Buying from a herd that has had a TB breakdown in the past three years increases this risk. Checking **ibTB** will provide information about the TB status of the herd and the area you are buying cattle from



This information can be helpful to identify the type of cattle bought into the herd and the associated risk

- The table shows the age range of cattle brought onto the holding:
- Less than 42 days old
 - 22 days to 15 months old
 - 15-30 months old
 - 30-16 months old
 - Over 60 months



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Year	< 42 Days	42 Days to 15 Months	15 to 30 Months	30 to 60 Months	Over 60 Months
YYYY	Number	Number	Number	Number	Number

On the **final page** of the report is a map of the holding based on the information that the Rural Payments Agency (RPA) and Rural Payments Wales (RPW) hold, showing the recent genotypes of *M. bovis* isolated from TB breakdowns around the holding.

This information can help assess the risk of introduction of TB into the herd from neighbouring herds and gives an idea of the level of infection in cattle herds in the local area



Farmers receiving a report should share it with their **private vet** and use the information to improve their herd's resilience to TB by exploring practical solutions to reduce the risk of suffering TB breakdowns